UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF ACCOUNTANCY

RESEARCH REPORT

An audit program planning methodology and model specific to performance auditing

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DECLARATION

I, Mark van Vuuren, declare this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirement of the degree of Master of Commerce in Accountancy at the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any degree or examination at this or any other university.

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Mark J. van Vuuren

Signed at …….

on the …… day of ……., 2011

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ABSTRACT

Performance audit as an audit discipline has developed seriously since the late 1970s. Due to its developing nature, it has been noted that it lacks formal methodologies. One such methodology is in the specific design of an audit program; this is important as the audit program is the basis of the audit. This study attempts to create a methodology of audit program design specifically for performance auditing and to present this in a model format. Grounded theory will be applied. The result indicates a methodology and model specific for performance audit can be compiled. The methodology and model were evaluated against SAICA and INTOSAI performance audit standards. In order to test the methodology and model in the external environment it was applied to an existing private sector business. No problems were identified.

The value of this research study contributes to the existing body of knowledge in that grounded theory was applied to develop a performance audit methodology specific to performance audit, the proposed methodology and model contributes to audit program design within performance audit, and in the evaluation of the methodology and model against SAICA and INTOSAI performance audit standards. Further research is required to confirm the applicability of the methodology and model in the private and public sectors.

Keywords

Performance audit; audit program; grounded theory; private sector; public sector; process; risk; control; risk-based auditing; efficiency; effectiveness; economy; inefficiency; ineffectiveness; uneconomical; INTOSAI

1 ORIENTATION

1.1 Introduction

Assessing risk is the core of the audit (Hayes, Dassen, Schilder and Wallage, 2005:23) and the audit program is the auditor's plan of action (Dickinson, 1982:84). In a study by the US Securities and Exchange Commission (SEC) of audit engagements which received SEC enforcement actions from 1987 to 1997, 44% of cases reported deficiencies in audit planning (Beasely, Carcello and Hermanson, 2001:1).

Performance auditing within South Africa is applied within the public sector (Prinsloo and Roos, 2006:4) although attempts have been made to introduce it to the private sector (Loots, 1989:406). Performance audit is a nascent form of auditing that became distinctive in the later 1970s (Pollitt and Summa, 2002:1; Daujotaite and Macerinskiene, 2008:178) and is perceived to be without a prescribed list of performance audit methods (Lonsdale, 2002:146); an improvement in the methodology will contribute to the effective practice of performance auditing.

If one accepts that the development and use of the audit program forms an integral part of the audit but that a consistent, detailed methodology is lacking, then the implication is that the same audit, given various audit program methodologies, might not consistently and effectively address the audit mandate and the result may be a varied grouping of audit findings and possibly varied audit; this variability might not be to the benefit of the shareholder or decision-maker.

1.2 Rationale for the study

There is little guidance in the academic literature in terms of a detailed methodology for an audit program specific to performance auditing. Performance auditing is a recognised form of auditing and as such there is a need for research to contribute to the population of performance audit methodologies. An examination of various audit standards did not reveal a detailed performance audit audit methodology (refer Appendix 3).

1.3 Objective of the study

The objective of this study is to research a methodology and audit model that contributes to the effective design of an audit program applicable to performance auditing. The objectives are summarised as follows:

Objective 1

To compile a performance audit audit program methodology and model using grounded theory.

Objective 2

To determine whether the proposed methodology and model can be applied in practice.

1.4 Background to the research

Performance audit is a nascent audit discipline developed seriously since the late 1970s (Loots, 1989:1; Pollitt and Summa, 2002:1; Daujotaite and Macerinskiene, 2008:178). Largely due to its nascent nature it lacks formal methodologies (Lonsdale, 2002:146).

Performance audit is defined as the audit of economy, efficiency and effectiveness and embraces:

(a) audit of the economy of administrative activities in accordance with sound administrative principles and practices, and management policies;

(b) audit of the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and

(c) audit of the effectiveness of performance in relation to achievement of the objectiveness of the audited entity, and audit of the actual impact of activities compared with the intended impact.

(ISSAI 3000: Standards and guidelines for performance auditing)

Performance audit differs from financial auditing. Per the APA (Auditing Profession Act, Act 26, 2005: Ch1. s1) an audit is defined as the examination of, in accordance with prescribed or applicable auditing standards-

(a) financial statements with the objective of expressing an opinion as to their fairness or compliance with an identified financial reporting framework and any applicable statutory requirements; or

(b) financial and other information, prepared in accordance with suitable criteria, with the objective of expressing an opinion on the financial and other information.

Three notable differences between performance auditing and financial auditing (aka regularity auditing):

- While financial auditing tends to apply relatively fixed standards, performance auditing is more flexible in its choice of subjects, audit objects, methods, and opinions.
- Performance auditing is not a regular audit with formalised opinions, and it does not have its roots in private auditing.
- the overall aim of performance auditing is to promote economy, efficiency and effectiveness.

  (INTOSAI ISSAI 3000)

Performance audit is generally understood as to pertain to the public sector (Summa, 2002:18) but it is also practised in the private sector with descriptive titles such as operative audits, management audits, quality audits and

environmental audit (Summa 2002:19). Summa (2002:19) explains the primary difference as follows: performance audits are a part of the external control system operating on public organisations, and the private sector descriptions (as mentioned operative audits, management audits, quality audits and environmental audit) are internalised forms of corporate control.

Dittenhofer (2001:438) present the operation differences between the public and private sectors:

1. *Performance criteria:* The public sector uses performance measures such efficiency, effectiveness and economy but these are subjective criteria and are difficult to measure. The public sector uses customer satisfaction as a measure of performance, which is converted to profits.
2. *Accessibility of government decision making to external influence:* Government work is open to the public, to interest groups and to the media; it's possible the public official may be responding to conflicting priorities and values. The private sector, except in director's meetings, can operate in reasonable privacy.
3. *Conflict between government policymakers and administration:* Elected officials usually make the policy, which is carried out by the administration. These two groups have different goals and objectives, respond to different interests, and are rewarded for different functions.
4. *The employment contract:* Patronage and civil service systems in government reward employees for political activities or seniority rather than for efficiency and productivity.
5. *Intense scrutiny by the media and public-interest groups*: Since government resources come from the public's taxes, the government is fair prey for the media and public-interest groups. Government officials therefore exert much time and effort in protecting themselves, which is counterproductive to innovation and risk taking.
6. *Emphasis on stability and reliability*: The emphasis in government is on reliability. Accountability, and legality rather than on maximum effectiveness and flexibility.

An audit program is important as it shows the auditor's plan of action (Dickinson, 1982:84); meticulous preparation of the audit program is important in order to define the audit questions, the information needed, and the audit design (INTOSA ISSAI 3000:s.2.1). A search of the literature revealed no methodology to compile an audit program specific to performance auditing (refer Appendix 3).

This study attempts to compile a methodology and model for performance auditing. This will entail qualitative research using grounded theory.

Qualitative research is research that focuses on phenomena that occur in natural settings. Qualitative research is distinct from quantitative research, which is a method to answer questions among measured variables with the intent of explaining, predicting and controlling phenomena (Leedy & Ormrod 2005:133).

Within qualitative research, grounded theory will be applied. Grounded theory attempts to derive a methodology from data collected from a natural setting; this requires focusing on how elements act, interact and influence each other. The method entails three main steps:

1. A method of coding data into categories and identifying relationships
2. Continual reappraisal of data collection and data analysis
3. Construction of a methodology from the deduced categories and relationships

Grounded theory methodology and procedures are now among the most influential and widely used modes of carrying our qualitative research when generating theory is the researcher's principal aim (Strauss & Corbin, 1997:vii).

Grounded theory will be applied since there does not appear to be an existing methodology for the compilation of a performance audit audit program.

The proposed methodology will be evaluated against the SAICA performance audit standards and INTOSAI's performance audit standards.

Although Corbin & Strauss (2008:25) believe that qualitative studies are usually exploratory and more hypothesis generating than testing, the inclusion of field-tests in this research verifies the proposed methodology.

1.5 Importance of the study

The research problem arises from the following source:
Performance audit is a developing audit discipline and from the literature it is not evident a detailed audit program methodology and model for performance auditing exists.

1.6 Statement of the research problem

This study aims to create a methodology and model specific to performance auditing for the compilation of an audit program.

The research questions are presented as follows:

Research question 1

Can a performance audit audit program methodology and model be compiled using grounded theory?

Research question 2

Can the proposed methodology and model be applied in practice?

1.7 Delimitations and limitations

Delimitations

The presented methodology is applicable specifically to performance auditing.

Limitations

1. To accept the proposed solution implies the model is effective as an acceptable risk-identification and audit program methodology, but it has not been practically determined that this is applicable for all performance audits across all business sectors.
2. Appendix 2 shows a population of various audit assignments and where the proposed model can be applied.
3. Five private sector firms were approached to participate in the second research question, i.e. to test the performance audit proposed methodology and model in a practical environment. Only two accepted. The reason the others declined to participate is due to confidentiality concerns, even though a confidentiality agreement was attached to the request. In addition, performance audit is not well-known in the private sector.

   Of the five companies, three are listed. All have multi-million-rand annual turnovers. This is presented in the following table.

n	Status	Sector
1	Listed	Food and drug retailers
2	Listed	Retailers – multi department
3	Listed	Food and drug retailers
4	Not listed	Electronic goods retailers
5	Not listed	Aviation

Table 1: Summary of private sectors companies approached

The presented methodology and model was also presented to the Auditor General (AGSA). AGSA has a policy that prevented it from presenting a statement agreeing with or endorsing the proposed methodology and model, and did not allow for testing of the proposed methodology and model against completed AGSA audits.

1.8 Assumptions

1. Performance audit is an established and recognised form of auditing.
2. Risk identification is a key step in the design of an audit program.
3. The audit program is the cornerstone of the audit.
4. At the point of putting data into the proposed model the auditor –

4.1 has received a mandate from the client to engage in a performance audit,

4.2 has familiarised himself with the goals and major projects of the organisation,

4.3 has performed a risk analysis of the entity being audited,

4.4 has evaluated budget and actual outcomes,

4.5 has completed preliminary audit procedures, such as ratio analysis,

4.6 has obtained process flows, benchmark figures and key performance indicators,

4.7 has established audit materiality.

1.9 Significance of the study

If the results of this study show that there is a methodology contributing to an audit program specifically used for performance auditing that

1. does show a relationship between process, risk, control and audit program design,
2. does produce an effective audit program that can be applied to a performance audit

then the significance is as follows:

Internal and external to the corporation

1. The proposed model collates key planning information for the audit on a single page.
2. The proposed model can be applied by the internal audit function, both in the public and private sector, in the compilation of an effective audit program.

3. The proposed model can be applied by the external audit function to audits both in the public and private sector, in the compilation of an effective audit program.
4. An effective audit program methodology reduces the probability that an auditor will not be aware of key risks affecting the audit entity.
5. The proposed model facilitates an independent reviewer in determining how the audit program was designed, what the key risks were and how these were addressed; and can easily verify the integrity of the presented relationship between process, risk, control and the audit program.
6. The proposed model gives greater assurance to company management and to the shareholder that the auditor has addressed the key risks pertinent to the business process/ project/ strategy.

<u>In the economic environment</u>

1. In applying the proposed methodology the risk and cost of repeatedly changing risk-identification and audit program methodologies will be removed.
2. The same methodology applied to multiple audit teams reduces audit plan design time, supervisor review time and aligns risks shared between multiple audits.
3. With the pending exemption option of statutory audits for private companies within South Africa, performance audits will add value to private companies not receiving statutory audits.

1.10 Structure of the remainder of the research report

Literature review

The literature review has two main sections: performance auditing and grounded theory. The sections include: definition of performance auditing, development of performance auditing, the benefits of performance auditing, the challenges facing

performance auditing, expectation gap, risk-based auditing, the audit program, grounded theory.
The literature provides the rationale for this study.

Models

Various audit program models are presented.

Research methodology

The research methodology presents the methodology used. Issues relating to the validity and reliability of the research are discussed.

Presentation and discussion of results

The results of each research question are presented and discussed, as are shortcomings within the study

Summary, Conclusion and Recommendations

A summary of the study, research question and their results is presented.
The conclusion of the study is presented.
Recommendations for further research are presented.

2 LITERATURE REVIEW

The literature review is divided into the following sections:

2.1 Existing studies on performance auditing

2.2 Risk-based auditing

2.3 The audit program

2.4 Grounded theory

2.1 Existing studies on performance auditing

2.1.1 Definition of performance auditing

There are various synonyms for performance auditing, such as broad scope auditing, cost-effectiveness auditing, efficiency auditing, operational auditing, project auditing, and VFM (value for money) auditing (Funnell, 1998:446) as well as administration auditing, comprehensive auditing, efficiency and effectiveness auditing, integrated auditing and management auditing (Burrowes & Perrson, 2000:91). Prinsloo and Roos (2006:3) offer the synonyms value-for-money audit and operational audit.

Summa (2002:19) distinguishes audit variants as follows: Operative audits, management audits, quality audits and environmental audits are used mainly in the private sector, and these are internalised forms of corporate control. Conversely, performance audits and value-for-money audits form part of an external control system operating on public organisations.

Vinten (1996, recorded in Burrowes & Persson, 2000:92) does not see management audit as a synonym for operational auditing; management audit is an all-embracing term which contains both operational audit and financial audit as segments. Funnell (1998:448) describes an earlier term for an all-embracing audit

methodology that encompasses traditional regularity or financial audits with efficiency audits; that term is ‘comprehensive auditing’. Ironically, already in 1986 the International Congress of Supreme Audit Institutions selected the term ‘performance audit’ as the common future term to be applied to audits examining economy, efficiency and effectiveness of operations (Hatherly & Parker, 1988:21).

To Faucett and Kleiner (1994:66) there are two types of performance audit: economy and efficiency audits, and programme audits. The first type is more common, focusing on the acquisition and application of resources, determining the cause of inefficient or uneconomical practices, and testing for compliance with laws and regulations concerning economic and efficient operations. The second type focuses on actual outputs compared to intended outputs. Furthermore, both these audit types are public enterprise audits.

Barzelay (1996:22) lists five types of performance audits: efficiency audits, program effectiveness audits, performance management capacity audits, performance information audits, and best practice reviews.

Scott (1996:213) defines a performance audit in Australia as an independent, objective and systematic examination of the management and administration of an organization, programme or function for the purposes of:

- forming an opinion on
    a) whether the organisation, programme or function is being managed in an economic, efficient and effective manner; and
    b) the adequacy of internal procedures, for promoting and monitoring economy, efficiency and effectiveness; and
- suggesting ways by which management practices, including procedures for monitoring performances, might be improved.

Another approach presented by Hepworth (1996:261) is to define performance auditing by focussing on the output: Let performance auditing be the term that gives the public assurance that resources are properly used, on a properly

approved basis, and used in an appropriate way and in an efficient and effective manner.

Performance auditing may contain two main objectives: mentioned above, one of Faucett and Kleiner's (1994:66) performance audit types is economy and efficiency audits. According the Netherlands Budget and Accounting Act, article 57 (BAA, 1991) performance auditing includes

- Auditing the effectiveness and efficiency of management, which includes all possible aspects of the internal management,
- Auditing the effectiveness and efficiency of the organisation's departments,
- Auditing the effectiveness and efficiency of implemented policies.

Performance auditing may contain three main objectives, e.g. Prinsloo and Roos (2006:4) define public accountability to mean that those individuals responsible for government programs are held responsible for the economic, efficient and effective responsibilities of these programs.

From the above contributors it is apparent there are various synonyms for performance audit, and these synonyms have various placements, e.g. some in the private sector, some in the public sector. There are also different types of performance audit, and a difference in the number of main objectives. This observation is iterated by Shannd & Anand (1996:60) who warn that performance auditing itself covers a range of approaches in terms of scope, methodology and form of reporting, further supported by Sloan (1996:146) who warns that in practice many performance audits are less than clear on matters of methodology, evaluative criteria and development of recommendations.

For the purposes of this research paper the following definition of performance auditing will be used: The South African Institute of Chartered Accountants (SAICA) defines performance audit as 'an independent auditing process aimed at evaluating the measures instituted by management, or the lack of these measures; ensuring that resources have been acquired economically and are utilised efficiently and effectively; and reporting on the acquisition and use of resources to

management or the relevant authority' (SAICA Guide on performance audit in the public sector, 2006).

2.1.2 The development of performance auditing

In historical terms, performance auditing is a relatively new procedure (Pollitt & Summa, 2002:1; Loots 1989:1). This can also be deduced from the various terms given in the previous section to performance auditing by Funnell (1998) and Burrowes and Perrson (2000).

Although performance auditing is a relatively new procedure, Flesher, Samson and Previts (2003:375) present arguments that the concept of VFM (value for money) auditing has been used selectively in history, presenting examples of English governmental users as early as 1180 and 1662, and that even earlier use is reported by Roman authors such as Aristophanes, Caesar and Cicero. In more recent times the VFM auditing method was used in the management of the Baltimore and Ohio railroad in 1827, where the Baltimore and Ohio railroad audit committee served not only as a mechanism to safeguard assets but made operational and organizational recommendations to improve the management and financial performance of the railroad.

Zavelberg (1996:201) reports that as early as 1922 in Germany the Reich Budget Code imposed the obligation to audit the Reich revenue and manage the Reich expenditure in compliance with the demands of efficiency.

Although there is mention of performance audit in history, the main thrust of development started in the mid 1970s (Loots, 1989:1) and it is generally accepted that performance audit is still a developing field.

2.1.3 The benefits of performance auditing

Leeuw (1996:92) presents the argument that public sector auditing leads to improved efficient and effective performance of the public sector. According to

Leeuw (1996:93) performance auditing makes it possible to distinguish ambitions and intentions from realisations. Funnell (1998:440) holds that performance auditing can be more potent than regularity or financial auditing as it is a highly intrusive form of auditing. He also points out that performance audit also shifts the focus of specific accountability to higher management levels by questioning higher-level skills, not accounting prowess.

According to Trodden (1996:157) performance measurement determines whether goals are not being achieved, and performance auditing in turn offers a way of identifying and correcting the root cause for not achieving goals. Furthermore, performance auditing allows for identifying successful processes and adopting these in other areas of the organisation.

To Prinsloo and Roos (2006:4) one of the most important reasons for performance auditing is to enable the government to show that public accountability responsibilities have been fulfilled, which means that those who are in change of government responsibilities are held responsible for the economic, efficient and effective running of these programs.

Sloan (1996:141) identifies the beneficiaries of the performance audit: apart from the government institutions these are the media, academia and professional bodies. He additionally notes that the measurement of performance will have to reflect several different perspectives if it is to fulfil the expectations of multiple stakeholders.

2.1.4 The audit expectation gap and performance auditing

Fadzly and Ahmad (2004:897) explain the audit expectation gap as the difference between auditors' and users' expectation of the audit function. To Humphrey, Mozier and Turley (1993, recorded in Fadzly & Ahmad, 2004:900) the general understanding of the term 'audit expectation gap' is one of differing expectations of the functions of independent audit between the auditors and the public, namely, the users of the financial statements. Evans (2004:191) defines 'performance gap'

as the difference between the business outcomes one expects and the hard reality of what one gets.

