

**DIGITALISATION TO ENHANCE COUNTRY-BY-COUNTRY REPORTING FOR
EFFECTIVE TAX RISK ASSESSMENT IN SOUTH AFRICA**

By

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ABSTRACT

In 2015, The OECD released an 15 point action plan to combat base erosion and profit shifting (BEPS). Amongst those actions is action 13 which deals with the implementation of Country-by-Country (CbC) reporting on Multinational Enterprises (MNE). Even though South Africa is not an OECD member, it adopted the implementation by enacting CbC reporting into law in December 2016. CbC reports give an overview of how local entities fit into their large group structure of the MNE which in turn will increase the tax transparency in the jurisdictions it operates from. Therefore, CbC Reports can be a great tool for tax administrations to assess tax risk. CbC reports are exchanged electronically between tax payer and tax administration as well as between different tax administrations of the different jurisdictions, thus the use of a digitalised system is of high importance as it will ultimately lead to better tax transparency.

This approach of this work is qualitative in nature and the OECDs guidelines and corresponding sections in South Africa's Income Tax Act were analysed. Throughout this study South Africa and India's tax administrations are being compared, with recommendations drawn from the Indian tax administration. This study addresses the use of CbC Reports in the risk assessment procedure as well as the current tax risk assessment procedures in both countries. The study goes further by explaining the concept of digitalisation and then gauges the digital competence of South Africa's and India's tax administration according to an gauge set out by EY. There are numerous challenges that are a result of digitalisation of the tax administration.

The findings of study prove that South Africa has already made progress towards a digitalised tax administration however there is room for improvement. Furthermore, as the tax administration progress, CbC reports will become more effective as a risk assessment tool. Lastly, the study imparts that even with the challenges that digitalisation of the tax administration brings about, the benefit of a digital tax administration providing tax transparency will be able to overcome these challenges.

Key words: Digitalisation, tax administration, cbc reporting, BEPS, risk assessment

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LIST OF ABBREVIATIONS AND ACRONYMS

Table 1: Abbreviations and acronyms used in this document

Abbreviation	Meaning
BEPS	Base Erosion and Profit Shifting
CbC	Country-By-Country
GTSN	Goods and Services Tax Network
IRS	Indian Revenue Service
IT	Information Technology
KPI	Key Performance Indicators
MCAA	Multilateral Competent Authority Agreement
MNE	Multinational Enterprises
OECD	Organisation for Economic Co-operation and Development
SARS	South African Revenue Service
SMME	Small, Medium and Micro Enterprise
TIEA	Tax Information Exchange Agreements
TAA	Tax Administration Act 28 of 2011
USA	United States of America

1 INTRODUCTION

1.1 Background

In recent years, tax havens and low tax jurisdictions have become increasingly popular among multinational enterprises (MNEs) as they enable these enterprises to engage in tax avoidance by shifting their taxable income to these jurisdictions. According to the Organisation for Economic Co-operation and Development's (OECD) glossary of terms, a tax haven can be defined as "a country which imposes low or no tax, and is used by corporations to avoid tax which otherwise would be payable in a high-tax country" (OECD, 2020b, p1). The OECD states that up to \$240 billion are lost annually worldwide because of tax avoidance by MNEs (OECD, 2017, p10). Thus, there is a need to implement measures to ensure better tax transparency by MNEs in order to stop "base erosion and profit shifting" (BEPS) by MNEs. BEPS refers to when taxpayers exploit countries' varying tax laws to pay less or no tax, this eats into the tax base of the country and can result in huge tax revenue losses for these countries (OECD, 2013, p10). In 2015, the OECD issued 15 action measures to prevent BEPS (OECD, 2015, p9), and in 2016, the OECD established the Inclusive Framework to monitor the implementation of the BEPS minimum standards (OECD, 2017b, p7). South Africa is not a formal member of the OECD, but along with 134 other countries it agreed to implement the BEPS minimum standards and by being included in the Inclusive Framework to achieve the global goal of terminating BEPS (OECD, 2017d, p8).

1.2 The OECD Recommendations under Action 13

Action 13 sets out a three-tiered documentation approach that is compulsory for qualifying MNEs to comply with in order to ensure tax transparency (OECD, 2017, p12). These documentation guidelines are now included in the OECD Transfer Pricing Guidelines of 2017.

The three tiers are explained below:

- **The Country-by-Country (CbC) Report:** This report sets out entity specific information and jurisdiction on an international basis (OECD, 2013, p3). Action 13

provides that MNEs with a group consolidated revenue of over €750 million (or the domestic equivalent) should document and submit a CbC report to the tax authority where their Ultimate Parent Entity is a resident (OECD, 2015, p17). For South African purposes, the South African Revenue Service (SARS) issued regulations in the Government Gazette that provide that as of 1 January 2016, MNEs with a parent company that is resident in South Africa with a group consolidated turnover of R10 billion or more should electronically submit a report to SARS (Government Gazette, No 40516, 2016, No. R1598). This report must be in a specific format that is in accordance with provisions set out by the OECD in the Action 13 Report (OECD, 2017c, p11), (OECD, 2015b, p16; p29). The OECD recommends that CbC reports can be exchanged using the XML Schema (explained later in this work) (OECD, 2015b, p10). MNEs with subsidiaries in South Africa that have parent companies resident in other countries are merely required to notify SARS of the identity and residence of their parent company (Government Gazette, No 40516, 2016, No. R 1598). In summary, CbC reporting gives a better understanding of how local entities fit into large and complex MNE groups (OECD, 2017, p10). CbC Reporting increases the international collaboration between tax authorities, thus allowing for better data analysis and governance of the data, which in turn would lead to better transparency between taxpayers and tax authorities (Baisalbayeva et al., 2017, p10).

- **The Master File:** Action 13 provides that the Master File should contain an overview of the MNE, including an overview of business operations, transfer pricing policies, and information about the MNE's global operations (OECD, 2015b, p14). For South Africa's filing purposes, just like the CbC report, a Master File is only submitted if the parent company is a resident of South Africa (Pearson et al., 2018, p4). A Master File is also electronically submitted on the SARS e-filing portal.
- **The Local File:** In term of Action 13, the Local File contains detailed information about inter-group transactions to determine whether the MNE has complied with the arm's length principles and the set-out transfer pricing policies declared in the Master File (OECD, 2015b, p15). The arm's length principle means that the price being charged in inter-group transactions should be the same as if the parties were unrelated (SARS, 2017, p20). In South Africa, an MNE that is required to file a CbC report will also be required to file the Local File on the SARS e-filing portal. Other South African companies are required to file a Master File and a Local File where

aggregate cross-border related party transactions exceed R100 million (Government Gazette, No 40375, 2016, No. R 1334).

The three-tier documentation allows tax revenue services to use their resources more effectively by limiting tax audits and compliance interventions to high tax risk taxpayers. All these reports and files are submitted, stored and shared digitally. MNEs that meet the thresholds and do not comply with these filing obligations may be charged with a penalty of up to R16 000 per month per return (Tax Administration Act [TAA], No. 28 of 2011, sections 210, 211(1), and 257).

1.2.1 Country-by-Country Reporting

Country-by-country reporting (which is the focus of this work) is one of the minimum standards of the BEPS measures. CbC reports, specifically, help to identify these high-risk taxpayers by conducting more effective risk assessments. The country in which the parent company of the MNE is resident is expected to automatically exchange the CbC report with other tax authorities with whom the MNE group has a constituent entity that is a resident. (OECD, 2017c, p13). The Master Files and Local Files should also be shared on special request to these specific tax jurisdictions (SARS, 2017, p10).

The OECD set out three main obligations that countries must comply with in order to enable CbC reporting. The first obligation is that for countries to be able to share the CbC reports, they have to be signatories to international agreements that enable the automatic exchange of CbC reports. These agreements could be bilateral, such as double tax treaties that enable the exchange of information under Article 26 and the Tax Information Exchange Agreements (TIEAs), or multilateral, such as the Multilateral Competent Authority Agreement (MCAA) (OECD, 2015b, p10). The MCAA facilitates the automatic exchange of information by setting out what information needs to be exchanged; when the information should be exchanged; procedures to exchange information; and safeguards that should be in place (OECD, 2015b, p37).

The second OECD obligation is that countries must have enacted domestic legislation and administrative measures in place to ensure consistency between states in their CbC reports (OECD, 2019, p5).

Under the third obligation, the OECD (2015b, p22) set out three conditions that should be met to obtain and use CbC reports. Non-compliance with any of these conditions may result in the temporary suspension of the exchange of CbC reports (OECD, 2019, p30).

