

**- Final mini-dissertation -**

**VAT LOTTERY INCENTIVES: AN OPPORTUNITY FOR SOUTH AFRICA?**

by

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## **ABSTRACT**

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#### **Background:**

Nine European Union (EU) member countries have introduced receipt-based tax lotteries (value-added tax (VAT) lotteries) in an effort to improve tax compliance in recent years. This acknowledges the fact that the traditional method of tax compliance enforcement through fines and penalties alone may no longer be optimal.

The idea of a VAT lottery is to incentivise consumers to ask for a receipt when paying for goods or services. The receipt serves as a lottery ticket that gives the consumer an opportunity to win a prize.

The decline in tax compliance in South Africa poses a threat to revenue collection and ultimately government's ability to meet its spending commitments. South Africa may benefit from implementing a VAT lottery to assist in improved VAT collection.

#### **Main purpose of study:**

This study aims to analyse VAT lotteries implemented in EU member countries in order to determine whether such lottery could improve taxpayer compliance in South Africa.

#### **Method:**

This descriptive study follows a systematic review strategy, using a combination of published studies and grey literature. A pragmatic approach is taken, allowing information obtained to

be considered objectively and interpreted subjectively. The study is cross-sectional and identifies each individual VAT lottery as a unit of analysis, following an inductive method of reasoning based on the secondary data obtained.

## **Results:**

There is a lack of quantitative research on the impact that VAT lotteries have on tax collection and, ultimately, on compliance. Six EU member countries were analysed, with three of these countries showing a decrease in the VAT gap in the years following the VAT lottery implementation. VAT gap data post implementation was not available for two of the countries.

Positive results include an increase in the number of vendors reported for refusing to issue invoices, a reduction in the number of non-validated receipts and increased VAT collection. The finance ministers of two countries and the ministry of finance of another publicly declared the VAT lotteries a success.

Research also indicates that the success should not only be measured by additional revenue generated, but by the culture of awareness of compliance created amongst consumers.

## **Conclusions:**

South Africa's VAT revenue represents a significant portion of the total tax revenues for the country, and the implementation of a VAT lottery could improve taxpayer compliance in South Africa.

It will start a conversation and create an awareness amongst consumers of how they can assist in ensuring transactions are reported, ensuring the South African Revenue Service receives the taxes due to it and enabling government to meet its spending commitments.

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## KEY TERMS

**Table 1: Key terms used in the study**

<u>Key term</u>	<u>Description</u>
Electronic cash register	A cash register that monitors business transactions. It connects electronically to the tax authority's system and provides it with a view of the transactions recorded (Fooker, Hemmelgarn & Herrmann, 2014:7).
Grey literature	Unpublished studies, as well as information produced by a source where publishing does not represent the main activity of that source (Booth, Sutton & Papaioannou, 2016:120).
Shadow economy	Transactions that do not form part of a country's official economy (Fooker <i>et al.</i> , 2014:3).
Value-added tax	A tax levied on goods or services consumed in South Africa (South African Revenue Service, 2017b:1).
VAT gap	"...the difference between expected VAT revenues and VAT actually collected, [which] provides an estimate of revenue loss due to tax fraud, tax evasion and tax avoidance, but also due to bankruptcies, financial insolvencies or miscalculations" (European Commission, not dated).

## LIST OF ABBREVIATIONS AND ACRONYMS

**Table 2: Abbreviations and acronyms used in the study**

<u>Abbreviation/Acronym</u>	<u>Meaning</u>
DOAJ	Directory of Open Access Journals
EU	European Union
IBFD	International Bureau of Fiscal Documentation
ID	Identity document
PDF	Portable document format
SARS	South African Revenue Service
Lei	Romanian currency
VAT	Value-added tax
Zł	Polish zloty

# **VAT LOTTERY INCENTIVES: AN OPPORTUNITY FOR SOUTH AFRICA?**

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 RATIONALE/ MOTIVATION FOR THE RESEARCH**

The matter of improving value-added tax (“VAT”) compliance through reward-based initiatives such as VAT lotteries has been a topic considered by several researchers (Brockmann, Genschel & Seelkopf, 2016:381-406; Fabbri, 2015:8-15; Marchese, 2009:383-402). Academic publications focusing on the impact of positive rewards on taxpayer compliance behaviour, as observed through empirical studies, are available (Bazart & Pickhardt, 2011:124-149; Fabbri & Hemels, 2013:430-443). Recent years have seen the actual implementation of VAT lottery tax reward initiatives in countries such as Portugal, Slovakia and Romania (Ungureanu & Dascalu, 2015:3-8).

The idea of a VAT lottery is to incentivise consumers to ask for a receipt when paying for goods or services. The receipt serves as a lottery ticket (in some countries the receipt must be registered first, but the general principles remain the same) which gives the consumer an opportunity to win a prize. Consumers ultimately assist in enforcing tax compliance when requesting an invoice from a seller, who will find it difficult to avoid declaring a transaction once a receipt has been issued (Ungureanu & Dascalu, 2015:48).

There are limited academic journals that critically evaluate the structure and outcome of VAT lottery tax reward initiatives implemented by different countries in recent years. This study aims to provide a structured overview of VAT lotteries implemented in recent years by countries forming part of the European Union (“EU”), comparing rewards, frequency, lessons learnt and subsequent improvements, design as well as the perceived success based on subsequent data and opinions of policymakers. This information will be analysed to provide recommendations on whether South Africa should implement a VAT lottery system as a tool

to improve taxpayer compliance, after consideration of the potential shortcomings and opportunities of these lotteries (Bornman & Stack, 2015:805).

According to Brockmann *et al.* (2016:384), individuals are more inclined to pay their taxes when government operates in a way that is viewed as efficient. The South African government acknowledges that corruption and poor governance have eroded public confidence and have led to tax morale being negatively impacted (National Treasury, 2018:1-2). Following the increase in personal income tax in the 2017 budget, personal income tax was expected to represent the majority of additional taxes collected in 2017; however, this tax is now expected to fall short by R21 100 000 000, and increased tax avoidance may be one of the reasons (National Treasury, 2018:40).

The VAT rate in South Africa was increased by one percentage point, from 14% to 15%, effective from 1 April 2018. This is the first increase in the VAT rate since 1993 (National Treasury, 2018:42). This VAT rate hike was not well received, with unions marching to Parliament and arguing that it punished the poor, who are not sufficiently protected against such an increase (Jadoo, 2018). Like the increase in personal income tax, this VAT rate hike may lead to higher levels of tax avoidance in instances where taxpayers feel that they are not seeing their tax money put to good use by the government.

The increase in the VAT rate was one of the extraordinary measures taken to ensure that government raises additional revenue of R22 900 000 000 during the 2018/19 period. It is part of government's efforts to stabilise public finances, following an estimated revenue shortfall of R48 200 000 000 for the 2017/18 period coupled with low economic growth, high unemployment levels, financial woes at state-owned entities with large government guarantees, an inflated public sector wage bill and the announcement of fee-free higher education and training (National Treasury, 2018:1-9).

A public outcry over the increased VAT rate prompted a statement by the African National Congress that government would consider additions to the list of zero-rated and tax-exempted items in an effort to minimise the impact on the poor (African National Congress, 2018). An expert panel was appointed by the Minister of Finance to investigate the list of zero-rated items and whether additional items should be considered or whether direct government expenditure programmes would be more effective in providing relief to poor

households (Omarjee, 2018). The original deadline of 30 June 2018 for submission to the Minister of Finance was extended to 6 August 2018, after which the report would be made public (Magubane, 2018); but to date, no further information has been made available.

The original terms of reference of the expert panel were subsequently amended to allow for considerations that could change the fiscal framework for the 2019/20 financial period (Niselow, 2018). If more products are added to the list of zero-rated items, revenues generated by the VAT rate increase will be less than the budgeted additional revenues of R22 900 000 000, which will lead to a revenue shortfall against the budget – which may in future necessitate another VAT rate increase.

This study will provide important information to policymakers at government level by providing a consolidated view of existing VAT lotteries, which can be considered as an alternative avenue for improving VAT collection. The South African Revenue Service (SARS) is considering the potential use of electronic cash registers that would enhance tax administration by monitoring business transactions, and a discussion paper on this will be released (National Treasury, 2018:50). A VAT lottery system could be rolled out in conjunction with electronic cash registers, and this study may provide important information to SARS on how it could combine the two concepts into one rollout. A VAT lottery could also be viewed as a more favourable way of increasing VAT collection than a second VAT increase.

## **1.2 PROBLEM STATEMENT**

Revenue collected by SARS represents 90% of government's budget. VAT contributed 24.5% to revenue collected for the 2017/18 period (Ministry of Finance, 2018) and is expected to contribute 25.9% of the budgeted revenue for the 2018/19 period (National Treasury, 2018:iv).

The problem is that there is a decline in tax compliance, as acknowledged by SARS, with VAT specifically noted as one of the areas of concern. Compliance has been impacted by low taxpayer morale, consumer and business confidence and the reliability of the tax administration (Ministry of Finance, 2018). The review and potential expansion of the current

list of zero-rated items may also result in less VAT revenue being collected. The inability of SARS to collect the taxes due to it will result in government being unable to meet its spending commitments (National Treasury, 2018:42).

### **1.3 RESEARCH QUESTION**

How do VAT lottery tax reward initiatives compare between member countries of the EU, and could it improve taxpayer compliance in South Africa?

### **1.4 RESEARCH OBJECTIVES**

- To identify tax reward initiatives in the form of VAT lotteries which have been implemented in EU member countries in the last 25 years, excluding VAT lotteries implemented within the past 12 months.
- To compare the rewards, frequency, lessons learnt and subsequent improvements and perceived success of these respective VAT lotteries based on subsequent data and opinions of policymakers.
- To make recommendations regarding the implementation (or not) of a VAT lottery system in South Africa.

### **1.5 RESEARCH DESIGN AND METHODOLOGY**

#### **1.5.1 Introduction**

This study will follow a systematic review strategy where the data collection is collected systematically to ensure the evidence obtained is of the highest quality in answering the research question. A systematic review allows for the use of unpublished studies and reduces the risk of publication biases (Dixon-Woods & Sutton, 2004).

The method for identifying studies and other relevant information for purposes of this study will be clearly articulated (Gough, Oliver & Thomas, 2017:5). This includes detailing the

inclusion and exclusion criteria applied in finding the relevant information which will be used to review the existing body of knowledge related to VAT lotteries.

## **1.5.2 Theory behind research design elements**

### **1.5.2.1 Philosophical stance**

Brewer (2003) defines positivism as "... the application of natural science methods and practice to the social sciences ...". Positivists believe in an objective truth determined by direct observation and objective measurement. This philosophical stance ignores human beliefs, thoughts and emotions (Sekaran & Bougie, 2016:28).

Interpretivism requires research to be performed from the perspective of people and how they view the world. It investigates what occurs in people's minds and how experiences of individuals are influenced by their surrounding circumstances. Interpretivists do not believe in an objective truth (Sekaran & Bougie, 2016:28-29); their research relies on individuals' subjective perceptions of the situation being studied (Patton, 2015:127).

Pragmatism does not dictate the research approach which should be followed. In answering the research question, it acknowledges that valuable insights can be obtained from both the objective observation of a phenomenon and the subjective interpretation of the meaning. Research results are viewed as a provisional truth that may change over time (Sekaran & Bougie, 2016:29). This philosophical stance allows the researcher to make decisions on the method and data collection as the study unfolds and is not limited by adherence to a fixed design (Patton, 2015:153).

### **1.5.2.2 Nature of the study**

A causal study aims to understand and explain the relationship that exists between variables (Datt, 2016). This can be achieved by testing hypotheses to determine the impact that one variable may have on another variable (Patton, 2015:584). It allows the researcher to explain why the phenomenon occurs. By identifying the correlation that exists between the variables, further predictions can be made about future patterns (Datt, 2016).

When the researcher wants to describe the characteristics of the phenomenon under investigation, a descriptive study is appropriate (Leavy, 2017:5). It involves mainly the use of words to describe what is being observed and allows an in-depth critical analysis (Booth *et al.*, 2016:182).

An exploratory study is appropriate when the phenomenon being observed is new or where it has not been the subject of many research studies previously. By learning more about the phenomenon, this type of study assists in filling the knowledge gap (Leavy, 2017:5). The main objective is the development of theory through the analysing of data (Davies, 2006:2).

### **1.5.2.3 Method of reasoning**

Deductive reasoning starts with a hypothesis which is tested by collecting data. The results are subsequently analysed in order to prove or disprove the hypothesis on the observed phenomenon (Msweli, 2011:32).

Inductive reasoning starts with specific observations and findings in order to generate a theory from the data patterns that emerge (Patton, 2015:64). “Deductive reasoning moves from general theory down to particular examples, while inductive reasoning moves from particular examples up to general theory.” (O’Leary, 2007).

Abductive reasoning is appropriate where the researcher is making specific observations which are subsequently explained in a meaningful way (Shank, 2006).

### **1.5.2.4 Time horizon**

A cross-sectional study entails the collection of data just once. The period over which the data is collected can be months, weeks or days (Sekaran & Bougie, 2016:104). Data is examined at one point in time only, providing a snapshot view (Booth *et al.*, 2016:150).

In a longitudinal study, data is collected at different points in time. The study of a phenomenon may continue over an extended period of time in order to answer the research question (Sekaran & Bougie, 2016:105). The time and resource implications of this type of



study make it more expensive and complicated than cross-sectional studies (Booth *et al.*, 2016:150).

#### **1.5.2.5 Unit of analysis**

The unit of analysis specifies the phenomenon being studied and determines the kind of data to be collected (Patton, 2015:260). The level at which data is aggregated for analysis should be determined by the research question (Sekaran & Bougie, 2016:103) to ensure that findings and conclusions are made at the correct level (Patton, 2015:262). Examples of units of analysis include individuals, countries, projects, time periods such as school terms, rainy seasons, particular days in week or election periods, crime reports, media items like news clippings, literature on a specific topic and programmes (Patton, 2015:261).

#### **1.5.2.6 Nature of the data**

Data collected by a researcher through surveys, interviews or focus groups will be classified as primary data, as this data was not available previously (Greener, 2011).

Secondary data is data that has already been collected by someone else and includes existing research papers (Greener, 2011). Sekaran and Bougie (2016:396) describe secondary data as “Data that already exist and do not have to be collected by the researcher”.

Quantitative data is represented numerically and can be statistically analysed (Chua & Mark, 2005:2).

Qualitative data is not presented numerically; it provides details through words or pictures. It provides an opportunity for research participants to provide their feedback in a way that is not coded according to pre-determined category responses, but to express their thoughts on a matter freely (Greener, 2011). Qualitative data includes feedback on open-ended questionnaires, data gathered from interviews or through observation (Sekaran & Bougie, 2016:2).