In a study conducted by Fadzly and Ahmad (2004:897), the users of financial statements were designated as brokers, bankers and investors. The criteria used to determine if there was an audit expectation gap in Malaysia comprised seventeen statements divided into two groups: responsibility statements (fifteen statements) and decision-usefulness statements (three statements). Within the decision-useful statements the focus was on the use of audited financial statements in decision making, performance monitoring and the assessment of how well the entity was managed. Statement 15 reads: 'The audited financial statements are useful in monitoring the company's performance.' The survey result for this specific question identified that the perception between the auditor and the broker, banker and investor differed significantly, indicating an expectation gap.

The overall study identified substantial expectation gaps about audits in Malaysia (Fadzly & Ahmad 2004:911). Since a part of the study included a focus on performance monitoring and results showed this to be lacking , it follows that the audit of said performance is part of the expectation gap.

A similar study was performed by Best, Buckby & Tan (2001:134) researching the audit expectation gap in Singapore, claiming an audit expectation gaps exists (Best, Buckby & Tan (2001:138).

Within the South African context, Loots' (1989) doctoral thesis 'An evaluation of the applicability of comprehensive auditing in the South African context' is generally accepted as the introduction of performance audit within South Africa. Loots is generally recognised as the father of performance audit within the South African context (Prinsloo and Roos, 2006:v). In his thesis, Loots' formulation of the initial problem recognised a significant movement since the mid-1970s in various countries towards the comprehensive audit approach, and raised the question whether in the South African context the auditor's traditional attest function could expand to the comprehensive audit approach, i.e. to also report on

the economic acquisition and the efficient and effective deployment of resources. His research concluded in the affirmative.

O'Leary (1996:16) considers performance auditing as one of the ways to close this expectation gap in that performance audits, whereby independent bodies review and comment on how efficiently, effectively and economically management have utilized an entity's resources, and so would appear to be an ideal means for alleviating third parties' fears of an entity collapsing.

To sum, an audit expectation gap is the difference between auditors' and users' expectation of the audit function. This is amplified and identified in Fadzly and Ahmad's (2004) study. Loots (1989) and O'Leary (1996) have identified performance audit as a means of closing the audit expectation gap.

2.1.5 The challenges facing performance auditing

The following challenges face performance auditing:

Given an environment focussed on performance measures further subject to a performance audit, it's possible that an excessively rigid system of measurement can lead to organisational paralysis, which Smith (1995, recorded in Leeuw 1996:95) refers to as 'ossification'. He adds another risk: tunnel vision, which refers to an emphasis on phenomena that are quantified by performance measurements at the expense of unquantified aspects of performance.

Meyer and O'Shaughnessy (1993, recorded in Leeuw 1996:99) coined the concept 'performance paradox' based on their work in the private sector. Through the implementation of excessive performance measures the result is a simultaneous proliferation and non-correlation of the same performance measures; the resultant effect is not necessarily an effective organisation.

Funnell (1998:444) raises a demand and risk associated with performance auditing: the full potential of the audit depends entirely on the auditors receiving

full information. This means the audited department has to have the requisite information in order to present it for audit, and may also prevent key information from reaching the auditors. Mimba, van Helden and Tillema (2007:192) argue that public sector organisations in developing countries are likely to face an unbalanced position between the demand for and supply of performance information. To be specific, the public sector reforms, which in part are stimulated by an increasing involvement by stakeholders, leads to an increased demand for performance information but because of the low-institutional capacity and high level of corruption the supply of sufficient performance information is compromised.

Halachmi and Bouckaert (1994:19) present an argument to do with the complexity of the organization – it may become more difficult to define what the input and output are, as well as type of input, e.g. capital, labour, management, hardware, software.

Shand and Anand (1996:67) raise the risk that performance auditors may be too judgemental by judging performance against standards which are unrealistic or criteria that are not significant in terms of improving performance. They also raise the criticism that audit reporting tends to be on an exception basis, which does not give a balanced view of performance, implying that a fault-finding approach is contrary to constructive suggestions to improve performance.

Sloan (1996:144) raises the concern that there are no well-defined performance audit professional bodies empowered to monitor the conduct of performance audit professionals.

A serious challenge is to determine the extent of the audit focus. Barzelay (1996:30) raises the question whether the principal goal of performance audit is performance improvement or performance accountability. The decision will affect the methodology. A key issue to Shand & Anand (1996:71) is the reappraisal of the role of performance auditor – to what extent the auditor should be involved in

'hands on' assistance to improve performance rather than the more detached approach previously considered necessary to preserve audit independence.

Sandberg and Larsson (1996:197) argue that the auditor as an independent teller of truth presents an audit that has a 'moral' responsibility for ensuring that action is taken to solve problems. Highlighting shortcomings is not sufficient; problem solving makes the audit a constructive catalyst for change without risking its independence. This critique is echoed by PUMA (1995:12) who warns of the narrow-minded approach of auditors who follow a fault-finding approach implying that the focus by auditors on procedures may be too limited to allow for performance improvement.

In a similar argument, Trodden (1996:159) calls for a rethink of the methodology and purpose of performance auditing with the goal of producing reports that focus on proposing alternatives for improvement, as opposed to focusing on what is wrong with existing systems.

2.2 Risk-based auditing

Puttick and Van Esch (1992:59) present four audit approaches:

- The balance sheet approach
- The systems based approach
- The transaction flow or cycle approach
- The risk-based audit approach

The risk-based approach requires an understanding of risks within an organization/ audit that are in turn addressed by systems of internal control; the converse approach would be to identify a set of controls and then determine if these are applied throughout the organization (Spencer Picket 2003: 12).

Puttick and Van Esch (2007:194) present two models for risk identification, traditional, and the business risk analysis approach.

- With the traditional approach the auditor would first identify both internal and external factors that could result in material errors occurring at an overall financial statement level; after this process these factors would be related to their potential impact, at an assertion level, in respect of balances or classes of transactions contained in the financial statements. Example of assertions are existence, valuation, completeness.
- The business risk analysis approach requires obtaining the business processes, to consider the risks attached to these processes, and to determine how these risks are identified and managed by the directors and management of the entity.

Puttick and van Esch (2007:195) list the benefits of the business risk analysis approach:

1. There is a perception by the client that the recommendations obtained through this approach adds value.
2. An effective and efficient audit process with better risk management.
3. It improves the work-flow timing, resulting in few problems with meeting audit report deadlines.
4. The auditor's focus on business and control issues leads to greater staff satisfaction within the audit firm.

According to Hayes *et al* (2005:23) business risk results from significant conditions, events, circumstances, actions and inactions that may impede the company's ability to execute its strategies; furthermore, auditors are required to include business risks in the planning process. They conclude that assessing risk is the core of the audit.

To sum, given multiple audit approaches, this study applies the risk-based approach to auditing. In paragraph 1.8 'Assumptions' the following two assumptions are presented:

- Risk identification is a key step in the design of an audit program.
- The audit program is the cornerstone of the audit.

By identifying the term ‘audit program’ as a common denominator in the above two assumptions, and then removing the term, what remains is that risk-identification becomes the cornerstone of the audit, which correlates with Hayes *et al* (2005:23) who state that assessing risk is the core of the audit.

2.3 The purpose of an audit program

According to Mautz (1964:170) the audit program fulfils two purposes: it serves as a plan of attack on the verification problem at hand; it also serves as a record for the audit work performed.

To Cooper (1974:33) the benefits of an audit program are:

1. It’s a detailed plan of work to be done; once done it’s a permanent record of the tests carried out and by whom.
2. By cross-referencing the audit program to the internal control questionnaire, evidence is presented that the audit program addresses the company’s systems of accounting and internal control.
3. It enables work to be organized, delegated and controlled.
4. The current audit program can be used as a basis for drawing up future audit programs.

According to Dickinson (1982:84) the audit program is the auditor’s plan of action, further noting that each audit program should be designed to meet the specific needs of each particular audit.

Advantages of an audit program according to Dickinson (1982:85) include:

1. It facilitates the review by the audit manager and partner.
2. It emphasizes the essential and important procedures for each client.

Per ISA 300.12 the audior shall include in the audit documentation

(a) the overall audit strategy,

(b) The audit plan

http://web.ifac.org/download/a016-2010-iaasb-handbook-isa-300.pdf

To sum, the audit program serves many purposes and a reasonable deduction would be that an audit cannot proceed without an audit program. The audit program is a fundamental focus of this study and the objective of this study is to research a methodology and audit model that contributes to the effective design of an audit program applicable to performance auditing.

2.4 Grounded theory

Grounded theory is a systematic theory used in research in the social sciences emphasising theory generation from data. http://en.wikipedia.org/wiki/Grounded_theory . Put otherwise, the procedures of grounded theory intend to develop an integrated set of concepts that provide a thorough theoretical explanation of the social phenomenon under study (Corbin and Strauss, 1990:5). Grounded theory was developed by sociologists Barney Glaser and Anselm Strauss in 1967.

Grounded theory is mainly used in qualitative research, which is to say a focus on phenomena that occur in natural settings, and it involves studying said phenomena in all their complexity (Leedy and Ormrod, 2005:133).

Grounded theory differs from normal theory in that traditional research begins at researching and developing a hypothesis. With grounded theory the first step is data collection, then the key points are marked with a series of codes, which are extracted from the text, then the codes are grouped into similar concepts in order to make them more workable. From these concepts, categories are formed; these categories are the basis for the creation of a theory, or a reverse engineered hypothesis. http://en.wikipedia.org/wiki/Grounded_theory

The specific approach of data analysis to be undertaken is that proposed by Corbin and Strauss (1990:12) to analyze data, namely:

1. Open coding: to divide data into segments and then scrutinize for commonalities reflecting categories or themes. The purpose is to give the analyst new insights by breaking through standard ways of thinking about interpreting phenomena reflected in the data. The method includes asking of any data 'What is this about? What is the being referenced here?' in order to identify, name, categorize and describe the phenomenon within the text.
2. Axial coding: Interconnections are made among categories and subcategories via a process of inductive and deductive thinking.
3. Selective coding: The interrelationships of categories are combined to create a sense of order and meaning, usually around a core category.
4. Theory development.

The benefits of grounded theory as an approach is that the theory is grounded in the data (Corbin and Strauss, 2008:48); as a result a theory cannot be refuted by more data or replaced by another theory as it is too intimately associated with the data; however, it can happen the theory is modified or reformulated. Put otherwise, theory evolves from data, i.e. it is not developed *a priori* and then tested (Lye, Perera & Rahman, 2006:129).

Grounded theory is not restricted to the social sciences but has also been applied to in accounting and auditing: Gurd (2008:122) revisited the intellectual roots of grounded theory by analyzing the method used in grounded theory research in accounting. About 23 papers were identified and analysed. A finding was that some accounting researchers used the label 'grounded theory' but misunderstood or did not apply the core canons of grounded theory established by Glaser and Strauss. The benefit of Gurd's paper is that it raises concerns about the lack of consistency of grounded theory research in accounting with the central canons of grounded theory. It also provides some directions for future grounded theory research by encouraging accounting researchers who wish to use grounded theory to engage more strongly in understanding the method and providing transparent explanations of their data collection and analysis methods.

Elharidy, Nicholson and Scapens (2008:139) assessed the role of grounded theory in interpretive management accounting research (IMAR) to establish whether interpretive researchers could use grounded theory in relation to their ontological stance, methodological position and research methods, and if so, how. Their paper suggests that grounded theory offers a balance between the expediency of the research findings (thus allowing researchers freedom to interpret management accounting practices), and the development of rigorous theory from IMAR. The benefit of this research shows grounded theory interpretive researchers a way of balancing the need to develop theory, which is grounded in everyday practices.

Parker and Roffey (1997:212) restated the case for accounting and management research from a grounded theory perspective, and advocated more frequent application of grounded theory. They examined the intellectual foundations and key tenets of grounded theory in the context of researchers' theoretical assumptions and methodological characteristics. Particular attention was given to grounded theory assumptions and methods in relation to other interpretive paradigms such as symbolic interactionism, ethnomethodology and hermeneutics. Their research presented potential applications to the accounting and management research arenas, arguing that rigorous grounded theory research could offer the accounting and management literatures unique understandings that provide additional perspectives to those already being offered by major schools of thought.

Although grounded theory is a descriptive term, there is debate about what constitutes theory. Charmaz (2006:176) presents four general types of theory: Positivist definition of theory, interpretive definition of theory, constructivist grounded theory, and objectivist grounded theory.

Positivist definition of theory

A positivist theory is a statement of relationships between abstract concepts that cover a wide range of empirical observations. The objective of the positivist

theory is explanation and prediction. A critique against this type of theory is that it can result in redutionaist explanations with simplistic models of action.

Interpretive definition of theory

Distinctly different from the positivist idea of explanation and prediction, the interpretive definition of theory emphasises understanding. The main difference is that interpretive theories show priority to showing patterns and connections, rather than linear reasoning.

The following table contrasts positive theory with interpretive theory:

Positivist theory	Interpretive theory
• Treat concepts as variables • Specify relationships between variables • Explain and predict these variables • Systematize knowledge • Verify theoretical relationships through hypothesis testing • Generate hypotheses for research	• Conceptualize the studied phenomenon to understand it in abstract terms • Articulate theoretical claims pertaining to scope, depth, power, and relevance • Acknowledge subjectivity in theorizing and hence the role of negotiation, dialogue, and understanding • Offer an imaginative interpretation

Table 2 – Positivist and interpretive theory
(Source: Charmaz, 2006:181)

Constructivist grounded theory

Constructivist grounded theory is part of the interpretive tradition. It places priority on phenomena and sees both data and analysis as created from shared experiences. A constructivist approach is much more than examining how

individuals view their situations – constructivists study how and why participants construct meaning and actions in specific situations.

Objectivist grounded theory

Objectivist grounded theory is derived from the positivist tradition. This approach erases the social context from which data emerges, there is no indication how interviewers and their research participants produced data; objectivist grounded theorists remain distant from research participants and their realities. There is an assumption by these theorists that data represents objective facts about a knowable world, the data already exists in the world and the research finds the data and 'discovers' theory from them.

Charmaz (2006:191) makes the point that in judging whether a specific study is constructivist or objectivist, it depends on the extent to which the key characteristics conform to one tradition or the other.

2.5 Summary

The purpose of a literature review is to describe theoretical perspectives and previous research findings regarding the problem at hand (Leedy & Ormrod, 2005:64). The problem at hand with performance auditing (first and generally) lies in a few places: the consistency within the definition, as raised by, *inter alia,* Funnell (1998), Burrows and Persson (2000), Summa (2002), Vinten (1996); in terms of the types of performance audit Faucett and Kleiner (1994:66) present 2 types, Barzelay (1996:22) lists 5 types. Perhaps this can be expected from a nascent discipline. There are benefits to performance auditing, as presented by Leeuw (1996:92), Trodden (1996:157) and Sloan (1996:142) which indicate that performance audit is worth pursuing and refining. That performance audit might close the audit expectation gap is notable.

There are also challenges, such as ossification (Smith 1995), performance paradox (Meyer and O'Shaughnessy, 1993), transparency and sufficiency of information (Mimba, van Helden and Tillema (2007), and exception-based reporting that does not improve performance (Shand and Anand, 1996:67).

Another problem with performance audit (second and specifically) is the nature of performance audit which is seen as a nascent form of auditing that became distinctive in the later 1970s (Pollitt and Summa, 2002:1; Daujotaite and Macerinskiene, 2008:178) and is perceived to be without a prescribed list of performance audit methods (Lonsdale, 2002:146). As stated earlier, the objective of this paper is to research a methodology and audit model that contributes to the effective design of an audit program applicable to performance auditing. How? By applying grounded theory to find a solution, for the primary reason that through the open coding process new insights might be created by breaking through standard ways of thinking about interpreting phenomena reflected in the data (Corbin & Strauss, 1990:12).

Even if grounded theory was applied, there needs to be a starting point. Given the four types of audit as listed by Puttick and Van Esch (1992), risk-based auditing is chosen. The presentation of the section on the audit program showed many interpretations of its benefit and purpose (Mautz 1964; Skousen and Jenson, 2001; Cooper,1974; Dickinson, 1982). It is clear an audit cannot proceed without an audit program.

Charmaz (2006:176) expounded on the types of theory.

The literature review, as defined by Leedy & Ormrod (2005:64), describes theoretical perspectives of the problem at hand, what is presented here is the background to performance audit and the concepts that are important in attempting to address the objective of this study.

3. AUDIT MODELS

The purpose of this chapter is to present various financial audit approaches as well as performance audit processes in order to present various audit concepts (e.g. existing control, test of control, weakness) and their relation to each other. In the grounded theory evaluation of data these relationships will be considered.

Introduction

This chapter serves to present various financial audit approaches as well as performance audit processes in order to present various audit concepts (e.g. existing control, test of control, weakness) and their relation to each other. In the chapter evaluating the results of the research questions grounded theory evaluation of data and these relationships will be considered.

Three financial audit models are presented: Arens and Loebecke (1994), Cosserat (2000) and Sawyer, Dittenhofer and Scheiner (2005).

Arens and Loebbecke

Arens and Loebbecke (1994:368) present a methodology for audit program design in which the relationship between (A1) the transaction-related audit objective is linked with (A2) the key existing control. The next step, (A3) is the test of this key existing control; (A4) a weakness is presented and (A5) is the substantive test to address this weakness.

Audit objective (A1)	Existing control (A2)	Test of control (A3)	Weakness (A4)	Substantive test (A5)
Existing sales transactions are recorded. (Completeness	Bills of lading are accounted for weekly by the accountant to	Account for a sequence of shipping documents.	Lack of internal verification that sales invoices are included in	Trace selected shipping documents to the sales journal to be

objective)	make sure they are billed.		the sales journal.	sure that each one has been included.

Table 3: Arens & Loebbecke (1994) audit table

Source: Arens & Loebecke (1994:368)

Example,

(A1) Existing sales transactions are recorded. (Completeness objective)

(A2) Bills of lading are accounted for weekly by the accountant to make sure they are billed.

(A3) Account for a sequence of shipping documents.

(A4) Lack of internal verification that sales invoices are included in the sales journal.

(A5) Trace selected shipping documents to the sales journal to be sure that each one has been included.

Cosserat

Cosserat (2000:489) presents a control risk assessment table in which the columns read (B1) function, (B2) potential misstatement, (B3) necessary control, (B4) possible test of operating effectiveness, (B5) relevant audit objective. This model is notable in that the function, risk and control are linked to the audit objective. In each of the models there is a columnar and developing relationship between the audit concepts.

Function (B1)	**Potential misstatement (B2)**	**Necessary control (B3)**	**Test (B4)**	**Audit Objective (B5)**
Recording movement of goods into stock.	Goods may not be recorded.	Use of pre-numbered goods received notes and production move order.	Reperform test of numerical continuity.	Relevant audit objective presented here, e.g. completeness.

Table 4: Cosserat (2000) audit table

Source: Cosserat (2000:489)

Example,

(B1) Recording movement of goods into stock.

(B2) Goods may not be recorded.

(B3) Use of pre-numbered goods received notes and production move order.

(B4) Reperform test of numerical continuity.

(B5) Relevant audit objective presented here, e.g. completeness.

Sawyer, Dittenhofer and Scheiner

Sawyer, Dittenhofer and Scheiner (2005:233) presents an approach for audit program design in which (C1) risks pertaining to the business are presented, followed by (C2) controls that should be in place. The third column (C3) contains the audit tests. The logic is that the risk is followed by the control, and the audit tests the existence, effectiveness and sufficiency of the actual control.

