Paper Title: Determinants of Accounting Standards in the Southern African Development Community (SADC)

Pran Krishansing Boolaky
Bournemouth University
School of Finance and Law
Fern Barrow, Poole, Dorset, BH 12 5 BB
e-mail: pbolaky@bournemouth.ac.uk

Abstract
This paper reports on the factors influencing accounting standards in the South African Development Community (SADC). The factors have been identified on the basis of previous research (see Larson, Hofstede, Gray, Nobes, Parker, Muller, Douplnik, Doost, D’Arcy, to mention a few) and then analysed using the PESC analysis. A multinomial experiment using chi-square test is conducted to determine whether these factors are equally important to all member countries of the SADC. A chart of independence is used to determine whether the environmental factors and the countries are independent. For the purpose of both test, the member countries have been categorised into type A and type B. Type A include countries having their stock exchanges and type B those having no stock exchange. The reason behind this classification is to demonstrate whether there is a difference in the result of the experiment. The result of the experiment indicates that the countries and the environmental factors are independent.

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Determinants of Accounting Standards in the South African Development Community (SADC).

1. Introduction

An overview of Southern African Development Community

SADC is a strong and viable regional bloc set up in 1992. Given the various protocols and agreements signed, the member countries of SADC are bound as a united entity with common density and common future. Since 1995, SADC economies have improved and many member countries have experienced recovery in terms of growth, investors' confidence and the flow of capital. Angola, Mauritius, Mozambique and Botswana can be cited as examples (SADC Annual Report, 2001). One of the main factors contributing to the growth rates in SADC is the increase in the foreign direct investment. Angola and Mozambique have a high growth rate due to the sound macro-economic policies adopted by the government. The increase in foreign direct investment is due to the removal of exchange controls and a number of other incentives offered to investors.

2. Factors influencing accounting standards in SADC

There are many factors that influence accounting systems and practices in a country. Many reasons have been put forward by different authors on the factors affecting accounting which when analysed closely, could be grouped as the political, economic, social and cultural factors (PESC). Some authors state that culture influences accounting (see Hofstede, 1980; Gray, 1988; Parker, 1989) whereas others explain that the economic development of a country affects accounting (Larson, 1993; Jaruga, 1993). Arpan and Radebaugh (1985) have revealed in their studies that accounting is affected by local environmental factors (see also Mueller et al. 1991). Cairn (2000) states that the development of accounting standards in a country should consider the international laws and standards as well as the international nature of business. Enthoven (1977) stresses the role that accounting has to play in economic development and pointed out that accurate and informative accounting system creates a confidential environment conducive to capital stimulus. According to Taluga and Ndubizu (1986), developing countries took accounting as a given variable or assumed its impact as inconsequential to economic development. Therefore economic development and accounting development occur concurrently. Larson (1993) states that countries adopting International Accounting Standards (IAS) enjoy an increased economic growth, but refuted by Samuels (1993) on the ground that there is no indication of causality between the variables used in his study. In 1995 Gernon et al agree that there is no conclusive evidence on the relationship between the stage of economic development and financial accounting and reporting. Hagigi and Williams (1993) argue that a national accounting system should be developed in response to the economic and political needs of a country.

Briston (1978) states that colonisation is the major variable affecting accounting in many countries outside Europe whereas Parker (1989) brings the argument further by saying that colonisation also influences culture and the legal systems of a country.

1 See SADC Chairman Report 2001.
Nobes (1998) adds up by stating that foreign direct investments also affect accounting systems and practices in a country. In the African context, many countries either fully or partly adopt the IAS, if not, based their local accounting standards on the IAS. The reason behind is to provide the users (foreign investors) with a reliable reporting environment. Nobes (1998) provides seventeen factors that can cause differences in accounting.

Gray (1988) uses the Hofstede (1980) cultural theory and explains how culture affects accounting systems and practices in a country whereas Douplin and Salter (1995) use four cultural variables from Hostede to explain the reasons for differences in accounting among countries. For the cultural dimension of accounting, see Craig & Clark, 1993; Saudagarn et al., 1997). Both Douplin and Salter (1995) and Gray (1988) are criticised (see Gernon et al. 1995). Moreover, Lee (1997) argues that Gray views culture as the most significant factor affecting the development of accounting but ignores other important factors such as political, economic and colonial ones.

