

Determinants of Different Accounting Methods Choice in Tanzania: A Positive Accounting Theory Approach

1.0 Introduction and motivation

The purpose of this study is to investigate the factors which influence the choices of accounting policies by managers of companies in Tanzania. Previous studies show that managers may choose income increasing or income decreasing accounting policies in reporting financial results (Beattie et al., 1994; Astami & Tower, 2006; Bowen & Shores, 1995). These studies also examine a number of factors that influence the managers' incentives for accounting choice. However, there are reasons to suggest that more research is required. First, most of these studies have tended to focus on firms in the developed countries (see Inoue & Thomas, 1996; Cullinan, 1999; Lin & Peasnell, 2000) and in countries in the Asia-Pacific region (Rahman & Scapens, 1988; Tawfik &, 2006; Astami & Tower, 2009). Consequently, there are no studies that have examined managerial accounting methods choices in the context of Africa. The findings from developed countries and the Asia-Pacific region may not be relevant to Africa because the environment is different, for example, the stage of economic development is very low, financial markets are inefficient and underdeveloped, and regulatory framework for accounting is weak and compliance with accounting rules is low (see Okeahalam, 2004). This study is the first attempt to examine what motivates managers to choose one accounting method over another in an African country- Tanzania.

A distinct characteristic of the Tanzanian environment, which makes an investigation of accounting policy choices particularly appealing, is the adoption of International Financial Reporting Standards (IFRSs) with effect from 1st July 2004. Despite adopting IFRSs, companies are still allowed to apply local accounting standards known as Tanzania Financial Accounting Standards (TFASs). These include TFAS 12, *Directors Report*; TFSA 23, *Accounting for VAT* and TFAS 24, *Public Sector Financial Reporting*. Generally, companies listed on the Dar es Salaam Stock Exchange use IFRSs in reporting their financial results. Where there is no equivalent or counterpart IFRS in reporting a particular item, the few retained TFASs are applied. However there is an apparent lack of clarity as to which accounting standards should be used since the Companies Act (2002) is silent. The Capital Markets and Securities Authority (CMSA) requires brokers, dealers and investment advisors to use TFASs and listed companies opt to use IFRSs (World Bank, 2005). In this situation of mixed and incompatible regulations, managers have the discretion over what accounting standards to apply in the preparation of financial statements without falling foul of the regulations. Our main objective in this study is to assess the factors that influence managers in choosing accounting policies.

Second, in a review article, Fields, Lys and Vincent (2001) criticise previous studies for their focus on single accounting policy choices and propose that research should consider examining several accounting method choices simultaneously as in Zmijewski and Hagerman (1981) to improve understanding. Missonier (2004) also concludes that although an impressive amount of empirical research on the motivational factors of the choice of accounting methods has been

undertaken, the majority of this research focuses on a single, isolated accounting practice. This assumes that the accounting choices of managers are independent of each other, which is not appropriate. The rationale for examining multiple accounting choices is that if managers are bent on accelerating or delaying the reporting of income, it would be more reasonable to expect them to do so by taking into account the accumulated effects of all their accounting procedures. The logic is easily understood from the viewpoint of accounting method strategies. In this study we use a number of accounting policy choices that managers may make.

In examining managers' accounting policy choice, we apply the positive accounting theory (Watts and Zimmerman, 1986) as in other previous studies (Beattie et al., 1994; Astami & Tower, 2006). The basic assumption of positive accounting theory is that managers (as agents) are rational individuals who are concerned with furthering their own self-interests. Consistent with this, we assume that the motivating factor influencing managers' selection of particular accounting policies is the maximization of their utility. Our motivation is therefore to gather evidence about the factors which influence managerial action. The accumulation of evidence from such studies facilitates the development of a theory to explain accounting practice (Beattie et al., 1994). We are also motivated by the fact that accounting information is used by rational investors in their investment decisions, but usefulness of the information to investors depends on how managers or preparers behave. Managers can provide information which misleads capital markets to simply meet their own self-interests (Watts & Zimmerman, 1986, quoted in Mouck, 1990). These behaviours, if not enlightened, may lead to

reduced value relevance of financial statements or poor quality financial statements, hence the misallocation of investor funds.