Risks (C1)	Controls (C2)	Tests (C3)	Ref.	Comments
The company being audited does not have a written charter or set of procedures.	The company's committees should include people from Manufacturing, Quality Control, Engineering and Procurement.	Examine company records to determine whether principal procurements have been considered and adequate support has been provided for the decisions made.		

Table 5: Sawyer, Dittenhofer and Scheiner (2005) audit table

Source: Sawyer, Dittenhofer and Scheiner (2005:233)

Example,

(C1) The company being audited does not have a written charter or set of procedures.

(C2) The company's committees should include people from Manufacturing, Quality Control, Engineering and Procurement.

(C3) Examine company records to determine whether principal procurements have been considered and adequate support has been provided for the decisions made.

Discussion

On comparing the three models to create an audit program, some differences are noted, such as

- Arens and Loebecke present the existing control, Cosserat presents the necessary control.
- Arens and Loebecke present weakness, Cosserat presents the potential misstatement.
- Arens and Loebecke present the objective first, Cosserat presents the objective last.
- The ordering of the columns and the assumed relationships between them, e.g. Sawyer, Dittenhofer and Scheiner present the risk, the corresponding control and the consequent appropriate test. Arens and Loebecke present the existing control, the test of the control, then the weakness, then the substantive test.

These observations will have bearing in the design of the proposed methodology using grounded theory.

Performance auditing

These above three models are applied to regularity or financial auditing. Within performance audit, the South African Institute of Chartered Accountants (SAICA) 'Guide on performance audit in South Africa' (2006) present a process flowchart of the performance audit process. The flowchart is presented below.

Process flowchart of the performance audit process

(SAICA Guide on performance audit in the public sector, 2006)

PRE-ENGAGEMENT AND PLANNING PHASE	
Step 1	Set up a contact meeting
Step 2	Agree terms of engagement
Step 3	Obtain sufficient knowledge of the business
Step 4	Identify a focus area for the audit – if not known
Step 5	Identify symptoms
Step 6	Develop audit objectives and criteria
Step 7	Obtain approval for focus area and criteria
Step 8	Draft a work plan
EXECUTION PHASE	
Step 1	Follow up on symptoms identified in the planning phase
Step 2	Identify new symptoms
Step 3	Test the criteria
REPORTING PHASE	
Step 1	Review all findings identified during the execution phase
Step 2	Write report items and suggested corrective measures
Step 3	Draft audit report
Step 4	Confirm factual correctness and report items
Step 5	Finalise the audit report and covering letter
Step 6	Submit report with comments to the accounting officer or authority
FOLLOW UP PHASE	
Follow up on agreed management action	

Table 6 Process flowchart of the performance audit process

(Source: SAICA Guide on performance audit in the public sector, 2006)

As a comparison to this flowchart, an Australian auditor general flowchart is presented:

ACT (Australian Capital territory) auditor general's office: performance audit stages

A typical performance audit may involve various stages, and take an average of 6 to 9 months to complete, depending on the complexity and scope of the audit.

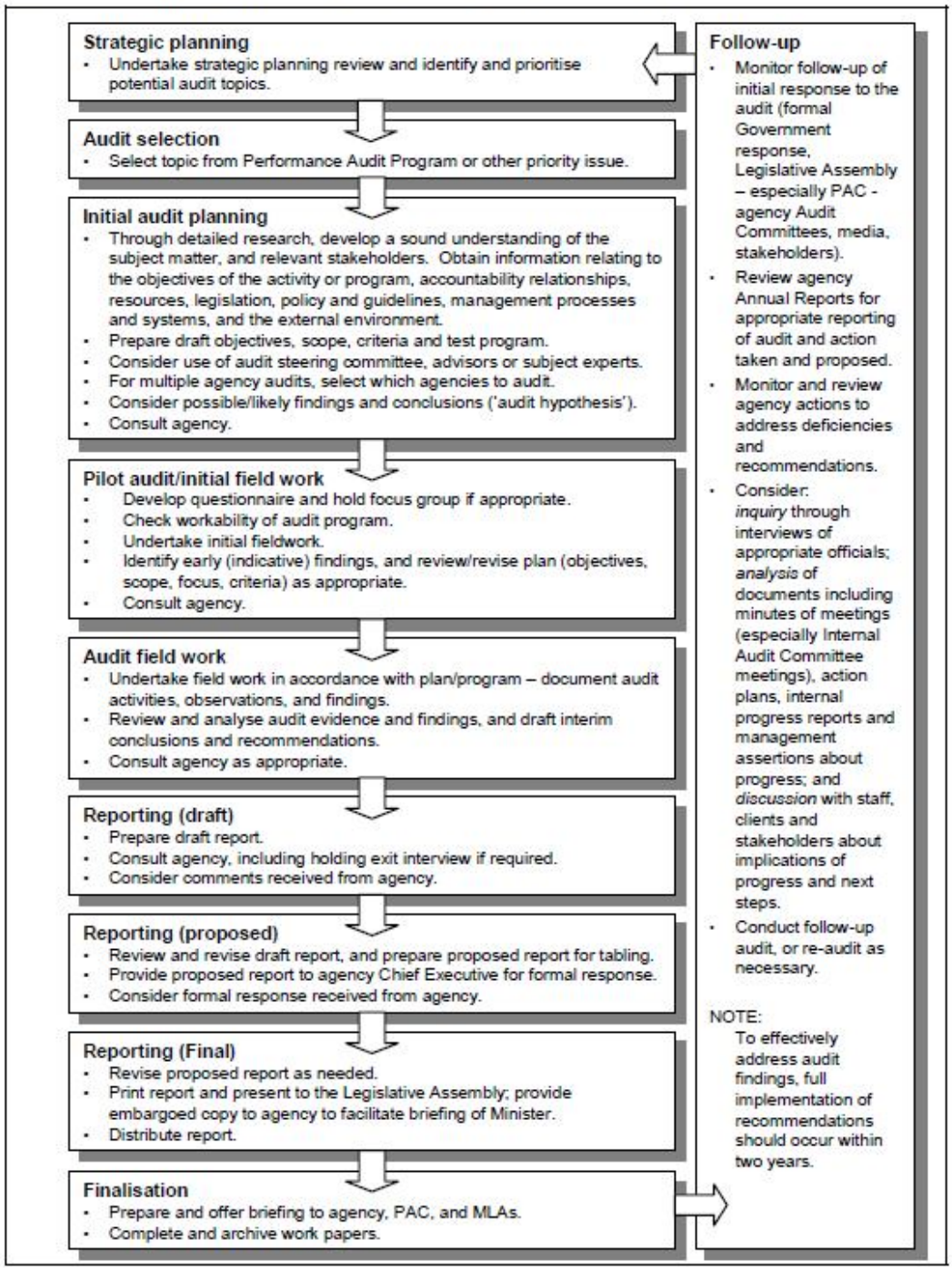

Table 7: ACT performance audit stages

Source: http://www.audit.act.gov.au/docs/Performance%20Audit%20Stages.pdf

The main similarity between the performance audit process flows is the planning, fieldwork, reporting structure. This process is consistent with financial auditing.

The SAICA flowchart is divided into four main sections: pre-engagement and planning phase, execution phase, reporting phase, follow-up phase. The concepts presented in the pre-engagement and planning phase include:

- a focus area, defined as a specific department, programme, activity, process, service rendered, management control system or organisational unit that has been identified for a performance audit (Prinsloo and Roos, 2006:28)
- symptoms, defined as the uneconomical procurement of resources, and/or the inefficiency or ineffective utilisation of resources (Prinsloo and Roos 2006:29)
- management measures (i.e. controls)
- cause of risk
- effect, defined as a negative impact (Prinsloo and Roos, 2006:41)
- audit objectives
- criteria, defined as sound management practices that should be in place if certain predetermined outputs and objectives/ outcomes are to be met economically, efficiently and effectively (Prinsloo and Roos, 2006:47)

(Appendix 1 contains a glossary of terms)

The SAICA guidelines contain the following steps in compiling an audit program:

1. The auditor should obtain sufficient knowledge of the business (s.24.d).
2. The auditor identifies a focus area for the audit by evaluating programs and sub-programs within the general process. Furthermore, symptoms for each sub/ program are identified (where a symptom is defined as a visible manifestation of something that is wrong); example an uneconomical procurement of resources; example, the inefficient or ineffective utilisation of resources (s.24.e). Inadequate management measures causing these symptoms should be identified.

3. The compilation of a 'criteria matrix' whereby all symptoms are presented and placed into specific focus areas (s.24.e).
4. Develop the audit objectives and criteria (s.24.g).

The performance audit terminology varies from standard auditing but the intent is the same: symptoms are actual risks, management measures are actual controls; criteria are the controls that should be in place. Table 8 shows the differences between performance auditing and regularity auditing (Prinsloo and Roos, 2006:13).

Auditing component	**Performance auditing**	**Regularity auditing**
Objective	To evaluate the management measures instituted to ensure economy, efficiency and effectiveness	To assess whether accounts or financial statements are a true and fair reflection of the financial position of the institution
Focus	Mainly programmes, projects, systems or activities	Accounts and financial statements
Audit criteria	• Usually more subjective and compiled by the auditor and agreed upon with the auditee • Represent good management practice • May vary from audit to audit	• Relatively fixed and usually predefined, e.g. by legislation • Transactions are judged to be regular or irregular • Compliance with prescripts and all types of legislation is tested
Academic requirements	Economics, political science, sociology, management science, auditing	Accounting, auditing
Skills and abilities required	Analytical, communication, problem-solving, reading, writing, computer literacy, innovation, endurance	Analytical, communication, computer literacy

Table 8: Performance auditing and regularity auditing

Source: Prinsloo & Roos (2006:13)

An additional difference between performance and regularity audit is raised within INTOSAI's ISSAI 3100 (Performance audit guidelines – key principles) on the subject of an overall audit opinion. Within performance audit the auditor is not normally expected to provide an overall opinion on the achievement of economy, efficiency and effectiveness by an audited entity in the same way as the opinion on financial statements; however, where the nature of the audit allows this to be done in relation to specific areas of an entity's activities, the auditor is expected to provide a report which describes the circumstances and context to arrive at a specific conclusion rather than a standardised statement (ISSAI 3100, s.2.4.2.29.)

Conclusion

The purpose of this chapter is to present various financial audit approaches as well as performance audit processes in order to present various audit concepts (e.g. existing control, test of control, weakness) and their relation to each other. In the grounded theory evaluation of data these relationships will be considered.

4 RESEARCH METHODOLOGY

4.1 Introduction

The objective of this study is to research a methodology and audit model that contributes to the effective design of an audit program applicable to performance auditing.

Two objectives are presented as follows:

Objective 1

To compile a performance audit audit program methodology and model using grounded theory.

Objective 2

To determine whether the proposed methodology and model can be applied in practice.

The research questions, based on the research objectives are as follows:

Research question 1

Can a performance audit audit program methodology and model be compiled using grounded theory?

Research question 2

Can the proposed methodology and model be applied in practice?

4.2 Research methodology

Research question 1

To answer the research question grounded theory will be applied in order to develop a theory, i.e. a theory that translates into a methodology. Grounded theory is mainly used in qualitative research, which is to say a focus on phenomena that occur in natural settings, and it involves studying said phenomena in all it complexity (Leedy and Ormrod, 2005:133). Another definition: Grounded theory is a systematic theory used in research in the social sciences emphasising theory generation from data http://en.wikipedia.org/wiki/Grounded_theory.
Research of existing literature indicates there is not a detailed methodology or model for performance audit audit programs; accordingly, grounded theory will be applied in order to generate a theory that translates into a methodology.

Grounded theory differs from normal theory in that traditional research begins at research and develops a hypothesis. With grounded theory the first step is data collection, then the key points are marked with a series of codes, which are extracted from the text, then the codes are grouped into similar concepts in order to make them more workable. From these concepts, categories are formed; these categories are the basis for the creation of a theory, or a reverse engineered hypothesis (http://en.wikipedia.org/wiki/Grounded_theory).

The specific approach of data analysis to be undertaken is that proposed by Corbin and Strauss (1990:12) to analyze data, namely:

a. Open coding: to divide data into segments and then scrutinize for commonalities reflecting categories or themes. The purpose is to give the analyst new insights by breaking through standard ways of thinking about interpreting phenomena reflected in the data. The method includes asking of any data ‘What is this about? What is the being referenced here?’ in order to identify, name, categorize and describe the phenomenon within the text.
b. Axial coding: Interconnections are made among categories and subcategories via a process of inductive and deductive thinking.
c. Selective coding: The interrelationships of categories are combined to create a sense of order and meaning, usually around a core category.
d. Theory development.

The benefits of grounded theory as an approach is that the theory is grounded in the data (Corbin and Strauss, 2008:48); as a result a theory cannot be refuted by more data or replaced by another theory as it is too intimately associated with the data; however, it can happen the theory is modified or reformulated.

The data source to be applied to grounded theory will be to the following guide and international audit standards:

1. SAICA Guide on Performance Audit in the public sector (2006).
2. Australian Audit standard ASAE3500: Performance engagements (2008).
3. INTOSAI's performance audit standards ISSAI 3000 and ISSAI 3100.
4. International Standards on Auditing (2010), specifically
    - ISA 200, Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing
    - ISA 210, Agreeing the Terms of Audit Engagements
    - ISA 220, Quality Control for an Audit of Financial Statements
    - ISA 230, Audit Documentation
    - ISA240, Fraud
    - ISA 250, Consideration of Laws and Regulations in an Audit of Financial Statements
    - ISA 300, Planning an Audit of Financial Statements
    - ISA 315, Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment
    - ISA 320, Materiality in Planning and Performing an Audit
    - ISA 330, The Auditor's Responses to Assessed Risks
    - ISA 500, Audit Evidence
    - ISA 501, Audit Evidence-Specific Considerations for Selected Items
    - ISA 520, Analytical Procedures
    - ISA 530, Audit Sampling
    - ISA 540, Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures

- ISA 550, Related Parties
- ISA 560, Subsequent Events
- ISA 610, Using the Work of Internal Auditors

The above guide and standards were chosen for the following reasons:

1. The standards are generally within the planning phase of an audit, which is where the audit program is compiled.
2. A global spread of source documents from which to apply grounded theory ensures variability.

Analysis of the proposed methodology and model will be covered in the chapter 'Presentation and analysis of results' where it will be evaluated against the SAICA performance guideline and the INTOSAI performance audit standards.

Research question 2

The proposed methodology and model will be applied to 2 business entities in the private sector and to 2 business entities in the public sector in order to compile a performance audit audit program.

Data collection of data intended for placement into the proposed model will be obtained through observation, staff interviews and interviews with senior management.

Once the data has been collected the researcher places it into the proposed model, as well as compiles the audit program.

Data analysis, i.e. the analysis of the proposed model and proposed audit program will be performed by the researcher as well as by senior management.

Senior management will be requested to answer two questions:

1. Have all material performance processes and risks pertinent to the business been identified by the proposed model?

2. Does the audit program addresses key risks?

If management answers in the affirmative to both questions then research question will be answered in the affirmative.

Conclusion

Two research questions are presented. The first research question will be subject to grounded theory research and evaluated in the chapter 'Presentation and analysis of results' against the SAICA performance guideline and the INTOSAI performance audit standards. The second research question will be subject to field testing.

4.3 Validity and reliability

Internal validity

Internal validity is defined by Leedy & Ormrod (2005:97) as the extent to which the design of a research study and the data it yields allow the researcher to draw accurate conclusions about the cause-and effect and other relationships within the data. The first research question is validated through audit models and an established methodology (grounded theory); the second research question is validated through the practical application of the proposed methodology and model.

External validity

External validity is the extent to which the research study's results apply to beyond the study itself (Leedy & Ormrod, 2005:99). It is the intent of the second research question to determine if the proposed model works in the field.

Reliability

Reliability is the consistency with which a measuring instrument yields a certain result when the entity being measured hasn't changed (Leedy and Ormrod, 2005:29). Given the various concepts required by the proposed methodology it is expected that the design of the audit program to be consistent. The process for research question 2 will be to present a list of questions, collate information and have the interviewee formally acknowledge the accuracy of the information, which reduces the risk that their opinions will vary significantly if the interview process was re-performed.

What is not reliable is the process of design of the proposed methodology: grounded theory will be applied to a select number of audit standards, and the way the population of standards are interpreted is individualistic and cannot be regarded as a universal process.

5 EVALUATION AND DISCUSSION OF RESULTS

The layout of this chapter is as follows:

5.1 Research question 1

Research question 1*: Can a performance audit audit program methodology and model be compiled using grounded theory?*

Result achieved

Applying grounded theory to a sample of audit standards a methodology and model developed with which to compile a performance audit audit program.

Presentation of the methodology

To answer the question whether an audit program planning methodology and model specific to performance auditing can be created, the presented methodology

is based on the evaluation of four audit models and utilises grounded theory. The methodology is based on:

- The relationship between process, risk, control and the audit program.
- Applying risk-based auditing.
- The use of the audit objective and its inverted risk counterpart.
- The inclusion of benchmarks and criteria within the control section.

The grounded-theory generated theory is thus: There is a relationship between process, risk, control and the audit program A risk-based approach is taken; the primary risk categories are the inverted objectives. The details of any process will determine the inherent and actual risks specific to that process. The risk is matched against the existing actual control. The criteria is included to compare actual to the standard, as is the benchmark. The combination of top level categories and transaction-level details allows for a complete picture of the contributors to risk. The audit program is based on tests addressing this risk.

The following table describes the proposed model. The reference numbers link to the proposed model, which is presented after this table.

Ref.	Description	Explanation
1	Process	*Process* refers to the business process of the audited entity. The auditor may further wish to divide the process into Input, Processing, Output and Impact stages.
2	Risk	*Risk* refers to the *Business Risk* and comprises the three primary performance audit risks, i.e. *ineffectiveness, inefficiency, non-economy* (aka *uneconomical*). These risks are derived from the performance audit objectives effectiveness, efficiency and economy. Within each risk type the distinction is made between *inherent* risk and *actual* risk. *Inherent risk* is the potential risk within the business and the business environment. It is appropriate to include inherent risk as actual controls exist to address inherent risk, e.g. disaster recovery procedures.