## **1.6 STRUCTURE OF THE MINI-DISSERTATION**

### **1.6.1 Chapter 1: Introduction**

This chapter highlights the importance of the research study by identifying the current knowledge gap and the need for further research. This is followed by a problem statement clearly defining the research problem. The research question and research objectives are then discussed, and the chapter ends with a discussion of the theoretical aspects of the research design elements.

### **1.6.2 Chapter 2: Literature review**

The process followed to identify academic literature relevant to the study is described in this chapter. This includes information on the databases used, the use of specific keywords to search these databases and specific inclusion and exclusion criteria applied. It further analyses the research design elements of the literature identified and indicates how the literature has been recorded for further analysis. This is followed by a summary and brief discussion where the literature reviewed is synthesised and critically evaluated. The ethical principles applicable to this study are noted and the chapter ends with a conclusion of the literature reviewed.

### **1.6.3 Chapter 3: Research design and methodology**

Chapter 3 discusses each of the research design elements that are applicable to the study. It motivates the use of a systematic review and explains why it is appropriate for the current study to follow this type of research method. An explanation is also provided of what a systematic review entails and how it has been applied in this study thus far.

### **1.6.4 Chapter 4: Data analysis and presentation of results**

This chapter presents the detailed findings of further data analysis. It provides an in-depth analysis that builds on the initial literature review and further synthesises and critically

evaluates available literature that meets the quality criteria. The information required to ensure that the research objectives are met is presented in a logical structure.

### **1.6.5 Chapter 5: Conclusion**

A conclusion is inductively reached through the process of analysing all the relevant literature articles. It highlights the findings flowing from the previous chapter and incorporates this into a well-structured argument used to support the conclusion reached. It also identifies and highlights recommendations for action and for potential future research.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The purpose of this chapter is to provide an overview of the process followed to find, record and analyse literature relevant to the study, followed by a summary and discussion of the literature reviewed. It also discusses the ethical principles adhered to in the study and concludes with the findings.

#### **2.2 IDENTIFICATION AND RECORDING OF ACADEMIC LITERATURE**

##### **2.2.1 Inclusion and exclusion criteria**

Part of the research objective was to identify VAT lottery tax reward initiatives implemented in the past 25 years in member countries of the EU; expanding the search for a longer period would not add value. The decision to limit the search to countries forming part of the EU was based on the requirement that information needed to be accessible in English.

Due to the limited number of articles available, the only other exclusion criterion concerned articles or journals published in a language other than English. A review of the abstracts of all articles found during the literature review process was a further measure applied in determining whether an article should be included or excluded. If an article related to the research topic, regardless of the nature of the study, it was included for review.

##### **2.2.2 Keywords**

The keywords used to find relevant articles originally included the following combinations:

- “Tax Lottery” OR “Tax Lotteries”;
- “Tax” AND “Lottery”; and

- “VAT” AND “Lottery”.

The use of the above combinations resulted in findings mostly related to lotteries and the related tax consequences. The combinations below were added to narrow down the search findings:

- “VAT” AND “Incentive”;
- “VAT” AND “Behaviour”;
- “Tax compliance” AND “Awards”;
- “VAT” and “Compliance”;
- “VAT compliance” and “VAT lotteries”;
- “VAT lottery” OR “Tax lottery” AND “Mechanics”;
- “VAT lottery” AND “Winner”; and
- “Value added taxes” AND “Tax systems” AND “Incentive” AND “Lottery” AND “Europe”.

The keywords “behaviour”, “incentive” and “compliance” were used to identify potential articles considering the impact of VAT lotteries on human behaviour. The keyword “mechanic” was included to assess whether there is existing literature discussing how the VAT lotteries function. “Winner” was included as a keyword to identify information on individuals who had already won prizes in a VAT lottery, which could then be used to further search specifically for the VAT lottery so identified.

The above combination of keywords sufficed to find articles specific to the research topic from the databases as discussed in section 2.2.3 (p.11). For Google searches, the phrase “VAT lottery winners” was used, and this identified various countries where VAT lottery tax reward initiatives are already in place. These countries were also incorporated as part of the keyword search combinations listed above.

### **2.2.3 Databases**

The initial databases used to search for relevant articles included EBSCOhost, Proquest, Directory of Open Access Journals (DOAJ) and WorldCat. Within Proquest and EBSCOhost there are a selection of databases to search. Keyword searches were conducted on all these

databases. Within DOAJ, the search was performed for both articles and journals, which are the options offered.

Limited published articles related to VAT lottery tax initiatives were found on these databases with the initial keywords as described in section 2.2.2 (on p.10). The databases were subsequently expanded to include Google Scholar and the OECD iLibrary.

The research indicated that the countries which had recently implemented VAT lottery tax reward initiatives were mostly countries forming part of the EU. Therefore, the search was further expanded to include information found directly on the OECD website (<http://www.oecd.org/>), the EU website (<https://ec.europa.eu/>) as well as the government websites of the various countries.

The EU website was searched not only by using keywords typed into the search bar, but by going through the different sections within the website to locate any further documents of relevance. This approach was specifically followed because the search function on the website did not appear to find articles and relevant information specifically found by manually browsing the webpage. The Taxation and Customs Union section on this website proved the most valuable.

Publication bias was avoided by ensuring that grey literature articles were also identified by duplicating the keyword searches together with countries identified as relevant to the research in the Google search engine. This yielded research on the topic published in newspapers and on government websites.

An account was also created with the International Bureau of Fiscal Documentation (IBFD) to gain free trial access to international tax research performed in order to find any research published by this organisation on VAT lotteries.

In addition to the above, specific information requests were made to email addresses indicated on both the OECD iLibrary and the OECD websites. A request for information was also sent to the Malta Ministry for Finance. An officer from the Public Lotto within the Ministry for Finance was kind enough to provide background information and a taxation paper published by the EU that contained information relevant to VAT lotteries.

#### **2.2.4 Recording of identified academic literature**

Literature items were identified through a combination of the abovementioned inclusion and exclusion criteria, keywords and databases. The relevance of each identified item to the current proposed study was determined on the basis of the abstract provided at the beginning of the article or journal.

Articles were downloaded if the abstract did not clearly indicate whether it was relevant to the study or not and were subsequently read at a high level in order to make a decision on their inclusion in or exclusion from further analysis. Databases and literature with no abstract were reviewed at a high level on a per item basis and included in or excluded from further analysis based on the relevance as determined at that stage of the literature review. The relevant items so identified were uploaded onto Qiqqa for further analysis.

Qiqqa is a software system that allows researchers to manage vast amounts of data in a portable document format (PDF) by storing data in a library folder of choice. It identifies duplicate documents and alerts the user to this, and functions as an advanced management system allowing an individual to search across the entire library content for specific keywords or phrases using optical character recognition.

The BibTex Sniffer was used on all uploaded documents, ensuring the correct reference details were reflected for each item within the library. The research design elements for each document were added in Qiqqa by means of the tagging function. Tags can be viewed afterwards by scrolling through a document or making use of the 'Annotation Report' function, which enables a consolidated view across multiple documents.

Additional relevant articles and journals were identified in instances where the same study was cited by multiple articles already included in Qiqqa. These articles and journals were then also included in the library for consideration as part of the proposed research topic.

## 2.2.5 Literature reviewed: Research design elements

### 2.2.5.1 Philosophical stance

As indicated in Table 3, none of the literature reviewed adopted a philosophical stance of interpretivism. The experiments and surveys forming part of the reviewed literature did not attempt to understand how the circumstances of the individuals involved impacted on their views and actions.

There were five articles that adopted the philosophical stance of positivism. These articles applied statistical modelling as an approach to measure the phenomenon being observed in order to arrive at an objective truth, without considering human thoughts and emotions.

The remaining 33 articles had a pragmatic philosophical stance and were not limited to the collection of data from only an objective or subjective point of view.

**Table 3: Analysis of the philosophical stance of the studies reviewed**

<b>Research design element: Philosophical stance</b>	<b>Positivism</b>	<b>Interpretivism</b>	<b>Pragmatism</b>	<b>Total</b>
Number of articles	5	0	33	38

### 2.2.5.2 Nature of the study

The findings regarding the nature of the literature reviewed are summarised in Table 4, with studies being classified as either causal, descriptive or exploratory.

A total of seven causal studies were analysed, consisting of four experimental studies, one survey study and two correlation-based studies, all focusing on the impact of tax reward incentives on human behaviour.

Of the three exploratory studies, one was a survey in South Africa to determine whether individuals were in favour of the concept of rewarding taxpayers for being compliant. The second study focused on a theoretical framework concerning taxpayer compliance and the third considered potential long-term negative effects of tax lotteries.



The remaining 28 articles were descriptive in nature, providing information on existing VAT lotteries and country-specific information.

**Table 4: Analysis of the nature of the studies reviewed**

<b>Research design element: Nature of the study</b>	<b>Causal study</b>	<b>Descriptive study</b>	<b>Exploratory study</b>	<b>Total</b>
Number of articles	7	28	3	38

### **2.2.5.3 Method of reasoning**

As indicated in Table 5, there are three deductive and four abductive studies forming part of the literature reviewed. These studies represent one of the exploratory studies and six of the causal studies noted in section 2.2.5.2.

The three deductive studies are causal in nature, testing a hypothesis of relationships through data collection in order to reach a conclusion. The four abductive studies are a combination of causal and exploratory studies, seeking not only to make specific observations but also to explain these observations in a way that is meaningful.

An inductive method of reasoning was adopted by 31 of the studies reviewed. These studies include all the descriptive studies, one of the causal studies and two exploratory studies in section 2.2.5.2.

**Table 5: Analysis of the method of reasoning for the studies reviewed**

<b>Research design element: Method of reasoning</b>	<b>Deductive</b>	<b>Inductive</b>	<b>Abductive</b>	<b>Total</b>
Number of articles	3	31	4	38

### **2.2.5.4 Time horizon**

All of the studies reviewed have a cross-sectional time horizon as noted in Table 6. None of the studies adopted a longitudinal time horizon as part of the research design.

The experiments and surveys reviewed took place at one point in time only. No additional surveys and experiments were performed at a later stage to determine a potential correlation of variables over time.

The majority of the studies reviewed followed a descriptive approach that could be applied at a specific point in time based on the information available on the unit of analysis. There was no need for the researchers in any of the articles reviewed to follow a longitudinal time horizon to answer the research question.

**Table 6: Analysis of the time horizon of the studies reviewed**

<b>Research design element: Time horizon</b>	<b>Cross-sectional</b>	<b>Longitudinal</b>	<b>Total</b>
Number of articles	38	0	38

#### **2.2.5.5 Unit of analysis**

Table 7 gives an overview of the units of analysis of the reviewed literature. Most of the articles reviewed focused on the VAT lottery as a tax compliance tool, with 19 articles focusing on VAT lotteries and one article specifically looking at the VAT lottery winners.

The deductive and abductive studies mostly focused on the behavioural decisions and on individuals as the units of analysis, with two articles looking at the former and four articles at the latter.

The South African budget is the unit of analysis in two articles, with issued invoices as well as anti-fraud measures analysed in one article each. Tax policy, taxpayer compliance attitudes as well as VAT represent the units analysed in two articles each.

**Table 7: Unit of analysis of the studies reviewed**

<b>Research design element: Unit of analysis</b>	<b>Number of articles</b>
Anti-fraud measures	1
Behavioural decisions	2
Budget	2

<b>Research design element: Unit of analysis</b>	<b>Number of articles</b>
Individuals	6
Issued invoices	1
VAT lottery	19
VAT lottery winners	1
Tax policy	2
Taxpayer compliance attitudes	2
VAT	2
Total	38

### 2.2.5.6 Nature of the data

Five articles contained primary data and represented experiments performed in four studies and a survey conducted in one study.

The remaining 33 articles reviewed consisted of secondary data and can be viewed in Table 8.

**Table 8: Analysis of the nature of the data within the studies reviewed**

<b>Research design element: Nature of the data</b>	<b>Primary data</b>	<b>Secondary data</b>	<b>Total</b>
Number of articles	5	33	38

As shown in Table 9, there were nine quantitative articles and 29 qualitative articles forming part of the literature reviewed. Most of the quantitative studies were causal in nature and related to experiments performed in answering the research question. The qualitative studies are descriptive in nature and mostly analyse the VAT lotteries. None of the articles adopted a mixed method approach.

**Table 9: Analysis of the nature of the data within the studies reviewed**

<b>Research design element: Nature of the data</b>	<b>Quantitative</b>	<b>Qualitative</b>	<b>Mixed method</b>	<b>Total</b>
Number of articles	9	29	0	38

## 2.3 SUMMARY AND BRIEF DISCUSSION OF REVIEWED LITERATURE

The application of the inclusion and exclusion criteria, combined with the keywords and databases as part of the identification and recording of academic literature discussed in section 2.2, resulted in a total of 49 articles initially included for further consideration. Figure 1 gives an overview of the various databases from which the 49 articles were sourced.

The 30 items included in the 'Other' category represent a combination of:

- Online media publications;
- Documents obtained directly from the European Commission website;
- Budget documentation from the South African National Treasury website;
- The Davis Tax Committee's report to the Minister of Finance on VAT, available on the Davis Tax Committee website; and
- Information obtained directly from the IBFD.

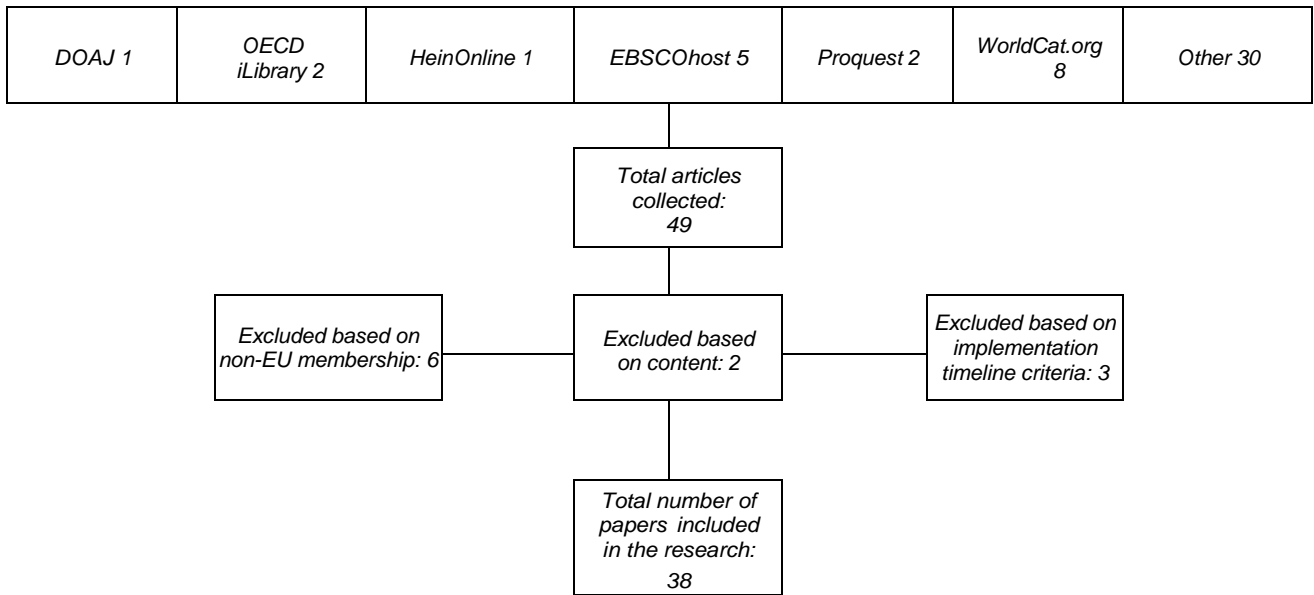
One of the research objectives in section 1.4 is the identification of VAT lottery tax reward initiatives implemented in EU member countries in the previous 25 years, excluding VAT lotteries implemented within the past 12 months. The exclusion of articles based on the country and implementation timeline was done through a review of the 49 articles.