Using panel data of 60-firm years obtained from the annual reports of the 15 companies listed on the Dar es Salaam stock exchange (DSE), this study found that company size, Internal financing, labour force and the proportion of non-executive directors as the main determinants of the choice of accounting methods. The results of this study are important to the IASB and accounting regulators in Tanzania, in the determination of the flexibility of accounting practices as well as the disclosures required to aid the users of financial statements. The study is also important to investors in developing countries, who must interpret financial statement numbers while making investment decisions. Furthermore, the study contributes to our understanding of what determines the choice of accounting methods in developing economies, especially Tanzania.

The remainder of this paper is organised as follows: The second section reviews the related literature and develops the hypotheses. The third section presents the research design. The findings are presented in section 4 while, the conclusions are presented in section 5.

2.0 Literature Review and Hypotheses development

2.1 Prior studies

Positive accounting theory, which is associated with Watts and Zimmerman (1986), assumes that the market is efficiency such that the market participants will see through observable smoothing devices such as accounting policy choice. Holthausen (1990) identifies three overlapping perspectives on accounting choice. These are opportunistic behaviour, efficient contracting, and

information perspectives. The two contracting perspectives (efficient contracting and opportunistic behaviour) are based on the existence of contracts which rely on accounting numbers.

Managers are assumed to maximize their own wealth in the opportunistic behaviour setting, which depends on performance-related cash bonuses, employment risk arising from the possibility of company failure or takeover, and the firm's share value. Managers' holdings of shares and share options and through the effect on the value of their human capital affect the share value wealth. It follows, therefore, that managers have incentives to make choices which maximize the firm's direct cash flows and hence firm value (Beattie et al., 1994).

Where accounting choices do not have a direct cash flow effect, managerial incentives arise. This occurs, for example, where accounting choices impact on share prices via their effect on the firm's expected political costs (a function of reported profits) or debt default/renegotiation costs. It is thus predicted that the managers of firms with high political costs will select current income-reducing accounting methods and that the managers of firms with high agency costs of equity and debt will choose current income-increasing methods. In the efficient contracting setting, contracts which minimize agency costs may encourage earnings management. The contracts are, nevertheless, efficient as they result in firm value maximization. In practice, it is difficult to distinguish hypotheses based on this perspective from those generated in the opportunistic behaviour setting (Beattie et al., 1994; Florou, 2004).

A number of studies draw from the positive accounting theory and examine managerial incentives for accounting policy choice. Cotter (1999) and

Gupta (1995) show that managerial incentives to choose accounting policies derive from the relationships among a corporation's stakeholders, including managers, stockholders and creditors. These studies have generally found that the presence of bonus plans, restrictive debt covenants, and political costs affect accounting procedure choices. Yet, their results afford only partial insights in our understanding of managers' motives since they focus on a single accounting choice at a time. Missioner (2004) identifies bank and private loans, ownership dilution, labour force and managers' own compensations as significant factors influencing the accounting method choice of Swiss managers. The study found *size* of a firm and *leverage* as insignificant in the Swiss context. In contrast to Missonier's study, Inoue and Thomas (1996) found that the *size* of a firm and *leverage* are major factors shaping Japanese managers' accounting choice methods. The study identifies other factors as taxation, foreign political costs and a firm's ability to finance its operations internally.

According to Beattie et al. (1994), firms tend to choose accounting methods to smooth income. In smoothing their income, managers choose accounting methods to increase or decrease income to meet their own interests. The study identified factors which cause managers to choose extraordinary items to smooth income in the UK context. These are accounting risk, market risk, agency costs, political costs, ownership structure, industry, dividend payout and managerial share options. Of these factors, accounting risk, agency costs, ownership structure and dividend payout are significant in explaining choice of extraordinary items by UK managers. Market risk, political costs, industry and managerial share options are not significant. This is in contrast with Inoue and