		Actual risk is obtained from fraud reports, audit reports, interviews, etc. The *rating* applies to the presented risk, e.g. if the risk is high the *rating* field can reflect a number from a risk ranking, e.g. 1-10, or it can be a colour-coded index.
2a	Inefficient risks	The converse of the efficiency performance objective.
2ai	Inherent risks applying to Inefficient risks	As described.
2aii	Actual risks applying to Inefficient risks	As described.
2aiii	Risk rating applied to Inefficient risks	As determined by the auditor, e.g. if the risk is high the *rating* field can reflect a number from a risk ranking, e.g. 1-10, or it can be a colour-coded index. To be read in conjunction with the control risk.
2b	Ineffective risks	The converse of the effectiveness performance objective.
2bi	Inherent risks applying to Ineffective risks	As described.
2bii	Actual risks applying to Ineffective risks	As described.
2biii	Risk rating applied to Ineffective risks	As determined by the auditor, e.g. if the risk is high the *rating* field can reflect a number from a risk ranking, e.g. 1-10, or it can be a colour-coded index. To be read in conjunction with the control risk.
2c	Uneconomical risks	The converse of the economy performance objective.
2ci	Inherent risks applying to Uneconomical risks	As described.
2cii	Actual risks applying to Uneconomical risks	As described.
2ciii	Risk rating applied to Uneconomical risks	As determined by the auditor, e.g. if the risk is high the *rating* field can reflect a number from a risk ranking, e.g. 1-10, or it can be a colour-coded index. To be read in conjunction with the control risk.
3	Control	*Control* refers to the existing controls, further distinguished

		by Preventative and Detective controls, each separated by Manual or Systems controls. The distinction between the different types of controls is made since each type addresses the particular risk in a different way, e.g. preventative system controls for a particular process and risk are dissimilar to detective manual controls. This distinction also facilitates finding the root cause of a problem due to a weak control.
3a	Preventative control	Controls that prevent a risk situation from arising.
3ai	Manual preventative control	Manual controls that prevent a risk transaction/ situation from arising.
3aii	Systems preventative control	Electronic controls, like sign-in rights, edit checks, data integrity checks, etc.
3b	Detective control	A control to detect and correct a risk transaction that has occurred.
3bi	Manual detective control	Manuals controls to detect and correct a risk transaction that has occurred, e.g. a paper-trail of signatures, delivery notes, invoices, documented testimonial evidence, etc.
3bii	Systems detective control	Electronic controls, such as an audit trail to identify who performed the transaction, the date and time of the transaction, details of the transaction, etc.
3c	Criteria	This is the pre-set standard against which actual controls are measured.
3d	Benchmark	The standard of performance against which actual performance is measured. This is also a synonym for quantifiable criteria.
4	Control risk	Control risk, which is the risk that a material misstatement will not be prevented or detected and corrected. See Appendix 1, definitions and terms. The control risk is determined by the auditor, e.g. if the risk is high the *rating* field can reflect a number from a risk ranking, e.g. 1-10, or it can be a colour-coded index.

5	Audit program	The audit program is compiled from the risk and control information.
6	Audit results	Contains the results of the audit tests.

Table 9: Description of the proposed model

The proposed performance audit model

Process - 1	Risk – 2									Control – 3						CR - 4	Aud Prog - 5
	Inefficient – 2a			Ineffective – 2b			Uneconomical – 2c			Preventative – 3a		Detective – 3b		Criteria - 3c	Benchmark - 3d		
	Inherent 2ai	Actual 2aii	Rating 2aiii	Inherent 2bi	Actual 2bii	Rating 2biii	Inherent 2ci	Actual 2cii	Rating 2ciii	Manual 3ai	Systems 3aii	Manual 3bi	Systems 3bii				

Table 10: The proposed performance audit model

Explanation of the proposed model:

The proposed model is intended as a complete audit planning document that reflects the audit entities processes, risks, and controls. From this information the audit program can be compiled.

The major columns from left to right are: Process, Risk, Control, Audit program.

Application of the model

1. To complete the proposed model the auditor first fills in the process column, reflecting the entity's business processes being audited, preferably in point form.
2. The second column is risk; here the auditor records the actual or inherent for each of the risk types, e.g. ineffective, inefficient and uneconomical risks identified for that particular part of the listed process. The materiality of the particular risk (*rating*) is also recorded.
3. For each identified *risk* the matching and existing *control* is raised. If there is not a control (point 3 in Table 3 above) for an actual, material risk then this may become a finding.
4. The benchmark compares actual quantifiable output to a norm. If the actual output is below the benchmark then a risk situation may exist. The auditor may wish to divide the benchmark into lower, middle and upper tiers to determine the extent of risk into which the actual output falls.
5. Criteria is the pre-set standard against which actual performance is measured. A synonym for criteria is 'formal management measures'. This is distinct from the control, which shows actual, implemented controls. A difference between the criteria (what should be in place) and the control (what is in place) is cause for concern and may result in a finding.
6. The control risk is based on the auditor's judgment, considering whether a risk will be prevented or detected, and corrected; it is read in conjunction with the main risk categories' risk rating. This gives the auditor an indication of the extent of testing required.
7. The audit program tests the existence, effectiveness and sufficiency of the controls.
8. Once within fieldwork, audit findings that are identified are placed alongside the audit program.

5.1.1 Evaluation of the proposed methodology: Grounded theory

Grounded theory was applied in the creation of the proposed methodology and model. The following stages of grounded theory were applied:

- Open coding
- Axial coding
- Selective coding was applied
- Theory development (in which consistent concepts and consistent relationships between concepts are identified, and concepts are collated)

<u>Open coding</u>: to divide data into segments and then scrutinize for commonalities reflecting categories or themes

The data was evaluated and through a process of note-making a general list of segments were compiled. From these segments commonalities, categories and sub-categories were explored.
The primary segments were planning, fieldwork and reporting. Within planning a list of 37 sub-categories were identified.

<u>Axial coding</u>: Interconnections are made among categories and subcategories

From the 37 sub-categories interconnections were evaluated and six general subcategories were created: objective, risk, control, process, audit and audit results.

<u>Selective coding</u>: The interrelationships of categories are combined to create a sense of order and meaning

In the evaluation of various categories and subcategories the interrelationships of concepts were considered.

1. Control and risk: Do controls exist independent of risk? Given that each business process has unique elements to it, the idea of universal controls regardless of risk appears naïve. A control should be put in place to achieve a purpose. From a risk-based approach, controls mitigate risk. Therefore the risk is presented first, and the presented actual controls to address the risks are then presented.
2. Types of controls: The control that should be in place (criteria) may be quite different from the actual control that is in place. Per ISSAI 3100 (Performance audit guidelines – key principles), criteria might be of a quantitative or qualitative nature. For this reason two criteria sub-categories are presented: criteria (qualitative) and benchmark (quantitative). This is congruent with Edgett & Snow (1996:11) who argue that benchmarking needs to be applied to the measure of success, and that benchmarks can come from internal and external sources.
3. Actual controls: INTOSAI 3100 presents that performance audits tend to follow one of three approaches; the second approach is a problem-oriented approach in which the cause of a particular problem is verified and analysed. If a problem within a process is the consequence of poor process design or poor implemented controls, it will be evident as a risk. For the purpose of control evaluation the actual controls are further divided into preventative controls, detective controls, manual controls and system controls.
4. Audit program, control and risk: Is an audit program a means to test the existence of risk and accordingly to remove the risk, or is it a test of the control to determine its existence and sufficiency in countering the risk? The approach taken here is that the audit program tests controls that are in place to address risk. Therefore, the logical order given the concepts of audit program, control and risk is: presented risks, controls in place to address the risk, audit program.
5. Audit program and audit results: The audit results are derived from the requirements of the audit program.
6. Process and risk: Consideration is given to any singular process, that it has a purpose and an expected result. Therefore it is possible the user may want to divide any process into input, process and output; given that various sub-processes might contribute in different ways to the overall process, it is

suggested a fourth stage of process (apart from input, process and output) is include, namely, impact. Consideration is given to a risk-based approach or an approach that considers both the process and the risks deriving from the process. According to the appendix to ISSAI 3100 Performance audit guidelines: key principles, section 2.1, performance audit is an information-based activity requiring analytic and creative skill that focuses on the activity as opposed to the financial audit approach of focussing on the accounts. Given the emphasis of activity, the concept of process in retained. As such, risks are contingent on a process, therefore the process is presented first, and then the risk found within the process is presented. The focus on a risk-driven approach is both effective and efficient (Colbert & Alderman, 1995:43); effective because it focuses the auditor's energies in areas of high risk, and efficient because the only work that is performed is that which addresses a specific risk.

7. Risk is determined by the type of transaction and the process under review. Actual risks refer to the actual process, the approach taken in this study is that inherent risks should also be presented. It shows that the auditor is aware of potential risks; furthermore, it is appropriate to include inherent risk as actual controls exist to address inherent risk, e.g. disaster recovery procedures.
8. Risk and objectives. Does the risk determine the audit objective, or does the audit objective determine the risk? The latter is chosen: given any process, if the objective was completeness, the risk is different than if the objective was accuracy. Applying risk-based auditing, and applying the principle whereby the inverse of the audit objective describes the risk e.g. completeness (objective) – incompleteness (risk), accuracy (objective) – inaccuracy (risk), the audit performance objective of efficiency becomes an inefficiency risk. This is also applied to effectiveness and economy.

Objective	Risk
Efficiency	Inefficiency
Effectiveness	Ineffectiveness
Economy	Uneconomical

Table 11 Objective and risk

9. Business process and company objectives. The business process is contingent on the objectives of the company.

The following table shows the sub-categories and categories, and content, using grounded theory.

	Categories					
	Objective	**Risk**	**Control**	**Process**	**Audit**	**Audit results**
Sub-categories						
Assertion	assertion					
audit evidence						audit evidence
audit procedure					audit procedure	
audit process					audit process	
audit program					audit program	
audit risk		audit risk			audit risk	
audit strategy	audit strategy					
benchmark			benchmark			
comparison			comparison			
Control			control			
- manual control			- manual control			
- systems control			- systems control			
Criteria			criteria			
Design					design	
Detective			detective			
Economy	economy					
effectiveness	effectiveness					
efficiency	efficiency					
Fraud material misstatement		fraud material misstatement	fraud			
Objective	objective					
performance audit	performance audit					
Performance indicator performance measures			Performance indicator performance measures			
Planning				planning		
preventative			preventative			
procedures				procedures		
Process				process		
Program					program	
program design					program design	
Purpose	purpose					
Risk		risk				
- inherent risk		- inherent risk				
- control risk		- control risk				
- actual risk		- actual risk				
- significant risk		- significant risk				
- material risk		- material risk				
- assessed risk		- assessed risk				
substantive			substantive			

Table 12: Subcategories and categories using grounded theory

Theory development

In the background to the data and deductions drawn from grounded theory are the theoretical models of Arens and Loebbecke (1994), and Cosserat (2000) and Sawyer, Dittenhofer and Scheiner (2005). In addition, the SAICA performance audit guidelines are also presented (2006). The following aspects contribute to the presented theory:

Consistent concepts

Audit concepts within regularity or financial testing can also be applied to performance auditing, such as the primary segments identified within open coding, i.e. planning, fieldwork and reporting. In addition, the six categories drawn from the axial coding evaluation can also be applied to regularity, financial and performance auditing, i.e. objectives, risks, controls, processes, audit program and audit results.

Consistent relationships between concepts

The interrelationships of various categories and subcategories as determined in the selective coding phase will remain consistent when applied in practice. Example. If, at theory level, risk precedes the control then it follows that for every theoretical example of a transaction then risk would precede control. It would be reasonable to surmise that if all theoretical examples agree to this relationship, then the theory, when applied in practice, would result in a similar observation.

Collation of concepts

Table 12 shows the 47 concepts placed into 6 general groups. Given the evaluation performed in the open, axial and selective coding, the theory develops as follows:

Grouping in a set order

Assume the audit program tests the control, the audit findings would then indicate weak controls/ existing risks. According to Dittenhofer (2001:471) the antithesis of risk is control, the control therefore addresses the risk, and risk is a consequence of a particular process. Conversely, the order of concepts is therefore process, risk, control, audit program, audit results. Given the risk-based audit approach is applied and also that this is performance auditing, the audit objective (efficiency, effectiveness, economy) becomes the primary audit risk (inefficiency, ineffectiveness, non-economy).

Subdivision

Within these general concepts (process, risk, control, audit program, audit results) there is further subdivision: risks are divided into inefficient, ineffective and uneconomical risks. Risks are further divided into inherent and actual risk. Controls are divided into preventative and detective controls, further divided by manual and systems controls.

Comparisons

Unique to performance auditing is the comparison of the actual performance to a standard. Mentioned earlier, according to Leeuw (1996:93) performance auditing makes it possible to distinguish ambitions and intentions from realisations. In this process there is a comparison of what is expected to what was realised. Similarly, according to Trodden (1996:157) performance measurement determines if goals are not being achieved, and performance auditing in turn offers a way of identifying and correcting the root cause for not achieving goals. As with Leeuw (1996), Trodden (1996) implies a comparison of what is expected to what was realised. Two forms of comparison are presented:

- Criteria
- Benchmark

It is for the reason of this comparative process that the proposed model includes a column for criteria (i.e. which controls/ policies/ standards should be in place,

with the intent to compare it to actual controls/ policies/ standards) as well as a column for benchmarks (which represent performance expectations and is compared against actual performance output).

Type of risk

There are various types of risk. In table 12 different types of risk were identified: inherent, control, actual, significant, material and assessed. Focus is placed on inherent and actual risk, and control risk. The reasoning is as follows: The process, risk, control approach is taken. Risks attached to processes will be identified in the risk column; but there are also risks attached to actual controls, such as , e.g. the insufficiency of controls surrounding cash transactions.

Two risk-types are included in the theory development: one for the inherent ad actual risks, the second for the actual controls.

Universal applicability

The evaluation of the presented model seems to indicate that the information presented in order to compile an audit program does not differentiate between a transaction performed in the public or private sector.

Theory or methodology

Corbin & Strauss (2008:55), in defining theory rely on Hage's definition (1972: 34) that theory is a set of well-developed categories that are systematically interrelated through statements of relationship to form a theoretical framework that explains some phenomenon.

The process presented in this study contains a set of well-developed categories that are systematically inter-related, and there is a theoretical framework. Corbin & Strauss (2008:308) make the proviso that theory explains, not merely describe; in the evaluation of grounded theory explanations have been presented. Corbin &

Strauss (2008: 104) make the point that theory building is a set of interrelated concepts, that concepts alone (2008:203) do not make a theory; these two requirements have been met.

It would be presumptuous to describe the result of this research as a proposed theory in order to compile an audit program as it may be misinterpreted as an entire new set of concepts, inter-relationships of concepts, standards, if not new approach to auditing. It is not, and for this reason, although the conditions of what constitutes theory in terms of grounded theory methodology have been met, the term used in this study will be 'proposed methodology'.

Conclusion on the evaluation of using grounded theory

Through the use of grounded theory the basis of the proposed methodology was formed: process, risk and control. Applying risk-based auditing, the performance objective (efficiency, effectiveness, economy) become the performance risk categories. The risk categories are subdivided as are the controls. The proposed model includes a column for the criteria and benchmark.

The proposed methodology is specific to performance auditing, and the proposed model is based on the proposed methodology.

5.1.2 Evaluation of the proposed methodology: SAICA

The analysis of the proposed methodology in terms of the SAICA Guide on performance audit in the public sector, 2006.

The SAICA definition of performance auditing is that it is an independent auditing process carried out to evaluate the measures instituted by management, or the lack thereof, to ensure that resources have been acquired economically and are utilised efficiently and effectively, and to report thereon to management and, if appropriate, to the legislative body concerned (SAICA Guide on performance audit in the public sector, 2006). The presented model accords with the requirements of SAICA definition:

- The presented model addresses the risks associated with uneconomical acquisition, and inefficient and ineffective utilisation.
- The presented model includes a column for measures instituted by management and the audit tests are an evaluation of these measures.

<u>The proposed methodology and model compared to the SAICA guide to performance audit in the public sector, 2006</u>

The following table highlights differences between the SAICA process flowchart and the proposed methodology. This table does not compare the process flow but rather sections within it as the focus of this study is focussed on audit program design theory, not on an overall process of the audit.

Table 13 – SAICA process flow and the proposed methodology

Step	SAICA process flowchart	Key differences with proposed methodology
	PRE-ENGAGEMENT AND PLANNING PHASE	
1	Set up a contact meeting	

2	Agree terms of engagement	
3	Obtain sufficient knowledge	
4	Identify a focus area for the audit – if not known	The proposed model contains columns for risk and the risk rating. If the focus area is not known then the extent of total risk entries (be it inefficiency, ineffectiveness or non-economy) will identify the focus area. Another indicator of focus area is the accumulated risk ranking given to each risk-type, e.g. within an audit, give multiple sub-processes, the total risk-ranking for inefficient risks shows 20 entries with a rating of 1 (where the risk ranking is calibrated from 1 to 5, with 1 being the highest risk), and effectiveness showing 15 entries with a risk ranking of 1.
5	Identify symptoms	If the focus area for the audit is known, and assuming background research occurred, then first identify key processes, then identify both inherent and actual risks linked to the process. Symptoms are synonymous with risk.
6	Develop audit objectives and criteria	The audit objectives are already identified (efficiency, effectiveness and economy) by nature of the audit mandate, i.e. this is a performance audit. The risks, as determined by the process, are placed within the performance risk categories, i.e. inefficiency, ineffectiveness and uneconomical. The presented model requires that both the actual control and the formal control (i.e. criteria), as well as benchmark are listed. These are included in the model only if related to the inherent or actual risk. Audit objectives and criteria that are not related to the performance risk are not recorded.
7	Obtain approval for focus area and criteria	

8	Draft a work plan	
	EXECUTION PHASE	
1	Follow up on symptoms identified in the planning phase	The proposed methodology identifies symptoms/ risk in the planning phases. If additional symptoms are identified subsequent to the planning phased then these would be raised as a scope exclusion.
2	Identify new symptoms	
3	Test the criteria	The proposed methodology advocates that the audit test is not restricted to testing the criteria. The primary test is to determine if actual controls exist to address the actual risk, and if these controls exist, are effective and sufficient. The proposed methodology also identifies additional tests, such as comparison of the actual control to the criteria, the comparison of the actual output to the benchmark.

Table 13 – SAICA process flow and the proposed methodology
Source: SAICA Guide on performance audit in the public sector, 2006

Key differences between the SAICA guide and the proposed methodology and model

1. In the preface to the SAICA document the point is made this is a guide that sets out the basic steps, principles, and audit process to be used when conducting performance audits. The proposed methodology and model, although a guide, is more specific, identifying process and related symptoms/ risks as opposed to merely identifying symptoms, and most importantly, specifying how the audit program is designed applying the process-risk-control methodology. It is therefore surmised that the presentation of more information will result in a more accurate and thus effective audit program, reducing the likelihood that key performance risks will not be audited.

2. The proposed methodology and model divides risks into inherent and actual risks whereas the SAICA guide requires a general category of symptoms.
3. The proposed methodology and model simplifies the SAICA methodology in that risks are categorised within the inverted objective, and risks are ranked, which removes the need for a separate criteria matrix (SAICA guide Annexure A) and removes the further development of audit objectives (SAICA guide reference .24.g)
4. The proposed methodology and model presents actual controls, criteria and benchmarks for each identified risk within a single template, with the purpose of designing an audit program.
5. Testing is not restricted only to criteria.

5.1.3 Evaluation of the proposed methodology: INTOSAI

INTOSAI (the International Organisation of Supreme Audit Institutions) is a global umbrella organisation for the external government audit community. It has existed for over 50 years and has provided an institutionalised framework for supreme audit institutions in order to promote development and transfer of knowledge, improve global government auditing and enhance professional capacities.

The International Standards of the Supreme Audit Institutions (SAI) is abbreviated to ISSAI, and each document receives a number, preceded by ISSAI. The international standards are divided into four groups, as presented in the table below.

Level	Standards	ISSAI	Sub-section
Level 1	Founding principles	1	
Level 2	Prerequisites for the functioning of Supreme Audit Institutions	10-40	
Level 3	Fundamental auditing principles	100-400	
Level 4	Auditing guidelines on financial audit	1000-2999	Implementation guidelines on financial audit
		3000-4999	Implementation guidelines on performance audit
		4000-4999	Implementation guidelines on compliance audit
		5000-5099	Guidelines on international institutions

		5100-5199	Guidelines on environmental audit
		5200-5299	Guidelines on privatisation
		5400-5499	Guidelines on audit of public debt
		5500-5599	Guidelines on audit of disaster-related aid
		5600-5699	Guidelines on peer reviews

Table 14: ISSAI Standards

Source: http://www.issai.org/composite-188.htm

ISSAI 3000-3999 'Implementation guidelines on performance audit' comprises two audit standards:

- ISSAI 3000 Standards and guidelines for performance auditing based on INTOSAI's Auditing Standards and practical experience
- ISSAI 3100 Performance audit guidelines: key principles

The following evaluation of ISSAI 3000 has two parts: an evaluation of the standards as presented in the 5 parts, and an evaluation of specific concepts.