A total of six articles were excluded based on the country where the VAT lottery was implemented, namely Mongolia, Georgia, Puerto Rico, Brazil and Serbia. A further three articles were excluded because their VAT lotteries were implemented within the past 12 months and only a limited amount of information was available on these VAT lotteries.

A further two articles were excluded based on the relevance of their content. They were initially included based on the titles, as they were considered a potential source of information; however, the content was not relevant to the current study.

Figure 1 schematically illustrates the process whereby the final 38 papers were selected.

**Figure 1: Quality assessment: summary of results**



### 2.3.1. VAT Lotteries

The EU consists of 28 member countries (European Union, 2018a), with VAT lotteries implemented in three of these countries in the past 12 months. Greece and the Czech Republic launched their VAT lotteries during October 2017 (Avalara VATlive, 2017; Frankova, 2017), while Lithuania’s first VAT lottery took place at the end of November 2017 (China Economic Net, 2017).

The next section provides an overview of VAT lotteries implemented in EU member countries in the past 25 years (excluding those implemented in the past 12 months, as noted above).

#### 2.3.1.1. Malta

Malta is the smallest EU member country, with a population of about 429 344 (European Union, 2018b). The VAT lottery was implemented in 1997 to motivate customers to ask for receipts, which would ultimately help improve VAT compliance (Fookan *et al.*, 2014:12).

The monthly draw on the 15<sup>th</sup> takes place in public, where all fiscal receipts are mixed in a large drum and receipts are drawn at random from the eight holes in the rotating drum (Ungureanu & Dascalu, 2015:49). Participation in this draw is therefore not automatic, and consumers must mail or deliver by hand all receipts of the previous month by the 10<sup>th</sup> of the following month to qualify for entry in the VAT lottery. Each receipt should contain the individual's name, surname and identity document (ID) number on the back (Fookan *et al.*, 2014:12-13).

The prize attached to each receipt drawn is equal to 100 times the value of that receipt (Ungureanu & Dascalu, 2015:49). A minimum and maximum prize value per receipt is set at €233 (R3 603,55<sup>1</sup>) and €11 647 (R180 131,34<sup>1</sup>) respectively. If a receipt has a value lower than €2,33 (R36,04<sup>1</sup>) or higher than €116,47 (R1 801,31<sup>1</sup>), the prize money will be brought to the minimum or maximum prize threshold as appropriate. A total monthly budget of €58 234 (R900 641,22<sup>1</sup>) is allocated to the lottery, and receipts will be drawn until all prize money is allocated. On average there are 30 people winning monthly (Fiedler, 2018).

Cheques are issued to the winners by the Lotto department, and the outcome of the lottery is published by the local newspaper and online by the Department of Information. All receipts remaining in the drum are recycled and based on the weight of the drum, estimates are made of the number of receipts submitted (Fookan *et al.*, 2014:13).

### **2.3.1.2. Slovakia**

The VAT receipts lottery was implemented in September 2013 as a measure to fight VAT evasion and address the increasing VAT gap (Remeta, Perret, Jareš & Brys, 2015:51-52). The VAT gap peaked in 2012 at 40.10%, almost double the EU average. The goal was to motivate individuals to ask for receipts and create an awareness around VAT compliance, ultimately leading to improved VAT collection (Fookan *et al.*, 2014:14).

Less than one year after implementation, a decrease in participation resulted in an overhaul of the VAT lottery from late September 2014. Monthly winners increased from 29 to 408, of

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<sup>1</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

which four appeared on a television show called TV Chance, where there are further opportunities to compete for cash and other prizes. The approach was aligned to survey results indicating that people wanted a higher probability of winning something of lower value rather than a higher value prize with a lower probability of winning (Cuprik, 2014).

A receipt of at least €1 (R15,47<sup>2</sup>) can be registered with the National Lottery either through a text message, the National Lottery company, online or automatically through the seller, who registers the receipt on behalf of the purchaser. This must be done within a period of two months from the date of the invoice and include compulsory information regarding the date and time as well as the amount of the transaction, and the cash register's unique identification number (Ungureanu & Dascalu, 2015:51).

Each receipt stands an equal chance of winning, regardless of the value (Fooker *et al.*, 2014:15). Lottery draws take place weekly, with 101 winners selected every time. The weekly first prize is estimated at €10 000 (R154 659,00<sup>2</sup>), but will fluctuate based on the number of receipts registered. The remaining 100 winners each receive only €100 (R1 546,59<sup>2</sup>) each. The same registered receipt will go into a second draw taking place every 28 days for an opportunity to take part in TV Chance, where one person is guaranteed to win €3 000 (R46 397,70<sup>2</sup>), and half of the 80 contestants will win various prizes. This is broadcasted during weeknights and creates a further awareness, serving as an advertising campaign (Cuprik, 2014).

### **2.3.1.3. Portugal**

Portugal launched its VAT lottery in April 2014 in an attempt to get individuals involved in daily tax monitoring by requesting receipts when purchasing goods or services. The goal is ultimately to ensure a fair trade environment where all vendors charge VAT on the price to the customer, thereby eliminating unfair competition and fighting tax evasion (Wise, 2014).

The lottery is known as the 'Lucky Invoice Lottery', with one weekly draw and two bi-annual draws, which are all televised to create an improved awareness of the lottery. The weekly prize is one Audi A4, and three individuals stand a chance to win an Audi A6 in each of the

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<sup>2</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

bi-annual draws. Participation in the bi-annual lottery is automatic and no further registration is required to qualify for this draw (Fooker *et al.*, 2014:19).

Entry into the draw is based on coupons, which are obtained through the registration of invoices either by the purchaser directly or by the seller at the time of purchase. The value of the invoice determines the number of coupons an individual is entitled to and works in multiples of €10 (R154,66<sup>3</sup>) spend for each coupon. One coupon will be assigned for a fraction of €10. Coupons have equal chances of being selected in the draw, with no limit placed on the number of coupons an individual is allowed to register (Ungureanu & Dascalu, 2015:53).

All invoices issued in a particular year will qualify for the Lucky Invoice Lottery in that year. Individuals should ensure that their fiscal identification numbers are included on the receipt issued, which will then in most cases be registered by the business issuing the receipt. The availability of an online platform facilitates a transparent process where consumers can ensure their receipts have been correctly registered, and if not, they can proceed to register the receipts themselves. The online platform provides individuals with an option to opt out of the lottery, and the winners are also notified through this platform, which allows them to decide whether to donate the prize or collect it, and if they want it done with or without public attention (Fooker *et al.*, 2014:19).

#### **2.3.1.4. Romania**

The VAT lottery was implemented in Romania in January 2015, with the first draw held in April 2015. This followed recommendations made by the Minister of Finance to create awareness amongst consumers to ask for a receipt, which would help reduce tax evasion (European Commission, 2017).

The lottery is open to residents and non-residents who have purchased goods or services in Romania. The monthly lottery is based on receipts issued in the previous month only, and the draw takes place on the first Sunday after the 15<sup>th</sup> of the month (Ministry of Public Finance, 2018).

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<sup>3</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).



No upfront registration of receipts is required, and an individual merely has to request and keep the receipt until the draw takes place the following month. The monthly draw extracts two numbers, the first representing the value of the invoice inclusive of VAT and rounded to the nearest whole number, and the second the day on which the invoice was issued. The value of the invoice will represent a number between 1-999. An individual who is in possession of an invoice meeting the criteria of value and date of issue, will be able to claim a prize only if the invoice was issued by an electronic cash register and contains all the required information clearly legible (European Commission, 2017).

Prizes have to be claimed within 30 days by submitting the original winning receipt together with a copy of the individual's ID document or passport to any territorial unit of the National Agency of Fiscal Administration. There is a monthly total winning prize which will be divided equally between the number of winning invoices, and in the event that the prize remains unclaimed in a month, it is rolled over to form part of the total winning prize of the following month (Ministry of Public Finance, 2018). For the time being, the fixed monthly prize is set at €220 000 (R3 402 498.00<sup>4</sup>) (European Commission, 2017).

Transparency is guaranteed as withdrawals are broadcast on television and results published by the media (Ungureanu & Dascalu, 2015:56). The draws are public, are attended by representatives of the National Agency for Tax Administration and the Ministry of Public Finance and take place in front of the Commission that supervises the draws (Iacob, 2015:527). Prizes are only paid into bank accounts, which indirectly supports the notion that individuals need to move away from paying for goods and services with cash (Ungureanu & Dascalu, 2015:56). Results are also posted on the websites of both the National Agency for Tax Administration and the Ministry of Public Finance for a period of 30 days (Iacob, 2015:527).

#### **2.3.1.5. Poland**

Poland launched its VAT lottery in October 2015 (BBC News, 2015) as part of an educational campaign to create an awareness amongst consumers that they should ask for a receipt

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<sup>4</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

when paying for goods or services. Participation is limited to individuals who are 18 years and older, and a minimum purchase amount is set at z110 (R36,33<sup>5</sup>) (Ministry of Finance, 2015b).

Individuals have to register their receipts on a special website and stand a chance to win laptops, tablets and cars each month (Ministry of Finance, 2015b).

This educational campaign only ran for a year and a half, with a focus on six industries identified as higher risk in terms of compliance. The VAT lottery was not rolled out across all these industries for the full 18 months; instead, individuals stood a chance of winning exclusively for receipts issued by a specific industry for a three-month period. The following industries were included in the campaign (Ministry of Finance, 2017):

- Hairdressers and beauty treatments;
- Personal taxi services;
- Restaurants and caterers;
- Dental and medical practice of a private nature;
- Mechanical services on vehicles; and
- Fuel sales at petrol stations.

There is also a prize for the issuer of the invoice that ultimately wins the Opel Astra, who receives a tablet as a token of appreciation for participating in honest business practices. In order to claim a prize, the original receipt needs to be handed over (Ministry of Finance, 2015a).

#### **2.3.1.6. Slovenia**

Mandatory fiscal cash registers were introduced at the start of 2016 in an attempt to reduce the shadow economy and allow for the traceability of issued invoices. A VAT lottery was introduced simultaneously to limit the risk of non-issuing of invoices and to provide an incentive for the customers to request the invoice (Financial Administration of the Republic of Slovenia, 2018).

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<sup>5</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

Participation in the VAT lottery requires an individual to collect and register ten receipts issued by different suppliers. Registration can be done through 3 different channels (Borstnik, not dated):

- A mobile application where the consumer verifies whether the invoice is already archived on the Tax Administration server. One automatic entry into the draw will take place once ten invoices have been verified;
- An online portal where a similar procedure to the mobile application is followed; or
- Manually gathering ten invoices from different suppliers and posting them to a specified address.

Quarterly lottery draws take place, with three cash prizes of €10 000 (R154 659,00<sup>6</sup>) each. Each prize is related to a specific method of verification of issued invoices, either through the mobile application, the online portal or through verification of the accounts of service providers such as hairdressers and taxi drivers (Financial Administration of the Republic of Slovenia, not dated).

#### **2.3.1.7. General**

Each VAT lottery analysed above has its own unique way of operating. The costs and benefits associated with each component of the VAT lotteries would have to be weighed up and considered in the context of what will work best for South Africa. Something that works in one country is not guaranteed to work in another.

#### **2.3.2. Impact of implemented VAT lotteries**

The following section critically evaluates and analyses whether the VAT lotteries implemented and discussed in section 2.3.1 are regarded as being successful based on subsequent information.

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<sup>6</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

### 2.3.2.1 Malta

To date, no quantitative evaluation has been conducted on the success of the Maltese lottery, and the question remains whether the introduction of this lottery has led to improved VAT compliance. The Department of Lotto estimates the number of receipts in each draw based on the weight of the lottery drum. The receipts submitted increased from 32 500 000 in 2007 to 35 700 000 in 2013. This indicates that there is a growing interest in the lottery (Fooken *et al.*, 2014:13).

An increase in total receipts submitted does not necessarily equate to a growing interest in the lottery, as noted by Fooken *et al.* (2014:13). The population of Malta at the two points in time being compared should be considered in order to establish whether the invoices submitted on average per individual have increased or not.

The average number of invoices submitted per individual is calculated in Table 10 by dividing the total estimated VAT lottery invoices submitted by the estimated population of Malta.

**Table 10: Analysis of the average annual invoices submitted per individual**

Years	Estimated total VAT lottery invoices submitted	Malta population estimate	Submitted invoices per individual
2007	32 500 000	405 616	80,13
2013	35 700 000	422 509	84,50

Source: Eurostat (not dated); Fooken *et al.* (2014:13).

On average, an individual in Malta submitted 80,13 invoices to the VAT lottery during 2007. During 2013, this average increased to 84,5. Whether this slight increase is attributable to a growing interest in the lottery cannot be confirmed by the numbers alone. Other factors to consider would relate to the age of the population, as the inclusion of babies (for example) would not add value to the analysis.

The VAT gap in Malta during 2015 was 23%, which is 13 percentage points higher than the EU average of 10% (Center for Social and Economic Research, 2017:40). This raises the question of how successful the VAT lottery in Malta is in driving improved VAT compliance. It may well be that the onerous task of manually gathering and posting the invoices at each

individual's own cost, combined with the lack of certainty that all the invoices are put into the lottery drum (Ungureanu & Dascalu, 2015:50), decreases the willingness of individuals to participate and assist in enforcing tax compliance.

### **2.3.2.2 Slovakia**

The overall fiscal impact of the lottery was estimated by extrapolating 2013 final quarter data in the restaurant and retailer sector, where the biggest impact was anticipated, indicating an increase of €8 000 000 (R123 727 200,00<sup>7</sup>) per annum. Estimated costs in 2014 of €1 600 000 (R24 745 440,00<sup>7</sup>) indicate that the lottery will be generating additional revenue, albeit on a smaller scale compared with other available methods of combating tax evasion (Fookan *et al.*, 2014:16).

Only 2% of the receipts submitted came from the service industry, which is deemed to be one of the riskier sectors in terms of VAT compliance. The lottery is therefore not as successful in reaching the problematic areas (Fookan *et al.*, 2014:16).