Thomas (1996), where size as a measure of political cost is significant though the results in case of share options are in line with bonus plan in the Japanese context and contradicts managerial compensation in the Swiss context. Basing their research on a single industry, Aitken and Loftus (2009), identify compensation plans, debt and political costs to explain managers' accounting policy choice in Australia. Only compensation plan is found to be significant while debt and political costs are not. This study rejects the political and debt hypothesis which describes the positive accounting theory proved in the US since the studies by Watts and Zimmerman (1986 & 1990). Astami and Tower (2006) investigated four key accounting-policy disclosures in the 2000/2001 annual reports of 442 listed companies in the Asian pacific Region. The results of their study indicate that companies that pursue income-increasing accounting techniques in their aggregate accounting policies are characterised by lower financial leverage, lower owner concentration and higher investment opportunity sets. Furthermore, they provided empirical evidence that the variations of management's choice of accounting policies can be explained by the country of reporting as well as certain firm specific variables. Their findings differ from those of studies done in developed countries (Cullinan and Knoblett, 1994; Bowen et al., 1995 and Missonier, 2004), which have reported that high levered firms pursue accounting policies that accelerate the reporting of income. Tawfik (2006) investigated the variables affecting both single policy and portfolio strategies accounting choices in Saudi Arabia. The study found strong evidence to support that accounting choices in Saudi Arabia are not affected by firm specific factors such as size, leverage, or ownership concentration. We however observe that, unlike in

Tanzania, IFRSs are not permitted in Saudi Arabia. Rahman and Scapens (1988) questioned the universality of the proposition that political costs (size) are a major influencing factor in accounting policy choice. In their Bangladesh study, they found evidence suggesting that multinational corporations do not consistently use income reducing policies.

2.2 Hypotheses

In line with other previous studies, we develop the hypotheses by drawing from the positive accounting theory. In this context, we argue that managers adopt accounting methods in response to debt covenant constraints, political costs, and increase their compensation. Hence, we examine the effect of leverage, company size, ownership dilution, labour force, proportion of non-executive directors and reliance on internal financing. We only focus on these factors because of they are more applicable in the specific context of the Tanzanian economic and institutional environment. This environment differs from that of the USA, Japan, UK, and Switzerland, more so regarding the importance of banks in the firm's external financing. This may be due to weak capital markets in Tanzania and hence a heavy reliance on bank loans (DSE Handbook, 2008). We are also restricted by the small sample size in this study owing to the small number of listed companies on the DSE.

2.2.1 Leverage

Inoue and Thomas (1996) have shown that owner-managers have incentives to liquidate the assets of the company in the form of dividends and leave the debt

holders with nothing but the shell of the company. However, a rational market for debt will price the debt accordingly and incorporate debt covenants into loan agreements to protect themselves. For example, debt covenants may restrict the payment of dividends at certain income levels. Prior literature links debt and accounting policy choice because debt covenants are usually based on reported accounting numbers and a violation of the debt covenants imposes costs on the company. Bowen et al. (1995) explain that managers seeking to reduce debt covenant costs may strive to adopt a set of accounting methods which enable them to report favourable financial statements in terms of creditworthiness. In addition, managers may try to improve the firm's financial flexibility in order to prevent them from reporting an "image of financial distress" (Easton, Eddy & Trevor, 1993). These considerations become more relevant as the company experiences financial debt increases, i.e. a higher total of financial debt over total assets (Cullinan & Knoblett, 1994; Piot, 2001 Zimmerman, 1986). According to the theory of accounting choices, to reduce the debt contracting costs, owner-managers have incentives to offer debt covenants which restrict some of their actions.

Despite the above arguments, Astami and Tower have found evidence suggesting that lower financial leverage is associated with income-increasing accounting techniques. We however observe that most of the countries surveyed in their study do not permit the use of IFRSs. In the context of Tanzania, companies rely on bondholders and banks for financing (DSE Handbook, 2008). Given the reliance on debt, managers should have incentives to choose income increasing accounting policies to ensure that they abide by the debt covenants

imposed by bondholders and banks and avoid renegotiation costs (Inoue & Thomas, 1996; Beatty & Weber, 2003). We therefore hypothesise the following:

H1: *The company's leverage ratio is significantly and positively associated with the manager's use accounting methods that accelerate the reporting of income.*