5.1.3.1 Evaluation of the proposed methodology: ISSAI 3000

The evaluation using ISSAI 3000 comprises two parts:

- The first main evaluation, in which the 5 parts making up ISSAI 3000 are used to evaluation the proposed methodology and model
- The second main evaluation, in which specific concepts within ISSAI 3000 are used to evaluate the proposed methodology and model

ISSAI 3000 First main evaluation

ISSAI 3000 consists of 5 parts. The question is presented where the proposed methodology deviates from the contents of ISSAI 3000

Part 1: What is performance auditing?

ISSAI 3000 presents two approaches to performance audit, quite different to each other but both are based on national standards for performance auditing. These are the results-oriented approach and the problem-oriented approach.

In the results-oriented approach the auditor studies performance and relates observations to the given norms (such as goals, objectives, regulations, etc.) or the audit criteria. This approach raises questions such as 'What is the performance or what results have been achieved, and have the requirements or the objectives been met?' In this approach, shortcomings are likely to be defined as deviations from norms or criteria. Identified recommendations are aimed at eliminating such deviations.

The problem-oriented approach deals with problem verification and problem analysis, normally without reference to predefined audit criteria. With this approach, shortcomings and problems – or at least indications of problems – are the starting point of an audit. The problem- oriented approach deals with

questions such as: ‘Do the stated problems really exist and, if so, how can they be understood and what are the causes?’

A major task in the audit is to verify the existence of stated problems and to analyse their causes from different perspectives (problems related to economy, efficiency, and effectiveness of government undertakings or programs).

Evaluation: Results-oriented approach

Does the proposed methodology and model cater for the results-oriented approach?

The proposed methodology allows for the recording of any process (subdivided into input, process, output and impact), as well as the criteria and the benchmark values. The proposed model records this information from which the audit program is compiled. Sufficient information is presented that allows for answering a question in which actual results are compare to given norms or other criteria. The proposed methodology and model therefore caters for the results-oriented approach.

Evaluation: Problem-oriented approach

Does the proposed methodology and model cater for the problem-oriented approach?

The design of the proposed methodology is risk based, recording problems and shortcomings as risks to normal processing. The section for actual controls is divided into four subsections (systems controls, manual controls, detective controls and preventative controls) with the intent to assist with root-cause identification of the problem.

The proposed methodology and model does not resolve the problem but it does record key information that is used in resolving the problem, and therefore caters for the problem-oriented approach.

There are two areas that have relevance to the proposed methodology and model:

Firstly, ISSAI 3000 raises the issue of government policy, stating that while performance auditing does not question political goals, it can highlight the consequences of a given policy. It can also identify and illustrate shortcomings resulting from conflicting goals. As an example, performance auditing does not question the level of compensation in social welfare systems; however, the auditors must have, as a starting point, a set of problems that are related to economy, efficiency, and effectiveness in the welfare systems being audited.

Evaluation

This has bearing on the proposed methodology in that it is risk-based, and in using the proposed methodology risks related to the economy, efficiency and effectiveness of the entity being audited are required to be obtained.

Secondly, the issue of audit preparation. Per ISSAI 3000:

- even in the early planning stages of an audit, systems of quality assurance might prove indispensable to ensure that the problems to be addressed are material and well defined;
- the objectives, problems, audit questions, and selected areas largely determine the quality of the audit;
- the process of planning, and the various stages that make up the decision-making process, ensure that quality is regularly assessed, since certain conditions must be met before the audit can move forward
- meticulous preparations are important to define the audit questions, the information needed, and the audit design.

Evaluation

The proposed methodology meets the above requirements, in that it collates elements of a process, the actual risk, the ranking of a risk, the actual control, and

the criteria in order that an audit program question can be designed that best addresses the risk attached to the performance of a process.

To sum, two main concerns are raised in part 2, problems related to the economy, efficiency and effectiveness of the entity being audited, and the quality of preparation to define the audit questions and the audit design. The design of the proposed methodology and model do not conflict with these requirements.

Part 3: Field standards and guidance: Initiating and planning the performance audit

Part 3 makes the statement that the most important steps in drawing up an audit proposal are:
a) Defining the specific issue to be studied and the audit objectives,
b) Developing the scope and the design of the audit,
c) Determining the quality assurance, the timetable, and the resources.

Evaluation

The proposed methodology facilitates these requirements as follows:

a) The audit objectives for performance audit in general are economy, efficiency and effectiveness. The audit objectives for a specific audit may be determined by management or might be determined by the auditor: the methodology facilitates this process in that the performance risks are ranked, which means that for a collection of sub-processes key risks are identified from the ranking, which gives focus to the issue to be studied. The proposed model contains columns from risk-type and risk-ranking; the risk-type (inefficiency, ineffectiveness, non-economy) determines the audit objective, i.e. efficiency, effectiveness, economy.

b) The scope and the design of the audit can be deduced from the proposed model, in that it contains key information about risks, controls, criteria, risk ranking and control risk.

c) The proposed model is in spreadsheet form, allowing the auditor to add additional columns alongside audit tests, identifying allocated time and resources, as well as actual time.

To sum, the proposed methodology and model compliments the ISSAIs 3 steps in compiling an audit proposal.

An important part of part 3 is audit criteria. The proposed methodology takes cognisance of audit criteria, distinguishing between qualitative and quantitative criteria. This is reflected in the proposed model as a column for qualitative criteria ('criteria') and quantitative criteria ('benchmark').

Part 4: Field standards and guidance: Conducting the performance audit

The proposed methodology and model focus on planning phase of the performance audit, specifically on the compilation of the audit program. Part 4 does not have relevance to the proposed methodology or model.

Evaluation

No evaluation is presented for part 4.

Part 5: Reporting standards and guidance: Presenting the performance audit result

The proposed methodology and model focus on planning phase of the performance audit, specifically on the compilation of the audit program. Part 5 does not have relevance to the proposed methodology or model.

Evaluation

No evaluation is presented for Part 5.

To sum, the evaluation of the ISSAI 3000 standard did not identify any conflicts with the proposed methodology and model.

ISSAI 3000 Second main evaluation

This section is the second part of the ISSAI 3000 evaluation, i.e. an evaluation of specific concepts.

ISSAI 3000 First evaluation: The standard is a guideline

In the ISSAI 3000 preamble the point is made this standard is not a normative or a technical document, or a handbook, but it contains a number of guidelines and other information with practical implications that take into consideration the special premises and features of performance auditing. In the introduction to the standard the point is made that guidelines in performance auditing cannot comprehensively embrace all possible approaches, methods and techniques, since in practice that would include everything in the social sciences.

Evaluation

The proposed methodology and model have taken the proposed guidelines and applied them in a particular manner. The standard does not offer such detailed application.

ISSAI 3000 Second evaluation: The risk of streamlining

In s.1.8 ISSAI 3000 warns of the risk of streamlining in audit planning, i.e. making a process efficient by stripping off non-essentials, warning that advanced performance auditing is complex investigatory work requiring flexibility, imagination and high levels of analytical skills, as well as hamper creativity and professionalism.

In s.1.9 ISSAI 3000 warns that streamlined and detailed procedures, methods and standards may actually hamper the functioning of performance auditing.

In s.3.3.1 ISSAI 3000 advises that as performance audits are carried out in a complex world, and it is rarely possible to devise a comprehensive audit design that will predict the progress of a performance audit in every detail.

Evaluation

The proposed methodology allows for high-level interpretation (process, risk, control) as well as allows for detail: the general categories are subdivided and the line-by-line approach requires detail. The risk of streamlining does not exist with the proposed model but with the auditor who does not complete all the risks of the proposed model.

ISSAI 3000 Third evaluation: Impact

ISSAI 3000 emphasises the term impact in various forms:
E.g. Comparing the actual impact of activities with the intended impact
E.g. The impact of the audit findings on an organisation
E.g. Means to optimise the impact
E.g. The relationship between goals, objectives, outputs and impacts
E.g. How the audited entity monitors impact
E.g. In the evaluation of a policy, what would the social and economic impact be?

Evaluation

The proposed methodology contains columns for process, risk, and controls. The user can include sub-processes within the process column but can also divide the process into input, process, output and impact stages. If a process has a notable impact it can be raised in the risk columns. The criteria column will reflect the expectation of the impact, and the benchmark will reflect the quantifiable measure of the expected impact.

To sum, the proposed methodology and model makes allowance for impact.

ISSAI 3000 Fourth evaluation: Comparisons

ISSAI 3000 identifies the importance of comparisons,

E.g. Comparing the actual impact of activities with the intended impact

E.g. Comparing various outcomes had existing policy objectives contained different goals or were implemented earlier/ later

E.g. A finding on efficiency can be formulated by means of a comparison with similar activities or with other periods

E.g. The comparison of costs against outputs

E.g. The comparison of output to the benchmark

E.g. The comparison of the actual control to the criteria

E.g. An audit finding is the comparison of 'what is' with 'what should be'

Evaluation

The proposed methodology allows for comparison in two main ways: the comparison of actual to intended (be it output or controls), as well as that the proposed model works on a line-by-line basis so that individual transactions can be compared. To sum, the proposed methodology and model makes allowance for comparisons.

ISSAI 3000 Fifth evaluation: Risk

In the discussion of accountability and a focus on causes of problems, ISSAI 3000 mentions accountability auditing, and offers advice whereby focus be placed on observed problems and possible causes; this creates an environment for comprehensive analysis.

In part 3 'Field standards and guidance: Initiating and planning the performance audit', specifically s.3.2.2 dealing with strategic planning, the point is made that for important problems or problem areas, the greater the risk for performance consequences, the more important the problems tend to be.

Evaluation

The proposed methodology is risk-based, in that the actual risk is the inverted performance objective, i.e. inefficiency, ineffectiveness and non-economy. Through a focus on observed problems the proposed theory is that the identification and subsequent removal/ reduction of the risk will enhance performance.

The methodology also includes a risk ranking of the particular performance risk, which complies with the ISSAI reasoning that the greater the risk for performance consequences, the more important the problems tend to be. The proposed model provides an opportunity to match the risk with the actual control and criteria.

ISSAI 3000 sixth evaluation: Definition of performance auditing

According to ISSAI 30000 s.1.1, performance audit is concerned with the audit of economy, efficiency and effectiveness. Furthermore, it embraces:
(a) audit of the economy of administrative activities in accordance with sound administrative principles and practices, and management policies;
(b) audit of the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and
(c) audit of the effectiveness of performance in relation to achievement of the objectiveness of the audited entity, and audit of the actual impact of activities compared with the intended impact'.

Evaluation

The proposed methodology is based on the three performance audit objectives of economy, efficiency and effectiveness, and therefore there is no conflict with the standard.

5.1.3.2 Evaluation of the proposed methodology: ISSAI 3100

ISSAI 3100 'Performance audit guidelines: key principles' was endorsed by INTOSAI in 2010. It is largely based on the concepts presented in ISSAI 3000. As the titles describes, the document presents key performance audit principles, i.e. definitions, performance audit objectives, selecting audit topics, the audit process, and quality control.

ISSAI 3100 First evaluation: Performance audit objective

Reading from ISSAI 3100 s.2.2.9, 'According to ISSAI 1006, an individual performance audit should have the objective of examining one or more of these three assertions:

(a) the economy of activities in accordance with sound administrative principles and practices, and management policies;

(b) the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and

(c) the effectiveness of performance in relation to the achievement of the objectives of the audited entity, and the actual impact of activities compared with the intended impact.'

Evaluation

The proposed methodology applies the three assertions (efficiency, effectiveness, economy) not as assertions but as risks (i.e. inefficiency, ineffectiveness, non-economy).

The proposed methodology also allows for the inclusion of each risk, as identified within a process, the actual control and benchmark, satisfying the requirements of (a), (b) and (c). With reference to (c) and impact, within the process column the

auditor can subdivide the process into input, process, output and impact. The intended impact recorded in the criteria column allows for the comparison of the actual to the intended, therefore satisfying the requirements of (c). The proposed methodology and model does not conflict with the requirements of this standard.

ISSAI 3100 Second evaluation: audit criteria

Per ISSAI 3100 s.2.4.1.13, 'Performance audits should have suitable audit criteria that focus the audit and provide a basis for developing audit findings. The audit criteria, which can be of a qualitative or quantitative nature, should be reliable, objective, useful, and complete. It should be possible to identify the source of the audit criteria used.'

Evaluation

The proposed methodology and model include a column for both qualitative and quantitative criteria, i.e. 'criteria' and 'benchmark'. The proposed methodology and model does not conflict with the requirements of this standard.

ISSAI 3100 Third evaluation: public and private sector

Per ISSAI 3100 s.2.1, 'Performance auditing is an independent and objective examination of government undertakings, systems, programmes or organisations, with regard to one or more of the three aspects of economy, efficiency and effectiveness, aiming to lead to improvements.'

Evaluation

The statement is made that performance audit is an independent and objective examination of government undertakings, systems, etc. It is the opinion of this study that performance audit can apply in both the private and public sectors. This was the conclusion of Loots (1989: 406). Furthermore, reference is made to AUS 808 'Planning performance audits' (prepared by the Auditing Standards Board of the Australian Accounting Research Foundation; issued by the Australian

Accounting Research Foundation on behalf of the Australian Society of Certified Practising Accountants and The Institute of Chartered Accountants in Australia; 1995) which states:

> 'The purpose of this Auditing Standard (AUS) is to establish standards and provide guidance on planning a performance audit. This AUS is to be read in conjunction with AUS 106 'Explanatory Framework for Standards on Audit and Audit Related Services' and AUS 806 'Performance Auditing'. This AUS applies to all performance audits whether:
> (a) the audit report is published or not; and
> (b) the audit is undertaken:
> (i) in the private or public sector'

It is deduced from the above that performance audit does have a place in the private sector.

Per ISSAI3100 s.2.4.3.29, 'The auditor is not normally expected to provide an overall opinion on the achievement of economy, efficiency and effectiveness by an audited entity in the same way as the opinion on financial statements. Where the nature of the audit allows this to be done in relation to specific areas of an entity's activities, the auditor is expected to provide a report which describes the circumstances and context to arrive at a specific conclusion rather than a standardised statement.'

It is not the intent of this study to resolve how an overall audit opinion can be applied to a performance audits completed in the private sector; this study does identify that a transaction, be it in the private or public sector, contains processes, risks, controls and the formation of an audit program is contingent on these three interacting concepts.

Within the South African context, the pending option for private companies to be exempted from statutory audits, performance audits will add value to companies not receiving statutory audits.

New methodology or a simple collation of concepts?

The SAICA guide on performance audit (2006) as well as ISSAI 3000 do not present sufficient detail as compared to what is presented within the proposed methodology. Within the introduction to both documents the intent as a guide is made clear – the question is whether the proposed methodology should stand independently or whether this research should rather amplify the shortcomings of SAICA and ISSAI 3000.

The proposed methodology is not a collation of principles or concepts based on SAICA or ISSAI for the following reasons:

- The proposed methodology is not entirely based on the contents of SAICA or ISSAI, e.g. the decision to used a process, risk, control layout; e.g. to use the inverted objective as risk.
- The basis of the proposed methodology comes from grounded theory, and the data set included different sources of data.
- The proposed methodology generates an information environment from which an audit program can be compiled.
- The proposed methodology is geared to a particular output, i.e. a performance audit audit program. This is an important document in the audit and research could not identify a detailed methodology or model.

Conclusion

The result of research question 1 indicated that a methodology and model can be developed for performance audit for the purpose of an audit program design.

The evaluation of grounded theory showed how the various steps were applied to generate the proposed methodology.

The SAICA evaluation identified that the proposed methodology was very specific compared the general guideline.

The INTOSAI evaluation revealed that the proposed methodology made use of the standard's guidelines and principles. A major difference is in the application

of performance audit: this research paper favours the argument that it should not be restricted to the public sector but can also be applied to the private sector.

The proposed methodology, although evaluated against SAICA and INTOSAIs ISSAI 3000 and 3100, is not an adaptation and collation of the guide and standards.

5.2 Research question 2

Research question 2: Can *the proposed model be applied in practice?*

Results achieved

Results of the field-test indicate that the proposed model can be applied in practice. Two field tests were performed, both in the private sector. The first has an annual turnover exceeding R10 million, the second has an annual turnover exceeding R100 million.

5.2.1 Field test 1

Summary

The purpose of research question 2 was to determine if the presented methodology and model could be applied in practice.

The model was applied to a retailer with an annual turnover over R10 million, and interviews were held with the general manager. Key information was obtained, written up in the proposed model and the audit program was prepared by the researcher. A second interview took place to evaluate the presented information and the audit program.

Two key findings were identified:

1. The general manager is a shareholder, the key salesman and the face of the business, working in a high-stress environment. In the initial evaluation of economic risk he did not identify himself as high risk. The imbalance between the actual risk and actual control amplified the discrepancy. From the company's perspective this is a succession planning risk; the control that should be in place is a key-man insurance policy.
2. The retailer's outlet is in a busy shopping centre close to an entrance. Passing traffic is high. An evaluation of key sales items and customer demographics showed that front-window space was not optimally used.

How the findings were identified:

- The process was provided by the auditee, the auditor completed the inherent and actual risks, and the actual, matching controls were provided by the auditee. A risk rating for each inherent risk was completed by the auditor. This finding is high risk to which where was no corresponding control.
- The main contributors to annual turnover were compared with the items in the shopfront windows; further comparison took place between the items in the shopfront windows and the client demographics.

Methodology

A formal meeting was set up with the general manager; a walk-through of the premises was performed, background knowledge of the business was obtained, key information about the business was obtained.
The various process categories were first identified, then the risks, then the controls. Based on the controls the audit program was compiled.

At a second meeting with the general manager the proposed methodology and model was discussed as well as the audit program design and the audit program tests.

Results

Management accepted all risks, controls and audit tests. No further performance risks were identified.

The results are presented as follows: There are four main focus areas in the business entity:

- Stock
- Sales
- Staff
- Cash and liquidity

Due to the size of the spreadsheet each main focus area is presented separately over two pages. The first page shows the process and the risks. The second page shows the controls, audit program and audit findings.

Four findings are presented, these are within the audit findings column and highlighted in green.

Due to the detailed nature of the business and to avoid clutter on the spreadsheet, audit questions are only raised for key risks, i.e. risks rated as 1 or 2.

Findings

There are four findings.

1. The auditee is the general manager, key salesperson, works the longest hours, he is the primary personality linked to his business. This is a keyman risk - his stress is the highest, the store turnover is contingent on his sales and leadership.
2. Shop front-window utilisation. Given the passing traffic and their primary demographic, the store front-windows are not used optimally.

3. There is no benchmark to determine effective sales as a function of traffic. This benchmark is a ratio between total passing traffic, traffic into the store, and number of sales per month. This ratio gives management a quantifiable way to measure how new advertising methods and promotions affects customer visits.
4. No complaints register. The main shareholder is a silent partner and there is no means for him to determine the level of complaints directed at the store. The complaints register, which can be a webpage printed on the sales receipt, will allow the owner to identify impediments to running the business effectively. For management on a rotational basis this webpage will prevent isolated incidents from staying with the manager on site for that day. Repeat business is 80% of turnover, which implies that complaints might affect repeat business.