The finance minister of Slovakia declared the VAT lottery a huge success because of the increased number of vendors reported for refusing to issue invoices, as well as the increase in VAT collection (BBC News, 2015).

The statement made by the minister of finance is supported by the data presented in a study on the VAT gap, which shows a steady decline from 33% in 2013 to 31% in 2014 and 29% in 2015. The study also acknowledges the role played by the introduction of various other measures to improve VAT compliance, such as the wider introduction of fiscal cash registers during 2014, and the VAT lottery launched in the third quarter of 2013 (Center for Social and Economic Research, 2017:48).

VAT compliance was therefore encouraged by the implementation of more than one initiative, and the increase in VAT collection and ultimate decrease in the VAT gap cannot be attributed solely to the VAT lottery. It is therefore acknowledged that there is a need for further quantitative analysis (Fookan *et al.*, 2014:16).

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<sup>7</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

### **2.3.2.3 Portugal**

Government sources indicated that the number of transactions reported to the tax authorities increased by 45.4% compared to the prior year, and as a result the cost of giving away cars was far less than the increased tax collection (Fabbri & Wilks, 2016:31).

The first draw on 17 April 2014 involved more than 207 000 000 coupons, 7 900 000 purchasers and 171 000 vendors. This is seen as a significant participation (Ungureanu & Dascalu, 2015:53) as the population was estimated at 10 427 301 on 1 January 2014 (Eurostat, not dated).

During 2014 the VAT gap decreased by three percentage points to 13%, with half of this decrease attributed to the increase in VAT compliance. It decreased even further to 11% in 2015, without significant changes introduced to the VAT regime during that year (Center for Social and Economic Research, 2017:45). This improved compliance trend in 2014 coincided with the rollout of the VAT lottery, and in the absence of further VAT initiatives applied during 2015 it provides strong evidence that the VAT lottery is successful.

### **2.3.2.4 Romania**

The minister of finance of Romania indicated that the VAT lottery was very successful and that VAT collection had increased significantly (Mercer, 2016). Compared with the same period in 2014, the declared VAT amounts for the first seven months of 2015 had increased by 5,85%. This increase is believed to be a result of combined compliance measures implemented, of which the VAT lottery is one (European Commission, 2017). According to the MasterCard director of Romania, consumption of paper rolls for cash registers had shown an 80% increase since the implementation of the VAT lottery (Ghinea, 2015).

VAT revenues increased by a record 12,6% in 2015, with the VAT gap decreasing to its 2011 low of 37%. However, Romania still has one of the highest VAT gaps in the EU (Center for Social and Economic Research, 2017:46).

There is no research evidence currently available that proves that the increase in VAT revenue collection correlates directly with the implementation of the VAT lottery. However, the lack of evidence should not be confused with a lack of correlation; there may well be a link between the two, even if only to a small extent.

### **2.3.2.5 Poland**

The educational VAT lottery campaign in Poland ran over a period of 18 months. During this period, over 140 000 000 receipts were registered. Prior to the launch of the VAT lottery, only every 14<sup>th</sup> consumer remembered receiving an invoice for purchases, whilst after the lottery this improved to every 3<sup>rd</sup> consumer (Ministry of Finance, 2017).

This particular VAT lottery was aimed at educating the citizens of Poland regarding the part they need to play in the bigger economy by ensuring receipts are issued. Based on the information provided by the Ministry of Finance, it appears that this goal was achieved.

An analysis of the VAT gap during the 2016 year to assess what impact this educational campaign had over a 12-month period would have been useful. Unfortunately, the latest available study only covers the periods from 2011–2015.

### **2.3.2.6 Slovenia**

Slovenia has remained in the top five EU member countries in 2015 with the lowest VAT gap, with a 6% gap recorded for 2015.

The introduction of mandatory fiscal cash registers at the start of 2016 was combined with the introduction of a VAT lottery to incentivise consumers to ask for receipts. This has resulted in a net increase of €43 100 000 (R666 580 290,00<sup>8</sup>) in the payment of VAT compared with the previous year (Financial Administration of the Republic of Slovenia, 2017:1).

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<sup>8</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

During the first year after implementation, consumers checked more than 21 000 000 receipts. Consumers used their phones to check receipts issued by three-quarters of all fiscal cash registers, reducing the number of non-validated receipts and allowing for government staff to shift their focus to controls of other risky areas of late and incorrect tax payments (Financial Administration of the Republic of Slovenia, 2017:1-2).

Even though the increased VAT payments cannot be attributed solely to the implementation of the VAT lottery, it does form part of a combined set of measures aimed at curbing non-compliance that ultimately increased VAT collection. This has also freed up time to allow the tax administration to focus on other risk areas.

### **2.3.3. VAT lottery and individual behaviour**

The success of a VAT lottery is not only measured by the additional revenue declared and paid over to the governments, but also by the culture and awareness of compliance which it creates amongst consumers (Mattes, 2015:3).

Individuals behaving in a similar manner, such as paying their taxes, may be driven to do so by different underlying reasons. They could be driven by an obligation to do the right thing and be model citizens, or they may have assessed the cost of non-compliance and found it too high (Kirchler, Hoelzl & Wahl, 2008:211).

Limited research is available on tax lotteries (Brockmann *et al.*, 2016:386). Experimental evidence by Bazart and Pickhardt (2011:145), indicates that lottery winnings used as a reward for compliant taxpayers lead to improved tax compliance. Their study also indicates that males evade taxes more than their female counterparts, but that they respond more favourably to the lottery scheme (Bazart & Pickhardt, 2011:124). Based on these findings, they conclude that the implementation of a lottery system will be most effective in countries where there is a higher share of male taxpayers coupled with a low rate of compliance (Bazart & Pickhardt, 2011:145-146).

Contrary to the above, in another controlled laboratory experiment Brockmann *et al.* (2016:381) found that rewarding honest taxpayers with a chance of winning a lottery resulted



in increased compliance by females, whilst the men decreased their level of compliance. This could stem from the difference in risk preferences between males and females. They caution that lotteries may obscure the obligation of an individual to pay tax (Brockmann *et al.*, 2016:381-399).

“Empirical evidence shows that the [lottery] policy is effective in reducing tax evasion and increasing net tax revenue” (Fabbri, 2015:9). The theoretical framework developed here indicates that where the lottery prize is big enough, it will ultimately reduce tax evasion and result in higher tax collection (Fabbri, 2015:13). This framework supports the Cumulative Prospect Theory regarding decision making of individuals, where individuals irrationally overweigh the probability of winning a very large amount of money such as the lottery (Fabbri & Hemels, 2013:14).

Bornman and Stack (2015:804) provide evidence that individuals view the idea of rewards for tax compliance as mostly positive. This is based on a survey conducted in Ekurhuleni, Gauteng, and provides insights into how South Africans may view a VAT lottery. The survey only included 176 participants in a very specific geographic location, with no other study of this kind having been done before. Caution should be exercised when extrapolating these findings across a country, and further research may be required on this matter.

In assessing whether a VAT lottery can be successfully implemented in a country, it is crucial to consider not only the potential positive financial impact, but also the taxpayers' perceptions of a VAT lottery and how they may react to it.

#### **2.3.4. South Africa**

VAT represented a total of 25,3% of total tax revenue in the 2016/17 financial year (South African Revenue Service, 2017a:29). It is expected to increase to 25,88% of total tax revenue for the 2018/19 financial year (National Treasury, 2018:iv). It remains an important tax for the government, as it represents more than a quarter of the total taxes collected.

Government's focus is to reduce the budget deficit through a combination of measures that includes reducing expenditure and increasing revenue through additional taxes (National

Treasury, 2018:37). The VAT rate was increased by one percentage point to 15%, with effect from 1 April 2018 as one of the measures to increase tax collection. This rate increase is expected to raise additional tax revenue of R22 900 000 000 (National Treasury, 2018:41).

Taxpayer morality is low because of corruption within government and wasteful expenditure due to poor governance. The revenue shortfall for the 2017/18 financial period amounted to R48 200 000 000, which is an indicator of increased tax evasion and avoidance, challenges experienced at SARS and low economic growth (National Treasury, 2018:38).

Kirchler *et al.* (2008:212) developed a framework that suggests that taxpayers will try to obtain the most favourable outcome by evading taxes in an environment where there is a perception of a low probability of tax officials detecting illegal tax evasion, coupled with a low trust in the authorities. A given tax rate would be interpreted differently by taxpayers, depending on the trust environment. Where trust is low, taxpayers will be aggrieved by the tax rate as it represents their hard-earned money taken unfairly from them. Conversely, where the level of trust is high, taxpayers will view their taxes paid as a contribution to society (Kirchler *et al.*, 2008:216). In instances where a specific group is of the view that they are paying more taxes than the rest, non-compliance within that group is likely to increase (Kirchler *et al.*, 2008:219).

The low trust environment that exists between the citizens of South Africa and the government, is evident not only in the acknowledgement of this fact in the 2018 budget review (National Treasury, 2018:38), but also in the negative reaction of the public following the announcement of the VAT rate increase, blaming corruption at government level for the need to increase taxes (Davis, 2018; Omarjee & Niselow, 2018; The Citizen, 2018).

South Africa therefore faces an increased risk of tax evasion because of the low trust in government, the increase in the VAT rate and the administrative challenges faced by SARS.

## **2.4 RESEARCH ETHICS**

Research ethics encompasses the research process from start to finish, including the data collection period and the ultimate writing-up of the report (Eriksson & Kovalainen, 2008).

The ethical principles applicable to this study are discussed below (Thomas & Hodges, 2010):

- **Honesty:** The research objectives, procedures and findings are presented in a truthful, open and honest manner.
- **Avoiding research bias:** The reporting of research findings does not neglect the findings of other researchers or valid data that may contradict the research findings of this study.
- **Acknowledging the work of others:** This study does not plagiarise the work of others, and the work and ideas of researchers are clearly identified and acknowledged through appropriate referencing.

## **2.5 CONCLUSION**

The implementation of VAT lottery systems in recent years by certain member countries of the EU acknowledges the fact that governments are considering alternative approaches to improve tax collection and reduce tax avoidance. The traditional methods of tax compliance enforcement through fines and penalties alone may no longer be optimal.

There is a general lack of quantitative research on the impact that VAT lotteries have on compliance and therefore on tax collection. Of the six countries analysed, and based on available information, three countries showed a decrease in the VAT gap in the years following the VAT lottery implementation. The VAT gap in Slovenia after the VAT lottery implementation could not be assessed, as no data is available at present. The impact in Malta could also not be viewed directly, as the VAT gap data is not available for earlier periods. Could this all be a coincidence, or is there a correlation between improved VAT collection and VAT lottery implementation?

Incentivising consumers to ask for receipts and to convert an invoice into a lottery ticket is something that South Africa needs to consider as a measure to improve VAT collection. Whether such a campaign will result in a net increase in tax revenues for the government, after taking into consideration the additional costs of implementing a VAT lottery system, is something that will require further research.

The non-monetary component of a VAT lottery that should not be disregarded is the increased awareness raised among consumers to ask for receipts and the compliance culture that may ultimately emanate from this (Mattes, 2015:3).

## **CHAPTER 3**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 INTRODUCTION**

#### **3.2 RESEARCH DESIGN ELEMENTS AS APPLICABLE TO THIS STUDY**

##### **3.2.1 Philosophical stance**

The present research study falls within the ambit of pragmatism. Contrary to the philosophical stance of positivism, it will not ignore human beliefs, thoughts and emotions, as the study will consider the impact that the VAT lottery may have on an individual's behaviour regarding VAT compliance. The study will also not be performed solely from the perspective of people, as is the case with interpretivism. The analysis and interpretation of the implementation and success of VAT lotteries based on information obtained will be considered objectively and interpreted subjectively to gain valuable insights and assist in answering the research question.

##### **3.2.2 Nature of the study**

This study is descriptive in nature. A detailed account is provided of the characteristics of VAT lotteries implemented in EU member countries in the past 25 years. Information subsequent to the VAT lottery implementation will be described in detail to provide an accurate overall view of the phenomenon under investigation. This approach allows for an in-depth verbal analysis, which is the most appropriate approach for this study because it does not try to explain and understand relationships existing between variables as with a causal study. It is also not exploratory in nature, as VAT lotteries are not a new phenomenon.

##### **3.2.3 Method of reasoning**

An inductive method of reasoning was followed in this study, starting with specific observations to allow patterns or themes that emerged to be identified and theory to be

generated by interpreting these patterns or themes. The phenomenon of VAT lotteries was studied to conclude whether it should be recommended for South Africa as a tool to improve taxpayer compliance. It does not entail the testing of a hypothesis through data collection, and is therefore not deductive or abductive in nature.

#### **3.2.4 Time horizon**

This study was not performed over an extended period of time and is therefore cross-sectional. The research question did not require data to be collected at more than one point in time to analyse a change in the unit of analysis over an extended period. Even though one of the research objectives required the identification of VAT lotteries implemented in EU member countries in the past 25 years, the data was collected once, over a period of months. This produced a snapshot as at a specific point in time, which is sufficient for the present study.

#### **3.2.5 Unit of analysis**

The unit of analysis for this study was individual VAT lotteries implemented in EU member countries in the past 25 years. This is driven by the research question and research objectives, which ensures that conclusions are drawn at the correct level. Through the identification of these VAT lotteries and subsequent data gathering, sufficient information was gathered to analyse and compare these lotteries and conclude whether a VAT lottery system should be recommended for South Africa. Analysing data at a more aggregated or disaggregated level would not have helped to answer the research question and could have resulted in the research objectives not being met.

#### **3.2.6 Nature of the data**

No new data was generated through experiments or surveys, and the study used secondary data that had already been collected by other people. The secondary data mostly represented existing information on VAT lotteries.

Qualitative data was generated by this study, as details were provided verbally in the form of detailed explanations. Data was not presented numerically for statistical analysis.

### **3.3 SYSTEMATIC REVIEW**

#### **3.3.1 Motivation**

Technology has improved access to research information. However, large amounts of data may prove unmanageable and hinder the decision-making processes of policy makers or researchers. A systematic review allows the researcher to make sense of the vast amount of information through critical evaluation and synthesis of available data (Mulrow, 1994:597).

A systematic review does not focus on a single study (Petticrew & Roberts, 2006:11), but rather entails an "... exhaustive search of the literature ..." (Booth *et al.*, 2016:23). Such a consolidated view of data or studies allows insights and interpretation of data that is not possible when viewing a single study in isolation (Mulrow, 1994:598). These insights can identify inconsistencies in an area of knowledge, provide an overview of what is known and also highlight a knowledge gap that might exist in the literature (Petticrew & Roberts, 2006:15).

This study aims to make recommendations on whether South Africa should implement a VAT lottery tax reward initiative to improve taxpayer compliance. Existing VAT lotteries or research on VAT lotteries will have to be identified, analysed and critically evaluated to determine whether this is a viable option for South Africa. Identifying one VAT lottery together with research on that VAT lottery will not provide the consolidated overview required to answer the research question.