Joshi and Al-Basketi (1999) states that differences in the socio-political environment do not make IASs less significant to the users of accounts in Bahrain. Dahawy (2002) states that culture and socio-economic factors had a significant effect on the use of IAS and concludes that in the context of Egypt the propensity for secrecy overrides the disclosure requirements of the IAS.

Based on the above discussion, it implies that accounting interacts with the environment (see also Gbenedio et al. 1998). It is therefore suggested in this paper to group the four main environmental factors into namely; political, economic, social and cultural factors and then each main factor is further divided into sub factors (see table 1), and for further analysis see section 4.

<table>
<thead>
<tr>
<th>Political &amp; legal Factors</th>
<th>Economic Factors</th>
<th>Social Factors</th>
<th>Cultural Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonisation</td>
<td>Cost of development</td>
<td>Accountancy profession</td>
<td>Language</td>
</tr>
<tr>
<td>Legal structure</td>
<td>Government priorities</td>
<td>Professional</td>
<td>Religion</td>
</tr>
<tr>
<td>Difference in legal systems</td>
<td>Inflation rate</td>
<td>Social attitude towards business and government</td>
<td>Resistance to change</td>
</tr>
<tr>
<td>Political systems/power</td>
<td>Number of listed companies</td>
<td>Status of the accountancy profession</td>
<td>Cultural attitude towards professional</td>
</tr>
<tr>
<td>Problem to enforce the standards</td>
<td>Existence of capital markets</td>
<td>Difficulty to adapt with global change</td>
<td>Cultural diversity</td>
</tr>
<tr>
<td>International intervention</td>
<td>Users needs</td>
<td>Nations' attitudes towards accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic gap between group A and group B countries</td>
<td>Human Development Index</td>
<td></td>
</tr>
<tr>
<td>Government Control</td>
<td>Problems to compare financial statements</td>
<td>Shortage of Accountants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementation cost</td>
<td>Objectives of standard setters</td>
<td></td>
</tr>
</tbody>
</table>

In fact these factors can also be described as the 'dynamics' affecting the development of accounting standards. The next section is a discussion on how these four factors affect accounting in SADC.
3. A discussion on the PESC factors

**Political factors**

There are many politically-related factors that can affect the development of accounting standards. These include, among other things, both national and international political and legal systems.

*Political power:*

Political power in this context covers the influence that all the actors in the accountancy province can exert on the development of standards. This includes the government intervention and outside pressure groups (see Hope et al., 1982). Rahman (1997) has used the Dahl (1957) model of power in order to explain the tension caused by power in the development of accounting standards. He concluded that, at the international level, a group having less power in terms of voting rights came out as 'winner' due to their skills and strategies adopted in the development of standards. This shows the elitist theory of power prevailing over the Dahl model through voting rights.

Putting the above argument in the context of Africa, it might be further argued that the elitist theory of power would prevail in some of the countries where the human development index is low. In these countries there is a small elite who will dominate the decision-making process. Thus in the development of accounting standards the same behaviour could be expected. In Mauritius the development of local accounting standards was dominated by a group of elite when the Accounting Standards Committee was first set up.

As regard the member countries in the SADC region, the Head of the States gives due importance and support to transparency and accountability by allowing their Auditor General to join the ASAAG, the ECSAFA and other similar bodies for the development and improvement of accounting and auditing practices in Africa. The role played by the ECSAFA and ASAAG is, therefore, fundamental because they group together the Eastern, Central and Southern African countries to reflect on and act upon the development of accounting in the region. Somehow the observance role of the foreign accountancy bodies (ACCA, CIMA) represents significant influences. However, it must also be noted that in Niger, Benin and Togo there was a lack of interest among public authorities and political class as regard the set up of an 'Association of Chartered Accountants' (see Alain Bethier, 1997)

*Enforcement*

In some countries the development of accounting standards rests in the hands of the local accounting standard board/committee which is in the private sector. As such the standards that they issue become difficult to enforce unless the government enforces them through the law. Many of the SADC countries have mentioned in the Companies Acts that companies should prepare accounts according to the local or international standards. However, in cases where the law is silent on this issue, then both enforcement and compliance become a difficult task. In Mauritius, the Companies Act 1984 stipulated that companies should prepare accounts according to the Mauritius Accounting Standards and, in 2001 when the Act was revised, mention is again made of compliance but with IAS in the case of Companies having a turnover of more than
Rs 10 million. It is through this type of legal provision that the accounting standards could be enforced.