The proposed model is presented below, completed for an independent business entity. The process and risk sections for stock are presented on this page, the sections for control, audit program and audit findings are presented on the following page. There are four main processes: stock, sales, staff, cash and liquidity.

Process	Risk								
	Inefficient		1=high	Ineffective		1=high	Uneconomical		1=high
	Inherent	Actual	rating	Inherent	Actual	rating	Inherent	Actual	rating
STOCK									
Goods ordered to meet demographic				No client demographic plan	No client demographic plan	1			
				Client demographic plan is erroneous	Client demographic plan is erroneous	2			
Stock received at warehouse	Major time delay	Risk of delay	2						
		Wrong goods received	3						
				Shrinkage	Shrinkage	4			
							Order price is not delivery price	Order price is not delivery price	5
				Goods damaged in transit	Goods stolen in transit	5			
	Warehouse is far from store	Warehouse close-by	5						
				Warehouse security risks	Warehouse security risks	4			
Goods in store for sale	Store times limited	Store times are not limited	5						
				Staff not incentivised to sell	Wrong commission structure per item	2			
							Slow-moving stock	Slow-moving stock	3
Reordering of goods	Goods not re-ordered	Goods not reordered	4						
							Re-order prices differ	Re-order prices differ	4
Payment to supplier	Delayed payment = no early settlement discount	Delayed payment = no early settlement discount	1						

Table 15 Research question 2, field-test 1 audit program

Control						AR	Audit program	Audit findings
Preventative		Detective		Criteria	Benchmark			
Manual	Systems	Manual	Systems					
Customer demographic plan		Monthly management meetings			Total stock turn: 5 weeks		Obtain evidence the monthly management meeting addresses stock movement	
Management orders stock		Sales reports					Compare stock-on-hand to the benchmark 5 week turn, investigate if benchmark is overrun	
							Determine reasonability of benchmark	
							Identify why slow stock was purchased, and authorised by whom	
Supplier delivery agreement							From a population of material deliveries, compare the expected vs. actual date of delivery.	
	Transport controls						From the list of cancelled orders determine how many were due to late deliveries	
							Conclude on effectiveness of supplier, examine the supplier agreement for penalties, advise management of losses	
Security controls								
Supplier agreement								
Supplier agreement								
Manual controls			Camera					
					R1m stock cost on floor		Establish the extent of annual shoplifting. Determine the cause. Obtain the industry benchmark and	
Employee contract		Meetings monthly					Enquire whether staff have left due for commission reasons. Obtain the commission rates, establish if an industry benchmark exists.	
Return policy with supplier								
		Customer complaints			Stock turn: 5 weeks			
Supplier agreement								
Bank overdraft			Vendor statement				Obtain stock payment reports and supplier agreements	
							Determine the date of supplier payments and identify the opportunities of earlier payment	
							Conclude on effective liquidity management	

Table 16 Research question 2, field-test 1 audit program

The process and risk sections for sales are presented on this page, the sections for control, audit program and audit findings are presented on the following page. There are four main processes: stock, sales, staff, cash and liquidity.

Process	Risk								
	Inefficient		1=high	Ineffective		1=high	Uneconomical		1=high
	Inherent	Actual	rating	Inherent	Actual	rating	Inherent	Actual	rating
SALES									
Turnover comprises:									
- Singular products									
- Installation deals									
Advertising	No advertising	No advertising	3						
				No advertising strategy	No advertising strategy	3			
Placement of goods - store & windows									
Passing trade					Passing trade number understated	1			
Front-window				Front window does not attract customers	Front window does not attract customers	1	Items do not show prices	Items do not show prices	2
							Window does not promote sales	Window does not promote sales	1
Customer enters premises									
- Repeat business									
- New customer									
	Customer waiting for service		2						
		Customer waiting for service	2						
				Sales staff are ineffective	Sales staff are ineffective	1			
							No sale occurs	No sale occurs	1
Item is purchased by the customer									
Payment									
- Cash				Cash is fake/ stolen (pink ink)	Fraud	2			
- Card				Fraud	Fraud	1			
- Account				Fraud	Fraud	2			
Guarantee				Guarantee problems		3			
Returned goods									
	Warranty repair time	Warranty repair time	2						
				Problematic warranty conditions	Problematic warranty conditions	2			
Customer complaints									
	Not dealt with timeously	Not dealt with timeously	1						
				Symptom addresses, not cause	Symptom and/or cause not addressed	1			
							Loss of custom		1

Table 17 Research question 2, field-test 1 audit program

Control						AR	Audit program	Audit findings
Preventative		Detective		Criteria	Benchmark			
Manual	Systems	Manual	Systems					
					65% of turnover			
					35% of turnover			
					R36 000 per annum			
High repeat customer base 80%				Advertising drive not reflected in turnover. High passing traffic				
							Obtain evidence advertising, and see effect on monthly sales	
			Mall management counting controls at entrances		280 000 per month (per mall management)		Independently confirm this figure, and how obtained. Examine the counter. Test for reasonability against parking lot capacity.	
Window dressing		Feedback for customer queries	Monthly sales reports shows extent of product movement				Examine the store windows for utilisation and representation	Window space not fully utilised. 35% of turnover from installations - not reflected in window. Business offers multiple sound-rooms - not
							See material contributors to turnover and determine how this is reflected in the front window	
					80% of turnover			
					20% of turnover			
Staff training	Door chime indicating a customer		Sales records					
							280 000 footsteps passing per month. Obtain the business's door counter, determine how many customer entries per month. Obtain the number of sales for the month	No effectiveness benchmark, e.g. ratio 1000:10:1
Ultraviolet tester					25% of turnover, no fraud benchmark for			
	Bank PIN controls				70% of turnover, no fraud benchmark for			
Management authority					5% of turnover Preferred clients only; no fraud benchmark			
Supplier agreement			Invoice date		No benchmark			
Supplier agreement					In warranty repair: 5-30 days		Obtain a listing of all returned goods. Separate in-warranty from out-of-warranty. Conclude on accuracy of benchmark. Determine cause of benchmark overrun.	
Supplier agreement					Out of warranty repair: 5-15 days			
			Internet 'HelloPeter.com'					
Training			Internet 'HelloPeter.com'					
Training			Internet 'HelloPeter.com'					
Training		Complaints addressed by management	Internet 'HelloPeter.com'				Investigate complaints on the Internet. Interview salesmen and staff, obtain extent of complaints.	No benchmark for complaints. No complaints register

Table 18 Research question 2, field-test 1 audit program

The process and risk sections for staff are presented on this page, the sections for control, audit program and audit findings are presented on the following page. There are four main processes: stock, sales, staff, cash and liquidity.

Process	Risk								
	Inefficient		1=high	Ineffective		1=high	Uneconomical		1=high
	Inherent	Actual	rating	Inherent	Actual	rating	Inherent	Actual	rating
STAFF									
Temp vs. Permanent staff?									
(Permanent preferred)	Temp staff and training risk	Temp staff and training risk	2						
Staff selection criteria					Incompetent sales staff	1			
							Wages not competitive		
Staff contingent		Insufficient staff on busy days	3						
				Staff not competent		3			
							Too many sales staff on slow days		
Training									
	Training is infrequent	Training is infrequent	4						
				No training	No training	4			
				No knowledge of products	No knowledge of products	3			
				Poor customer skills	Poor customer skills	4			
Staff disputes & complaints									
	Commissions paid too late	Commissions paid too late	3						
				Staff morale low					
							Low commissions		3
Staff review									
	Review not regular	Review not regular	4						
				Review based only on sales	Sales and customer relations	3			
Staff retention/ loss									
(Actual loss = 7%)									
- sales staff				No succession planning	No succession planning	4			
- admin staff				No succession planning	No succession planning	3			
- management				No succession planning	No succession planning	3			
Payment									
- Salaries					Systems payment is not made	4		Business in liquidation	4
- Commission					Systems payment is not made	4		Business in liquidation	4
Staff turnover	High staff turnover	High staff turnover	5						
							New staff compromise sales	New staff compromise sales	4

Table 19 Research question 2, field-test 1 audit program

Control						AR	Audit program	Audit findings
Preventative		Detective		Criteria	Benchmark			
Manual	Systems	Manual	Systems					
		Weekly training						
Formal interview process								
Background checks								
					Sales staff: 16			
		On-site management						
		On-site management						
				Training manual				
		Monthly training						
		3 times per month training						
		3 times per month training						
		3 times per month training						
		External legal firm		Labour law				
On-site management								
Employment contract		Weekly & Monthly meetings						
Training								
		Appraisals every 6 months		Standard review procedures				
					10% per annum			
					No industry norm for this sector			
Competitive salary		Appraisals every 6 months		Standard review				
Competitive commission		Appraisals every 6 months		Standard review				
Share options, bonuses		Appraisals every 6 months		Standard review procedures				58% of sales from auditee. Auditee is front of business. Auditee is a shareholder. Auditee is in senior management
	Bank overdraft facility		Bank payment systems	25th of the month				
	Bank overdraft facility		Bank payment systems	7th of the month				
Formal hiring practices		Formal exit interview	Sales report by salesperson					
Weekly meetings, appraisals								

Table 20 Research question 2, field-test 1 audit program

The process and risk sections for cash and liquidity are presented on this page, the sections for control, audit program and audit findings are presented on the following page. There are four main processes: stock, sales, staff, cash and liquidity.

Process	Risk								
	Inefficient		1=high	Ineffective		1=high	Uneconomical		1=high
	Inherent	Actual	rating	Inherent	Actual	rating	Inherent	Actual	rating
CASH & LIQUIDITY									
- CASH RECEIPT & MANAGEMENT									
Monthly turnover goal									
Overdraft		Overdraft rate does not fluctuate with stock levels, indicating slow moving items	2						
Current overdraft									
Liquidity balance							Insufficient overdraft		4
Monthly running costs							Insufficient funds	Insufficient funds	4
Marginal costs (commissions)							Insufficient funds	Insufficient funds	4
Supplier terms	Terms cannot be renegotiated	Terms cannot be renegotiated	4						
								Vendor does not offer cash discount or rebate structure	2

Table 21 Research question 2, field-test 1 audit program

Control						AR	Audit program	Audit findings
Preventative		Detective		Criteria	Benchmark			
Manual	Systems	Manual	Systems					
					R1m		Identify how many times in last year monthly t/o was	
	Bank overdraft	Administrative responsibility	stock reports, sales reports, etc.		(500 000)		Obtain monthly bank, monthly stock levels and monthly turnover for last 24 months, graph the balances, conclude on the 5 week stock turnover rate benchmark; conclude on the liquidity risk of the company.	
		Management meetings & accounting controls			(10 000)		Identify how many times in last year overdraft limit was reached. Establish rate of overdraft increasing and rate to reduce to zero. Conclude on effective liquidity management	
	Bank relationship							
	bank overdraft							
	bank overdraft							
		Competitive environment for new suppliers						
Vendor agreement	Vendor relationship	Vendor agreement	Vendor history of supplies and payments				Obtain the vendor contract. Obtain evidence that the terms are reviewed annually. Determine if external research is performed for vendors offering cheaper prices/ better terms/ more rebates.	

Table 22 Research question 2, field-test 1 audit program

Research question 2 field test 1 - Evaluation of the results

The proposed model is based on the proposed methodology. The requirements of the proposed model were completed. The methodology required identifying the process, the risks and requesting the matching control. A list a list of controls was requested in order to identify the matching risks; this was performed as a test of completeness.

Due to the consulting nature of auditing, the auditor tends to have a greater insight into inherent risk than the auditee. If the auditor is not competent to understand the risks within a business sector then the effect of the model is compromised, in that key risks may be ignored, no actual controls addressing the risks will be identified, and no test verifying the actual controls will occur.

The auditee accepted the links between the process, risk and control, this was a performance audit and therefore focussed on performance risks. The audit tests addressed key risks; the auditee confirmed no key performance risks were missed.

The auditee benefited from the inherent risks identified in by the exercise.

The two key questions of this test were put to the general manager:

- Have all material performance processes and risks pertinent to the business been identified by the proposed model?
- Does the audit program addresses key risks?

Management answered in the affirmative to both questions.

Does this field test satisfy the requirements of SAICA? The SAICA definition of performance auditing is that it is an independent auditing process carried out to evaluate the measures instituted by management, or the lack thereof, to ensure that resources have been acquired economically and are utilised efficiently and effectively, and to report thereon to management and, if appropriate, to the legislative body concerned (SAICA guidelines on performance auditing and 2006). To evaluate: an independent audit process was carried out, the audit identified that labour resources were at risk (i.e. not designed effectively), and purchased goods were not presented effectively for resale.

5.2.1 Field-test 2

Summary

The purpose of research question 2 was to determine if the presented methodology and model could be applied in practice.

The model was applied to a retailer with an annual turnover over R100 million. Key information was obtained from the staff and management, then written up in the proposed model and the audit program was prepared by the researcher. A second interview took place to evaluate the presented information and the audit program.

Two key findings were identified:

1. The general manager is the owner, the key manager on the floor and the face of the business, working in a high-stress environment. The control that should be in place is a key-man insurance policy.
2. The advertising budget is shared between the store and head-office (as this is a franchise). Management was interested to know what the competitor's advertising spend was, to establish if head office advertising could be higher.

Methodology

A formal meeting was set up with the owner/ general manager; a walk-through of the premises was performed, background knowledge of the business was obtained, key information about the business was obtained.
The various process categories were first identified, then the risks, then the controls. Based on the controls the audit program was compiled.

At a second meeting with the general manager the proposed methodology and model was discussed as well as the audit program design and the audit program tests.

Results

Management accepted all risks, controls and audit tests. No further performance risks were identified.

The results are presented as follows: There are four main focus areas in the business entity:

- Purchases
- Stock
- Administration
- Staff
- Sales
- Customer
- Environmental

Due to the size of the spreadsheet each main focus area is presented separately over two pages. The first page shows the process and the risks. The second page shows the controls, audit program and audit findings.

Two findings are presented, these are within the audit findings column and highlighted in green. The first finding, the general manager is the owner and face of the franchise business, is a performance risk in that in his absence will compromise the effective management of the store, which in turn will affect operations that focus on efficiency and economy. The second finding raises the risk of ineffective advertising due to the amount spent by head office. These findings were deduced through discussion and in a real audit evidence would be presented that is relevant, reliable and sufficient and will support the risk.

Due to the detailed nature of the business and to avoid clutter on the spreadsheet, audit questions are only raised for key risks, i.e. risks rated as 1 or 2.

The proposed model is presented below, completed for an independent business entity. The process and risk sections for purchases are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

PURCHASES						
Process	**Risk**					
	Inefficient	**rank**	**Ineffective**	**rank**	**Uneconomical**	**rank**
Three sources of suppliers: · Head Office · Distribution centre · Independent vendors					Liquidity risk	2
Goods ordered, not received					Fraudulent vendor	4
Over-ordered goods					Over-ordering results in liquidity risk	2
Payment					Payment to fictitious vendor Overpayment to vendor	

Table 23 Research question 2, field-test 2 audit program

Control					
Actual control	**CR**	**Criteria**	**Benchmark**	**Audit program**	**Findings**
Agreed time to pay suppliers	4	Cash management		Examine the vendor and head office agreements. Conclude on existence, currency and content-risk	
Head Office assistance with payment process		Bank overdraft		Identify the actual time to pay suppliers. Obtain the market benchmarks. Conclude on timing risk	
		Vendor agreement	Standard business practise	Determine the bank overdraft, establish if it covers reasonable contimngency risks	
		Head office agreement	Standard business practise		
Only pay on invoice					
Only cheque payment					
Single signatory					
Segregation of Admin staff					
Agreements with suppliers, stock counts		Daily & weekly stock management	Daily, weekly & monthly	Obtain stock reports for the year, determine the cause of low stock items	
		Management meetings		From said reports, determine slow moving items; identify cause	
Only pay on invoice				Obtain a population of all payments for the year	
Only cheque payment				Perform ratio analysis	
Single signatory	1			Obtain all purchase invoices for the year	
Segregation of Admin staff				Match to payments, perform ratio analysis	
				Conclude on risk of overpayment	
				Conclude on effective identification and management of stock levels	

Table 24 Research question 2, field-test 2 audit program

The process and risk sections for stock are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

STOCK						
Process	**Risk**					
	Inefficient	**rank**	**Ineffective**	**rank**	**Uneconomical**	**rank**
Goods are ordered						
Goods received into Stock	Stock deteriorates/ perishes					
			Stock quality weak	2		
					Over-order of stock	
From Stock onto Floor					Shrinkage	3
Floor to basket					Customer theft	
Basket to till					Goods are under-rung	
Month-end reports					No knowledge of extent of shrinkage	2
Stock on shelves	Stock deteriorate/ perishes					

Table 25 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
Freezers in stock room		Temperature control		Identify the quality control mechanisms in place	
Return agreements with supplier				Determine how many customer complaints are stock related	
Return agreements with supplier				Obtain a sample of product complaints, determine the cause.	
				Conclude on effective quality controls	
				Conclude on vendor agreement wrt to quality	
Segregation of duties				Determine the industry standard for food retail shrinkage	
Training	1		2% industry standard: retail	Examine the controls to identify shrinkage	
Weekly stock reports				Obtain the shrinkage reports, compare to benchmark	
				Determine the cost of the shrinkage	
				From ratio analysis determine the time and place for greatest shrinkage, re-examine controls in those processes	
Security service					
Stock/ till recon				See test above for shrinkage	
Benchmark of days before deterioration					
Stock reports show item date					

Table 26 Research question 2, field-test 2 audit program

The process and risk sections for administration are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

ADMINISTRATION						
Process	Risk					
	Inefficient	rank	Ineffective	rank	Uneconomical	rank
Administration staff			Shared tasks lead to fraud risk	3		
			(Ineffective specialised training)			
Communication to staff			Staff misunderstanding of processes or responsibilities			
			(Ineffective communication)			
Data management			Purchasing errors			
			(Ineffective systems/ training)			
			Stock errors			
			(Ineffective systems/ training)			
			Incomplete financial reports	2		
			(Ineffective systems/ training)			

Table 27 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
Segregation of duties		Interview controls at head office for new staff includes criminal record check		Establish segregation of duties exists	
Identified responsibilities				From a sample of processed payments, determine who processed them, the date, and if this was part of their responsibilities	
Designated departments					
Weekly meetings with senior management					
Segregation of duties				Determine who has access to the database and server	
Computerised data management	2			Run a CAAT for unauthorised access and access time for the year	
				Reperform a backup	
				Establish that complete backups are made	
				Obtain evidence of a current DRP (Disaster Recovery Plan).	
				Conclude on effective data management	

Table 28 Research question 2, field-test 2 audit program

The process and risk sections for staff are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

STAFF						
Process	Risk					
	Inefficient	ran	Ineffective	ran	Uneconomical	ran
Staff to hire			Poor quality staff hired (Ineffective quality control for hiring)			
Staff to administer back office processes			Multi-tasking allows for fraud risk (Ineffective specialised training)			
Staff at till			Under-ringing (Ineffective quality control for hiring)			
			Client and till staff in collusion (Ineffective quality control for hiring)	2		
Staff communication			Poor communication with staff (Ineffective communication	2		
			Staff problems not identified (Ineffective controls to identify grievances)	1		
Staff control			No employment contracts			
Staff disputes			Staff morale low			
			Staff walkout	1		
Management continuity			Ineffective management given illness/ vacation	1		