A systematic review will facilitate an extensive search of the literature, followed by a critical evaluation and synthesis of all data obtained related to VAT lotteries. Recommendations for implementation in South Africa can then be made following a consolidated overview of these VAT lotteries.

### **3.3.2 Explanation**

A systematic review is a type of review that seeks to identify research evidence that can support the research question (Byrne, 2017). This methodology requires research evidence to be obtained in a transparent manner that ensures the replicability of finding the literature included in the study (Dixon-Woods & Sutton, 2004). The quality of research evidence is then critically assessed, and the studies to be included in the systematic review are selected (Byrne, 2017; Dixon-Woods & Sutton, 2004).

Following the identification, quality assessment and selection of relevant studies, a systematic review involves synthesising the findings narratively (Dixon-Woods & Sutton, 2004). An exhaustive search of the literature related to the research question is required for a systematic review (Byrne, 2017).

In this study, relevant research evidence has been obtained in a transparent manner, presenting a detailed account of how the academic literature was identified and recorded as outlined in section 2.2. The quality of literature identified was appraised and documented in section 2.3, and Figure 1 schematically illustrates how articles were selected and excluded.

The summary and discussion of the literature reviewed can be found in section 2.3, where the information was synthesised and critically evaluated.



## CHAPTER 4

### DATA ANALYSIS AND PRESENTATION OF RESULTS

#### 4.1 IMPLEMENTED VAT LOTTERIES

Recent years have seen an increased interest among EU member countries in the use of VAT lotteries as an alternative measure to improve VAT compliance.

Table 11 indicates all the VAT lotteries implemented in EU member countries over the past 25 years. It also indicates which countries were excluded from further analysis because their VAT lotteries were implemented within the past 12 months.

**Table 11: VAT lotteries implemented in EU member countries in the past 25 years**

<b>Country</b>	<b>Implementation date</b>	<b>Excluded from further analysis?</b>
Malta	1997	No
Slovakia	2013	No
Portugal	2014	No
Romania	2015	No
Poland	2015	No
Slovenia	2016	No
Greece	October 2017	Yes
Czech Republic	October 2017	Yes
Lithuania	November 2017	Yes

#### 4.2 VAT LOTTERY COMPARISONS

Each VAT lottery has a unique design. This section reviews the main differences between the VAT lotteries identified in Table 11.

## 4.2.1 Rewards and frequency

To facilitate a valuable comparison of rewards between VAT lotteries, it is necessary to also consider the frequency of these rewards. This allows comparison of any annualised monthly or annual prize with the number of winners.

### 4.2.1.1. Malta

The Maltese VAT lottery takes place once a month, with a fixed monthly budget of €58 234 (R900 641,22<sup>9</sup>). The number of winners varies each month, as the total prize money is set and paid out on the basis of the value of the invoices drawn in the lottery. There are minimum and maximum prize thresholds (set at €233 (R3 603,55<sup>9</sup>) and €11 647 (R180 131,34<sup>9</sup>) respectively), and invoices which fall above or below these values after multiplication by 100 will be allocated the minimum or maximum amount as appropriate (Fiedler, 2018). There is therefore no minimum spend required to participate in this VAT lottery, and each receipt stands an equal chance of being selected, regardless of the value.

The actual amount spent on the VAT lottery differs slightly each month, as invoices are drawn from a drum until the allocated budget is utilised. Table 11 analyses the VAT lottery results for the past 12 months, calculating an average lottery value per person based on the number of winning receipts. This average is also expressed in a rand equivalent and indicates that the average lottery winnings fluctuated between R22 228,92 and R57 237,48 per person.

**Table 12: Analysis of the Maltese VAT lottery results from August 2017 – July 2018**

VAT lottery period	Total lottery winnings	Number of receipts drawn	Calculated average prize per person	Rand equivalent <sup>9</sup>
August 2017	€61 420	18	€3 412,22	R52 773,09
September 2017	€65 778	23	€2 859,91	R44 231,13
October 2017	€59 234	35	€1 692,40	R26 174,49
November 2017	€58 720	30	€1 957,33	R30 271,92
December 2017	€59 392	18	€3 299,56	R51 030,60
January 2018	€58 654	18	€3 258,56	R50 396,49

<sup>9</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

VAT lottery period	Total lottery winnings	Number of receipts drawn	Calculated average prize per person	Rand equivalent <sup>9</sup>
February 2018	€62 469	28	€2 231,04	R34 504,98
March 2018	€58 780	27	€2 177,04	R33 669,84
April 2018	€60 366	42	€1 437,29	R22 228,92
May 2018	€62 915	17	€3 700,88	R57 237,48
June 2018	€60 530	17	€3 560,59	R55 067,70
July 2018	€58 647	20	€2 932,35	R45 351,43

Source: Department of Public Lotto (2017); Department of Public Lotto (2018).

The average monthly salary in Malta was €1 380,42 (R21 349,44<sup>10</sup>) in 2015, with an inflationary adjustment of 2,93% from 2014 (National Statistics Office, 2017a:113). Assuming an equal inflationary adjustment annually, the average monthly salary in Malta will equal €1 505,19 (R23 279,12<sup>10</sup>) in 2018.

The average lottery prize per person for the 2018 periods listed in Table 11 equals €2 756,82 (R42 636,69<sup>10</sup>), which exceeds the calculated monthly average salary for 2018, assuming a 2,93% inflationary adjustment from 2015 to 2018.

#### 4.2.1.2 Slovakia

A minimum spend of €1 (R15,47<sup>10</sup>) is required to participate in Slovakia's weekly VAT lottery (Ungureanu & Dascalu, 2015:51). Of the 101 winners selected each week, the first prize is estimated at €10 000 (R154 659,00<sup>10</sup>), with the remaining winners each receiving €100 (R1 546,59<sup>10</sup>).

The same registered receipts are automatically entered into a second monthly draw, where one person will win a guaranteed €3 000 (R46 397,70<sup>10</sup>) and 40 people will win various prizes (Cuprik, 2014). There are no further details available on the various prizes that may be won, and these are therefore disregarded in the further analysis below.

Due to the significant prize variations in Slovakia and the large number of people receiving a very small amount weekly, the calculation of a total monthly average VAT lottery amount

<sup>10</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

per person will not provide a realistic view. Table 13 below shows the average rand equivalent of each prize that can be won.

**Table 13: Slovakia: VAT lottery winnings**

VAT lottery frequency	Number of winners per month	Fixed VAT lottery amount per person	Rand equivalent per person <sup>11</sup>
Weekly – first prize	4	€10 000	R154 659,00
Weekly – other	400	€100	R1 546,59
Monthly	1	€3 000	R46 397,70

Source: Cuprik (2014).

The average monthly salary in Slovakia was €883 (R13 656,39<sup>11</sup>) in 2015, with an inflationary adjustment of 2,91% from 2014 (International Labour Organization, 2016:103). Assuming an equal inflationary adjustment annually, the average monthly salary in Slovakia will equal €962,46 (R14 885,25<sup>11</sup>) in 2018.

This VAT lottery therefore has a total of five monthly prizes that significantly exceed the monthly average salary, and 400 prizes that represent only 10,39% of the monthly average salary (assuming a 2,91% inflationary adjustment from 2015 to 2018).

#### 4.2.1.3 Portugal

Portugal's VAT lottery is based on coupons as opposed to invoices, with every €10 (R154,66<sup>11</sup>) spend being allocated one coupon. A coupon will also be allocated for a fraction of €10, and there is therefore no minimum required spend for an entry into the lottery. Each coupon has an equal chance to win; however, this does favour people with higher spending capacity as they will have more coupon entries in each draw.

Table 14 indicates the total value of the vehicles given away as VAT lottery prizes per year, and on an average basis this equates to a value of R4 140 211,12 in prizes per month. This represents a monthly average prize per person of R856 595,40.

<sup>11</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

**Table 14: Portugal: Annual VAT lottery winnings**

Lottery prize	Number of cars per year	Price per vehicle	Total prize per annum	Total average monthly prize	Rand equivalent average monthly prize <sup>12</sup>
Audi A4	52	€52 429	€2 726 308	€227 192,33	R3 513 733,91
Audi A6	6	€81 014	€486 084	€40 507,00	R626 477,21
Total	58	€133 443	€3 212 392	€267 699,33	R4 140 211,12

Source: Audi (2018); Fookien *et al.* (2014:19).

Portugal's average monthly salary was €1 092 (R16 888,76<sup>12</sup>) in 2014 (International Labour Organization, 2016:103), and even with inflationary adjustments this falls well below the average monthly prize per person (calculated at R856 595,40).

#### 4.2.1.4 Romania

A fixed monthly amount of approximately €220 000 (R3 402 498<sup>12</sup>) is allocated to the Romanian VAT lottery. The lottery selects a date and invoice value, and all individuals in possession of an invoice issued on that date with that value can claim a prize. The allocated monthly total lottery prize is then divided by the number of winners to determine how much each individual receives. In instances where there are more than 100 people claiming a prize, there will be a second draw to select only 100 (European Commission, 2017).

The Romanian government's website does not contain details of VAT lottery winners from June 2017 to date. The information on the number of winners each month available for earlier periods since inception, is shown in Table 15, together with the calculated prize money and its rand equivalent.

**Table 15: Romania: Monthly VAT lottery**

VAT lottery period	Number of winners	Prize per person	Rand equivalent average monthly prize per person <sup>13</sup>
April 2015	18 215	€12,08	R186,80

<sup>12</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

<sup>13</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

VAT lottery period	Number of winners	Prize per person	Rand equivalent average monthly prize per person <sup>13</sup>
May 2015	No draw (refer to section 4.2.2.1)		
June 2015	100	€2 200,00	R34 024,98
July 2015	4	€55 000,00	R850 624,50
August 2015	15	€14 667,67	R226 833,20
September 2015	35	€6 285,71	R97 214,23
October 2015	26	€8 461,54	R130 865,31
November 2015	No data		
December 2015	9	€24 444,44	R378 055,33
January 2016	100	€2 200,00	R34 024,98
February 2016	12	€18 333,33	R283 541,50
March 2016	9	€24 444,44	R378 055,33
April 2016	1	€220 000,00	R3 402 498,00
May 2016	20	€11 000,00	R170 124,90
June 2016	100	€2 200,00	R34 024,98
July 2016	3	€73 333,33	R1 134 166,00
August 2016	3	€73 333,33	R1 134 166,00
September 2016	3	€73 333,33	R1 134 166,00
October 2016	No data		
November 2016	86	€2 558,14	R39 563,93
December 2016	9	€24 444,44	R378 055,33
December 2016	12	€18 333,33	R283 541,50
January 2017	2	€110 000,00	R1 701 249,00
February 2017	2	€110 000,00	R1 701 249,00
March 2017	1	€220 000,00	R3 402 498,00
April 2017	2	€110 000,00	R1 701 249,00
May 2017	65	€3 384,62	R52 346,12

Source: Ministry of Public Finance (2018).

The average monthly prize fluctuates significantly from month to month, as it depends on the number of winning claims submitted. Excluding the April 2015 average prize (discussed in more detail in section 4.2.2), the VAT lottery prize per person ranged between R34 024,98 and R3 402 498,00.

The average monthly salary in Romania was L2 328,00 (R7 744,65<sup>14</sup>) in 2014, with an inflationary adjustment of 7,63% from 2014 (International Labour Organization, 2016:103). Assuming an equal inflationary adjustment annually, the average monthly salary in Romania will equal L3 123,84 (R10 392,20<sup>14</sup>) in 2018. The average salary is a third of the minimum VAT lottery prize for the period analysed.

#### **4.2.1.5 Slovenia**

The Slovenian VAT lottery takes place every quarter, with three prizes of €10 000 (R154 659,00<sup>14</sup>) each to be won. Participation in the VAT lottery requires an individual to collect and register ten receipts issued by different suppliers (Borstnik, not dated).

The average monthly salary in Slovenia was €1 556,00 (R24 064,94<sup>14</sup>) in 2015, with an inflationary adjustment of 1,04% from 2014 (International Labour Organization, 2016:104). Assuming an equal inflationary adjustment annually, the average monthly salary in Slovenia will equal €1 605,00 (R24 822,77<sup>14</sup>) in 2018. The average lottery prize per person therefore exceeds the calculated monthly average salary for 2018, assuming a 1,04% inflationary adjustment from 2015 to 2018.

#### **4.2.1.6 Poland**

Monthly VAT lottery draws took place in Poland from October 2015 for a period of 18 months as part of an educational campaign. Prizes comprised iPads, laptops and an Opel Astra each month and an Opel Insignia every third month (Ministry of Finance, 2015b).

**Due to the significant prize variations in Poland, the calculation of a total monthly average VAT lottery amount per person will not provide a realistic view.**

Table 16 below shows the average rand equivalent of each prize.

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<sup>14</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

**Table 16: Poland: VAT lottery winnings**

VAT lottery prize	Number of winners per year	Individual prize value	Rand equivalent of individual prize value <sup>15</sup>
Opel Astra	12	zł61 400	R223 057,60
Opel Insignia	4	zł99 900	R362 922,71
iPads	60	zł2 080	R7 556,350
Laptops	72	zł3 599	R13 074,66

Source: Laptop6 (not dated); Mobilewithprices (not dated); Opel (2018a); Opel (2018b).

The average monthly salary in Poland was zł3 900 (R14 168,15<sup>15</sup>) in 2015, with an inflationary adjustment of 3,26% from 2014 (International Labour Organization, 2016:103). Assuming an equal inflationary adjustment annually, the average monthly salary in Poland will equal zł4 293,56 (R15 597,50<sup>15</sup>) in 2018.

There are 132 annual smaller VAT lottery prizes which are less than the average monthly salary of an individual in Poland, assuming a 3,26% inflationary adjustment from 2015 to 2018. The prices of the 16 vehicles that can be won annually are significant and exceed the average monthly salary.

## **4.2.2 Lessons learnt and subsequent improvements**

It is important to understand how each country's VAT lottery has changed over time, as it can reveal operational design flaws subsequently corrected or improvements brought about to ensure sustained public interest in the VAT lottery.

### **4.2.2.1 Romania**

The original VAT lottery in Romania was designed in such a way that each person in possession of an invoice with the value and date selected in the draw would be able to share in the fixed lottery prize value (European Commission, 2017).

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<sup>15</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).



The government did not anticipate that the first draw in April 2015 would see a total of 18 215<sup>16</sup> people submitting winning receipts. Each winner received a mere €12,07 (R186,80<sup>17</sup>), resulting in the Ministry of Finance making some changes to ensure bigger prizes for winning receipts. As a result, no VAT lottery draw took place the following month, and a new occasional draw was scheduled in June 2015 for the fiscal receipts issued in April 2015 and May 2015 (Marica, 2015).

