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CONTENTS

LOAN PORTFOLIO STRUCTURE AND PERFORMANCE OF GOVERNMENT-OWNED BANKS IN INDONESIA: DOES SIZE MATTER?

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Abstract

Government-owned banks represent the smallest number of banks in Indonesia (25% of all banks) but have a dominant market share of almost 50% in the loan market. Studies previous to this one do not address the effect of size differences on the loan portfolio structures and performance of such banks. The objective of this study is to add to the literature in this area by determining whether small and large Indonesian government-owned banks differ in terms of their loan portfolio structures and performance. The study covers the 2003 to 2011 period. Descriptive statistics, univariate statistics and generalized least squares estimation are applied. The findings show that the loan portfolio structures and returns of small and large government-owned banks differ significantly.

Keywords: Loan Portfolio, Government-Owned Banks, Indonesia

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1. Introduction

Government owned banks (GBs) play a prominent role as financial intermediaries in Indonesia. Data retrieved from the Bank Indonesia annual reports sourced from the Indonesian Banking Directory indicate that although representing just 25% of the overall number of banks in Indonesia, the GBs retained a dominant market share of almost 50% in the loan market over the period 2003 to 2011.

Over the 2003-2011 periods, GBs in Indonesia were the major loan providers. The total amount of loans provided by GBs in 2011 was almost three times as much as that of other domestic banks and nearly twice as much as that of foreign-owned Banks in Indonesia (Bank Indonesia, 2011). Therefore GBs dominate the Indonesian banking industry.

According to the Indonesian central bank classification, GBs comprise of state-owned banks (owned by central government) and regional development banks (owned by provincial/local governments). Table 1.1 shows that the state-owned banks are on average larger than regional development banks.

Table 1.1 Asset size of Different Indonesian Banks - 2003 and 2011

Bank Ownership Group	December 2003					December 2011				
	< 1 Trillion Rp	1-10 Trillion Rp	10-50 Trillion Rp	> 50 Trillion Rp	Total	< 1 Trillion Rp	1-10 Trillion Rp	10-50 Trillion Rp	> 50 Trillion Rp	Total
State Owned Banks	0	1	1	3	5	0	0	0	4	4
Foreign Exchange Commercial Banks	8	17	9	2	36	1	18	7	10	36
Non-Foreign Exchange Commercial Banks	31	9	0	0	40	12	15	3	0	30
Regional Development Banks	10	15	1	0	26	0	14	11	1	26
Joint Venture Banks	7	13	0	0	20	0	6	8	0	14
Foreign Banks	3	3	5	0	11	0	4	3	3	10
Total	59	58	16	5	138	13	57	32	18	120
Percent of Total	0,43	0,42	0,12	0,04	1,00	0,11	0,48	0,27	0,15	1,00

Source: Indonesian Banking Statistics 2003 and 2011

Using the means of all government banks as the cut-off (column 3, Table 1.2), the State-owned banks formed large GBs whereas on the contrary the regional development banks formed small GBs.

While previous studies highlight the weak performance of GBs compared to other bank ownership types (La-Porta et al. (2002), Barth et al. (2004), Sapienza (2004), Berger et al. (2005a) and Taboada (2011)), no such research distinguishes between the effect of size differences between GBs on their loan portfolios. The only retrieved previous research which finds that bank loan portfolios are determined by bank characteristics such as ownership and size was conducted by De-Haas et al. (2010).

They did not specifically refer to GBs but indicated that large banks in general possess a comparative advantage in lending to large customers as they are able to exploit economies of scale in evaluating the "hard-information" borrowers. In contrast, small banks may not be able to lend to large borrowers because of size limitations and regulatory lending limit constraints. However, they are better at dealing with "soft information" borrowers such as consumers and small and medium size enterprises (SMEs).