Table 29 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
Database of employees Hiring process assisted by Head Office					
Segregation of duties					
Cameras				Examine cameras, obtain period of holding images	
				View images, determine if the quality is effective in identifying fraud and related personnel	
Weekly meetings	2			Establish if staff grievances are recorded	
				From a sample of grievances identify the primary cause, and establish how this was resolved\	
				Identify the controls in place for staff complaints	
				Identify the controls in place for staff motivation	
				Determine how staff dissatisfaction is monitored	
Contracts are in writing Disciplinary processes are in					
External labour company to manage the dispute	1			Establish if the store staff belong to a union	
				Determine the relationship with the union, interview the union representative	
				Compile a questionnaire of risks, and determine from the union representative the risk of a walkout	
				Obtain from management contingent plans to address a walkout	
				Establish there is a legal consulting firm contacted to resolve labour issues; establish if they have an effective track record.	
				Conclude on the risk of ineffective labour management	
Management team will carry responsibility				Identify key managers, determine the transfer knowledge and customer relationship in the event of replacement	key area

Table 30 Research question 2, field-test 2 audit program

The process and risk sections for sales are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

SALES						
Process	**Risk**					
	Inefficient	**ran**	**Ineffective**	**ran**	**Uneconomical**	**ran**
Item choice			Range of products limited	1		
Floor to basket			Shrinkage by customer (ineffective security)	2		
Basket to till			Collusion with till staff for under-ringing (Ineffective specialised training)	1		
Payment					Fraud	
Parking for customers			If customer cannot park then will not shop			
Store layout			Layout not according to standard of Head			
Product placement			Good sellers not placed in most	2		

Table 31 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
		Head office has franchise stock-criteria requirements		Obtain a list of all product in store	
				Determine the competing range per product category	
Store security				Establish if the supplier can provide monthly items sales by store, determine the variance to the benchmark and demographic	
Cameras				Determine if all cameras are visible as a deterrent	
				Advise certain cameras be portable and pinhole, and placed at manager's discretion	
Payment policy exists					
			Credit card payments 65% of turnover		
			Cash payments 35% of turnover		
		Cheque payments – only for selected customers			
Extra ground purchased for parking					
Head Office inspection and assistance					
Head Office inspection and assistance				Obtain the sales list showing fastest moving items	
				Perform a walk-through and determine from a sample the stock placement	
				Obtain the sales list showing slowest moving items	

Table 32 Research question 2, field-test 2 audit program

The process and risk sections for administration are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

CUSTOMER						
Process	**Risk**					
	Inefficient	**ran**	**Ineffective**	**ran**	**Uneconomical**	**ran**
Advertising			No/ poor advertising			
Customer parks			No parking space			
Customer comes into			Store is closed (ineffective planning by management)			
Customer shops			Complaints: Goods out of stock (ineffective planning) Quality issues (ineffective maintenance) Staff issues (ineffective staff relations)			
Customer complains			No manager to receive complaint	1		
Customer pays	Takes too long too shop	4				
	Takes too long to pay	1			Staff customer	
					Credit card fraud	1
Customer loyalty					Loyalty contingent	1

Table 33 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
	2	Advertising performed by head office as well as by franchise		Identify head office advertising budget, compare it to similar listed food retailers. Assuming that advertising can be quantified as a cost and in terms of sales, determine if head office advertising is suffient.	**key are**
Extra land purchased					
			12 Hours per day, 7 days a week		
Management deals with complaints immediately					
A manager always on site				Determine if a manager on duty is store policy Determine how the manager's absence would be	
Heavy traffic days identified and extra managers in place Extra till staff on hand for congested days				Retest the average shopping time Identify the busy time, conclude on the benchmark time to wait Examine the queuing method Examine the credit card slips Determine if there is a credit function, from a sample determine that the sale took place, that the authorised person performed the correction. Conclude on effective customer control	
Advertising Sponsorships to community				Identify the method and frequency to determine Examine the method and conclude on effectiveness Conclude if customer loyalty is based only on price	

Table 34 Research question 2, field-test 2 audit program

The process and risk sections for environmental are presented on this page, the sections for control, audit program and audit findings are presented on the following page. The seven main processes are purchases, stock, administration, staff, sales, customer, environmental.

ENVIRONMENTAL						
Process	**Risk**					
	Inefficient	**rank**	**Ineffective**	**ran**	**Uneconomical**	**rank**
Perishables reach sell-by date			Rotten goods sold to customers	1		
			(ineffective management)			
Perishables disposed of			Perishables not disposed in an environmentally-friendly manner	2		
			(ineffective management)			
Oil is used in cooking process			Oil is old			
			(ineffective management)			
Oil is replaced			Old oil discarded in drain	3		
			(ineffective management)			
Goods packaging disposed off			Packaging not disposed in an environmentally-friendly manner	3		
			(ineffective management)			

Table 35 Research question 2, field-test 2 audit program

Control					
Actual control		**Criteria**	**Benchmark**	**Audit program**	**Findings**
Benchmark for sell-by date identified, products removed				Determine if complaints are registered/ retained	
				Determine the number of complaints per month	
Daily collection from municipality	3			Establish the cause and the control; identify the manager for the section	
Benchmark identified and controls in place for replacement					
Vendor collects oil for recycling				Obtain evidence that the oil is removed on a regular basis	
Vendor collects packaging for recycling				Inspect the waste areas, conclude on cleanliness	
				Inspect the air con intake and extraction, conclude on proximity to each other as well as to the waste area	

Table 36 Research question 2, field-test 2 audit program

Research question 2 field test 2 - Evaluation of the results

The proposed model is based on the proposed methodology. The requirements of the proposed model were completed. The methodology required identifying the process, the risks and requesting the matching control; a list a list of controls was requested in order to identify the matching risks; this was performed as a test of completeness.

The auditee accepted the links between the process, risk and control, this was a performance audit and therefore focussed on performance risks. The audit tests addressed key risks; the auditee confirmed no key performance risks were missed.

Due to the size of the business with a turnover of over R100 million per annum, the presented model is not as concise as a full audit would present. Furthermore, field tests of the audit program questions did not occur.

Conclusion to research question 2, field-test 2

The proposed model was successfully applied to a large private-sector business.
The two key questions of this test were put to the general manager:

- Have all material performance processes and risks pertinent to the business been identified by the proposed model?
- Does the audit program addresses key risks?

Management answered in the affirmative to both questions.

Comparison of the two field tests

Both field tests occurred in the private sector. Both businesses buy and sold products. The differences were the type of industry (electronic goods retail; food and household retail). The annual turnovers differed (Rm10, Rm100).
Management in both businesses answered positively for the two key questions:

- Have all material performance processes and risks pertinent to the business been identified by the proposed model?
- Does the audit program addresses key risks?

Comparison of the proposed model

The proposed model was applied to two private-sector businesses. In Part 3 'Audit model' 3 financial audit models were presented. These models, if applied to the above field-tests, would not have resulted in the same extent of information, and accordingly the audit tests would have been compromised for lack of detail, mainly as these are financial models, and lack performance requirements, such as criteria.

If the same field-tests were applied using only the SAICA guideline (without reference to contributing explanations, such as Prinsloo & Roos (2006), it is highly doubtful a sample of auditors would have identified the same quality of audit program. The reasons are:

- that the proposed model is grounded in data
- the proposed model has applied select concepts and placed these in a select order
- the proposed model has defined the relationships, e.g. process, risk, control, objectives as inverted risks
- the proposed model is specific and detailed. The SAICA guide preface (2006:1) reads, 'It is not intended to be a comprehensive guide on a performance audit, but a generic guide that lays down the principles a performance audit in the public sector in South Africa.'

It is doubtful that the application of ISSAI 3000 would have achieved a similar detailed audit program addressing the same level of risk as the proposed model, based on the intent of ISSAI 3000 which indicates in the preamble that it is not a normative or a technical document, or a handbook, but it contains a number of guidelines and other information with practical implications that take into consideration the special premises and features of performance auditing, further adding that even though these guidelines reflect current best practices, they will not fully be applicable to all INTOSAI members, due to different traditions and mandates.

It is the lack of detailed and consistent methodologies that forms the grounds of this research. Inspection to standards did not reveal detailed performance audit methodologies (refer appendix 3).

5.3 Two examples of the proposed methodology and model

In addition to the singular practical test of the proposed methodology and model, two examples are presented that show how the proposed methodology and model can be applied.

Example 1: Corporate projects

Background

A corporation discovers that project dead-lines are late, the projects require multi-department interaction. Key projects are running late, staff are overworked but at the same time there are long idle periods as staff wait for instructions from the individual project steering committees. Managers claim to be overworked.

Required

To evaluate the cause of the problem and to provide a solution.

Audit concept	Description
Risk	Inherent risk Projects may be too complicated, the preparation time unrealistic, management and staff might not be competent for tasks expected of them. Project management methodology may be the cause Actual risk Projects are not meeting deadlines The consequence of late projects means that annual turnover is compromised. The effect of late projects compromises the 'economy' objective, the cause of the projects being late, at this point, is effectiveness (i.e. ineffective staff and/or ineffective project techniques), as well as inefficiency (inefficient use of labour resources).
Control	This refers to the actual controls in place. Intra-corporation email is in place, as well as a policy on work times.
Control – Criteria	The criteria is the expected performance based on competency, the expected project management processes, the expected outputs at expected times.
Control	The primary benchmark indicating labour utilisation is the time sheet. Project managers

benchmark	also have stages of project completion.
Audit test	<u>Ineffective risk</u> 1. Obtain a listing of all key projects, obtain a sample of key projects that had over-run excessively on budget time. 2. Obtain a list of key members involved in these over-run projects. 3. Evaluate their formal qualifications, evidence of on-going education, and conclude if they are suited for the tasks presented to them. <u>Inefficient risk</u> 1. Perform an analysis of all steps within a project. 2. Determine where time is compromised. 3. Obtain benchmarks and the criteria for overrun projects. 4. Obtain the company rules on working times. 5. Identify total man-hours in a year. 6. Interview staff and project managers, identify the cause of the time overrun. 7. Examine meeting schedules. 8. Determine if the benchmarks and criteria are reasonable.
Audit results	1. An evaluation of key staff members showed they are competent to perform the tasks required of them. 2. Audit findings were raised regarding inefficiencies.
Findings	Key finding: Daily interactive staff hours allowing for interaction are at 3hours 30 mins. The finding recommendation pushes this up to 5 hours 15 mins per day. See Notes
Additional Recommendations	• Benchmark on frequency of meeting and revised length of meetings (in that meetings should be shorter), endorsed by the CEO. • Introduction of video conferencing for off-site attendees. • Due to the materiality of project delays an overall project steering committee be formed (which includes the performance auditor) identifying the cause of any further project delays.

Table 37. Example 1: audit concept and description

Notes

1. The written company policy is that employees work for 7hrs 30 mins per weekday. The corporation is city-based; due to some employees travelling from afar the daily start-stop hours are variable.

2. Current interactive hours are at 3 hrs 30 mins, presented in Table 24.
3. The recommendation alters the interactive hours to 5 hrs 15 mins.
4. The difference is 1 hour 45 mins per staff member per day. On an annual basis (assuming 260 workdays in a year) interactive hours increases by 455 extra interactive hours per employee. If the company has 2000 employees on site then the effect of implementing the recommendation equates to an additional 910 000 interactive hours per year; this allows a wider window for staff interaction for meetings and project work, therefore satisfying the primary problem.

	Interactive hours	**Interactive hours - actual**	**Interactive hours - recommendation**	**Recommendation effect**
Breakfast	07h00 – 09h00		07h00 – 08h45	
Lunch	12h00 – 15h00	09h00-12h00 = 3hrs	12h30 – 14h30	08h45 to 12h30 = 3hrs 45mins
Daily leave time	15h30	15h00-15h30 = 30mins	16h00	14h30 – 16h00 = 1,5hrs
TOTAL		**3hrs 30mins**		**5hrs 15mins**

Table 38: Tabulation of hours

Example 2: Supermarket

Background

A non-franchised supermarket competes against similar franchised operations. Prices are competitive and it is assumed customer loyalty is contingent on favourable prices. Lately sales have dropped even though prices are competitive.

Required

To evaluate the cause of the problem and to provide a solution.

Research

1. Background evaluation took place with an intent to understand the shopping process from the client's perspective, as well spending time at the competitor to determine any noticeable differences that may explain the decrease in sales.
2. Evaluation of the procurement process revealed no anomalies.
3. Evaluation of the client purchase and payment at the store and the competition store revealed that prices were approximately equal but the entire shopping trip at the competitor was faster.
4. Two separate marketing companies were used to question customers' attitudes. The reason for this was that the cause of the problem would not be identified in the quality of answers but the variability within the questions.
5. A major difference identified with the competitor is that they barcode products and scan these at the till.

Audit concept	Description
Risk	Inherent risk Existing clients move to the competition. Actual risk • Decrease in sales (economic). • No risk in quality of goods as the competitor sells the same items with the same shelf-times for perishables; therefore the risk of ineffective products is removed. • During the preliminary interviews it was noted there was not a policy on product placement on shelves. • The shopping process (buy and queue) is longer than at the competition

	(inefficiency risk.
Controls	This refers to the actual controls in place. • Financial controls were in place. • Stock controls were in place to determine stock quantities, mark-ups and movement time. Comparative benchmarks were in place: no major variances were evident. • A manager was always on the floor to assist with client queries.
Control – Criteria	• There are no existing criteria to determine shopping time nor queue-and-pay time.
Control – benchmark	• Stock theft/ shoplifting was 0.1% of turnover, which management accepted as normal. • The monthly turnover was lower than usual. • From the stock movement variance report it was deduced that the turnover-per-basket decreased, implying that big spenders had moved to the competitor.
Audit test	From a sample of the client's supermarket and three competitors determine and compare: - the benchmark time to shop; the benchmark time to queue and pay - the method of stocking items on the shelves - the queuing mechanisms - the payment methods - the layout of the tills
Findings	The primary finding is that it took longer to pay than to shop for large shopping loads. The customer appreciated the competitive prices but the queue time to pay was a greater inconvenience than the benefit of competitive prices.
Recommendations	1. Determine the average weekday, Saturday and Sunday basket/ trolley price of the customer, and for each weekday, Saturday and Sunday determine the benchmark time to shop and to queue and pay. From this determine the key-customer (big spender) shopping time. 2. Establish a singular shopping line for tills (as opposed to a line for each till) for trolleys, and a singular shopping line for baskets. 3. Put up a prompter to direct the customer to the next available till. 4. Place a television at the line and play comedy sketches for customers to view while they queue. 5. Introduce barcodes on products and scanning equipment at all tills. 6. At each till there is a till operator and a dedicated staff member to pack the items (the latter contingent on high volume times).

	7. From the stock schedule, consider placement of high-movement articles at eye high of the key customer, e.g. children are short, so their items like sweets and toys are 80cm and lower to the ground; ladies items are 120 cm from the ground; men's items are 150cm from the ground. (This finding addresses the efficiency risk) 8. To address the drop in sales (which lead to the audit) have shoppers register and obtain a shopper's card; this is not mandatory but shoppers with a high monthly spend receive through email news of forthcoming sales and special offers. In this way preferred customers receive preferred service. (This finding addresses the economy risk)

Table 39. Example 2: audit concept and description

Notes

1. The above example addresses the inefficiency risk but also attempts to add value by finding a way to recoup lost sales, such as registering for a shopper's card and high monthly spenders receive preferential treatment.
2. There was no existing criteria to compare actual shopping time and actual queue-and-pay time. The audit finding will identify this and recommend the criteria and benchmark be implemented

Conclusion to research question 2

Research question 2 tested the proposed methodology and model. Two field-tests were performed, both with multi-million rand turnovers. Both field-tests resulted positive results in that the auditee

Only two entities in the private sector were used in determining the effectiveness of the proposed model. AGSA were approached but declined to participate.

Two examples were presented to show how the performance audit methodology and model work.

5.4 Limitations within performance auditing

Four shortcomings of the study are presented: risk removal or optimisation, synonyms and consistencies, research questions in the field, and effective performance auditing.

Risk removal or optimisation?

The presented methodology is risk-based. It may happen that assessing risk is not sufficient, that to identify and remove a performance risk simply removes risk, but it does not optimise the performance of the process, that output will not necessarily improve. As a metaphor, a small lawnmover can cut the grass of a small area of land; conversely, a tractor can cut the grass of a large area of land. If all performance impediments of the small lawnmower were removed it would still not be able to cut a large area of land in the same time as the tractor. The design of the lawnmower, and it's capacity to perform in order to produce the expected outcome, has limits. Put otherwise, a performance-risk free entity does not imply the entity performs optimally for all loads.
To sum: It is possible that a business entity has its limits, in terms of number of staff, specialist staff, quality of equipment, etc.

Trodden (1996:157) believes that performance measurement determines if goals are not being achieved, and that performance auditing offers a way of identifying and correcting the root cause for not achieving goals. This implies that the goal of performance audit is to identify and correct root causes in order to achieve goals. A criticism against Trodden might be that even if the root cause was identified, the business entity might not have the capacity to create the expected output.

Not dissimilarly, Scott (1996:213) defines a performance audit in Australia as an independent, objective and systematic examination of the management and administration of an organisation, programme or function for the purposes of:

- forming an opinion on
    a) whether the organisation, programme or function is being managed in an economic, efficient and effective manner; and

b) the adequacy of internal procedures, for promoting and monitoring economy, efficiency and effectiveness; and

- suggesting ways by which management practices, including procedures for monitoring performances, might be improved.

The last sentence is noteworthy ' - suggesting ways by which management practices, including procedures for monitoring performances, might be improved.' The implication is that it is not sufficient merely to conclude on the efficiency or effective of management and the adequacy of internal control. Scott calls for additional value that improves management practices.

A key issue with Shand & Anand (1996:71) is the reappraisal of the role of performance auditor, in which they question to what extent the auditor should be involved in 'hands on' assistance to improve performance rather than the more detached approach previously considered necessary to preserve audit independence.

Similarly, Daujotaite and Macerinskiene (2008:178) conclude the aim of performance audit is to evaluate the entity's performance and management in terms of economy, efficiency and effectiveness but also to provide recommendations on how to improve the performance of the entity.

The argument is between performance risk reduction and performance optimisation, also known as value-add. Put otherwise, if the goal of performance auditing is performance improvement, then it is possible the reduction of risk does not address the purpose of performance auditing. To enhance performance or to reduce risk, the latter seems easier but the auditor would be castigated by PUMA (1995:12) who warns of the narrow-minded approach of auditors who follow a fault-finding approach.

To focus on improving performance: Trodden (1996:159) calls for a rethink of the methodology and purpose of performance auditing with the goal to produce reports that focus on proposing alternatives for improvement, as opposed to focus what is wrong with existing systems.

The problem with this request is that there is no prescribed list of performance audit methods, and the methods that exist are constantly evolving (Lonsdale 2002:127). Furthermore, if improvement in processes or profits are the primary reason for an audit then the auditor's role as a risk identifier or a verifier should change to that of a business consultant. The definition and role of performance auditing may require reconsideration, example, Daujotaite and Macerinskiene (2008:184) define performance audit as an advanced management tool.