These conditions are:

- **Confidentiality:** The OECD puts the responsibility to protect confidentiality on the jurisdiction itself. Jurisdictions should already have legal protections on such information in place. These protections include restriction of access to information and governing the ways that it may be used (OECD, 2015b, p22).
- **Consistency:** This condition requires jurisdictions to adopt into their legislation provisions to enforce filing obligations for qualifying MNEs. No jurisdiction will require a CbC report without a legal requirement being implemented and neither will it be exchanged. The OECD (2015b, p22) also requires the templates set out by them in Annex III of Action 13 to be used in reporting to ensure all the information required in CbC reporting is reported.
- **Appropriate Use:** The OECD (2015b, p22) requires jurisdictions to commit to using CbC reports to assess high-level transfer pricing risks and other BEPS related risks. CbC reports may also be used by jurisdictions to make further enquiries on other tax matters in the course of a tax audit (OECD, 2015b, p22). The CbC reports should not be used to propose transfer pricing adjustments to taxpayers or to adjust taxpayers' income (OECD, 2015b, p22).

1.3 Compliance with the Country-by-Country Reporting Requirements in South Africa

With regards to signing international agreements, the legal authority in South Africa is provided for in section 231 of the Constitution of the Republic of South Africa (1996), which states the following:

“Any international agreement becomes law in the Republic when it is enacted into law by national legislation; but a self-executing provision of an agreement that has been approved by parliament is law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament.”

The procedure for tax treaties to be approved is that a draft by the Minister of Finance is passed to Cabinet for approval, and only after the approval of Cabinet may it be introduced by the Minister of Finance to the National Assembly, which is a House of Parliament (Legislative and Constitutional Development, 2004, p1). Therefore, once parliament approves the bill or amendment by way of the President's signature, it will be considered an Act of Parliament and will be in force upon its publication in the Government Gazette (Legislative and Constitutional Development, 2004, p1). South Africa signed the MCAA on 27 January 2016 (OECD, 2020, p1), and ratified it 23 December 2016 (Government Gazette, No 40516, 2016, No. R 1598). In South Africa, the CbC report is retained by SARS and shared to all other 85 tax jurisdictions that have also signed the MCAA or other bilateral agreements (OECD, 2020, p1). On 8 May 2016, South Africa and the USA signed "Arrangement between the Competent Authority of the United States of America and the Competent Authority of the Republic of South Africa on the Exchange of Country-By-Country Reports" (SARS, 2017, p3). South Africa also has a number of double tax treaties that can enable the automatic exchange of information in terms of Article 26 of treaties based on either the OECD or the UN MTC. Currently, South Africa has entered into over 100 double tax agreements (SARS, 2020c). South African has also signed TIEAs that can enable the exchange of information to jurisdictions it does not have double tax treaties with, in particular to tax haven jurisdictions that do not levy income taxes. Currently South Africa has entered into 20 TIEAs, as set out on SARS website (SARS, 2020d).

Regarding enacting legislation to implement CbC reporting, in South Africa section 1 of the Tax Administration Act, No. 28 of 2011 (TAA) was amended to include the definition of international tax standard to include the CbC reporting standard for MNEs. Section 3(3)(a) of the TAA explains that SARS has the right to spontaneously disclose taxpayers' information under international tax agreements such as the CbC reporting standard for MNEs. SARS has the responsibility to treat and collect taxpayers' information as if it were relevant information required in the tax act (TAA section 3(3)(a)).

Confidentiality of the CbC reports is protected in South Africa in terms of Article 6 of the regulations specifying the CbC reporting standard for MNEs that was published by the Minister of Finance in the Government Gazette (Government Gazette, No 40516, 2016, No. R 1598).

South Africa set out regulations to enable CbC reporting in the Government Gazette, No 40516, 2016, No. R 1598 on 23 December 2016. The regulations set out in the Government Gazette simulate the OECD recommendations in BEPS Action 13 (OECD, 2015b, p39). SARS administers the filing of CbC reports in terms of public notice under section 25 of the TAA (Government Gazette, No 41186, 2017, No. R 1117). In terms of the CbC regulations a “constituent entity” is defined follows:

“Any separate business unit of an MNE that is included in the Consolidated Financial Statements of the MNE for financial reporting purposes, or would be so included if equity interests in such business unit of an MNE Group were traded on a public securities exchange” (Government Gazette, No 40375, 2016, No. R 1334).

CbC reporting is done by the Reporting Entity (SARS, 2017, p16). The Reporting Entity is the constituent entity that is required to file a CbC report. According to Article 2 of South Africa’s CbC Regulations, this will either be the Ultimate Parent Entity or Surrogate Parent Entity (Government Gazette, No 40375, 2016, No. R 1334). An Ultimate Parent Entity is an entity that owns a sufficient interest in one or more of the entities in an MNE, whereas a Surrogate Parent Entity is merely an entity that was appointed by the MNE to substitute the Ultimate Parent Entity and file the CbC report on behalf of the entity (Government Gazette, No 40375, 2016, No. R 1334).

The Reporting Entity must be registered with e-filing in order to access SARS’ Financial Data Reporting system to do CbC reporting in South Africa, (SARS, 2017, p16). A CbC01 form must be filled out. This form complies with the OECD XML Schema format. MNEs are obliged to submit information that is complete and correct. Immediately upon submission, SARS will send an acceptance/rejected response to the user based on the completeness of the form (SARS, 2017, p17). SARS will then consolidate these reports and automatically exchange them with tax jurisdictions that are party to the CbC MCAA or the bilateral competent agreement signed with USA (SARS, 2017, p17).

As a member of the OECD Inclusive Framework, South Africa underwent a peer review of the minimum standards of Action 13 in 2017/2018 and 2019 (OECD, 2019b, p485). The peer review reports show that South Africa complies with the conditions required to receive

and exchange CbC reports, and the exchange of CbC reports commenced in South Africa in September 2017 (SARS, 2019d).

1.4 Problem Statement

South Africa had a tax revenue shortfall of R63.3 billion for the 2019/2020 tax year (National Budget, 2020, p33). The Covid-19 pandemic severely affected the state of the global economy, and this negative worldwide impact and the government economic relief efforts will increase the budgeted shortfall drastically (National Supplementary Budget, 2020, p21). In order to relieve the tax revenue shortfall, measures must be put into place to increase tax compliance. Moreover, in order to increase tax compliance, tax authorities should increase tax transparency. CbC reporting provides an effective tool to enhance tax transparency which is necessary for curtailing BEPS. As stated in the previous section. When South Africa signed the OECD MCAA in January 2016, it included in the agreement was the electronic exchange of CbC reports to ensure better tax transparency and less tax avoidance (Government Gazette, No 40516, 2016, No.R 1598; Oguttu, 2020, p14).

CbC reports help increase transparency by providing administration tax authorities with an overview of an MNEs structure as well as identifying MNEs that can be flagged for high-level risk assessment if their structure provides more opportunities to shift profits to low tax jurisdictions. Efficient risk assessment will lead to tax audits with successful findings, thus less wasted audit resources. Successful findings will ensure tax compliance and increase tax revenue.

In order for CbC reporting to be effective, the tax authority should be able to get maximum benefit from them. The most efficient way to analyse these reports is through digitalisation. The terms “digitalisation” means using electronic means to improve business processes. This differs from “digitisation”, which is the process of converting physical information into a digital format (Banga and Willem te Velde, 2018, p3). Digitisation should be used for digitalisation. Digitalisation of tax administrations can enhance CbC reporting, but in order for this to be achieved, the entire tax administration system, including risk assessment and tax audits, should be converted to an electronic format as CbC reports are already submitted and exchanged electronically.

Thus, the research problem that this study aims to address is that the current tax administration is not fully digitalised, thus making CbC reporting only partially effective in providing tax transparency. This problem is exacerbated by the lack of advanced technological capacity that South Africa faces as a developing country. This includes lack of capacity and resources to set up world-class digital systems and lack of expert tax technicians who can run a digital tax system that can efficiently process CbC reports.

1.5 The Purpose of the Study

The purpose of this study is to recommend measures to ensure effective compliance with the OECD's CbC recommendations in South African. Since these reports have to be exchanged electronically, the tax administration must be effectively digitalised to implement Action 13 efficiently (Oguttu, 2015, p546).

This work recommends measures to bring about tax administrative reforms that will lead to the complete digitalisation of the tax administration by automating risk assessment procedures and tax audits. In this way, SARS will fully benefit from the exchange of CbC reports with other jurisdictions (OECD, 2017, p10). This study will therefore seek to point out what South Africa's tax administration system lacks from a digital perspective, what it is expected to have in place, and what needs to be done to achieve the digital administrative reform that will enable effective CbC reporting (Wiesener, 2018, p11).

Since the digital administrative reforms that should be implemented in the tax administration will impact taxpayers, this work also provides recommendations on digital changes that taxpayers who are required to file CbC reports will need to put in place to ensure their CbC reports comply with the digital systems set up by the tax administration (Wiesener, 2018, p11).

1.6 Comparative Study

To gauge whether the digitalisation of tax administration in South Africa is on par with fellow emerging economies, a comparative study of South Africa's and India's situation is provided in this study. South Africa and India share common experiences as both countries fought for equality and freedom in their respective countries. In 1994, the year in

which South Africa attained democracy and political and economic sanctions were lifted, the consular and diplomatic relationship between India and South Africa were renewed (Philip, 2007, p89).