**Economic factors**

The types of economic systems of a country will affect the types of accounting standards used in that country (Nobes, 2002). In a planned economy, there is no commercial motive because all activities are undertaken at a ‘not-for-profit’ objective. Therefore, the users are not interested to know the profitability of the entities. In these types of economies, there is a need for a central accounting plan that can provide information on cash in and cash out of the central government. Citizens of the countries consume using the ‘voucher’ system thus making commercial reporting irrelevant. This describes the practice of some pure communist regimes in the past, such as Russia and China.

By contrast, commercial accounting standards become appropriate to the counties where the economic systems are either mixed or free. In these types of economies the investors are the commercial banks or other similar institutions. As such their motives are to maximise wealth. For this reason many free and mixed economies use the commercial accounting standards because enterprises are bound to report on their financial performance. More so, the report should need to be true and fair. Recently the setters of commercial accounting standards have moved to a concentration on transparency.

Another factor affecting the accounting systems and standards of a country is its level of economic development (see Larson, 1993). The level of development depends on whether the country is already developed or developing. For example the developed countries are today trading through e-commerce and report though the internet; and the emerging countries are transiting from either the manufacturing sector to financial services sector or from agricultural to manufacturing. This is a noticeable phenomenon in Africa. The shift from one type of industry to another entails changes in the needs of the society, and accounting has to develop accordingly in order to adapt to the changes. The paragraph below will look at a three-stage process of economic development followed by a three-stage process of accounting development.

In order to explain the transitional stages in the economic development the developing countries have been classified as (i) type I countries, (ii) type II countries and type III countries. This is shown in table 2 below.

Type I countries include all those countries which are transiting from agriculture to manufacturing whereas type II countries are those countries which are transiting from manufacturing to some services sector and type III countries are those where services sector play a key role. It can therefore be argued here that the need for commercial standards might be less relevant and applicable to the type I countries but more applicable and relevant in the case of type II and type III countries. This argument can be supported with the fact that when a country is involved in industry and services, there is more external investment and thus greater commercial aim at end. To provide better information for decision-making the commercial accounting standards become relevant.
In all these countries there are still a number of Government Owned Enterprises (GOE), but the government is adopting the private sector practices in their management and control (Goddard, 2002; Peursem and Pratt, 1998; Guthrie, 1993).

If we study the history of accounting, we could conclude that accounting has experienced a three stage process, namely the evolution, the revolution and the transcendental stage. As regard the evolution stage the argument is that accounting has developed from a simple recording system to a double entry book-keeping system, whereas the revolutionary stage extends to cost and management accounting, financial reporting and auditing and harmonisation of standards and practices. In fact this has occurred due to development in the world economies. The transcendental stage includes the requirement for green reporting, money laundering reports, sophisticated accounting regulations and reporting through the internet.

Taking the revolutionary stage, we can argue that it relates to the industrialisation period of many economies. Industrialisation brings an increase in the volume of trade and commerce and thus a need for commercial accounting standards and practices. Moreover the revolutionary stage can also be related to the privatisation policy of many governments where focus is laid on the ‘denationalisation’ of government owned enterprises or the adoption of the private sector practices in the GOE.

The transcendental stage applies to those countries that are the highly developed and which depend on financial services as a main economic sector. Figure 2 shows the relationship between the economic development and the accounting development.

<table>
<thead>
<tr>
<th>Type I</th>
<th>Type II</th>
<th>Type III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congo</td>
<td>Angola</td>
<td>Lesotho</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Botswana</td>
<td>Mauritius</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Malawi</td>
<td>Namibia</td>
</tr>
<tr>
<td>Zambia</td>
<td>Mozambique</td>
<td>Seychelles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South Africa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zimbabwe</td>
</tr>
</tbody>
</table>

|        | 4      | 4      | 6      |

Table 2: Proposed classification of countries by types
Figure 2 Economic development and accounting

Economic Development

Financial Services

Type III countries
- Accounting regulations
- Money-Laundering Reports

Type II countries
- Environmental Reporting
- Financial Reporting & Auditing
- Cost & Management Accounting
- Double-entry book-keeping

Type I countries
- Accounting is simply a recording system for banks and tax

Accounting Development

Agricultural
When a country transits from agriculture to industry it will move from the Type I group to the Type II group and any country transiting from industrial to totally financial services will upgrade to the Type III group.