2.2.2 Company size

Watts and Zimmerman (1986) note that political scrutiny is greater for large companies than for smaller companies. Prior studies have commonly used company size to represent political costs because there is a perception that large companies are subject to intense scrutiny, especially if they are reporting huge profits. These political costs may take the form of state interventions (via legislation, regulations) but also retaliations from unions and customers that may result in opportunity costs (i.e. abandoning profitable investments). The visibility of large companies, especially in terms of available wealth, tends more easily to attract the attention of numerous stakeholders, including elected representatives (and the electorate), employees, customers and competitors. As a result, managers of large companies may be inclined to select accounting methods that delay the reporting of income to reduce these political costs (Missonier, 2004). However Rahman and Scapens (1988) have questioned the universal application of the political cost theory. Tawfik (2006) and Astami and Tower (2006) also found no evidence to support that size influences accounting policy choices in Saudi Arabia and the Asian Pacific region respectively.

In developing countries like Tanzania, large companies are often accused of exploiting the general public and the country's resources, especially multinational companies and are likely to be heavily regulated. Hence reporting huge profits might attract significant consequences from politics. However, it is also possible in Tanzania, as in most other African states, that large companies are political connected (Mangena, Tauringana and Chamisa, 2010). Such political connection implies that political costs relating to reporting huge profits may not be an important issue since managers will be protected by influential politician to whom they are connected. Moreover, since governments of developing countries like Tanzania encourage companies to participate in economic development, state interventions may not materialise and therefore we make no directional prediction. Hence, we hypothesise the following:

H2: *Company size is significantly associated with the adoption of accounting methods that decrease reported income.*

2.2.3 Labour Force intensity

Employees and/or unions (i.e. its labour force) may influence managers to avoid potential political costs. For example, strikes such as those by Tanzania Railways Limited (TRL) and National Microfinance Bank (NMB) employees in the year 2008 over demands for higher wages and salaries (with the employees claiming that the companies were generating a lot of income yet their earnings remained low) are kept to a minimum. The goal of maximizing employee wealth generally

takes the form of wage demands associated with the companies' economic rents. Given that economic rent is generally correlated with the companies' profits (Elias, 1990; Liberty & Zimmerman, 1986), employees are likely to focus on reported earnings. Wage increases can result in a substantially reduced shareholder wealth. This provides managers with the incentive to limit the intensity of wage demand (and thus the intensity of conflicts) by selecting accounting methods which delay the reporting of income.

The relevance of this accounting policy will increase as the bargaining power of employees increases such as with union presence and/or in a labour intensive industry. The few studies that examine the effect of labour pressures on the process of making accounting decisions consider the level of unionization as a good indicator of employees' power of negotiation (Cullinan & Knoblett, 1994; Liberty & Zimmerman, 1986). Since this information may not be available for Tanzania corporations, we use, as in Depoers (2000), the ratio of salaries plus social charges to sales as a proxy of labour force power.

H3: *Labour force intensity is significantly and negatively associated with accounting methods that accelerate the reporting of income.*

2.2.4 Ownership Dilution

Managers of companies with a high ownership dilution (i.e. where the percentage of the voting rights held by the principal shareholders is low) may experience more discretionary power especially in publishing information on its performance

(Hall, 1993). It is therefore highly probable that in companies where the ownership dilution is high, managers will choose accounting methods that accelerate the reporting of income to increase their own compensation. In doing so, they may convince shareholders that the company's performance is satisfactory, especially where bonus agreements may leave some discretion to the owners to determine the amount to be paid to the executives. They may increase the value of their human capital by developing a reputation for professional competence as well as by reporting a flattering image of the firm (Missonier, 2004). In the Asia Pacific region, Astami and Tower (2006) found that lower levels of ownership concentration are significantly associated with companies that pursue income increasing accounting techniques. We measure ownership concentration on the basis of the number of blockholders owning 5% or more of the company's share capital. In this respect, when the number of blockholders is large, ownership dilution is considered low and managers' discretion to adopt income increasing policies may be curtailed. We therefore hypothesise that:

H4: *Ownership dilution is significantly and negatively associated with accounting methods that accelerate the reporting of income.*