Both South Africa and India are developing countries that face similar challenges such as poverty, crime, and a large gap in income earners. South Africa imports \$4.32 billion worth of goods from India annually, which is 5% of total imports, making India the fourth top importer to South Africa (Trading Economics, 2020, p1). Both countries are members of the G20 alliance. Although neither country is a member of the OECD, both signed the OECD MCAA that can enable CbC reporting (OECD, 2020, p1).

South Africa and India have had a Double Tax Agreement in place since 1997 (SARS, 2020, p1). Significant tax reforms were announced by the Indian government in September 2019, which reignited the Indian economy (Sonnenberg, 2019, p1). India has been proactive in the use of technology in tax administration and has made a shift to a digital tax administration system, making India one of the fastest growing economies in the world (Sharma and Singh, 2018, p298). India is also one of the leading developing countries in implementing the BEPS measures (Shome, 2016, p459). Therefore, South Africa could learn from India how to transition to a digital tax administration to maximise the advantages of CbC reporting.

1.7 Scope of the Study

This study focuses on ensuring a digitalised tax administration in South Africa as a means to effectively enforce CbC reporting. The work will draw from the experiences in India to provide recommendations for the digitalisation of South Africa's tax administration where it is found lacking. The work excludes digitalisation matters pertaining to the preparation and sharing of Master Files and Local Files. Although digitalisation will greatly improve other tax systems, such as income tax returns, assessments, debt collection, service delivery and early warning systems, this work focuses only on how digitalisation can enhance CbC reporting.

1.8 Methodology

A qualitative research method was used for this study. This entailed a literature review of income tax legislation, SARS Interpretation Notes, court cases, reports by international bodies like the OECD, tax text books, journals, and electronic academic articles on the topic. This was done to gain an insightful understanding of the topic from both South Africa's and India's perspective.

1.9 Breakdown of Study

The structure of the study is summarised below.

Part 1: Introduction

This part of the work gives the background of the topic, it explains the OECD minimum standards in Action 13, the CbC requirements and how these have been implemented in South Africa. The part also clarifies the purpose and scope of the study, and presents an argument on the choice of India in the comparative study to complement the research topic.

Part 2: Tax Risk Assessment

This part discusses what tax risk assessment is by detailing the different types of tax risks. It also looks at the tax risk assessment systems and tools used by South Africa and India. The final aspect of this part explains how CbC reports assist in detecting these risks and assessing its severity.

Part 3: Enhancing Digitalisation of Tax Administrations for Effective Tax Risk Assessment

This part explains what it means for a tax administration to be digital as well as the associated benefits of a digitalised tax administration.

Part 4: Key Measures that Have to Be in Place to Ensure a Digitalised Tax Administration

This part details the key measures that are necessary for a seamless digital transition. These key measures are a compliance strategy, a legislative framework, an operational

framework, tax technology and infrastructure, change management, and performance measurement. This part also delves into the necessity of each measure in the digitalisation of tax administration as well as how these measures link together.

Part 5: The Profile to Gauge the Digital Competence of Tax Administrations

This part explains how the digital competency of a tax administration is judged. It continues by applying this system to assess the tax administration systems of both South Africa and India to determine where the tax administrations fits into the gauging method.

Part 6: Use of Digitalisation to Enhance CbC Reporting for Tax Risk Assessment— OECD Guidelines

This part explains how the OECD guidelines facilitated the use of digitalisation using an XML Schema to enhance tax risk assessment through CbC reporting. It also shows how South Africa and India adapted these guidelines to enhance CbC reporting in the respective countries.

Part 7: The Challenges of Digitalisation for Effective CbC Reporting and Possible Solutions

This part discusses the challenges South Africa may experience that may hinder the effectiveness of a digitalised tax administration. Recommendations are given to address these challenges, including various technological infrastructures such as blockchain technology and cognitive automation.

Part 8: Recommendations Drawn from India

Recommendations are suggested based on the advancements that have been made by India. These recommendations are suggested based on the similarities between the two countries and their tax administrations.

Part 9: Conclusion

This part concludes the study. The chapter summarises the findings and conclusions, explains the limitations of this study and makes recommendations for future research.

2 TAX RISK ASSESSMENT

2.1 Meaning of Tax Risk Assessment

Tax risk assessment is the process of identifying taxpayers that pose an added tax risk to jurisdictions (OECD, 2017, p15). The following are the different types of tax risks:

- **Transactional risk:** This usually concerns once-off non-routine transactions that occur because of the incorrect documentation of these types of transactions (Elgood et al., 2004, p4). This tax risk is usually caused by lack of knowledge.
- **Operational risk:** This concerns everyday operational transactions when tax laws and regulations are inaccurately applied (Elgood et al., 2004, p5).
- **Compliance risk:** This is the risk of not complying with tax legislation and focuses on the preparation, completion and submission of tax returns (Elgood et al., 2004, p6).
- **Financial accounting risk:** This deals with whether the tax figures are accurate and whether quality data is used to calculate it (Elgood et al., 2004, p6).
- **Portfolio risk:** This combines transactional, operational and financial risks (Elgood et al., 2004, p7).
- **Management risk:** This concerns personnel in charge of tax and their management of tax affairs. It also deals with the documentation in place to ensure all tax issues related to the company are physically documented (Elgood et al., 2004, p8).
- **Reputational risk:** This refers to the impact on a company when the public finds out about their tax affairs through a public space such as the courts (Elgood et al., 2004, p8).

Tax administrations carry out tax risk assessments to determine which entities are more likely to default in tax. Once this is determined, tax authorities can make calculated decisions to focus their resources on assessing taxpayers that pose the greatest risk. The resources of a tax administration include the use of personnel, funds and information technology (IT) that can be used in the following ways:

- Criminal investigations for extremely high-tax risk entities (Hauptman et al., 2014, p3);
- Complete and partial tax audits depending on tax risk (Hauptman et al., 2014, p3); and

- Assistance with information (Hauptman et al., 2014, p3).

2.2 Tax Risk Assessment Tools used in South Africa

Tax authorities use different risk assessment tools to assess tax risk. In South Africa, SARS adjusts its tax risk assessment process every four years using the SARS Compliance Programme that was launched in 2012 by the Minister of Finance (SARS, 2013, p1). The Compliance Programme is a set of strategies that the Commissioner of SARS uses over a five-year period on a set target group of taxpayers to ensure tax compliance (SARS, 2014, p28). It also sets out areas to focus on to identify tax risks (SARS, 2013, p5). The Compliance Programme is included in SARS's strategic plans that are published every five years.

SARS has for instance introduced questions concerning 'transfer pricing' of the company into its Corporate Tax Return Form to assess tax avoidance risks. Transfer pricing refers to the price at which connected parties exchange goods and services among each other (SARS, 1999, p5). Using these questions, SARS can identify whether a company has significant cross-border transactions with related parties (Jansen van Nieuwenhuizen, 2013, p1). Returns are automatically saved on SARS's IT system for future use should transfer pricing risks arise. These returns are then further examined by SARS employees. In this way, SARS employees are not required to analyse companies with no risk so that SARS resources are not wasted on non-essential purposes.

Other key initiatives that SARS has adopted to complement its risk assessment strategies include the following (SARS, 2016, p41–p43):

- Segment based interventions that are conducted in high-risk areas to ensure better compliance (SARS, 2016, p41). Large corporates, high-net worth individuals¹ and small, medium and micro enterprises (SMMEs) are dealt with differently and as follows:

¹ Individuals which have gross income of R7 million or higher and/or have gross wealth to the value of R75 million or above (SARS, 2013, p3).

- SARS aims to strengthen its capabilities to address BEPS by placing more importance on OECD guidelines such on CbC reporting. This is meant to specifically address non-compliance issues in large corporates (SARS, 2016, p42).
- SARS aims to use risk profiling to target high-net-worth individuals and associated entities for audits to address compliance. Additionally, third-party data is used to identify individuals whose declared taxes do not match income earned (SARS, 2016, p42).
- SARS ensures SMMEs' compliance by using risk profiled targeted interventions. More educational support is provided to SMMEs to encourage compliance (SARS, 2016, p42).
- Improved enforcement and audit capabilities as well as the capability to manage taxpayer debt by ensuring staff have adequate required skills. Improved digitalisation of the tax administration complements this initiative (SARS, 2016, p43).
- Improved case selection processes by enhancing tax risk engines to filter between tax types and taxpayer types. This is done by using a scoring system that audits outcomes from selected cases to enhance the effectiveness of the system (SARS, 2016, p43).
- Ensure the integrity of taxpayer registers by merging and comparing third-party data and the SARS Client Information System to certify that taxpayers' information is up to date (SARS, 2016, p43).
- Continued collaboration with global tax jurisdictions on international tax compliance and to exchange CbC reports on MNE for transparency purposes (SARS, 2016, p43).