A new maximum number of winners was set for each draw. If there are more than 100 winning fiscal receipts in a month, there will be a second draw for all winning fiscal receipts in which 100 fiscal receipts will be selected to share in the fixed prize. This ensures that a minimum prize value of approximately €2 200 (R34 024,98<sup>17</sup>) is established (European Commission, 2017), as can be seen in Table 14.

#### **4.2.2.2 Slovakia**

A decrease in public interest less than one year after its implementation forced the state-run lottery to implement changes in an effort to increase participation (Cuprik, 2014). The VAT lottery originally provided three chances to win with each receipt submitted (Ungureanu & Dascalu, 2015:51):

- A bi-weekly draw with 10 prizes ranging between €100 to €10 000.
- A monthly draw with a winner selected from each of the eight administrative regions. The draw firstly identified a winning cash register, and secondly selected a receipt issued by that winning cash register. Each winner received a prize of €5 000<sup>18</sup> or goods to this value.
- A third chance to win through participation in a weekly television show, with 150 individuals winning various prizes. Participation in this third draw requires receipts to be re-registered.

A survey conducted among 880 individuals in June 2014 indicated that people preferred more chances of winning, even if it meant that the prizes would be smaller. This led to

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<sup>16</sup> Another source indicated the number of winners in April 2015 as 17 902 (European Commission, 2017).

<sup>17</sup> Converted using the exchange rate on 8 August 2018 (Oanda, 2018).

<sup>18</sup> A different source indicates prize money of €10 000 (Cuprik, 2014).

changes where the bi-weekly and monthly draws were combined into a weekly draw with 101 winners. One individual wins €10 000 while the remaining 100 winners each receive only €100. The television show reduced the number of winners to 80 and is now broadcast every weeknight (Cuprik, 2014).

#### **4.2.2.3. Other**

No subsequent lessons were learnt or improvements identified in Portugal, Slovenia, Poland and Malta.

### **4.3 PERCEIVED SUCCESS OF VAT LOTTERIES**

It has been acknowledged that quantitative analyses are required for countries which have implemented VAT lotteries. The lack of quantitative evaluation makes it difficult to conclude whether the implementation of a VAT lottery ultimately leads to increased VAT compliance in the short or long term (Fookan *et al.*, 2014:10-13). This lack of information on the impact on revenue collection may also result from the inability to establish a clear link between a VAT lottery and increased compliance on the part of the taxpayer (Awasthi & Engelschalk, 2018:35).

In the absence of formal studies which may provide an indication of a successful implementation, the alternative option is to refer to subsequent data as well as opinions expressed by people at the appropriate level. Refer to section 2.3.2 for a detailed discussion on this matter.

### **4.4 COULD A VAT LOTTERY BE BENEFICIAL FOR SOUTH AFRICA?**

One cannot conclude that a policy implemented successfully in one country will automatically be successful in another. Various factors will need to be considered and compared between the countries in order to draw a conclusion. The next section discusses items of importance in assessing whether a VAT lottery could be beneficial for South Africa.

#### 4.4.1. Significance of VAT collection

It is important to understand the contribution of VAT collection to the total tax revenues collected for each country. This requires a comparison between the EU member countries and South Africa in order to assess whether South African VAT is comparable to other countries in terms of its materiality for the fiscus.

Even though South Africa has the lowest VAT rate of the countries considered in this study, South Africa's VAT is the second biggest contributor to total tax revenue, as indicated in Table 17. Romania is the only country where VAT contributes more to total tax revenue. It should be noted that during 2016 the Romanian VAT rate was 20% (International Monetary Fund, 2018:14).

**Table 17: Standard VAT rates and contribution to total taxes**

Country	Current standard VAT rate	VAT contribution to total taxes <sup>19</sup>
South Africa	15%	25,3%
Malta	18%	22,5%
Romania	19%	26,0%
Slovakia	20%	21,3%
Slovenia	22%	22,9%
Portugal	23%	24,8%
Poland	23%	21,6%

Source: International Monetary Fund (2018:6); National Statistics Office (2017b:4); OECD (2017:18); South African Revenue Service (2017a:29); VATlive (2018).

This is a clear indication of the importance of South African VAT collection for the government, representing more than a quarter of the total South African taxes, at a rate of 15%. It is therefore reasonable to consider the implementation of a VAT lottery in South Africa as a measure to protect and potentially further improve collection of this critical tax.

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<sup>19</sup> EU member country contribution data reflects information for 2015, except for Malta and Romania. Malta and Romania reflect 2016 data. South African data reflects 2017 estimated data.

#### 4.4.2. Country size and population

Of the countries investigated in this study, South Africa is by far the biggest in terms of area and population (see Table 18). It is 3,8 times as big as Poland, which is the largest EU member country of the six analysed and is bigger in square kilometres than all the EU member countries combined.

**Table 18: Comparison of territory and population**

Country	Size (square kilometres)	Population <sup>20</sup>
South Africa	1 219 090	57 725 600
Malta	316	475 701
Romania	238 391	19 523 621
Slovakia	49 035	5 443 120
Slovenia	20 273	2 066 880
Portugal	92 225	10 291 027
Poland	312 679	37 976 687

Source: European Union (2018b); Eurostat (not dated); Statistics South Africa (2018b:21); Trading Economics (2018).

The size and diversity of the South African population may impact on the cost of implementing a VAT lottery in South Africa. Depending on how a VAT lottery would be implemented in South Africa, one of the biggest expenses could relate to the outlay on electronic cash registers; however, as SARS is already considering the use of such registers to enhance tax administration by monitoring business transactions, it would not be a cost incurred solely for the implementation of a VAT lottery.

The size of South Africa also indicates that a VAT lottery system where all receipts are mailed to a specific location, such as the one implemented in Malta, will not be appropriate. Registration of invoices on an online platform, via a cell phone or directly by the supplier, or having the customers keep the invoices as in the case of Romania, may be the most viable option for South Africa.

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<sup>20</sup> Based on 2018 information.

### 4.4.3. Unemployment

In assessing the viability of a VAT lottery in South Africa, the economy of the different countries should be considered. The state of the economy may impact on the willingness and ability of people to participate in the VAT lottery, especially in circumstances where “...customers and business owners could collude to evade taxes due to the collectivity [sic] and privately sharing of benefits.” (Fabbri, 2015:9).

Table 19 indicates the unemployment rates in the EU member countries for July 2018, whereas the rate for South Africa is for the period April to June 2018.

**Table 19: Unemployment rates**

<b>Country</b>	<b>Unemployment rate</b>
South Africa	27,2%
Malta	4,0%
Romania	4,2%
Slovakia	6,8%
Slovenia	5,8%
Portugal	6,8%
Poland	3,5%

Source: Eurostat (2018); Statistics South Africa (2018c:1).

The unemployment rate for South Africa refers to the proportion of the labour force that is unemployed, aged between 15 and 64, and who (Statistics South Africa, 2018c:17):

- “Were not employed in the reference week; **and**
- Actively looked for work or tried to start a business in the four weeks preceding the survey interview; **and**
- Were available for work, i.e. would have been able to start work or a business in the reference week; **or**
- Had not actively looked for work in the past four weeks, but had a job or business to start at a definite date in the future and was available.”

The unemployment rates of all the EU member countries in Table 19 are calculated using the same methodology. The table shows the number of people unemployed as a percentage of the labour force being employed and unemployed people aged 15 to 74.

Unemployed persons are defined as persons between age 15 to 74, who (Eurostat, 2018):

- “are without work;
- are available to start work within the next two weeks;
- and have actively sought employment at some time during the previous four weeks.”

South Africa’s unemployment rate of 27,2%, is significantly higher than that of any of the EU member countries. Even though there may be slight differences in the methodologies adopted to calculate these rates in South Africa and member countries of the EU, they would not fully account for the significant difference in the unemployment rates.

The governor of the Reserve Bank has acknowledged that the current growth forecast remains too low to address the high unemployment levels experienced in South Africa (Menon, 2018). “The South African economy has slipped into a recession in the second quarter of 2018, shrinking by 0,7% quarter-on-quarter (seasonally adjusted and annualised).” (Statistics South Africa, 2018a). This does not bode well for the unemployment rate in the near future.

#### **4.4.4. South Africa**

South Africa consists of nine provinces that differ significantly from each other in terms of the population and economy. Table 20 indicates that Gauteng contributed over a third of South Africa’s economic output, with a 35% contribution to the national economy in the fourth quarter of 2017. Kwazulu-Natal is in second place, with a 16% contribution, indicating just how significant a contribution Gauteng makes to the South African economy.

There is a direct correlation between the population and the contribution that each province makes to the economy. The unemployment rates vary significantly by province, from 34,4% in the Free State to 19,3% in Limpopo.

**Table 20: South Africa: provincial comparisons**

Province	Mid-year population estimates: 2018	Unemployment Rate per province: April – June 2018	Provincial contribution to the national economy: quarter 4 2017
Gauteng	14 717 000	29,7%	35%
KwaZulu-Natal	11 384 700	21,8%	16%
Western Cape	6 621 100	20,7%	14%
Eastern Cape	6 522 700	34,2%	8%
Limpopo	5 797 300	19,3%	7%
Mpumalanga	4 523 900	33,2%	7%
North West	3 979 000	26,1%	6%
Free State	2 954 300	34,4%	5%
Northern Cape	1 225 600	28,9%	2%

Source: Statistics South Africa (2017); Statistics South Africa (2018b:2); Statistics South Africa (2018c:7).

This should be considered when deciding on how best to implement a VAT lottery, and whether provincial lotteries (in addition to a country-wide lottery), such as the one originally implemented in Slovakia, would be preferable.

#### **4.4.5. Recommendations for South Africa**

With the exception of Malta and Poland, all of the EU member countries analysed indicated an increase in VAT collection after the implementation of the VAT lotteries. The finance ministers of Slovakia and Romania publicly declared their VAT lotteries a success. The ministry of finance for Poland indicated that before they launched the VAT lottery as an educational campaign, only every 14<sup>th</sup> consumer remembered receiving an invoice, whereas after the VAT lottery every 3<sup>rd</sup> consumer remembered receiving one.

Slovakia had an increase in the number of vendors reported for refusing to issue invoices, and in Slovenia, consumers used their phones to check receipts issued by three-quarters of all fiscal cash registers, reducing the number of non-validated receipts.

From the above, it is evident that the success of a VAT lottery is not only measured by the additional revenue declared and paid over to government, but also by the culture and awareness of compliance it creates amongst consumers (Mattes, 2015:3).

South Africa's VAT revenue represents a significant portion of the total tax revenues for the country. High unemployment rates and an economy in a recession will mean a constrained environment for growth and tax revenue collection.

SARS is already considering the implementation of electronic cash registers, which provides the perfect opportunity to assess how a VAT lottery could be implemented in conjunction with the rollout of electronic cash registers.

A VAT lottery will start a conversation and create an awareness amongst consumers of how they can help ensure that transactions are reported, ensuring SARS receives the taxes due to them, enabling government to meet its spending commitments. It would therefore be beneficial for South Africa to implement a VAT lottery system.



# **CHAPTER 5**

## **CONCLUSION**

### **5.1 INTRODUCTION**

Chapter 5 gives an overview of how the research question and research objectives were answered, with reference to relevant sections in the study. It further highlights the limitations of this study and makes recommendations for future research opportunities.

### **5.2 REFLECTION ON ADDRESSING THE RESEARCH QUESTION AND OBJECTIVES**

How do VAT lottery tax reward initiatives compare between member countries of the EU, and could they improve taxpayer compliance in South Africa?

To answer this research question, the following research objectives were set:

- To identify tax reward initiatives in the form of VAT lotteries that have been implemented in EU member countries in the past 25 years, excluding VAT lotteries implemented within the past 12 months.
- To compare the rewards, frequency, lessons learnt and subsequent improvements and perceived success of these respective VAT lotteries based on subsequent data and opinions of policymakers.
- To make recommendations regarding the implementation (or not) of a VAT lottery system in South Africa.

In the literature review, a total of nine EU member countries were identified where VAT lotteries have been implemented in the past 25 years. Of the nine identified, three were implemented within the past 12 months and excluded from further analysis. These countries and their implementation dates are listed section 4.1.

Information pertaining to each VAT lottery is documented in sections 2.3.1.1 to 2.3.1.7. This provides an overview of the type of rewards offered, how frequently the VAT lotteries take

place, what is required to participate in the VAT lotteries and why they were implemented. In the EU member countries, the rewards vary from cash to vehicles, laptops and iPads. The frequency of rewards differs from weekly to bi-annual rewards, depending on the country and the prize in question.

The rewards and frequency of these VAT lottery draws are detailed in sections 4.2.1 to 4.2.1.6, together with the translated values in rand terms to provide a better view of how the prizes compare between countries, given the different currencies.

Lessons learnt and subsequent improvements are documented in section 4.2.2, with only Romania and Slovakia making amendments to their VAT lotteries post implementation to address specific concerns. In Slovakia, these amendments increased the number of winners and resulted in smaller prizes, and in Romania they limited the number of eligible winners per draw in order to establish a reasonable minimum prize value.

Section 2.3.2 analyses subsequent data and the opinions of policymakers. The subsequent data provides information regarding the movement in the VAT gap of each country since the implementation of the VAT lottery, where such data is available. This information, together with the information outlined in the preceding three paragraphs, ensured that the second objective of this study was met.

As regards the third objective – whether it would be beneficial for South Africa to implement a VAT lottery system – the significance of the contribution of VAT to the total tax revenue collected in each country was considered in section 4.4.1. The unemployment rate, size of the country and population were also considered in sections 4.4.2 to 4.4.4. Based on all the factors considered, the conclusion reached in section 4.4.5 is that the implementation of a VAT lottery would be beneficial for South Africa.

Improved taxpayer compliance cannot be measured solely by the additional revenue generated from the implementation of a VAT lottery. As noted in section 4.4.5, certain countries observed an increase in the reporting of suppliers refusing to issue invoices, or an increased awareness among consumers of receiving an invoice from a supplier. Section

2.3.3 discusses the experimental evidence on the impact a VAT lottery has on an individual's tax compliance.

Considering all of the above facts, it can be concluded that a VAT lottery could improve taxpayer compliance in South Africa.

### **5.3 LIMITATIONS**

The analysis and frequency of rewards in section 4.2.1 do not include the latest available information for Romania. The government website where the lottery winner details are published, only includes information up to May 2017.

VAT lotteries of developed countries were analysed to conclude whether such a lottery could be beneficial for South Africa as a developing country (United Nations, 2018:141-142). This study does not include a detailed comparison of the differences between a developed and a developing country in reaching this conclusion.

The perceived successes of the VAT lotteries discussed in section 4.3 does not consider any bias on the part of the individuals expressing their opinions. There may be a conflict of interest in instances where individuals expressing an opinion on the success of a VAT lottery were involved in the design and implementation of such VAT lottery.

With the exception of Malta, all VAT lotteries in this study were implemented in the past six years. This study does not consider whether the improved VAT collection and consumer participation may be short-lived.