2.2.5 Internal Financing

Companies can use different forms of finance to fund their operations: debt, issue shares or use retained earnings. A low level of retained earnings would be indicative of a company which relies more on external financing (debt or equity)

and distributing most of its profits as dividends. On the other hand a high proportion of retain earnings, may be an indication that the company is not distributing most of its earnings to the shareholders. Waweru, Gelinas and Uliana (2009) have argued that emerging economy market stocks are more risky when compared to stocks in developed markets. Given this, shareholders may therefore prefer dividends to capital gains in emerging markets, such as Tanzania. Failure by manager's to pay dividends may send the wrong information signal to the shareholders. In order to reduce asymmetric information costs, companies relying more on internal financing (retained earnings) are more likely to choose income decreasing accounting procedures in an attempt to reduce the amount of dividend to enable them to invest the retained earnings in new projects. However, using more external finance, they are more likely to use income increasing accounting methods to signal their ability to pay interest on debt as well as to attract new investors.

H5: *The proportion of retained earnings to net assets is significantly and negatively associated with the selection of accounting methods that increase reported income.*

2.2.6 Proportion of non-executive directors

The objective of corporate governance is to realize shareholders' long-term value while taking into account the interests of other stakeholders. Effective corporate governance and related accountability mechanisms are presumed to mitigate conflicts of interest and provide reasonable assurance that each party observes

certain behavioural norms. One might expect that accounting would be well equipped to examine and prescribe improvements in accountability among agents in capitalist settings. The board of directors plays a key role in accountability, with the non-Executive directors having the most crucial role. Non-executive directors' role is to ensure that managers are accountable to the shareholders and that shareholders' interests are protected. According to Shapiro (2006), a higher proportion of non-executive in the board may increase controls on self-interested managers. Given that the role of the board is to protect shareholders' interests, their monitoring activities should curtail managers' self-value maximising actions. Therefore, we hypothesise the following:

H6: *Managers of companies with greater proportion of non-executive directors on the board are likely to choose income decreasing accounting policies.*

3.0 Research methods

3.1 Sample and data source

Quantitative methods are employed to examine the relationships between the independent variables (leverage, company size, labour force, ownership dilution, internal financing and proportion of non-executive directors) and dependent variable (income strategy, measured on the basis of multiple accounting policies). The data is drawn from annual reports of all the fifteen companies listed on the DSE (see Appendix 1 for the list of companies). The data collected is for a 4-year period from year 2005 when Tanzania effectively adopted IFRSs to the year ended 2008, which result in 60-firm years. The design is chosen because the population

is small and the use of panel data increases the number of observations, thus allowing meaningful statistical analysis. Where information was not available in annual reports, data was obtained from the companies' websites, DSE or Capital Markets and Securities Authority (CMSA). In order to calculate values of variables to test the hypotheses, directors' report, profit and loss account, balance sheet and notes to the accounts were all read.

3.2 Income strategy measurement

To measure income strategy (our dependent variable), we consider a company's set of accounting choices as a single comprehensive decision as in Bowen et al. (1995) and Inoue & Thomas (1996). Only accounting policies that are disclosed in the company's annual report are selected. The accounting policies are classified as either income increasing or income decreasing and are drawn from the major accounting policies disclosed as part of the notes to the financial statements. We identified eleven relevant policies that can affect income (**Table 1**). The effect of accounting method on income or income strategy depends on measurements and recognition of a standard.

Table 1: Selected Accounting policies and effect on income

Policy	Income Decreasing	Income Increasing
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Depreciation (DP)	Accelerated	Straight line
Retirement Allowance (RA)	Lump sum	Annual income
Marketable Securities (MS)	Fair value	Cost
Freehold land & buildings (L&B)	Revaluation	Cost
Inventory (IVT)	Weighted Average Cost	FIFO
Employee benefit (EB)	Expensed	Liability (paid in future)
Property, plant & equipment (PPE)	Revaluation	Cost
Goodwill (GWL)	Revaluation	Cost
Intangible assets-software (IAS)	Fair value	Cost
Investment Property (IP)	Fair value	Cost
Leasing (LEAS)	Sum-of-digits method	Actuarial method

We define income strategy as a portfolio or combination of accounting policies which may increase or decrease reporting income (Missonier, 2004; Inoue & Thomas, 1996; Zmijewski & Hagerman, 1981). The income strategy as a variable is the ratio of the number of income increasing accounting policies divided by the total number of accounting policies used by a company (i.e. income increasing plus income decreasing). The denominator varies or changes depending on the

total number of relevant accounting policies. In measuring the income strategy we assume that the effects on income of all eleven accounting methods listed in Table 1 are equal. This is consistent with Zmijewski and Hagerman (1981) who show that attaching weights to accounting policies in income strategy models does not significantly change the results.