2.3 Tax Risk Assessment Tools Used in India

India has been in the process of automating tax risk assessment processes since 2007. Currently, India has three main projects that help detect income tax risks (OECD, 2017, p22):

- **Computer Assisted Scrutiny Selection:** This refers to the Indian Revenue Service (IRS) using a centralised rule-based mechanism to sift through taxpayers' returns using set-out criteria. This process allows the IRS to use their resources on taxpayers who fall outside an acceptable bracket, alluding to potential tax risks. Criteria that

control these mechanisms are reviewed annually and amended according to suggestions received from outcomes in prior tax audit cases that were reviewed by representatives from different departments, such as transfer pricing, international tax, and investigation and intelligence departments (OECD, 2017, p22).

- **The Non-filers Monitoring System:** This system prioritises addressing taxpayers with potential tax liabilities that do not submit a return. All databases of the IRS are analysed for this purpose. The cases are classified with grade ratings according to priority (OECD, 2017, p22).
- **Project Insight:** This project uses data analytics to identify high-tax risk individuals or companies. IRS uses advanced IT infrastructure to profile taxpayers. Taxpayers are then sent reminders through email, text messages or phone calls to urge them to voluntarily comply with the tax legislation. This IT infrastructure gathers information from all government databases as well as taxpayers' public social media accounts (Prasad, 2019).

2.4 The Role of CbC Reporting in Tax Risk Assessment

The OECD Action 13 report states that CbC reports will be helpful in the assessment of high-level transfer pricing risks and BEPS related risks (2015b, p16). CbC reporting is specifically used to deter tax avoidance and profit shifting; therefore, it specifically addresses the compliance risk category. CbC reports can be incorporated into tax risk assessment frameworks differently for different jurisdictions depending on the risk assessment framework they use. Regardless of whether jurisdictions have mature transfer pricing policies and audit procedures in place, CbC reports will add value to the risk assessment process (OECD, 2017, p31).

Tax authorities can use CbC reports to help develop a profile of company structures that are common for MNEs with high-tax risks (OECD, 2017, p32). Another way to use CbC reports in the tax risk assessment process is by analysing trends in BEPS activities to determine the ratio of MNEs across sectors. This will allow authorities to draw patterns as to which sectors' BEPS are most common in and to assess if all patterns are actually related to BEPS or if any other reasons can be detected from considering previous experience (OECD, 2017, p33).

The main advantage of CbC reports with regards to tax risk assessment is that it gives tax authorities comparative material. Tax authorities can use these reports to compare the following:

- Figures of jurisdictions to establish which jurisdiction stands out, allowing tax authorities to flag risks more efficiently (OECD, 2017, p34); and
- Individual MNEs' CbC reports throughout the years can be examined to identify changes of level of activity and nature of trade. Inflation and market trends do play a role in these changes but very large amounts will flag potential tax risks (OECD, 2017, p34).

According to the OECD "Handbook of Effective Risk Management" (2017, pp35-36), the following tax risk indicators can be identified by analysing CbC reports:

- **Contribution of the MNE in a jurisdiction:** This indicator is determined by factors such as size of MNE, activities, revenue, and tax liability.
- **Activities of a group in a jurisdiction:** For example, if the MNE only has a holding company in a specific jurisdiction, it may indicate a lower tax risk because of less activity.
- **Large proportion of tax-deductible transactions entered into with related parties:** Over time this may eat into the tax base of a tax jurisdiction (OECD, 2017, p33). However, tax authorities should not flag a risk from this indicator alone as transactions with related parties could be just for commercial purposes (OECD, 2017, p36).
- **Results of ratios of a sector in a jurisdiction that deviate from the same sector in potential comparable jurisdictions:** Comparable jurisdictions with many similarities in their economies are, for example, India and South Africa. Ratios that may be compared include profit margins, effective tax rates, profits per unit of economic activity, pre-tax return on equity, and post-tax returns on equity. However tax authorities should also take other factors, such as differences in laws, cost of labour and level of competition, into consideration (OECD, 2017, p38).
- **MNEs results in a jurisdiction that do not reflect market trends of the same sector in that specific jurisdiction:** CbC reports of a variety of MNEs that operate in the same sectors are compared to set benchmarks for that sector. However, the

size of MNEs, number of employees, and specified market will also play a role in the benchmarking process (OECD, 2017, p34). If these results vary widely, it is an indication of a possible tax risk.

- **MNEs with significant profits within a specific tax jurisdiction even though minimal activity happens in that jurisdiction:** This could indicate that profit may be diverted from within the group or from other jurisdictions (OECD, 2017, p39).
- **MNEs that have entities with significant profits in a particular jurisdiction and yet the returns show low tax liability:** This indicator requires further assessment as the entity could have incurred large amounts of capital expenditure, thus qualifying for accelerated tax wear and tear allowance (OECD, 2017, p39).
- **A group that has significant activities located in tax havens in order to pay a lower tax rate poses a BEPS risk:** IT and administrative centres are usually excluded when detecting this indicator as these activities draw low profits (OECD, 2017, p40).
- **Significant once-off transactions that are entered into that involve the restructuring of the group or the relocation of a key asset:** Such transactions have a substantial impact on the tax position of the entity, thus affecting the jurisdictions in which the transactions occurred (OECD, 2017, p33). These types of transactions do not clearly indicate a risk, but indicate that the tax authority should seek more information to determine if a risk exists.
- **Cases where intellectual property is kept in its own entity and not with related activities:** The reason that this may indicate a risk is because of the difficulty that arises when valuing intellectual property, making it easier to use it as a tool to shift profits (OECD, 2017, p41).
- **Marketing of the group that is kept in jurisdictions that differ from jurisdictions in which sales happen:** This alerts tax authorities to a risk if a centralised marketing company is not used for the entire group of companies, thus justifying that the varying locations is not for commercial or operating reasons (OECD, 2017, p42).
- **Procurement entities, marketing entities and manufacturing locations that are based in different jurisdictions:** A tax risk is indicated when these entities are not in the same jurisdiction and it is not for operational or commercial reasons.

- **Income tax that is consistently not paid in full:** Over time, the tax accrued by the group and the tax paid by the group should balance. However, if it does not balance and the variance is material, it will signify a tax risk (OECD, 2017, p43).
- **A group that includes dual resident entities:** Dual residency is when a double tax treaty exists and an entity is, for instance, incorporated in one jurisdiction but its place of effective management is in another and it must be determined which jurisdiction may claim the entity as its tax resident. This is usually challenging for tax authorities to classify (OECD, 2017, p43).
- **A group that includes entities with no tax residence:** This is also challenging for tax authorities to identify. Such cases arise very seldom as they can only arise because of differences in jurisdiction laws (OECD, 2017, p44).
- CbC report of MNE does not match the information provided by a constituent entity.

3 ENHANCING DIGITALISATION OF TAX ADMINISTRATIONS FOR EFFECTIVE TAX RISK ASSESSMENT

3.1 Meaning of Digitalisation

Digitisation is defined as the process of transforming analogue material into an electronic form, especially for storage and use in a computer (Pearce-Moses, 2005, p120). Taking this into consideration, the digitalisation of tax administration therefore means to use electronic formats to administer the various tax acts. This means the information must be organised, received and delivered in a digital format. In order to achieve a digital tax administration, a digital transformation is necessary, meaning that all tax related information and processes must be digitalised (Musgrove, 2018, p1).

The digitalisation of tax administration is complex as tax administrations must play many roles; therefore, various technologies must be used to accomplish this (Mumbua, 2019, pp12-14). Artificial intelligence, the use of data storage clouds, data analytics and other technological advancements are becoming increasingly popular in tax revenue services worldwide as their use can optimise operations and increase taxpayer satisfaction through the ease and simplicity of tax services (Baisalbayeva et al., 2017, p7).

3.2 Benefits of a Digitalisation in Enhancing the Tax Administration in South Africa

According to section 3 of the TAA of South Africa, the tax administration is responsible for administering the tax acts such as the TAA, Income Tax Act 58 of 1962, VAT Act 89 of 1991, Estate Duty Act 45 of 1955, and Transfer Duty Act 40 of 1949. In South Africa, the tax administration is SARS under the direction of the Commissioner.

Section 3(2) of the TAA outlines that the role of administering the various tax acts involves the following:

- Obtaining full information on taxable events, obligations of a person or any other information that may affect the past, present or future tax liability of a person;
- Verifying whether returns and information of a person were filed in accordance with tax acts;
- Determining taxpayers' tax liability;
- Collecting taxes from taxpayers;
- Refunding taxes when necessary;
- Establishing taxpayers' identities by collecting information on such persons;
- Being alert to any offences that contravene the tax acts and following this through by either laying criminal charges or providing assistance for reasonable, necessary further investigations or prosecution;
- Providing the assistance necessary under international tax agreements;
- Enforcing SARS powers and duties to ensure that the tax acts are complied with; and
- Any other administrative functions required to enforce the tax acts that are not specifically mentioned above.