Table 1.2. Means of Government-owned Banks Total Assets (In Million Rupiah)

Year	State-owned Banks	Regional Development Banks	All GBs
2003	125,000,000	2,586,841	18,900,000
2004	128,000,000	3,018,909	19,600,000
2005	138,000,000	4,060,576	22,000,000
2006	158,000,000	6,092,949	25,700,000
2007	181,000,000	6,484,202	29,800,000
2008	207,000,000	7,068,015	33,200,000
2009	242,000,000	7,616,221	38,900,000
2010	278,000,000	9,128,837	45,000,000
2011	331,000,000	11,600,000	54,200,000
All Years	198,000,000	6,405,776	31,900,000

The objective of this study was to use bank level information to determine the extent to which large and small GBs differ in terms of their loan portfolio composition, risk and performance.

Findings from this research show that the economic sector (EHHI) loan portfolio concentration of the large and small GBs differ over the total study period with small GBs being more concentrated, and showing an increase in concentration over the period 2003 to 2011. However, the loan types (THHI) portfolio concentration for all GB sizes are very similar and do not change much over the period 2003 to 2011. Small GBs have more focused loan portfolios but experience lower risk and higher return. These findings support the corporate finance theory, according to which banks should implement focus strategies to reduce agency problems and exploit their management expertise in certain sectors. The findings do not support the traditional banking and portfolio theory that banks should diversify their loan portfolio to reduce risk (Hayden et al., 2006).

2. Literature Review

Bank loan portfolio diversification strategies are based on the modern portfolio theory of Markowitz (1952), and largely followed by experts in financial institutions (Winton, 1999). According to the idiosyncratic risk hypothesis, diversification eliminates the specific (idiosyncratic) risk which enable banks to reduce their monitoring efforts and therefore lower their operating costs, which ceteris paribus should lead to higher cost efficiency (Rossi et al., 2009). Furthermore, the benefit of diversification stems from economies of scope across inter alia

economic sectors and geographic areas (Laeven and Levine, 2007).

Researchers like Hayden et al. (2006), Berger et al.(2010) and Tabak et al. (2011) all indicate that risk reduction and performance improvement are advantages of diversification whilst agency problems are common associated disadvantages. Notwithstanding the aforementioned, Tabak et al. (2011) also indicates that diversification increases the risk in the Brazil and Italian banking sectors and reduces the performance of the banks in China, Germany and small European countries. This viewpoint, that diversification does not always reduce risks and improve returns, is also supported by other researchers like Winton (1999) and Acharya (2002).

Some of the regulations governing central banks like maximum lending limits that apply to banks, promote diversification, whilst other regulations pertaining to aspects like branching, entry, and asset investments often encourage focus strategies (Berger et al., 2010). However, the existence of regulations that instigate diversification may increase monitoring costs and reduce cost efficiency due to large numbers of individual customers and industries (Rossi et al., 2009). Furthermore, given that managers are risk averse, they may incur additional costs in their search for high quality loans to apply diversification. These factors may reduce diversification risk-return efficiency.

A focus strategy opposed to a loan portfolio diversification strategy is effective when banks face information asymmetry (Acharya et al., 2002), Kamp et al. (2005),Berger et al. (2010), Tabak et al. (2011)) and it serves as a contributing determinant of differences between banks in terms of their loan

concentration in sectors (Dell'Ariccia and Marquez, 2004). Re-allocation of loans (commonly known as flight to captivity) to sectors where greater adverse selection problems exist may happen when banks face mere intrinsic overall competition from other outside lenders entering the market. It means that more lenders may target borrowers in the same sectors subject to low information asymmetries. Therefore, existing informed lenders may have to deal with more captured (but also higher risk) borrowers that did not previously form part of their market in such sectors (Dell'Ariccia and Marquez, 2004)[1].

Bank size can be regarded as another determinant of bank loan portfolio composition. Researchers such as De-Haas et al. (2010) investigated bank size performance differences. Their findings show that bank size, bank ownership, and legislation that protect the rights of banks as creditors are important determinants of the loan portfolio compositions of banks. According to Carter et al. (2004) the lending performance of small banks may be better than that of large banks due to factors such as structure performance (SP), information advantage (IA), and relationship development (RD) theories. The SP theory relates to the industry or market structure in which banks operate. When operating in smaller markets with a limited number of competitors, small banks may experience higher interest income (Gilbert, 1984). The IA theory refers to the information accessibility and organisational structures of banks. Nakamura (1993, 1994) and Mester et al. (1999) point out those small banks have the advantage of credit information accessibility. Their flat organisational structures also allow better delegated borrower monitoring (Carter et al., 2004). Finally, the RD theory contrasts the relationship lending conducted by small banks using "soft information" about borrowers with arms-length lending by large banks using "hard information of borrowers (Berger et al., 2005b). Small banks have the advantage of serving the "soft information" borrowers due to their ability to maintain a close relationship with the borrowers.