3.3 Model specification

Following our hypotheses development in Section 2.2 above, we specify the following ordinary least squares (OLS) regression model:

$$\text{INCOME STRATEGY} = \alpha_0 + \alpha_1 \text{LEVER} + \alpha_2 \text{SIZE} + \alpha_3 \text{LABFORCE} - \alpha_4 \text{ODILUTION} + \alpha_5 \text{INTERFIN} + \alpha_6 \text{PROPNEED} + \varepsilon$$

Where:

INCOME STRATEGY = percentage of the accounting strategy choices that accelerates income (number of accounting methods accelerating income divided by total accounting methods).

SIZE = Company size measured as the log of total assets collected from the annual reports at the end of the financial year end

LEVER = Leverage ratio measured as total long term debt scaled with total book value of equity, both collected at the financial year end.

LABFORCE = Labour force intensity, measured as the total labour charges scaled by the total annual turnover for the company

ODILUTION = Ownership dilution, measured as the number of blockholders with shareholdings of 5% or more.

INTERFIN = Internal financing, defined as the percentage of appropriated retained earnings scaled by the net assets

PROPNEDE= Proportion of non-executive directors, measured as the percentage of non-executive directors on the board.

4.0 Results

In this section we present the results of the regression analysis. We first report the descriptive statistics and correlation results in Section 4.1. This is followed in Section 4.2 by a presentation of the regression results.

4.1 Descriptive Statistics and Correlation Matrix

Table 2 above presents a summary of the descriptive statistics of the dependent and independent variables.

Table 2: Descriptive statistics

Variable	Mean	Median	Std Dev	Min	Max
Income strategy	.710	.700	.130	.500	1.000
Firm size	25.463	25.330	1.938	21.020	28.870

Leverage ratio	2.925	.775	3.743	.000	15.630
Labour force	.113	.088	.072	.002	.370
Ownership dilution	2.733	2.000	1.287	1.00	6.00
Proportion of NEDS	.763	.820	.182	.270	1.000
Internal financing	.453	.381	.353	.000	.970

The table shows that the mean income strategy is 71.0%. This suggests that listed companies in Tanzania adopt more income increasing accounting policies than income decreasing accounting policies. This is consistent with positive accounting theory and agency theory which argues that managers choose accounting methods to maximize their utility. We, therefore view these findings as a reflection of managerial opportunism and weak corporate governance mechanisms. Even though the percentage of non-executive directors is very high at 76.28%, the non-executive directors may not be knowledgeable about the company's business to monitor managers effectively. As noted by DSE Handbook (2008), companies in Tanzania rely heavily on debt-financing. The mean leverage ratio of 2.93 means that the amount of debt is more than double that of equity. However, there seems to be high investment of retained earnings by the companies. The mean internal financing is about 45.32% of the total net assets and this is significant, suggesting that a significant amount of profits is distributed as dividends.

The Pearson correlations are presented in Table 3. We use the correlation matrix to determine whether the independent variables are highly correlated. *Table 3* shows that there is little correlation among most of the independent variables as the highest correlation is 0.633 is less the benchmark of 0.7, suggesting that the problem of multicollinearity is not serious (Tibachnick and Fidel, 1996)

Table 3: Correlation Matrix for the Independent Variables

Variable	Income	Size	Lev	LabForce	ODilution	Propned	InterFin
Income	1.000						
Size	.123	1.000					
Lev	.023	.579***	1.000				
LabForce	-.278**	.271**	.564***	1.000			
ODilution	-.144	-.184	.230	.111	1.000		
Propned	-.633***	.266**	.077	-.009	.063	1.000	
InterFin	.052	-.046	-.267**	-.238*	-.165	.282**	1.000

***, **, * Significant at the 1%, 5% and 10% respectively

4.2 Multiple regression results and discussion

The results of the regression analysis are shown in Table 4.