Both tax administrations and taxpayers will benefit from a digitalised tax administration. The benefits to the taxpayers will largely be conveniences such as fewer physical interactions with SARS; real-time communication; tailored e-services; fewer assessments if SARS can automatically enter and calculate tax liability for taxpayers; several payment methods; and faster refunds (Baisalbayeva et al., 2017, p9). A study by Kirchler (2007, p100) shows that to enforce a stronger tax morale, the convenience, access and control of service delivery should be improved. A higher tax morale increases tax compliance.

Tax administrations will benefit by closing the tax revenue gap as more taxpayers will become compliant. Digitalisation decreases operating costs; reduces administrative costs since there are fewer physical interactions with taxpayers; fosters transparency; ensures better risk assessment; and saves tax authorities from wasting resources on non-essential audits (Baisalbayeva et al., 2017, p9). Digitalisation also gives tax authorities insight into taxpayers' financial affairs (Gueydi and Abdellatif, 2018, p784).

The digitalisation of South Africa's tax administration has the potential to enhance the prevention of tax avoidance, in particular the use of transfer pricing schemes, through the enforcement of CbC reporting (Gueydi and Abdellatif, 2018, p784). Digitalising South Africa's tax administration will equip SARS with the resources to collect the needed information to enforce tax compliance of MNEs. MNEs contribute a major portion of the tax revenue for most African countries, including South Africa, and therefore, equipping the tax administration with the necessary resources to ensure tax compliance is crucial for development of the country (Oguttu, 2015, p3). A study by Gueydi and Abdellatif (2018, p785) shows that tax compliance is low in non-digital tax administrations as most administrative activities occur after the filing of returns, whereas after digitalisation, most administrative activities occur prior to filing, meaning that fewer notices need to be issued, fewer assessments need to be done, ultimately leading to more compliance. In other words, with digitalisation problems are prevented before they occur and not remedied after occurring.

4 KEY MEASURES THAT HAVE TO BE IN PLACE TO ENSURE A DIGITALISED TAX ADMINISTRATION

In order for a tax administration to digitalise, it is imperative that certain key measures are put into place prior to the shift to ensure a smoother transition. These key measures are a compliance strategy, a legislative framework, an operational framework, tax technology and infrastructure, change management, and performance measurement.

4.1 Compliance Strategy

This strategy sets out the methodologies that should be put into place to align the values that the tax authority wishes to uphold and the outcomes that are desired through digitalisation (Baisalbayeva et al., 2017, p16). This must be done so that all key participants, such as employees, businesses, and individuals, are aware of the requirements, values and desired outcomes. A compliance strategy that incorporates key performance indicators (KPIs) is fundamental to determining if the digital transformation is successful. KPIs are measuring tools to value how effectively a company, in this case the tax authority, achieves its objectives (Guzik et al., 2010, p12). There are two categories of KPIs, high-level KPIs, which focus on the overall achievement of the authority as a whole, and low-level KPIs, which focus on measuring progress towards objectives in each department, such as VAT, Income Tax and Transfer Pricing departments (Klipfolio, 2001).

As discussed in section 2.2., SARS has implemented a Compliance Programme that is included in the SARS Strategic Plan. The most recent version sets out the strategies SARS wishes to implement with regards to compliance for years 2016/2017-2020. All the strategies set out to achieve tax compliance could be achieved using the digitalisation of the tax administration. These strategies are the following:

- To adapt an approach for high-risk taxpayers, such as high-net worth individuals, large corporates and SMMEs, that distinguishes them from each other (SARS, 2016, p41);
- To strengthen administration abilities;
- To expand capacity and capability to manage taxpayer debt;
- To Improve risk assessment procedures by improving procedures that select audit cases;
- To ensure the reliability of taxpayers; and
- To continue to collaborate and work with other tax and customs jurisdictions on global compliance and enforcement issues and to exchange information as per OECD guidelines.

4.2 Legislative Framework

A legislative framework covers laws, policies and governance to protect both taxpayers and the tax authority from infringement on their rights. Confidentiality, user terms, conditions, and responsibility of liability of breaches between SARS and taxpayers are just a few of the implications that come with technology, making legislation to address such implications imperative (Baisalbayeva et al., 2017, p17).

4.3 Operational Framework

An operational framework sets out the processes needed to accomplish a compliance strategy. In this case, the operational framework will provide detailed instructions guiding the way towards a digitalised tax administration to result in better compliance. Operational frameworks are usually tailored specifically to tax administrations according to the country's social, economic and political background as well as the technological maturity of the tax administration operations (Baisalbayeva et al., 2017, p17).

4.4 Tax Technology and Infrastructure

A tax technology strategy must be designed to govern the installation, usage, support, maintenance, licence, and security requirements of the tax administration (SARS, 2016, p43). Much like the operational framework, tax technology and infrastructure are tailored to the needs of the tax authority. There are multiple options of technology and infrastructure to choose from according to the requirements and challenges the tax administration will experience (Patni, 2017, p22).

According to Baisalbayeva et al. (2017, p30), most digital tax administrations will include the following main categories of technology for these reasons:

- Advanced analytics that predict and model information for different types of taxpayers.
- Multi-factor authentication for security and confidentiality, for example, biometrics.
- Customer relationship management platforms that store and manage all taxpayer documents securely, giving the tax authority a full view of the taxpayer.
- Cognitive services and artificial intelligence that assist taxpayers, services and also uses machine learning for insight into data.

4.5 Change Management

Tax administration staff will need intensive training in tax technology to process the strategies set out for the digitalisation of the tax administration. Guidance should be provided to staff to the extent that they are comfortable with operating and using the technology in place (Baisalbayeva et al., 2017, p18).

4.6 Performance Measurement

Performance measurement is the process by which progress is measured and compared to KPIs. As technology changes, the needs of the tax administration will change along with it, thus performance measurements are necessary to determine whether previous objectives have been met and whether new objectives are being met. This will indicate whether any adjustments should be made to the tax technology and infrastructure to achieve better tax compliance. Since the main goal is tax compliance, a tool to measure performance could determine whether the income tax revenue deficit decreased, in other words, whether the tax gap closed by any percentage.

5 THE PROFILE TO GAUGE THE DIGITAL COMPETENCE OF TAX ADMINISTRATIONS

According to research done by EY Global (2018, p6), the profile of the digital competence of tax administrations can be gauged according to the following five categories (in their order of listing):

- **e-Filing:** Electronically filling a standard income tax return form that are matched annually.
- **e-Accounting:** Submitting electronic supporting documentation to returns filed, such as invoices and trial balances.
- **e-Match:** Other documents are submitted in addition to returns and supporting documents. These documents include bank statements and financial statements. At this stage, tax authorities can compare and match document details between tax payers.

- **e-Audit:** Data is analysed and compared to returns to determine accuracy. These comparisons are all done in real time. Audits are issued electronically and response times to electronic audits are limited (Vuković, 2009, p2).
- **e-Assess:** No tax return forms are filed as the tax authority analyses data and informs taxpayers of the tax that must be paid. The taxpayer have a limited time to correct these calculations (Vuković, 2009, p2).

This list shows that e-Filing indicates the lowest level of digitalisation of a tax administration and e-Assess indicates the highest level of digitalisation of a tax administration (EY Global, 2018, p6).

5.1 Rating the Profile of South Africa's Tax Administration on the Digital Competence Gauge

South Africa's tax administration is doing things in each of the categories and not just according to one of the categories. In order to determine the average competence of the tax administration system, activities should be analysed according to which category it falls into. This will give insight into the category that the South African tax administration fits into best.

Regarding e-filing, SARS uses an e-filing system for the submitting of tax returns. According to the SARS e-Filing Guide (2020), the system can be used to submit the following tax returns:

- Pay-As-You-Earn (EMP201 return);
- Skills Development Levy (included on the EMP201 and EMP501 return);
- Value Added Tax (VAT201);
- Provisional Tax (IRP6);
- Income Tax Returns for individuals and companies;
- Trusts (IT12R).

Regarding e-Accounting, SARS requires taxpayers to submit all supporting documents that are used for returns to be uploaded electronically onto the e-filing portal. These documents include the following:

- Employees Tax Certificate;
- Certificates received for local interest income, foreign interest income and foreign dividend income;
- Documents relating to medical expenditure;
- Retirement annuities certificates from financial institutions;
- Logbooks to claim business travel deductions if any travel allowances are given as fringe benefits;
- Any other documents relating to income that must be declared or deductions that may be claimed.

Other processes that SARS allows taxpayers to make electronically also fall under this category, such as:

- Change of Personal Details (IT77/RFC);
- Tax Practitioner Registration;
- Payments of tax;
- Requests for Tax Clearance Certificate;
- Applications for Advance Tax Rulings;
- Customs payments.

SARS requests financial statements for trading and farming activities, all information relating to local and foreign capital gain transactions, and all information relating to the renting of assets. Therefore, SARS falls into the e-Match category.