**Costs and government priorities**

It costs to develop accounting standards and to comply with them. It is therefore fundamental to evaluate the cost and benefit of developing accounting standards in a country (Baldwin et al., 1999). Baldwin argued that a 'compliance cost assessment' should be submitted to the Regulatory Appraisal Department prior to deciding whether to approve a regulation so that it does not cause an unnecessary burden on the country. A similar procedure is followed in the US following a suggestion from the AICPA Special Committee on Financial Reporting in 1994.

Some developing countries cannot afford to undertake this procedure before approving an accounting standard given that the procedure itself incurs a cost. Secondly these countries have other priorities that will bring greater economic benefits to them than the development of accounting standards. Some of the poor countries which might be cited as examples are Comoros island, Zaire, which might find it cheaper to fully adopt the IAS and focus on strategies to reduce poverty level in the country.

**Number of listed companies and capital markets**

When a country has moved away from the planned economic system to the open economic system, the types of business organisation also change. Many open economies have a capital market with a large number of listed companies. Once companies are listed on the stock exchange the need for accounting standards arises. This is because public funds are at stake and therefore financial reports have to be transparent, credible and informative for the users to take decisions. Moreover if the shares of the listed companies are also quoted on the international market then the development of the accounting standards should consider international requirements (Fekrat, 1998). The IASC framework might also be appropriate for these countries. At present 10 of the SADC countries have their own stock exchanges. Table 3 gives a list of the countries with and without a stock exchange.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Name of Stock Exchanges</th>
<th>Year set up</th>
<th>Group*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>N/A</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Botswana</td>
<td>Botswana Stock Exchange</td>
<td>1995</td>
<td>A</td>
</tr>
<tr>
<td>Congo</td>
<td>N/A</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Lesotho</td>
<td>N/A</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>Malawi Stock Exchange</td>
<td>1995</td>
<td>A</td>
</tr>
<tr>
<td>Mauritius</td>
<td>Stock Exchange of Mauritius</td>
<td>1989</td>
<td>A</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Mozambique Stock Exchange</td>
<td>1999</td>
<td>A</td>
</tr>
<tr>
<td>Namibia</td>
<td>Namibia Stock Exchange</td>
<td>1992</td>
<td>A</td>
</tr>
<tr>
<td>Seychelles</td>
<td>N/A</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>Johannesburg Stock Exchange</td>
<td>1889</td>
<td>A</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Swaziland Stock Exchange</td>
<td>1996</td>
<td>A</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Dar-es-Salaam Stock Exchange</td>
<td>1996</td>
<td>A</td>
</tr>
<tr>
<td>Zambia</td>
<td>Lusaka Stock Exchange</td>
<td>1994</td>
<td>A</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Zimbabwe Stock Exchange</td>
<td>1890</td>
<td>A</td>
</tr>
</tbody>
</table>

Sources: Various sources; * A country with stock exchange; b country without stock exchange
Users' needs
The needs of the users of accounts change as a result of changes in their size and in the business framework. Obviously when the number of businesses increase and the stock exchange becomes a central platform for investment, both the size of the users as well as their needs for accounting information increase (Nobes, 1998). If we therefore assume that there is a relationship between economic development and information needs, therefore accounting standards should develop to satisfy those needs. To bring this argument to another level we can argue that the increase in the number of users will include foreign users/investors. Thus the development of accounting standards should give due consideration to this point.

Objectives of standards setters
The objectives of an accounting system could be increasing transparency in the financial reports through the development of appropriate accounting standards, the protection of creditors or the calculation of taxable income. Given the tendency in the Southern African countries, it seems that there is a move towards transparency/credibility and informativeness of the financial reports. Based on this assumption the development of accounting standards will be oriented in the same way as UK or US. The work of ECSAFA and ESAAG on the transition from cash accounting to accruals accounting in the public sector is already indicating the Anglo-Saxon style of developing standards. So far various conferences and workshops have been carried out by these bodies with a view to reach a consensus on the application of accrual based accounting in the public sector.