It is possible that the presented model with its risk-based approach in conjunction with an audit finding structure can allow for the presentation of value-add that the above authors refer to. With the proposed risk-based methodology the audit program tests the existence, effectiveness and sufficiency of the controls, criteria and benchmark. If these are found lacking then a risk is evident and a finding may result (depending on materiality of exposure). The audit finding itself can have various forms, but what is proposed as a part-solution is that the audit finding layout describes the risk, identifies the cause, provides a solution to the cause as well as provides an improvement on the performance objective (i.e. efficiency, effectiveness, economy) to which the risk refers. The finding therefore includes both risk-identification and the auditor's input in how to improve the performance. The need to include an improvement in every finding may be difficult to formalise in an audit standard for if the auditor cannot identify an improvement it seems unfair to accuse him of ineptitude.

Synonyms and inconsistencies

There are various synonymous for performance auditing, Funnell (1998) lists various as do Burrows and Perrson (2000). The various synonyms include broad scope auditing, cost-effectiveness auditing, efficiency auditing, operational auditing, project auditing, VFM (value for money) auditing, administration auditing, comprehensive auditing, efficiency and effectiveness auditing and integrated auditing and management auditing.

In addition, there appears to be confusion where performance auditing is placed, in the public or private sector or both. To add to the confusion, Vinten (1996) does not see management audit as a synonym of operational auditing. There is possible inconsistency surrounding the types of performance audit, e.g. Faucet and Kleiner (1994) list two types: economy and efficiency audits, and programme audits. Barzelay (1996) lists five types: efficiency audits,

program effectiveness audits, performance management capacity audits, performance information audits, and best practice review.

Inconsistency with synonyms may appear indicative of a developing discipline that attempting to find consistency in purpose, principles and concepts. This is not only limited to synonyms: Shand and Anand (1996:60) warn that performance auditing itself covers a range of approaches in terms of scope, methodology and form of reporting.

Research questions in the field

The second research question required practical evidence obtained from the field to test whether the proposed methodology and model were was effective. One problem was finding private sector companies willing to impart with confidential information about the intimate operational details of their business. Another was their lack of knowledge about performance auditing. Although each company that considered participation in the field tests found benefit in the performance auditing concepts, not many were applying performance audit techniques.

Effective performance auditing

Mayne (2010:1) asks whether performance auditing is doing the right thing the right way. Mayne acknowledges the significant changes public management has undergone in the last 30 years, noting the increased popularity of performance audit.

This concern is raised by Funkhauser who notes that performance auditors believe their work has sparked actual improvements, but there has been very little scholarly examination supporting this.

This is echoed in Leeuw (2011) who posits that there is limited evidence to show that performance audits are effective; although there are indicators that show a difference but he warns that because the causal relationship between audits and ‘change’ is not evident one should be cautious to conclude that audits are producing effects. In an earlier paper Leeuw (2009:3) recognised that evaluation, monitoring, inspection and performance auditing had become a booming business, but questions what ‘added value’ means.

The problem, as Mayne sees it, is that although there is some literature on performance auditing, most of it is written by auditors. He does not see evidence of vast literature on performance audit in practice and whether it's working. He also notes there are no performance auditing journals nor open conferences on performance auditing. In order to promote discussion and debate he poses three questions:

- Is performance auditing well adapted for modern public administration??
- Is performance auditing up to the task?
- Does performance audit work?

Conclusion

The proposed methodology was evaluated in terms of the methodology used, i.e. grounded theory. The various standards were presented to which the grounded theory methodology was applied, and table 12 shows the workings of this process. The proposed methodology was evaluated in terms of SAICA and also in terms of INTOSAI ISSAI 3000 and ISSAI 3100.

The proposed methodology is more detailed than SAICA and ISSAI 3000 and 3100; the latter are guides. The principles are drawn from the guides, and collated in a form to produce a proposed methodology to produce an audit program. The result of the exercise is that concerns are addressed, such as Lonsdale (2002:146) reporting that within the SAIs there is no prescribed list of performance audit methods. If the proposed methodology does add consistency to performance audit methods, then the severity of Lonsdale's observation (2002:145) that there is evidence to suggest that SAIs vary significantly in the extent to which they explain their methodology, is lessened. This will address a key risk mentioned by Lonsdale, that the range of methods the SAIs use for performance audits is constantly evolving. From an audit-program design perspective one assumes an inherent risk with constantly evolving methods (as the various processes, risks and controls, and risk rankings might be interpreted differently).

For the second research question, the model was applied successfully to two business entities within the private sector. Management answered in the affirmative in both field tests:

- Have all material performance processes and risks pertinent to the business been identified by the proposed model?
- Does the audit program addresses key risks?

The SAICA guide on performance auditing (2006) cannot, as is stands as a generic guide presenting principles, compile the same quality of audit program as the proposed model; the model is more detailed and contains principles, concepts, and relationships between concepts.

In addition to the two field tests, two examples were presented to provide the reader with a broader understanding of a performance audit problem and solution.

In the research methodology chapter the tests of research question 2 were presented as two field-tests in the public sector and two field-tests in the private sector. Only two field-tests occurred, both in the private sector. The auditor general (AGSA) was approached but was not willing to participate in the field-tests. Although the proposed methodology and model appears to work for two private business entities, it cannot be said to apply to all business entities.

6 SUMMARY, CONCLUSION and RECOMMENDATIONS

6.1 Summary

Performance audit developed as a serious discipline in the late 1970s; still a developing discipline there is a need to improve if not consolidate current methodologies. Performance audit is distinct from regularity or financial audits, some of the key distinguishing factors are the specific three performance objectives, criteria, benchmarks and performance measurement. Performance audit is largely practised in the public sector although there has been an academic call to move it to the private sector. As an advantage performance audit is considered to be an effective means for improving entity performance. Another advantage is that it is an highly intrusive form of audit and is perceived as more potent than regularity or financial auditing; in addition, by its nature it focuses on accountability and skills by higher management levels and is not merely focussed on accounting prowess. As a disadvantage, performance audit has no prescribed list of detailed methods. Consistent with any audit is that it requires an audit program, and performance audits are more complex in their design than regularity or financial audits. The design of the audit program is the key to the audit, which is the objective of this study; research did not find a detailed methodology or model for performance audit audit programs (refer appendix 3). Grounded theory was applied in order to generate a theory. Through evaluation of various audit models and the evaluation of audit standards using grounded theory a methodology and model developed (refer table 12). The methodology is based on:

- The relationship between process, risk, control and the audit program
- Risk-based auditing
- The inverse of the audit objective is the primary risk
- The inclusion of benchmarks and criteria within the control section
- The combination of high-level and detailed information

The proposed model is presented in Table 10.

The methodology and model were evaluated in terms of the SAICA 2006 guideline and ISSAI 3000 and ISSAI 3100.

Reasons were presented why, although theory was produced in terms of grounded theory methodology, the term ‘proposed methodology’ was used.

The proposed methodology, although evaluated against SAICA and INTOSAIs ISSAI 3000 and 3100, is not an adaptation and collation of the SAICA guide and INTOSAI standards.

For the second research question the proposed methodology and model was tested in the field and results indicate an effective performance audit audit programme can be compiled. Two private-sector field-tests were completed, and two additional examples presented. AGSA were approached for field-tests within the public sector but did not participate. An analysis was presented of the proposed model compared to SAICA and ISSAI.

This study showed that grounded theory can be applied to performance audit research. The benefit of the proposed methodology and model is that it improves the quality of risk identification and thus reduces performance audit risk. The benefit of the evaluation to SAICA guide and INTOSA standards is that the proposed methodology and model complies with the guidelines and principles. The benefit of the field test indicated that the proposed methodology and model can be applied practically, as well as that it can be applied in the private sector.

6.2 Conclusion

There is a need for a detailed methodology to create a performance audit audit program. The objective of this study was to research a methodology and audit model that contributes to the effective design of an audit program applicable to performance auditing. Two research questions were presented.

Research question 1 attempted to develop a theoretical and practical model to produce a performance audit audit plan. The proposed model is presented in table 10. Evaluation of the

proposed methodology and model according to SAICA and grounded theory did not reveal major discrepancies.

Research question 2 investigated whether the proposed methodology and model could be applied to an existing business entity; two field-tests were performed in the private sector, results indicated the proposed methodology and model could be applied successfully.

6.3 Recommendations for further research

Introduction

Three suggestions for further research are presented: Increased number of field tests, the possibility of additional performance objectives, and performance enhancement.

Increased number of field tests

Research question two was applied to a single business entity within the private sector. Additional testing is recommended across a number of sectors to determine if the proposed methodology and model is acceptable. Two concerns are presented:

First, whether performance audit remains in the public sector or whether it can also be applied in the private sector.

Secondly, and depending on the decision made in the first concern, the cooperation of the public and private sector. This study was compromised by the lack of cooperation from AGSA, and private sector participation might be compromised by concerns of confidentiality and labour resources.

New objectives

The current performance audit objectives are efficiency, effectiveness and economy, known as the three E's. It is possible an additional performance audit objective is discovered, for example, eubstance (that is, consistency). Eubstance can be applied to any repeat transaction or

behaviour, contributes to performance, as well as qualifies the current performance objectives: efficiency (e.g. is the emergency generator consistently activated within 30 seconds of a power-out?), effectiveness (e.g. are administration clerks consistently applying the same methodology to bank reconciliations?) and economy (e.g. is the generation of output consistent for each days' production?). Although eubstance is a valid performance concept it does not stand independently alongside the current three performance objectives; rather, it qualifies the existing objectives. If eubstance was a valid objective then this would imply that the results of the third research question were erroneous.

If a new objective was found within performance auditing the proposed methodology will cater for it by inverting the objective into a primary risk. A column for this particular risk is then placed in the 'general risk section' of the proposed model.

What is recommended is that the possibility of additional performance objectives within this developing discipline be researched.

Performance enhancement

Already raised in this study is Scott (1996:213), who, in defining performance auditing, believes the auditor should suggest ways by which management practices might be improved. Shand & Anand (1996:71) calls for the reappraisal of the role of the performance auditor, encouraging a hand's on approach. Similarly, Daujotaite and Macerinskiene (2008:178) conclude the aim of performance audit is to evaluate the entity's performance and management in terms of economy, efficiency and effectiveness but also to provide recommendations on how to improve the performance of the entity, and Trodden (1996:159) calls for a rethink of the methodology and purpose of performance auditing with the goal to produce reports that focus on proposing alternatives for improvement.

In the section titled 'Risk removal or optimisation' the distinction was presented between the removal of risk versus creative ideas to optimise the entity's performance. The lawnmower example was used, but businesses are not that rigid: apart from actual risk removal hidden capacity can be identified and developed, e.g. staff can be trained, assets acquired or sold off, brainstorming and new markets identified.

If the distinction is simply between risk removal and creative ideas in order to amplify the entity's performance, does the latter constitute auditing? Assuming that the improvement of an entity does fall under a definition of auditing, can a universal methodology can be designed to that improves performance capacity that does not only rely only on the removal of performance risks? Further research addressing this question will benefit performance auditing. The result might not be dissimilar to Guthrie & Parker's (1999:302) conclusion that performance audit is a masque that might defy any universal technical definition.

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8. APPENDICES

Appendix 1: Definitions and terms

Analysis	Analysis involves examining a substance and its components in order to determine their properties and functions, then using the acquired knowledge to make inferences about the whole (Corbin and Strauss, 2008:45).
Audit program	Detailed instructions for the entire collection of evidence for an audit area or an entire audit (Arens and Loebbecke, 1994:774).
Axial coding	Interconnections are made among categories and subcategories (Corbin and Strauss, 2008: 195).
Categories	Higher-level concepts under which analysts group lower-level concepts according to shared properties. Categories are sometimes referred to as themes. They represent relevant phenomena and enable the analyst to reduce and combine data (Corbin and Strauss, 2008: 159).
Coding	Deriving and developing concepts from data (Corbin and Strauss, 2008: 65).
Concepts	Words that stand for groups or classes of objects, events and actions that share some common property(ies), though the property(ies) can vary dimensionally. Concepts are interpretations, the product on analysis (Corbin and Strauss, 2008: 159).
Control	Control activities are the policies and procedures established by management as a response to internal and external risks (Puttick & van Esch, 2007:400)
Economy	The acquisition of the appropriate quality and quantity of resources at the appropriate time and place, and at the lowest possible cost (SAICA Guide on performance audit in the public sector, 2006).
Effectiveness	The extent of the achievement of set or predetermined objectives, or other intended effects of programmes, operations, activities or processes (SAICA Guide on performance audit in the public sector, 2006).

Efficiency	The utilisation of resources so that the output is maximised for any given input, or input is minimised for any given quantity and quality of output (SAICA Guide on performance audit in the public sector, 2006).
Grounded theory	A specific methodology developed by Glaser and Strauss (1967) for the purpose of building theory from data (Corbin and Strauss, 2008:1).
Integration	The process of linking categories around a core category and refining and trimming the resulting theoretical construction (Corbin and Strauss, 2008:263).
Open coding	To divide data into segments and then scrutinize for commonalities reflecting categories or themes (Corbin and Strauss, 2008:195).
Performance Audit	A performance audit may be described as an independent auditing process aimed at evaluating the measures instituted by management, or the lack of these measures; ensuring that resources have been acquired economically and are utilised efficiently and effectively; and reporting on the acquisition and use of resources to management or the relevant authority (SAICA Guide on performance audit in the public sector, 2006).
Process	An ongoing flow of action/ interaction/ emotions occurring in response to events, problems, or as part of reaching a goal (Corbin and Strauss, 2008:229).
Properties	Characteristics that define and describe concepts (Corbin and Strauss, 2008: 159).
Qualitative analysis	A process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge (Corbin and Strauss 2008:1).
Risk	Below are risk types. *Note that 'risk' is synonymous with 'symptom'.*
Inherent risk	The susceptibility of an assertion to a misstatement that could be material, either individually or when aggregated with other misstatements, assuming there are no related internal controls (Puttick & van Esh, 2007: 180).
Control risk	The risk that a statement could occur in an assertion and that such misstatement could be material, either individually or when aggregated with other misstatements, and will not be prevented or detected and corrected on a timely basis by the entity's internal control (Puttick & van Esh, 2007: 180).

Audit risk	The risk that the auditor will unknowingly express an inappropriate opinion on the financial statements (Puttick & van Esh, 2007: 180).
Symptom	An uneconomical procurement of resources and/or the inefficient or ineffective utilisation of resources. A visible manifestation of something that is wrong. (Prinsloo and Roos, 2006:29). Symptom is synonymous with risk.

Appendix 2: Applications of the proposed model

Policy

1. Do the performance policies exist, are they effective and sufficient?
2. Are the performance policies, benchmarks and criteria congruent with company policy?

Process

3. Has the process under review been documented, and all inputs and sub-processes included?

Risk

4. Have the key performance risks for a process been identified?
5. Have the key performance risks for a process been identified in terms of efficiency, effectiveness and economy?
6. Are actual key performance risks distinguished from inherent performance risks?
7. Are actual key performance risks distinguished from inherent performance risks as well as prioritized?
8. Can actual key performance risks be reduced/ addressed?

Benchmark

9. Are there performance benchmarks?
10. Are the benchmarks internally/ externally sourced?
11. Do benchmarks existent? Are they effective and sufficient?

Controls

12. Are the actual controls sufficient to address the actual risks identified the process?

Performance indicator and criteria

13. Does the process contain performance indicators?
14. Are these indicators effective and sufficient for the process?
15. Do criteria existent, are they effective and sufficient?

Comparison

16. Are the benchmarks compared to the actual performance output?
17. At which points in the process are the benchmarks compared to the actual performance criteria?

Efficiency, Economy and Effectiveness

18. Have the ineffective, inefficient and uneconomical contributors of the process been identified?
19. Can the model identify the cause of the ineffective, inefficient and uneconomical contributors of the process be identified?

The presented model can be used for no.'s 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18.

Appendix 3: Examination of audit standards

The purpose of this appendix to show which sources have been reviewed to find methodology to compile a performance audit audit program.

Institution and website	Acronym	Contains specific performance audit audit program methodology?
Australian audit standards http://www.auasb.gov.au/Standards-and-Guidance.aspx http://www.auasb.gov.au/Standards-and-Guidance/Australian-Auditing-Standards-in-Clarity-format.aspx	ASA AUS	No
Performance audit stages http://www.audit.act.gov.au/docs/Performance%20Audit%20Stages.pdf		No
AUS806 Performance auditing (July 2002) http://psc.rigsrevisionen.dk/media(566,1033)/Australia_-_Performance_Auditing.pdf		No
AUS 808 Planning performance audits (Oct 1995) http://psc.rigsrevisionen.dk/media(567,1033)/Australia_-_Planning_Performance_Audits.pdf		No
INTOSAI	ISSAI	
Implementation guidelines for performance auditing (2004) http://intosai.connexcc-hosting.net/blueline/upload/1implgperfaude.pdf		No
Implementation guidelines on performance audit (Year-end 2007 to 2010) http://www.issai.org/composite-344.htm		No
ISSAI 3000 Standards and guidelines for performance auditing based on INTOSAI's Auditing Standards and practical experience (2004) http://www.issai.org/media(879,1033)/ISSAI_3000_E.pdf		No
ISSAI 3100 Performance Audit Guidelines – Key		No

Principles (2010) http://www.issai.org/media(871,1033)/ISSAI_3100_E.pdf Code of ethics and auditing standards (2001) http://intosai.connexcc-hosting.net/blueline/upload/1codethaudstande.pdf		No
European court of auditors (ECA) Audit manual http://eca.europa.eu/portal/page/portal/audit/PerformanceAuditManual http://eca.europa.eu/portal/pls/portal/docs/1/271275.PDF		No
International standards on auditing http://web.ifac.org/clarity-center/the-clarified-standards http://en.wikipedia.org/wiki/International_Standards_on_Auditing ISA 300 Planning an audit of financial statements (2009) http://web.ifac.org/download/a016-2010-iaasb-handbook-isa-300.pdf ISA 330 The auditor's responses to assessed risks (2009) http://web.ifac.org/download/a019-2010-iaasb-handbook-isa-330.pdf	ISA	No No No No
US Generally accepted audit standards http://www.investopedia.com/terms/g/gaas.asp http://en.wikipedia.org/wiki/Generally_Accepted_Auditing_Standards	GAAS	No No
US Statements on auditing standards http://en.wikipedia.org/wiki/Statements_on_Auditing_Standards_(USA)	SAS	No
US Government auditing standards http://www.gao.gov/govaud/d07162g.pdf	GAGAS	No
Statements of financial accounting standards http://en.wikipedia.org/wiki/Statements_of_Financial_Accounting_Standards	FAS	No

All sites accessed February 2011

Appendix 4: List of abbreviations

Abbreviation	Description
AGSA	Auditor General of South Africa
ACT	Australian Capital Territory
APA	Auditing Profession Act
ASA	Australian Audit Standards
AUS	Australian Audit Standards
ECA	European Court of Auditors
e.g.	Example
et al	and others
etc.	Etcetera
i.e.	That is
IFAC	International Federation of Accountants
INTOSAI	International Organisation of Supreme Audit Institutions
ISA	International Standards on Auditing
ISSAI	International Standards of the Supreme Audit Institutions
FAS	Statements of Financial Accounting Standards
GAAS	US Generally Accepted Audit Standards
GAGAS	US Government Auditing Standards
IMAR	Interpretive Management Accounting Research
SAI	Supreme Audit Institution
SAICA	South African Institute of Chartered Accountants
SAS	US Statements on Auditing Standards
SEC	US Securities and Exchange Commission
Viz.	Namely