With respect to e-Audit, SARS audits individuals and companies either on a random basis or on a risk basis. An audit from SARS usually entails an intense analysis of financial records and supporting documentation to determine whether the taxpayer has correctly declared their tax position (SARS, 2019b). Although SARS does carry out audits and these audit notifications are issued electronically by SARS. However, the returns and documents captured are not compared and analysed digitally in real time as the processing time from the submission of a return until the issue of a notification of an audit can take up to 21 days (SARS, 2019b). However, it can be issued up until the assessment is closed three years later or it can be reopened and issued at a later stage (SARS, 2019b). This proves

that the comparison is not done in real time as this would surely shorten the processing time. Therefore, South Africa's tax administration does not fall in this category.

Regarding e-Assess, as of August 2020, SARS has issued auto assessments to many taxpayers. By doing so, SARS is entering this category as they are using taxpayers' information to fill out returns and calculate tax owed using taxpayers' information (SARS, 2020b). There is no longer a need for taxpayers to fill out returns, they merely need to approve these assessments or correct them.

Based on the EY Global (2018, p6) digital competence gauge, it can be concluded that that SARS is at level e-Match as they meet all the electronic requirements of that category. Even though SARS could very soon fall into the e-Assess category, it cannot be included yet as it is only being used for a small number of taxpayers and a for a very short period (as at September 2020) (SARS, 2020b). South Africa needs to move to a full e-Assess tax administration in which the tax administration calculates the tax liability of taxpayers and nothing further is submitted by the taxpayer (EY Global, 2018, p7). This shift will have to be done gradually with the use of multiple tax technology tools. At this level of digital competence, South Africa need to improve, especially on its data analysis in real time, if it is to benefit from the digital requirements of CbC reporting.

5.2 Rating the Profile of India's Tax Administration on the Digital Competence Gauge

With regards to e-filing, most of India's tax administration system is already electronic (Mohanka, 2019). The following can be done on India's national e-filing portal:

- e-Registration: This is used for online registration as a taxpayer.
- e-Filing: This is used for filing of tax returns.
- e-Sahyog: This is a support system used to electronically resolve discrepancies in Income Tax Returns instead of visiting a tax office (Mitra, 2019).
- e-Payment: This is used to simply pay direct taxes using a debit card or internet banking.

In respect of the e-accounting category, IRS has digital solutions to the many of its functions, placing them in the e-Accounting category. These functions include:

- e-Proceedings: This is used to stay up to date on any notices of assessment issued by IRS and to respond in a timely manner to said notices. Options are pre-programmed to respond with *Agree*, *Partially Agree* or *Disagree* (Soni, 2020). This allows for a simpler and quicker process.
- e-Nivaran: This portion of the portal is used to lodge and process complaints as well as track whether the issue is being resolved. Taxpayers use this to upload supporting documentation to support the complaint (TaxGuru, 2020). When grievances are lodged on the e-Nivaran portal, taxpayers select the specific tax department to which they wish to lodge a complaint, leading to a shorter processing time as the complaint goes directly to the relevant department (TaxGuru, 2020).

With reference to the e-match category, IRS has the following e-Match processes in place:

- e-Submission of Responses to Outstanding Demands: If the IRS finds a discrepancy between tax paid and tax owed, a demand notice is sent to the taxpayer. This function provides the taxpayer with an electronic solution to respond to demand notices. Response options are prepopulated. These options range from complete agreement with demand, partial agreement with demand, and disagreement with demand. If the demand is not fully agreed to, taxpayers can enter the amounts they consider correct and state whether an appeal or revised return has been submitted (India Today, 2019).
- Businesses in India are required to use the Goods and Services Tax Network (GTSN) for financial transactions. This network simplifies the tax system in India by matching up all purchasing transactions with supplier and vice versa in order to keep track of transactions between counterparties. This allows the government access to the actual transactions so that it can be reconciled with the financial statements that the taxpayer submitted (Horadan, 2017).

With respect to e-Audit, in 2018 India ambitiously formed a committee within the IRS to prepare for the IRS to conduct e-audits. However, as yet there has been no conclusive outcome on the progress of this initiative (Flynn et al., 2020, p12).

Regarding e-Assess, currently there is no information available that proves that India has begun e-assessments for its taxpayers. However, because of the GTSN Network, the IRS will have a significant amount of information with which to pre-populate these returns (Horadan, 2017).

Based on the EY Global (2018, p6) digital competence gauge, it can be concluded that that IRS is at level e-Match as they have not begun to explore the more digitised categories. At this level of digital competence, India needs to progress to the e-audit and e-assess categories at a faster rate as they already possess the resources to do so thanks to their GTSN Network. By levelling up, India will greatly benefit from the digital requirements of CbC reporting.

6 USE OF DIGITALISATION TO ENHANCE CBC REPORTING FOR TAX RISK ASSESSMENT - OECD GUIDELINES

6.1 OECD's Guidelines to Enhance CbC Reporting Through Digitalisation

The OECD recommends that CbC reporting be based on a standard template set out by the OECD to ensure worldwide consistency (OECD, 2017, p25). This is an electronic template that uses XML Schema technology to ensure consistency and authentication with regards to CbC reporting. The XML document format is kept throughout the preparation, filing and exchange process of the CbC reports (OECD, 2017, p27).

According to Vuković (2009), “an XML Schema describes the structure of an XML document”. XML is a method of coding, in other words XML is a coding “language”, and a schema refers to the way a database is organised (Rouse, 2005). This structure's main advantage is that it supports various data types, making the following easier:

- Defining content of documentation that the tax jurisdictions allow and require
- Certifying the appropriateness of data
- Converting data to the different currencies and languages used in different jurisdictions (Vuković, 2009).

According to the OECD (2017, p26), CbC reports from a MNE group will be exchanged with other tax jurisdictions when the group has activities within 18 months of financial year-end for the first year of exchanges and within 15 months of financial year-end thereafter. The XML Schema system improves the exchange process as it allows multiple CbC reports to be exchanged in one message, making it more feasible for tax jurisdictions to exchange these reports (OECD, 2017, pp34-35). CbC reports are first encrypted using the XML Schema format and then transmitted through an electronic platform known as a Common Transmission System (Montes and Bernado, 2019, p126). The OECD developed this platform, and tax jurisdictions pay an annual fee to the OECD for its use. Common Transmission System allows the exchange of information to be secure and data to be standardised for the maximum benefit of all recipients (OECD, 2017, p35). Countries in the European Union use another electronic platform (Common Communications Network to exchange reports (Hemels, 2018, p104). Countries that choose not to use either of the online platforms should reach an agreement with other jurisdictions on the method of transmission and encryption (OECD, 2017, p26).

Even though CbC reports are in an XML document, the following errors have been occurring globally in the preparation of CbC reports (van den Brekel et al., 2019, p4):

- Tax reference numbers are left blank, making it more difficult to identify an entity.
- The same tax reference number is used for all the constituent entities in the MNE, and yet, each constituent entity should have its own tax reference number.
- Currency varies throughout the document, and yet, it is the functional currency of the Ultimate Parent Entity that is supposed to be used throughout.
- Incorrect jurisdiction code are used in the documents, making it more difficult to exchange reports with the correct jurisdiction.
- Constituent entities that are non-consolidated are not being included in the CbC reports. All separate business units of MNE should be included in CbC reports even if they have separate financial statements.

It is therefore important that countries have digitalised tax administrations to ensure they can effectively use the XML Schema.

6.2 Digitalisation and CbC Reporting in South Africa

The e-filing system is also used for CbC reporting in South Africa. The details of the Reporting Entity in the CbC reporting process are prepopulated in the CbC01 form (SARS, 2019, p12). Records from returns submitted can be validated against CbC reports to ensure that there is complete accuracy and transparency. According to SARS (2019), in South Africa a CbC01 form is electronically prepared and submitted on the e-filing portal. The form must be submitted within 12 months of the MNE's financial year-end. A representative of the MNE will receive an email or SMS to confirm that the CbC information was successfully submitted. This is all done after the MNE activated CbC functionality of the e-filing system.

The CbC01 form is based on the OECD standard template and consists of the following:

- Details of Reporting Entity (SARS, 2019, p12), including:
 - Reporting period;
 - Registered name;
 - Company registration number;
 - Country the CbC report is issued by;
 - Tax Identification Number: This number is particularly important as it helps tax authorities worldwide track an entity and its transactions in different jurisdictions (Gueydi and Abdellatif, 2018, p784);
 - Global Intermediary Identification Number: This is the identification number given to foreign financial institutions upon registering with the Foreign Account Tax Compliance Act of the United States (SARS, 2017b); and
 - Reporting Role: This is to determine whether it is the Ultimate Parent Entity or local entity filing.
- Contact Person: This includes the name, surname, contact number and email address of person that is the representative of the MNE for the purpose of confirmation of successful submission (SARS, 2019, p13).
- Address: All addresses of an MNE, including country codes.
- CbC report: A separate report must be completed for every tax jurisdiction that the MNE operates in, however, this is limited to 249 tax jurisdictions (SARS, 2019, p14). Each CbC report includes the following sections:

- Summary: Figures from financial statements are documented in this section such as profit/loss before tax, income tax paid, income tax accrued, capital, accumulated earnings, total value of assets, and number of employees (SARS, 2019, p15);
- Revenue: The unrelated and related revenue of the constituent entity. These figures are taken from the financial statements (SARS, 2019, p16); and
- Selection of Constituent Entities: All the same details that is required for the reporting company.