No regard is had to the perceptions of South Africans and whether they will react positively to a VAT lottery. This includes the risk that individuals may argue that the VAT lottery promotes gambling.

## **5.4 RECOMMENDATIONS AND FUTURE RESEARCH**

Future research could be conducted to ascertain whether the VAT lottery should take the form of goods, money or both and which option would result in both optimal compliance and a return for government. This could be incorporated into an experimental study on South African participants, providing insights into how different types of lottery systems may influence tax compliance behaviour.

Research should be directed towards understanding whether a VAT lottery may have a negative long-term impact on society from what could arguably be seen as exposure to gambling.

## **5.5 CONCLUDING REMARKS**

South Africa finds itself in a very difficult economic situation, with a recently announced recession and increased unemployment rates. This, coupled with decreased taxpayer compliance, may lead to the inability of SARS to collect the taxes due to it, resulting in government being unable to meet its spending commitments.

Various EU member countries have in recent years implemented VAT lotteries as an alternative measure to improve taxpayer compliance. These countries understand that the threats of interest and penalties alone may not be sufficient to ensure compliance.

South Africa should consider implementing a VAT lottery as a means not only to increase VAT revenue, but also to educate the people of the country with regard to their responsibility to be tax compliant citizens.

## 6 LIST OF REFERENCES

- African National Congress. 2018. *Statement of the African National Congress following the Special National Executive Committee held on the 25th February 2018*. Press release issued on 25 February 2018. [Online] Available from: <http://www.anc.org.za/content/statement-african-national-congress-following-special-national-executive-committee-held-25th> [Accessed: 2018-08-08].
- Audi. 2018. *Models*. [Online] Available from: <http://www.audi.pt/pt/web/pt.html> [Accessed: 2018-09-01].
- Avalara VATlive. 2017. *Greece VAT receipt lottery to fight fraud*. [Online] Available from: <https://www.vatlive.com/vat-news/greece-launches-vat-receipt-lottery-to-fight-fraud/> [Accessed: 2018-03-25].
- Awasthi, R. & Engelschalk, M. 2018. *Taxation and the shadow economy: how the tax system can stimulate and enforce the formalization of business activities*. Not known: World Bank Group. [Online] Available from: <http://documents.worldbank.org/curated/en/497071522428886160/Taxation-and-the-shadow-economy-how-the-tax-system-can-stimulate-and-enforce-the-formalization-of-business-activities> [Accessed: 2018-09-01].
- Bazart, C. & Pickhardt, M. 2011. Fighting income tax evasion with positive rewards. *Public Finance Review*, 39(1):124-149.
- BBC News. 2015. Poland: 'receipt lottery' launched to boost VAT income. *BBC News*, 28 September. [Online] Available from: <http://www.bbc.co.uk/news/blogs-news-from-elsewhere-34379634> [Accessed: 2018-05-27].
- Booth, A., Sutton, A. & Papaioannou, D. 2016. *Systematic approaches to a successful literature review*. 2nd ed. London: Sage.
- Bornman, M. & Stack, L. 2015. Rewarding tax compliance : taxpayers' attitudes and beliefs. *Journal of Economic and Financial Sciences*, 8(3):791-807.
- Borstnik, M. not dated. *Slovenia: fiscal receipt lottery starts in 2016*. [Online] Available from: <http://www.salesdatacontroller.com/5087-2/> [Accessed: 2018-05-27].
- Brewer, J. 2003. Positivism. In: Miller, R.L. & Brewer, J. (eds.). *The A-Z of social research*. London: Sage. [Online] Available from: <http://methods.sagepub.com.uplib.idm.oclc.org/reference/the-a-z-of-social-research/n79.xml?fromsearch=true> [Accessed: 2018-05-06].
- Brockmann, H., Genschel, P. & Seelkopf, L. 2016. Happy taxation: increasing tax compliance through positive rewards? *Journal of Public Policy*, 36(3):381-406.
- Burger, S.W. (schalk.burger111@gmail.com) 2018. *VAT Lottery*. [Email to:] Fiedler, L. (lilian.fiedler@gov.mt) 2018-05-18.

Byrne, D. 2017. *Data collection: what is a systematic review?* London: Sage. [Online] Available from: <http://methods.sagepub.com.uplib.idm.oclc.org/project-planner/data-collection/i1250?fromsearch=true> [Accessed: 2018-05-28].

Center for Social and Economic Research. 2017. *Study and reports on the VAT gap in the EU-28 member states: 2017 final report (TAXUD/2015/CC/131)*. Warsaw, Poland: Center for Social and Economic Research. [Online] Available from: [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/study\\_and\\_reports\\_on\\_the\\_vat\\_gap\\_2017.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/study_and_reports_on_the_vat_gap_2017.pdf) [Accessed: 2018-05-20].

China Economic Net. 2017. *Lithuania launches receipt lottery to curb shadow economy*. [Online] Available from: [http://en.ce.cn/main/latest/201711/29/t20171129\\_27028222.shtml](http://en.ce.cn/main/latest/201711/29/t20171129_27028222.shtml) [Accessed: 2018-26-05].

Chua, P. & Mark, M.M. 2005. Quantitative data. In: Mathison, S. (ed.). *Encyclopedia of evaluation*. Thousand Oaks, CA: Sage.

Cuprik, R. 2014. VAT lottery to change. *The Slovak Spectator*, 15 September. [Online] Available from: <https://spectator.sme.sk/c/20051977/vat-lottery-to-change.html> [Accessed: 2018-05-26].

Datt, S. 2016. *Defining research method for research papers*. [Online] Available from: <https://www.projectguru.in/publications/defining-research-method-research-papers/> [Accessed: 2018-03-11].

Davies, P. 2006. Exploratory research. In: Jupp, V. (ed.). *The SAGE dictionary of social research methods*. London: Sage.

Davis, G. 2018. Unions furious with Treasury's move to hike VAT rate. *Eyewitness News*, 22 February. [Online] Available from: <http://ewn.co.za/2018/02/22/unions-furious-with-treasury-s-move-to-hike-vat-rate> [Accessed: 2018-05-28].

Department of Public Lotto. 2017. *VAT lottery results*. [https://mfin.gov.mt/en/Services/vat\\_lottery/Pages/VAT-Lottery-Results.aspx](https://mfin.gov.mt/en/Services/vat_lottery/Pages/VAT-Lottery-Results.aspx): Department of Public Lotto. [Online] Available from: [https://mfin.gov.mt/en/Services/vat\\_lottery/Pages/VAT-Lottery-Results.aspx](https://mfin.gov.mt/en/Services/vat_lottery/Pages/VAT-Lottery-Results.aspx) [Accessed: 2018-09-01].

Department of Public Lotto. 2018. *VAT lottery results*. Triq il-Gvern Lokali, Marsa: Department of Public Lotto. [Online] Available from: [https://mfin.gov.mt/en/Services/vat\\_lottery/Pages/VAT-Lottery-Results.aspx](https://mfin.gov.mt/en/Services/vat_lottery/Pages/VAT-Lottery-Results.aspx) [Accessed: 2018-09-01].

Dixon-Woods, M. & Sutton, A. 2004. Systematic review. In: Lewis-Beck, M.S., Bryman, A. & Liao, T.F. (eds.). *The SAGE encyclopedia of social science research methods*. Thousand Oaks, CA: Sage. [Online] Available from: <http://methods.sagepub.com.uplib.idm.oclc.org/Reference/the-sage-encyclopedia-of-social-science-research-methods/n998.xml> [Accessed: 2018-04-01].

Eriksson, P. & Kovalainen, A. 2008. *Qualitative methods in business research*. London: Sage. [Online] Available from: <http://methods.sagepub.com/book/qualitative-methods-in-business-research> [Accessed: 2018/05/24].

European Commission. 2017. *European platform undeclared work: good practice fiche*. Not known. European Commission. [Online] Available from: <http://ec.europa.eu/social/main.jsp?pager.offset=45&catId=1299&intPagelId=4875&langId=en> [Accessed: 2018-03-21].

European Commission. not dated. *VAT gap*. [Online] Available from: [https://ec.europa.eu/taxation\\_customs/business/tax-cooperation-control/vat-gap\\_en](https://ec.europa.eu/taxation_customs/business/tax-cooperation-control/vat-gap_en) [Accessed: 2018-05-20].

European Union. 2018a. *Countries*. [Online] Available from: [https://europa.eu/european-union/about-eu/countries\\_en](https://europa.eu/european-union/about-eu/countries_en) [Accessed: 2018-05-26].

European Union. 2018b. *Living in the EU: size and population*. [Online] Available from: [https://europa.eu/european-union/about-eu/figures/living\\_en#size\\_and\\_population](https://europa.eu/european-union/about-eu/figures/living_en#size_and_population) [Accessed: 2018-05-26].

Eurostat. 2018. *Euro area unemployment at 8.2%*. [Online] Available from: [https://ec.europa.eu/eurostat/search?p\\_auth=aa9A68wu&p\\_p\\_id=estatsearchportlet\\_WAR\\_estatsearchportlet&p\\_p\\_lifecycle=1&p\\_p\\_state=maximized&p\\_p\\_mode=view&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_text=unemployment&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_sort=\\_score&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_theme=PER\\_PO PSOC&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_action=search&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_collection=CAT\\_PREREL&\\_estatsearchportlet\\_WAR\\_estatsearchportlet\\_publicationDate=2018](https://ec.europa.eu/eurostat/search?p_auth=aa9A68wu&p_p_id=estatsearchportlet_WAR_estatsearchportlet&p_p_lifecycle=1&p_p_state=maximized&p_p_mode=view&_estatsearchportlet_WAR_estatsearchportlet_text=unemployment&_estatsearchportlet_WAR_estatsearchportlet_sort=_score&_estatsearchportlet_WAR_estatsearchportlet_theme=PER_PO PSOC&_estatsearchportlet_WAR_estatsearchportlet_action=search&_estatsearchportlet_WAR_estatsearchportlet_collection=CAT_PREREL&_estatsearchportlet_WAR_estatsearchportlet_publicationDate=2018) [Accessed: 2018-09-10].

Eurostat. not dated. *Population on 1 January*. [Online] Available from: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=tps00001> [Accessed: 2018-05-27].

Fabbri, M. 2015. Shaping tax norms through lotteries. *International Review of Law & Economics*, 44:8-15.

Fabbri, M. & Hemels, S. 2013. 'Do you want a receipt?' Combating VAT and RST evasion with lottery tickets. *Intertax*, 41(8/9):430-443.

Fabbri, M. & Wilks, D.C. 2016. Tax lotteries: the crowding-out of tax morale and long-run welfare effects. *Journal of Legal, Ethical and Regulatory Issues*, 19(2):26-38.

Financial Administration of the Republic of Slovenia. 2017. *Annual effect of fiscal cash registers is EUR 81 million*. [Online] Available from: [http://www.fu.gov.si/fileadmin/Internet/Nadzor/Podrocja/Davcne\\_blagajne\\_in\\_VKR/Novice/2017/Ucinki\\_uedbe\\_davcnih\\_blagajn\\_2016.pdf](http://www.fu.gov.si/fileadmin/Internet/Nadzor/Podrocja/Davcne_blagajne_in_VKR/Novice/2017/Ucinki_uedbe_davcnih_blagajn_2016.pdf) [Accessed: 2018-09-09].

Financial Administration of the Republic of Slovenia. 2018. *Introduction of tax offices* [Online] Available from: [http://www.protisiviekonomiji.si/uedba\\_davcnih\\_blagajn/](http://www.protisiviekonomiji.si/uedba_davcnih_blagajn/) [Accessed: 2018-05-27].

Financial Administration of the Republic of Slovenia. not dated. *Prize game turn on the mind, request an account!* [Online] Available from: [http://www.fu.gov.si/drugo/posebna\\_podrocja/nagradna\\_igra\\_vklopi\\_razum\\_zahtevaj\\_racun/](http://www.fu.gov.si/drugo/posebna_podrocja/nagradna_igra_vklopi_razum_zahtevaj_racun/) [Accessed: 2018-05-27].

Fooker, J., Hemmelgarn, T. & Herrmann, B. 2014. *Improving VAT compliance: random awards for tax compliance (Fiscalis workshop 06.05.2014 Ispra (IT))*. Luxembourg: Office

for Official Publications of the European Communities. [Online] Available from: [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/resources/documents/taxation/gen\\_info/economic\\_analysis/tax\\_papers/taxation\\_paper\\_51.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_51.pdf) [Accessed: 2018-05-26].

Frankova, R. 2017. *Receipt lottery to be launched in October*. [Online] Available from: <http://www.radio.cz/en/section/business/receipt-lottery-to-be-launched-in-october> [Accessed: 2018-05-20].

Ghinea, R. 2015. MasterCard director for Romania: the number of issued tax vouchers has almost doubled since the tax lottery began. *Mediafax*, 15 October. [Online] Available from: <http://www.mediafax.ro/economic/directorul-mastercard-pentru-romania-numarul-de-bonuri-fiscale-emise-aproape-s-a-dublat-de-cand-a-inceput-loteria-fiscala-14844457> [Accessed: 2018-05-27].

Gough, D., Oliver, S. & Thomas, J. 2017. *An introduction to systematic reviews*. 2nd ed. Los Angeles, CA: Sage.

Greener, I. 2011. *Designing social research: a guide for the bewildered*. London: Sage. [Online] Available from: <http://methods.sagepub.com.uplib.idm.oclc.org/book/designing-social-research/n1.xml?fromsearch=true> [Accessed: 2018-05-09].

Iacob, I. 2015. *The lottery of fiscal receipts. A brief analysis*. Paper presented at Law between Modernization and Tradition: Implications for the Legal, Political, Administrative and Public Order Organization, Bucharest, Romania, 21-23 April:524-532. [Online] Available from: <https://heinonline-org.uplib.idm.oclc.org/HOL/Page?collection=journals&handle=hein.journals/cidstue2015&id=1> [Accessed: 2018-02-24].

International Labour Organization. 2016. *Global wage report 2016/17: wage inequality in the workplace*. Geneva, Switzerland: Ilo Publications. [Online] Available from: [https://www.ilo.org/global/research/global-reports/global-wage-report/2016/WCMS\\_537846/lang--en/index.htm](https://www.ilo.org/global/research/global-reports/global-wage-report/2016/WCMS_537846/lang--en/index.htm) [Accessed: 2018-08-08].

International Monetary Fund. 2018. *Romania: selected issues*. Washington, DC: International Monetary Fund. [Online] Available from: <http://www.imf.org/en/Publications/CR/Issues/2018/06/06/Romania-Selected-Issues-45944> [Accessed: 2018-09-09].

Jadoo, Y. 2018. Unions declare VAT war, plan protests. *The Citizen*, 22 February. [Online] Available from: <https://citizen.co.za/news/1831391/1831391/> [Accessed: 2018-05-13].

Kirchler, E., Hoelzl, E. & Wahl, I. 2008. Enforced versus voluntary tax compliance: the “slippery slope” framework. *Journal of Economic Psychology*, 29(2):210-225.