Table 4: OLS regression results of income accounting method strategies (N=60)

Variable	Coeff.	SE	Beta	t-statistics	VIF
Constant	.544	.176		3.095***	
Company size	.025	.007	.375	3.515***	2.008
Leverage	.006	.004	.170	1.420	2.525
Labour force	-.749	.162	-.427	-4.625***	1.499
Ownership Dilution	.003	.009	.026	.304	1.322
Propned	-.572	.058	-.822	-9.797***	1.238
Internal finance	.090	.030	.249	2.983***	1.228
R ²		.699			
Adjusted R ²		.665			
F-value		20.490***			

***, **, *Significant at the 1%, 5% and 10% respectively

As the table shows, the regression model has significant explanatory power. The adjusted R² of the model is 0.665 and the F-value of 20.490 is significant at the 1% level or better. The adjusted R² of the model indicates that the model explains 66.5% of the variation in the income strategy measure.

In terms of the explanatory factors, we find that leverage is not significantly related to the choice of accounting policies, although the direction of the coefficient is positive as predicted. However, the hypothesis that there is a

significant relationship between leverage and accounting choice (H1) is therefore rejected. This is consistent with studies done by Aitken and Loftus (2009) in Australia, Missonier (2004) in Switzerland, Tawfik (2006) in Saudi Arabia and Rahman and Scapens (1988) in Bangladesh, who found that leverage is not a factor in explaining the choice of accounting methods. However the findings are not consistent with those of Astami and Tower (2006) who found that lower leverage levels were significantly associated with the choice of income-increasing accounting choices in the Asian Pacific region. Our results suggest that the level of debt does not influence the choice of accounting policies in Tanzania. This may reflect the close relationship that may exist between managers and their debt-holders, especially banks, to the extent that debt covenants are perhaps not as important.

Company size (SIZE) is positive and significantly related to the choice of accounting methods, hence the second hypothesis (H2) of a significant association is supported. The positive relationship between income strategy and company size contradicts previous studies which showed a negative relationship (e.g., Christie, 1990; Missonier, 2004) and no relationship (e.g., Tawfik, 2006; Astami & Tower, 2006). This research finds that large companies choose income increasing methods probably due to the Tanzanian government policy encouraging companies to participate in economic development. Given that the Tanzanian government support companies' role in economic development and the lack of laws on social responsibility, political pressures resulting from increasing profitability may be limited. In this context, companies may not consider adopting increasing income accounting policies costly in terms of political scrutiny. This

contradicts the argument that larger companies fear government action, especially if their profits are large, and therefore tend to delay profits (Watts & Zimmerman, 1986).

Our results also show a negative and significant relationship between labour force intensity and income strategy, thus consistent with hypothesis 3 (H3). This implies that managers may employ decreasing income accounting policies to diminish the intensity of wage demands and reduce conflicts between unions and management. The dilution of ownership is not associated with accounting policy choice, thus our hypothesis 4 is not supported. Our findings are inconsistent with those of Astami and Tower (2006), who reported that companies that pursued income increasing accounting techniques were characterised by lower levels of owner concentration. The non-significance of this variable may reflect the general issue in most African countries where shareholders, especially the minority, have very little control over managers. The implication is that no shareholder pressure is anticipated by managers whether they report high or lower profits.

We find that there is a significant positive relationship between internal financing and income strategy, thus our hypothesis 5 (H5) is not supported. The result contradicts the study by Missonier (2004) which found that at higher level of external financing (low level of internal financing), managers choose income increasing procedures. This shows that the higher the level of internal financing, the more managers will choose income increasing procedures. It is possible that managers may have incentives to signal a stronger financial performance to justify their ability to finance the costs of borrowing and reduce the pressure to raise finance from the market and dilute earnings.

Finally, the relationship between the proportion of non-executive directors and income strategy is negative and significant, thus hypothesis 6 (H6) is supported. These results suggest that when the proportion of non-executive directors is greater, managers are unlikely to choose income increasing accounting policies. The implication of this finding is that non-executive directors in Tanzanian companies are effective monitors of managers, and act in the best interests of shareholders.