In summary, a CbC report contains information regarding the global allocation of the MNEs income, activities and taxes per each tax jurisdiction. Activities in each jurisdiction are also categorised according to the type of activity done (Oguttu, 2020, p10).

6.3 Digitalisation and CbC Reporting in India

In 2016, India added section 286 to its Income Tax Act of 1961. This section enforces CbC reporting for relevant MNEs (Montes and Bernado, 2019, p129). India requires furnishing CbC reports online on an e-filing portal, just like South Africa. MNEs that meet the OECD requirements with parent companies registered in India must file an Income Tax 3CEAD form (Mehra, 2018, p6). The 3CEAD form follows a similar format as the OECD standard template and is therefore similar to the CbC01 form completed in South Africa. IRS, however, has created their own XML Schema and does not use the OECD XML for the MNEs to electronically submit to their e-filing system (Mehra, 2018, p6). The OECD XML would need prior adaption and corroboration from the MNE to electronically file CbC reports to the IRS.

India also introduced a mandatory Digital Signing Certificate in the 3CEAD form (Mehra, 2018, p6) that are also applied to CbC reports. India's Digital Signing Certificate works by registering a signature to a specific person after their identification is validated, and only then is the digital certificate granted. This signature is encrypted with the document so that it cannot be copied. This digital signature is traceable as it is registered for up to 10 years and can be renewed (Jain et al., 2015, p83). The Digital Signature Certificate gives CbC reports furnished in India added security and authenticity.

7 THE CHALLENGES OF DIGITALISATION FOR EFFECTIVE CBC REPORTING AND THE POSSIBLE SOLUTIONS

7.1 Cyber Security

South Africa has some of the highest number of cybercrime victims in the world with around 9 million South Africans having fallen victim to cybercrime in 2016 (Chiwanza, 2018; Manyala-Chitapi, 2019). Therefore, the biggest challenge South Africa will have to face to protect the digitalised tax administration is the issue of confidentiality. Confidentiality is one of the requirements countries must comply with in terms of the Action 13 of the BEPS reports to be able to receive CbC reports (OECD, 2017, p11). The OECD puts the onus of protecting the confidentiality of transfer pricing documents, including the CbC reports, on the country's tax administration (OECD, 2017, p240). The OECD has addressed the protection of confidentiality in the exchange of tax information in a report entitled "Keeping it Safe" (OECD, 2012, p1). Article 22 of the Multilateral Convention on Mutual Administrative Assistance in Tax Matters states that tax information should be protected in the same manner required under domestic law, and such information may only be disclosed to authorities or in court proceedings if necessary (OECD, 2012, p36).

Chapter 6 of the South African TAA deals specifically with the confidentiality of tax information. These provisions explain that SARS must keep the information disclosed by a taxpayer confidential (section 67 of TAA). SARS is obliged to also keep other information confidential, such as information supplied by a third party in confidence, information subject to legal profession privilege, and personal information about SARS officials (section 68 of TAA). SARS officials are bound to confidentiality by an oath taken before a magistrate or a commissioner of oaths (section 67(2) of TAA). The exception to this confidentiality requirement is when a judge orders the disclosure of information for the purpose of an investigation into offences dealing with criminal activities, public safety, or environmental matters (section 71 of TAA). Section 236 of TAA deals with the consequences of a breach in confidentiality. The consequences detailed in section 236 for exposing tax information to non-authorised personnel in South Africa is a fine or imprisonment of up to two years upon conviction.

India also has domestic provisions to govern the confidentiality of tax information that is included in their Income Tax Act under section 280. The consequences for exposing tax information to non-authorized personnel in India is a fine or imprisonment of up to six months, as per section 280 of India's Income Tax Act of 1961. Both South Africa and India echo the OECD's provisions that tax information may only be shared with tax authorities or in court. The provisions of Article 22 of the OECD's Multilateral Convention on Mutual Administrative Assistance in Tax Matters is nearly identical in its requirements to section 71 of South Africa's Income Tax Act 58 of 1962 and section 280 of India's Income Tax Act of 1961.

Government systems, specifically the tax administration system, process and store huge amounts of data that must remain confidential. The issue of cyber security is particularly important in government electronic services because if this information falls into the hands of unauthorized people, it could potentially destroy the credibility of South Africa's tax authority. Lack of credibility will negatively impact MNEs in complying with CbC reporting requirements out of fear that their information will not be protected (Elisa et al., 2018, p2). Furthermore, other tax authorities will be hesitant to exchange CbC reports because of the lack of trust from mishandling information (Elisa et al., 2018, p2).

South Africa currently also has other legislation beside the TAA in place to tackle issues of cyber security. These are:

- Section 14 of the Constitution of the Republic of South Africa of 1996 provides for the right to privacy and has implications to ensure the confidentiality of all communications between SARS and the taxpayer.
- The Protection of Personal Information Act (Act 4 of 2013) helps protect data of natural and juristic persons by setting out conditions for information processing in chapter 3 of the Protection of Personal Information Act. Security safeguards are one of these conditions, which is most relevant to protecting the confidentiality of CbC reports. These provisions are contained as follows in section 19 to section 22.
 - Section 19: All procedures to ensure confidentiality must be done with integrity by processor of information.
 - Section 20: The processor of information should treat all personal information as confidential.

- Section 21: Processing information may only be done with the consent of the owner of the information and under authority of such owner.
- Section 22: Any breaches in security should be disclosed to the owner of the information as soon as possible.
- The Cybercrimes and Cybersecurity Bill that was proposed in 2015 but that has not yet been enacted into law (Michalsons, 2020). However, once enacted it will specifically protect data from being accessed and altered without authorisation as per section 3 of the Bill.

For all South African government data exchanges, including tax services such as e-filing, data are encrypted and passes through a secure exchange layer that includes electronic signatures, time stamping, and logging location of access and transfer for audit trail purposes (Kotzé and Alberts, 2017, p502).

A suitable solution to protect tax data against cybercrime is encryption, which is already used by most tax authorities, including SARS (SARS, 2020e, p17). Encryption is a method of securing data to prevent unauthorised access. This is done using mathematical algorithms to scramble the text of the data. In order to view the data, the viewer has to unscramble the text and this can only be done with an “encryption key”, which only authorised parties possess (Etzel et al., 2003, p6). Encryption is very efficient in deterring hackers as data is useless without an encryption key. Encryption keys are used to automatically exchange CbC reports between jurisdictions. As the tax administration evolves to a completely digital tax administration, more cyber security risks will arise; hence, more security measures will need to be assessed to determine its suitability to protect users’ confidentiality. These measures will go beyond the encryption techniques already in use.

Blockchain technology is a security measure worth exploring to address further cyber security issues. A blockchain is a chronological database of transactions recorded by a network of computers. Each blockchain is encrypted and organised into smaller data sets referred to as “blocks”. Each block contains information about a certain number of transactions (Wright and De Filippi, 2015, p6). A blockchain is basically a digital ledger that is decentralised, storing data on multiple platforms where none of the sources is a central administrator (Wolfers et al., 2018, p39). The concept of blockchain is complex because a

user that owns a “block” has access to records; however, the nature of blockchain as a ledger makes the database still transparent and searchable (Wolfers et al., 2018, p39). It is almost impossible to alter information on a blockchain because of the way blocks all link and verify each other. The data is also encrypted for further protection.

To maximise the use of blockchains at a large scale, governments should issue taxpayers their own e-wallet that contains a unique wallet identification number linked to their South African ID number. Transactions would be made to and from this wallet, and each transaction would be recorded on the blockchain network (Datta, 2019, p6-7). This will allow SARS to track all transactions for audit purposes. The use of blockchains in this manner will allow South Africa to operate its tax administration on an e-Assess tax administration system. An e-Assess tax administration is the highest level of digitalised tax administration, and on this level almost every procedure is automated, allowing for more transparency and less effort from the taxpayers.

Blockchain technology can benefit the tax administration in the following manners:

- It can be autonomous in that no human intervention is needed to verify transactions, keeping transactions confidential (Wright and De Filippi, 2015, p6).
- The automatic exchange of CbC reports required in MCAA can be done securely in real time and kept on the blockchain for easy access.
- It can be used to verify the residency of the consumer through the source of their transactions (Wolfers et al., 2018, p40).
- It can facilitate profit splits on individual transactions for transfer pricing purposes (Wolfers et al., 2018, p40).
- It can ensure real-time and secure access to tax authorities’ systems for taxpayers.
- e-Payment systems could compromise users personal information (World Bank, 2019, p31), but if payments are done through a blockchain, it will be more secure as only authorised block owners may trace payments and information.