Social Factors
The accountancy profession
This is a predominant factor in the development of accounting standards of a country. One issue is whether the country has its own professional accountancy body or whether the qualified accountants obtain their professional degree from abroad. Moreover the status of the local accounting qualification is also important. It must be possible to establish recognition and equivalence of the local accountancy profession with the international benchmark. For example, in the English speaking countries the local qualification must be equated with British accountancy qualifications. It is interesting to note that in the Anglo African countries the communities either read for the ACCA/CIMA/ICA/AAT or do the local examinations and then obtain part exemptions from some of these bodies. In this context the development of accounting standards in line with the Anglo-Saxon standards will not be a major problem because the preparers of accounts already have an insight of these standards.

Education and training
The development of accounting standards is an on-going exercise because accounting standards are volatile. This is explained by the several changes made to different accounting standards, be they, IAS/UKFRS/USGAAP. In order to keep the 'preparers' of accounts up-to-date it is pertinent to set up a continuing education and training programme. It is not only by having a pool of qualified accountants that the development of standards becomes a success but by the way the development project is designed. Given that developing accounting standards is an on-going activity, poor countries do not even think of venturing into the project. However, it must be noted
that the World Bank has made intensive investment in accounting education in Africa (Godfrey et al., 1998).

**Nation's attitude towards accountants**
If the nation has a negative attitude towards accountants and their work, this will act as an inhibitor to the development of standards. Doost (1997) stated that, in the developing countries, the majority of businesses are privately owned and the owners detest accounting because they see it as an intrusion on their privacy. But the tendency in the African region is changing given that investors have started to believe in investing through the capital markets and that the governments are attracting foreign investors. Thus the attitude towards accounting work might be viewed as being more favourable than Doost recognised in 1997.

**Cultural factors**
Culture affects both accounting development and practices (see Gray, 1988; Perera, 1989, Saudagar & Meek, 1997). Gray has used the Hofstede power distance and uncertainty avoidance theory on accounting. He concluded that accounting would tend to be less transparent where the power distance is large and uncertainty avoidance is small. This stands good for countries where the degree of autocracy is high. In the Southern African Development Community, there is a greater democracy in the government system than in some other parts of Africa. As such there might be less barrier to the development of accounting standards. Moreover, there were several other studies on the impact of culture on accounting which concluded that culture has a high influence on accounting (see Jaggi, 1975; Bromwich & Hopwood, 1983; Frecher & Kilgore, 1994; Salter & Niswander, 1995).

Religions and beliefs also affect accounting standards and practices (Dahawy, 2002). For example, the Islamic religion condemns the charging of interest on loans/savings. This will therefore make the accounting standards on borrowing cost redundant if two Islamic countries are trading with each other. However, when these countries are exposed to the rest of the world they are bound to incur interest expense when borrowing, thus making the accounting standard for borrowing cost relevant.

The development of accounting standards is exposed to a series of tensions. As discussed in the foregoing paragraph some of them might have a positive impact whereas others inhibit the development process. For example in other part of Africa such as, Togo, Niger and Benin there was still a lack of interest by both the public and the political class in accounting and reporting as well as the setting up of an association of accountants in the country (see World Bank CFAA, 1997). Having discussed the factors that affect the accounting standards in SADC, the next section will consider whether these factors are equally important to the member countries.

4. **A multinomial experiment of the factors influencing the accounting standards in SADC.**

This section will test whether the environmental factors from table 1 above, are equal in proportions for all the SADC countries under the four qualitative measures ie.
PESC, using the country classification as per table 3. The steps followed to run the test are described below.

(i) Re-arranging the environmental factors

Political factors

Let political factors be a
a1 colonisation, a2 legal systems, a3 difference in legal systems, a4 political systems/power, a5 problems to enforce standards, a6 international intervention, a7 governmental control.

Economic factors

Let economic factors be b, thus reading as
b1 development cost, b2 implementation cost, b3 inflation rate, b4 government priorities, b5 number of listed companies, b6 existence of capital markets, b7 user needs, b8 differences in objectives of standards setters, b8 users needs, b9 economic gap between group A and group B countries, b10 problem to compare financial statements.

Social factors

Let social factors be c, thus reading as
c1 accountancy profession, c2 professional education training, c3 social attitude towards business/government, c4 status of accountancy profession, c5 difficulty to adapt with global change, c6 nation's attitude towards accounting, c7 human development index, c8 shortage of accountants.