5.1 Conclusions

This research examines the determinants of managers' accounting methods choice for 15 Tanzania companies that are quoted on the DSE from 2005 to year ended 2008. We draw from positive accounting theory and examined whether firm size, leverage, internal financing, proportion of non-executive directors, ownership dilution, and labour force intensity influence the manager's choice of accounting policy. We find no relation between leverage and accounting policy choice. The results show, contrary to the political cost hypothesis, that there is a positive relationship between income strategy and company size, indicating that larger companies are more likely to adopt income increasing accounting methods. Labour force intensity is found to be negatively related to income strategy, suggesting that labour intensive companies choose income delaying accounting policies, perhaps to avoid pressure from workers and labour unions demanding high salaries and wages. The relation between the proportion of non-executive directors and income strategy is negative, suggesting that non-executive directors

curtail the use of income increasing accounting policies. This seems to suggest that non-executive directors are effective monitors of managerial opportunistic behaviours. Finally, we find that companies that rely on internal financing choose income increasing methods so that they can retain more and show their shareholders that they are profitable.

This study makes a number of contributions to the literature. First, it is the first study to examine the factors that influence the choice of accounting methods in Africa, and in Tanzania, in particular. Second, the paper introduces the effect of board composition (measured as the proportion of non-executive directors) as a new factor that influences the choice of accounting policies. No previous study has examined this variable in the context of managerial accounting choice. Third, our study demonstrates that there may be behavioural differences between managers of developed countries and their peers in a developing nation such as Tanzania. For example, the differences in some of our results to prior research suggest that the economic, social and political differences may be affecting managers' behaviour in decision making. For example, whilst studies in developed countries report that large companies and highly leverage companies adopt income decreasing and increasing methods, respectively, in Tanzania, large companies adopt increasing income policies, whilst the level of debt does affect accounting methods choice. This seems to suggest that political costs are not a major issue for managers in developing countries. Thus, the results of this study cast doubt on the reliability of political cost hypothesis.

Finally, the findings of this study have policy implications for IASB and African accounting regulators. Allowing companies to choose between accounting

policies may encourage earnings management and this may mislead investors. This means that in the context of Tanzania, regulations need to clearly specify the accounting standards that firms have to apply.

However, the findings of this study should be interpreted in the context of the sample size used. A sample size of 60-firm years is too small to provide conclusive evidence on Africa. Hence further research is required in other African countries with more listed companies on their stock exchanges, for example, countries such as Kenya, South Africa and Zimbabwe. It may also be interesting to carry out a cross-country study to determine with accounting policy choice differ by country in Africa. Second, because the study uses panel data, with each company included five times, the results are affected by the economic changes or specific events in a specific year. To the extent that the economic changes or events are not controlled for in the model, this is a limitation. Future researchers can use cross-sectional data to avoid the economic changes between years, test foreign political costs, managers' discretion, audit committee and industry. Moreover, they should try to use natural logarithm of total sales as a measure instead of natural logarithm of total assets and investigate relevance of options in choosing accounting policies.

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APPENDIX 1

List of Companies Listed on DSE and Investigated

S/N	Company Name	Symbol	
1.	<u>Tol Gases Limited</u>	TOL	
2.	<u>Tanzania Breweries Limited</u>	TBL	
3.	<u>Tanzania Tea Packers Limited</u>	TATEPA	
4.	<u>Tanzania Cigarette Company Limited</u>	TCC	
5.	<u>Tanga Cement Company Limited</u>	SIMBA	
6.	<u>Swissport Tanzania Limited</u>	SWISSPORT	
7.	<u>Tanzania Portland Cement Company Limited</u>	TWIGA	
8.	<u>National Investment Company Limited</u>	NICOL	
9.	<u>Dar Es Salaam Community Bank</u>	DCB	
10.	<u>National Microfinance Bank Plc</u>	NMB	
11.	<u>Kenya Airways Limited</u>	KA	
12.	<u>East African Breweries Limited</u>	EABL	
13.	<u>Jubilee Holdings Limited</u>	JHL	
14.	<u>Kenya Commercial Bank Limited</u>	KCB	
15.	<u>CRDB Bank Public Limited Company</u>	CRDB	