7.2 Increased Resources for Digital Infrastructure Development

Currently South Africa’s tax administration is equipped with the necessary infrastructure for storing data, filing accounting documents and returns, and processing electronic

payments, as discussed in the previous chapters. To increase tax compliance, the government must use tax data better for improved risk assessment and transparency. This can be done by developing infrastructure to integrate tax data from various tax departments, to analyse tax data by validating it, and to perform electronic audits. South Africa's tax administration system currently lacks the infrastructure to determine tax through accounting systems without the necessity of submitting returns. With such limited infrastructure, it may not be possible for SARS to predetermine the completed CbC report (IMF, 2017, p9). All these tools must operate in real time, which may currently be difficult for SARS to accomplish.

The most fitting solution would be cloud computing. According to Arora and Parashar (2013, p1922), "cloud computing is the ability to access a pool of computing resources owned and maintained by a third party via the internet". Companies such as Microsoft, Google and Amazon, to name a few, provide services such as servers, storage, databases, networking, software, analytics, and intelligence over the internet in real time and with flexible resources (Amazon Web Service, 2019).

Microsoft Azure (2020) describes the various advantages of cloud computing as follows:

- It is cost efficient as hardware, software, setup costs and operating costs of data centres such as employees, electricity and space all add up when expenditure incurred is based on usage.
- Speed is instant on demand, although more complex tools might require a few minutes. However, it is still much faster than human effort, which could take hours or even days.
- It is productive as one cloud can be used for several functions, allowing employees to use their time more productively by exploring other ways to achieve tax compliance.
- Cloud providers already have the policies, controls and technology to ensure infrastructure and data is protected from potential threats.
- Data is backed up and recovered hassle-free, providing the reliability that tax administrations need.

7.3 Job Losses due to Digitalisation

The digitalising of the tax administration system is double edged: It will improve tax compliance in numerous ways, but it will also automate many other functions making the employees who did these jobs manually useless.

According to Statistics South Africa (2020), in the last quarter of 2019, South Africa's unemployment rate was 29.1%. This is bound to have increased due to the Covid-19 pandemic lockdown in 2020. The complete digitalisation of the tax administration system will affect employees in both government and corporate sectors and have a negative impact on the unemployment rate of South Africa. Education plans will need to be put into place to train these employees to operate in a digital environment. To progress to a more digitalised tax administration, South Africa will need to train and employ a broad spectrum of people to work in tax administration, including IT specialists, coders, and call centre help assistants trained in IT.

7.4 Coping with the Pace of Digital Developments

According to the OECD (2019c, p2), "digital technologies tend to develop faster than the regulations or social structures". The pace between regulations and technological advancements may slow the growth of the tax administration system in relation to other countries where the pace is more equal. South Africa may be continuously adapting and developing its tax administration system to be digitalised; however, the required regulations such as the Cybercrime and Cyber Security Bill (2017), which will protect the necessary parties of digital transactions in a digital tax administration, may not be enacted in time, which will hinder the use of these new systems.

Another related issue is that international tax regulations could be developed at a faster pace than South African regulations can keep up with since more developed countries may have technological advancements in their tax administration systems that South Africa does not have. Developed countries may also process legislation faster than South Africa and other developing countries. It is therefore important for South Africa to keep up to date with international digital developments. South Africa has so far kept up with the implementation of automatic exchanges of CbC reports as they were part of the 49

countries that exchanged reports in 2017, as opposed to the other 51 countries that only began this exchange in 2018 (OECD, 2018, p3).

7.5 Ensuring Quality of Data

Data is deemed quality data when it is true and relevant (Wang et al., 1993, p670). Data should be verified against tax returns to determine whether any CbC reports contain errors. Data should also be analysed across systems to find errors, inconsistencies and tax compliance risks (Wolfers et al., 2018, p14). South Africa may not have the technology that developed countries have to assess data quality.

Cognitive automation will be beneficial to analyse and process if the data in CbC reports is relevant. Cognitive automation is software that mimics the way a human brain operates and learns from mistakes. This software has the ability to judge, interpret and reason like a human, giving it more advantages than regular artificial intelligence (Wolfers et al., 2018, p44). Cognitive automation works by taking in large amounts of data and analysing it in both systematic and adaptive ways (Wolfers et al., 2018, p37). Just as a person learns, cognitive technology has the ability to learn, making it efficient in detecting possible tax avoidance and evasion. Using cognitive automation to analyse CbC reports will make the quality of data more relevant as this automation will study these reports to find faults, verify facts and detect patterns, helping SARS reach its goal of increased tax transparency.

7.6 Limited Size of Tax Administration Portals to Handle Bulk of Information

CbC reports have to be filed on the SARS e-filing portal. This portal limits the size of uploaded files. SARS works around this issue by asking companies to fill out online templates instead of submitting documents. This process places an unnecessary administration burden on companies and is prone to error as figures are carried over (Wolfers et al., 2018). Financial professionals working for MNEs may not be familiar with XML technology and find difficulty to generate CbC reports in this format. MNEs required to submit CbC reports can address these difficulties by using programmes designed to the ease completion and filing in the correct format. These programmes are readily available from major audit firms such as Deloitte, PWC, EY and KPMG (SARS, 2019c, p23).

8 RECOMMENDATIONS DRAWN FROM INDIA

South Africa could emulate India to enhance the security of its data. As mentioned previously, IRS uses a Digital Signing Certificate in their version of the CbC reporting form known as the 3CEAD form. South Africa could adopt this method by assigning a Digital Signature Certificate to each MNE that meets the R10 billion turnover threshold with its Ultimate Parent Entity as a South African resident. The MNE will then use this digital signature on their CbC01 form. Firstly, this will allow SARS to ensure the authenticity of the submitted form, and secondly, the information captured on the form will be secure and only SARS will have access to it using their encryption key.

South Africa can emulate India's tax administration by developing their tax administration based on sustainability as well as security. Both these aspects are necessary for a digitalised system to operate at maximum potential (Sharma and Singh, 2018, p297). Centralised systems would be necessary to ensure a sustainable digital tax administration; however, this would cause excessive information to be stored on government systems, creating an inevitably security risk (Sharma and Singh, 2018, pp298-299). Consequently, security procedures will have to be put in place to combat the risks that the sustainability of the tax administration system would produce. A new system called Cyber Swachhta Kendra was introduced in all India's government computers to remove any malware and clean computers before the tax administration operated their centralised system using government systems (Sharma and Singh, 2018, p299).

South Africa has already adopted some of the same measures as India, such as the Cybercrime and Cyber Security Bill that is pending enactment but which will govern cyber security. Just like India, South Africa also ensures the encryption of documents. However, there are various other measures South Africa can adopt from India to ensure the smooth development of a digitalised tax administration. Some of these measures are listed here:

- Developing recovery strategies and countermeasures for crisis response in the event of loss of information or threats of information being stolen by unauthorised personnel.
- Legal awareness policies that are constantly enforced with employees.

- Course study curriculum changes to educated youth that will be actively involved in the operation of cyber security and cybercrimes (Sharma and Singh, 2018, p301).

GTSN will smooth India's transition to a more developed and digitalised tax administration. This network is a stepping stone to a digitalised tax administration as it creates a common system in which transactions are recorded, thus harmonising the different taxes and reducing the taxpayers' tax administration burden (Kavita Rao et al., 2019, p33). South Africa could introduce this system as it may be more efficient and more accurate as SARS processes more returns through e-assessment.

9 CONCLUSION

The days of traditional tax administration are coming to an end. This is compelling South Africa to digitalise its tax administration. This transformation is imperative as it will allow SARS to not only continue enforcing international standards, for example, CbC reporting, but also to benefit from these standards. This study analysed the importance of digitalisation in ensuring tax risk assessments with particular focus on CbC reporting. The study made various recommendations to enhance digitalisation at SARS. Furthermore, these recommendations were made using India's current tax administration as a model.

The study had limitations as digital improvements to enable the filing of CbC reports, Master Files and Local Files could not be quantitatively measured since there is not enough conclusive evidence as these were only effected in 2016 when South Africa signed the MCAA to enable the filing and automatic exchange of CbC reports.

Further research can be carried out to reach a more in-depth conclusion about the appropriateness of technological advancements in tax administration. This will ensure the continuous evolution of technology to advance the digitalisation of the tax administration. Further research will be needed to determine if there is a correlation between increased tax compliance and digital transformation (Baisalbayeva et al., 2017, p31).

It is evident that the digitalisation of tax administration will face many challenges; however, with new technology developing continuously, these challenges can be addressed at once. The study pointed out the benefits of digitalisation, which include increased tax transparency, and in turn, increased tax compliance, ultimately increasing the tax revenue and decreasing the expected revenue shortfall. Another benefit is that digitalisation will enable efficient risk assessments when analysing CbC reports, as resources will be used to audit more risky transactions that would prevent the tax authority from incurring unnecessary audit costs.

The digital transformation of the tax administration will require time, money, education, and most importantly, collaboration between tax authorities, taxpayers, accountants and software vendors (Flynn et al., 2020, p12).

In conclusion, even though the digitalisation of South Africa's tax administration will require many resources, its implementation will allow South Africa to benefit greatly from CbC reports, which will increase tax transparency and hopefully close the tax revenue shortfall.

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