Laptop6. not dated. *Lenovo thinkpad T450s Poland - price and specs*. [Online] Available from: <http://www.laptop6.com/pl/laptops/lenovo/lenovo-thinkpad-t450s-981> [Accessed: 2018-09-07].

Leavy, P. 2017. *Research design: quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. New York, NY: The Guilford Press.



Magubane, K. 2018. We need more time for our report, VAT review panel tells Nene. *News24*, 1 August. [Online] Available from: <https://www.fin24.com/Economy/we-need-more-time-for-our-report-vat-review-panel-tells-nene-20180801> [Accessed: 2018-08-08].

Marchese, C. 2009. Rewarding the consumer for curbing the evasion of commodity taxes? *Finanz-archiv / Public Finance Analysis*, 65(4):383-402.

Marica, I. 2015. Final count: over 18,000 Romanians claim winning receipts at the fiscal lottery. *Romania Insider*, 18 May. [Online] Available from: <https://www.romania-insider.com/final-count-over-18000-romanians-claim-winning-receipts-at-the-fiscal-lottery/149031/> [Accessed: 2018-09-08].

Mattes, L. 2015. *VAT lotteries – the ultimate road towards tax compliance and social awareness?* Not known: International Bureau of Fiscal Documentation. [Online] Available from: [https://online.ibfd.org/kbase/#topic=doc&url=%252Fcollections%252Fwp%252Fpdf%252Fwp\\_vat\\_lotteries\\_the\\_ultimate\\_road\\_towards\\_tax\\_compliance\\_and\\_social\\_awareness.pdf&WT.z\\_nav=Navigation&title=VAT+Lotteries+%25E2%2580%2593+The+Ultimate+Road+towards+Tax+Compliance+and+Social+Awareness%253F](https://online.ibfd.org/kbase/#topic=doc&url=%252Fcollections%252Fwp%252Fpdf%252Fwp_vat_lotteries_the_ultimate_road_towards_tax_compliance_and_social_awareness.pdf&WT.z_nav=Navigation&title=VAT+Lotteries+%25E2%2580%2593+The+Ultimate+Road+towards+Tax+Compliance+and+Social+Awareness%253F) [Accessed: 2018-05-20].

Menon, S. 2018. Unemployment rate rises, as manufacturing sector sheds 105,000 jobs. *BusinessDay*, 31 July [Online] Available from: <https://www.businesslive.co.za/bd/economy/2018-07-31-unemployment-rate-rises-as-manufacturing-sector-sheds-105000-jobs/> [Accessed: 2018-08-06].

Mercer, M. 2016. *Romania's rules for greater government delivery*. [Online] Available from: <https://www.centreforpublicimpact.org/romanias-rules-for-delivery/> [Accessed: 2018-05-27].

Ministry of Finance. 2015a. *The first draw in the lottery lottery is behind us*. Press release issued on 17 November 2015a. [Online] Available from: [https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset\\_publisher/M1vU/content/za-nami-pierwsze-losowanie-nagrod-w-loterii-paragonowej?redirect=https%3A%2F%2Fwww.mf.gov.pl%2Fministerstwo-finansow%2Fwiadomosci%2Faktualnosci%2Fministerstwo-finansow%2Fp\\_p\\_id%3D101\\_INSTANCE\\_M1vU%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-2%26p\\_p\\_col\\_count%3D1%26\\_101\\_INSTANCE\\_M1vU\\_advancedSearch%3Dfalse%26\\_101\\_INSTANCE\\_M1vU\\_keywords%3D%26\\_101\\_INSTANCE\\_M1vU\\_delta%3D20%26\\_101\\_INSTANCE\\_M1vU\\_cur%3D48%26\\_101\\_INSTANCE\\_M1vU\\_andOperator%3Dtrue#p\\_p\\_id\\_101\\_INSTANCE\\_M1vU\\_](https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset_publisher/M1vU/content/za-nami-pierwsze-losowanie-nagrod-w-loterii-paragonowej?redirect=https%3A%2F%2Fwww.mf.gov.pl%2Fministerstwo-finansow%2Fwiadomosci%2Faktualnosci%2Fministerstwo-finansow%2Fp_p_id%3D101_INSTANCE_M1vU%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1%26_101_INSTANCE_M1vU_advancedSearch%3Dfalse%26_101_INSTANCE_M1vU_keywords%3D%26_101_INSTANCE_M1vU_delta%3D20%26_101_INSTANCE_M1vU_cur%3D48%26_101_INSTANCE_M1vU_andOperator%3Dtrue#p_p_id_101_INSTANCE_M1vU_) [Accessed: 2018-03-25].

Ministry of Finance. 2015b. *The first lottery ticket in Poland will start in a week*. Press release issued on 24 September 2015b. [Online] Available from: [https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset\\_publisher/M1vU/content/za-tydzien-rusza-pierwsza-w-polsce-loteria-paragonowa?redirect=http%3A%2F%2Fwww.mf.gov.pl%2Fministerstwo-finansow%2Fp\\_p\\_id%3D101\\_INSTANCE\\_NsX0%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3D\\_118\\_INSTANCE\\_9Jwz\\_\\_column-1%26p\\_p\\_col\\_count%3D1#p\\_p\\_id\\_101\\_INSTANCE\\_M1vU\\_](https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset_publisher/M1vU/content/za-tydzien-rusza-pierwsza-w-polsce-loteria-paragonowa?redirect=http%3A%2F%2Fwww.mf.gov.pl%2Fministerstwo-finansow%2Fp_p_id%3D101_INSTANCE_NsX0%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3D_118_INSTANCE_9Jwz__column-1%26p_p_col_count%3D1#p_p_id_101_INSTANCE_M1vU_) [Accessed: 2018-03-25].

Ministry of Finance. 2017. *Double handing of cars at the National Receipt Lottery*. Press release issued on 31 May 2017. [Online] Available from: [https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset\\_publisher/M1vU/content/](https://www.mf.gov.pl/ministerstwo-finansow/wiadomosci/aktualnosci/ministerstwo-finansow2/-/asset_publisher/M1vU/content/)

podwojne-wreczenie-aut-w-narodowej-loterii-paragonowej?redirect=https%3A%2F%2Fwww.mf.gov.pl%2Fministerstwofinansow%2Fwiadomosci%2Faktualnosci%2Fministerstwo-finansow%2Fp\_p\_id%3D101\_INSTANCE\_M1vU%26p\_p\_lifecycle%3D0%26p\_p\_state%3Dnormal%26p\_p\_mode%3Dview%26p\_p\_col\_id%3Dcolumn-2%26p\_p\_col\_count%3D1%26p\_r\_p\_564233524\_tag%3Dloteria%2Bparagonowa%26\_101\_INSTANCE\_M1vU\_changeViewTo%3Dabstracts#p\_p\_id\_101\_INSTANCE\_M1vU\_ [Accessed: 2018-03-25].

Ministry of Finance. 2018. *Minister's speech at the SARS 2017/18 preliminary revenue outcome announcement*. Press release issued on 3 April 2018. [Online] Available from: <http://www.sars.gov.za/Media/Pages/Media-Packs.aspx> [Accessed: 2018-08-08].

Ministry of Public Finance. 2018. *Lottery of vouchers*. [Online] Available from: <http://www.mfinante.ro/loteriabonurilor.html?pagina=loteriabonurilor> [Accessed: 2018-05-27].

Mobilewithprices. not dated. *Apple ipad air 2 64GB price in Poland with release date and full specification*. [Online] Available from: <https://www.mobilewithprices.com/apple-ipad-air-2-64gb-1525-in-poland-5041.php> [Accessed: 2018-09-07].

Msweli, P. 2011. *Writing a research proposal : practical guidelines for business students*. Cape Town, South Africa: Juta.

Mulrow, C.D. 1994. Systematic reviews: rationale for systematic reviews. *BMJ : British Medical Journal*, 309(6954):597-599.

National Statistics Office. 2017a. *Regional statistics Malta: 2017 edition*. Lascaris, Valletta: National Statistics Office. [Online] Available from: <https://nso.gov.mt/en/nso/Media/Salient-Points-of-Publications/Pages/Regional-Statistics-MALTA-2017-Edition.aspx> [Accessed: 2018-09-01].

National Statistics Office. 2017b. *Tax revenues: 2016*. Press release issued on 2 November 2017b. [Online] Available from: [https://nso.gov.mt/en/News\\_Releases/View\\_by\\_Unit/Unit\\_A2/Public\\_Finance/Documents/2017/News2017\\_177.pdf](https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_A2/Public_Finance/Documents/2017/News2017_177.pdf) [Accessed: 2018-09-09].

National Treasury. 2018. *Budget review 2018*. [Online] Available from: <http://www.treasury.gov.za/default.aspx> [Accessed: 2018-05-13].

Niselow, T. 2018. Cabinet to discuss VAT, fuel hike report. *News24*, 31 July. [Online] Available from: <https://www.fin24.com/Economy/cabinet-to-discuss-vat-fuel-hike-report-20180731> [Accessed: 2018-08-08].

O'Leary, Z. 2007. *The social science jargon buster : the key terms you need to know*. London: Sage. [Online] Available from: <http://methods.sagepub.com/book/the-social-science-jargon-buster/n28.xml> [Accessed: 2018-05-09].

Oanda. 2018. *Currency converter*. [Online] Available from: <https://www.oanda.com/currency/converter/> [Accessed: 2018-08-08].

OECD. 2017. *Revenue Statistics 1965-2016 special feature: complementary indicators of tax revenues*. Paris: Oecd Publishing. [Online] Available from: <https://read.oecd->

ilibrary.org/taxation/revenue-statistics-1965-2016\_9789264283183-en#page1 [Accessed: 2018-09-09].

Omarjee, L. 2018. Panel of experts to review list of zero-rated VAT items. *News24*, 25 April. [Online] Available from: <https://www.fin24.com/Economy/panel-of-experts-to-review-list-of-zero-rated-vat-items-20180425> [Accessed: 2018-08-08].

Omarjee, L. & Niselow, T. 2018. The fight against the VAT hike is on. *News24*, 28 February. [Online] Available from: <https://www.fin24.com/Budget/the-fight-against-the-vat-hike-is-on-20180228> [Accessed: 2018-05-28].

Opel. 2018a. *Astra hatchback*. [Online] Available from: <https://www.opel.pl/samochody/astra/hatchback/index.html> [Accessed: 2018-09-07].

Opel. 2018b. *Insignia grand sport*. [Online] Available from: <https://www.opel.pl/samochody/insignia/grand-sport/index.html> [Accessed: 2018-09-07].

Patton, M.Q. 2015. *Qualitative research & evaluation methods: integrating theory and practice*. 4th ed. Thousand Oaks, CA: Sage.

Petticrew, M. & Roberts, H. 2006. *Systematic reviews in the social sciences : a practical guide*. Malden, MA: Blackwell.

Remeta, J., Perret, S., Jareš, M. & Brys, B. 2015. *Moving beyond the flat tax - tax policy reform in the Slovak Republic (OECD taxation working papers no. 22)*. Paris, France: OECD. [Online] Available from: <https://www.oecd-ilibrary.org/content/paper/5js4rtzr3ws2-en> [Accessed: 2018-05-26].

Sekaran, U. & Bougie, R. 2016. *Research methods for business: a skill-building approach*. 7th ed. Chichester, West Sussex, United Kingdom: John Wiley.

Shank, G. 2006. Praxical reasoning and the logic of field research. In: Hobbs, D. & Wright, R. (eds.). *The SAGE handbook of fieldwork*. London: Sage.

South African Revenue Service. 2017a. *Annual report: South African Revenue Service 2016 – 2017 (ISBN: 978-0-621-45716-2 RP246/2017)*. Pretoria: SARS Communication. [Online] Available from: <http://www.sars.gov.za/AllDocs/SARSEntDoelib/AnnualReports/SARS-AR-22%20-%20Annual%20Report%202016-2017.pdf> [Accessed: 2018-05-28].

South African Revenue Service. 2017b. *VAT 404 guide for vendors*. Not known: South African Revenue Service. [Online] Available from: [http://www.sars.gov.za/Legal/Legal-Publications/Find-Guide/Pages/Value-Added-Tax-\(VAT\).aspx](http://www.sars.gov.za/Legal/Legal-Publications/Find-Guide/Pages/Value-Added-Tax-(VAT).aspx) [Accessed: 2018-07-02].

Statistics South Africa. 2017. *Gross domestic product*. 2017. [Online] Available from: [http://www.statssa.gov.za/publications/P0441/GDP\\_Q4\\_2017\\_Media\\_presentation.pdf](http://www.statssa.gov.za/publications/P0441/GDP_Q4_2017_Media_presentation.pdf) [Accessed: 2018-08-07].

Statistics South Africa. 2018a. *The economy shrinks by 0,7% in Q2: 2018*. [Online] Available from: <http://www.statssa.gov.za/?p=11507> [Accessed: 2018-09-11].

Statistics South Africa. 2018b. *Mid-year population estimates 2018*. Not known: Statistics South Africa. [Online] Available from: [http://www.statssa.gov.za/?page\\_id=1854&PPN=P0302](http://www.statssa.gov.za/?page_id=1854&PPN=P0302) [Accessed: 2018-09-11].

Statistics South Africa. 2018c. *Quarterly labour force survey*. Not known: Statistics South Africa. [Online] Available from: [http://www.statssa.gov.za/?page\\_id=1854&PPN=P0211&SCH=7329](http://www.statssa.gov.za/?page_id=1854&PPN=P0211&SCH=7329) [Accessed: 2018-08-07].

The Citizen. 2018. VAT hike angers opposition parties, unions *The Citizen*, 21 February. [Online] Available from: <https://citizen.co.za/news/1829743/vat-hike-angers-opposition-parties-unions/> [Accessed: 2018-05-28].

Thomas, D.R. & Hodges, I.D. 2010. *Designing and managing your research project: core skills for social and health research*. London: Sage. [Online] Available from: <http://methods.sagepub.com/book/designing-and-managing-your-research-project> [Accessed: 2018/05/24].

Trading Economics. 2018. *South Africa - surface area (sq. km)*. [Online] Available from: <https://tradingeconomics.com/south-africa/surface-area-sq-km-wb-data.html> [Accessed: 2018-09-09].

Ungureanu, D. & Dascalu, D. 2015. Improving VAT compliance in Romania by implementing a new tool – tax lottery receipts. *Journal of Economic Development, Environment and People*, 4(4):47-57.

United Nations. 2018. *World economic situation and prospects 2018*. New York, NY: United Nations. [Online] Available from: [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018\\_Full\\_Web.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018_Full_Web.pdf) [Accessed: 2018-09-16].

VATlive. 2018. *2018 European Union VAT rates*. [Online] Available from: <https://www.vatlive.com/vat-rates/european-vat-rates/> [Accessed: 2018-09-09].

Wise, P. 2014. Portugal tries its luck with tax lottery. *FT.com*.