Cultural factors

Let cultural factors be d, thus read as
c1 language, d2 religion, d3 resistance to change, d4 cultural attitude towards professional, d5 cultural diversity.

(ii) Classifying the factors as 1 or 0

Secondly each sub-factor is classified as 1 if it affects the accounting standard and as 0 if it does not. A total of each of the sub factor is computed under the PESC before a goodness-of-fit test is run. This is shown in table 4(a) below. Table 4(b) shows the country profile by percentages.

<table>
<thead>
<tr>
<th>Table 4(a)</th>
<th>Political factors</th>
<th>Economic factors</th>
<th>Social factors</th>
<th>Cultural factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A1</td>
<td>A2</td>
<td>A3</td>
<td>A4</td>
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<tr>
<td>B</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>B1</td>
<td>B2</td>
<td>B3</td>
<td>B4</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>C1</td>
<td>C2</td>
<td>C3</td>
<td>C4</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>A</td>
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<td>1</td>
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Table 4(b)  

<table>
<thead>
<tr>
<th>Environmental Factors</th>
<th>Group A %</th>
<th>Group B %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political</td>
<td>41.7</td>
<td>58.3</td>
</tr>
<tr>
<td>Economic</td>
<td>33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Social</td>
<td>20.0</td>
<td>80.0</td>
</tr>
<tr>
<td>Cultural</td>
<td>45.5</td>
<td>55.5</td>
</tr>
<tr>
<td>Average</td>
<td>35.125</td>
<td>65.125</td>
</tr>
</tbody>
</table>

(iii) The multinomial experiment

A multinomial experiment also called a goodness-of-fit test is used to test the null hypothesis. This test does not require the data to be normally distributed. The multinomial experiments are run using the Chi-square distribution.

(iv) Assumption and hypothesis

It is assumed that the PESC factors are equal in proportions to the group A Countries. (Group A Countries are countries having their stock exchanges).

The null hypothesis for the above can be stated as follows:

Ha: p1 = p2 = p3 = p4

(v) Result

Group A countries

Table 5

<table>
<thead>
<tr>
<th>Actual</th>
<th>Political</th>
<th>Economic</th>
<th>Social</th>
<th>Cultural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Expected</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = \frac{\sum(O-E)^2}{E} = 1.54 \]

Group B Countries

The same test is now run on the group B Countries.

Table 6

<table>
<thead>
<tr>
<th>Actual</th>
<th>Political</th>
<th>Economic</th>
<th>Social</th>
<th>Cultural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Expected</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = \frac{\sum(O-E)^2}{E} = 1.7998 \]
(vi) Interpretation

At .05 alpha value, the critical value of the chi-square at 3 degree of freedom is 7.815. Given that the calculated value is within the acceptance region, there is no evidence to reject the hypothesis.

(vii) Environmental Factors for Group A and Group B countries.

In this part of the analysis, a test is run for independence of group A and group B countries and the environmental factors. The null hypothesis is formulated as follows:

$H_0$: There is no interaction and no association between the countries and the environmental factors. A chart is used to describe the independence between the countries and the economic factors (see figure 3 below)

<table>
<thead>
<tr>
<th></th>
<th>Political</th>
<th>Economic</th>
<th>Social</th>
<th>Cultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>7</td>
<td>10</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

The chart of independence above indicates that the environmental factors and the countries are not dependent.

5. Conclusion

This paper has used the PESC model to capture the environmental factors affecting accounting standards in SADC. It has also considered a three-stage process of economic development and a three-stage process in accounting development. As a result, the SADC countries have been classified as type I, II and III. From this
analysis, it may be inferred that the accounting requirements, thus the accounting standards, will differ. Moreover, this paper has re-classified the SADC countries using the stock market. In this classification, two groups are identified, namely; group A and group B Countries. Finally a goodness-of-fit test is run to determine if the factors affecting accounting standards in these two groups of countries are of equal proportion. The test shows that the factors affecting accounting standards between these two groups are equal in proportion. More so this analysis also shows that there is no association between the environmental factors and the countries. The paper therefore suggests that although countries can be grouped in different ways, policy-makers should consider the PESC factors when developing the accounting standards of a country or when adopting, if not, adapting international accounting standards.
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