Differences in the organisational structures and exposure to asymmetric information between small and large banks may result in different loan portfolio compositions (Degryse et al., 2012) and differences in lending technology and innovation capability (Berger et al., 2005a).

In view of the aforementioned characteristic differences between bank sizes that researchers identified, it is hypothesized that differences exist in the loan portfolio composition and loan repayment default risk of different sizes of GBs. As a result their returns may also differ.

A Brief History of Government-owned Banks in Indonesia

The major reform of the Indonesian banking industry commenced with the enactment of the Banking Act No 14/1967. One year after the reforms which started in 1967, seven separate government-owned banks were established, each governed by their own laws. They were established to develop specific sectors of the national economy[2] with specific segment allocation for each one.

Throughout the 1970s, banking was dominated by GBs. Although foreign bank branches established in 1968 still existed, the industry remained closed to new entries. As a result, GBs did not face competition from other banks (Bennet, 1999). They were often required by policy makers to direct their loans to certain customers. This was known as "memo lending" or "lending on the basis of a recommendation from a prominent or politically well-connected person" (Bennet, 1995). High officials of the GBs were appointed by senior politicians. Thus, to maintain the security of their jobs, they compromised bank loan portfolio quality. Memo lending resulted in improper loan assessment which led to providing loans to non-credible companies that did not have the ability to repay the loans. Further, McLeod (1996) reported that the lending policy of GBs targeted state enterprises that were obliged to rely on GBs, not only for their financing but also for their investments.

In 1974, the government introduced control over bank lending, as a major element of the banking policy regime (Arndt 1974 quoted in McLeod (1996)). It was a mechanism according to which interest rate ceilings were allocated to different economic sectors. The Central Bank therefore directed the allocation of bank credit to different sectors (Chant and Pangestu, 1994).

During the period of the oil boom (1973-1982), the GBs enjoyed the supply of funds by the Central Bank at low interest rates. This made it possible for them to grant loans to economic sectors at a low rate. The mechanism was planned by the government to spread the income generated from oil to sectors targeted by the government. It enhanced the fulfilment of the social motives of government banks (McLeod, 1996).

After the sharp decline of oil prices (which generated the main Indonesian export income) in 1982, the government realized the need to create more efficient banking. The main objectives of the reform actions were to cease the subsidized lending program and to create a more market-oriented banking system. The reform process consisted of the termination of

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[1] Flight to captivity implies that banks re-allocate their portfolio towards more captive borrowers when shocks to their balance sheet, or from their competitive environment, force them to alter their lending patterns

[2]The specific sectors/activities served by each of the seven newly formed State-owned banks were: Bank Negara Indonesia-manufacturing, Bank Dagang Negara-mining, Bank Bumi Daya - agriculture and forestry, Bank Rakyat Indonesia-agriculture and fishing, Bank Ekspor Impor - foreign trade, Bank Tabungan Negara-national saving bank, and Bapindo-national development bank (see: Bennet, 1990).

providing liquidity credit to GBs, removal of interest rate controls (as the consequence of the termination of the subsidized-lending program), and abandonment of lending controls (Mc Leod, 1996).

The intention with the abandonment of lending control was to enable GBs to take independent loan portfolio decisions based on their ability to attract deposits. It also pushed the GBs to compete with other banks since subsidised interest rates no longer existed. The Central Bank loans to GBs remained high (Mc Leod, 1996). There was little improvement in the efficiency of GBs and they maintained their focus on serving government-owned enterprises and neglected the retail markets (Cole and McLeod quoted in Mc Leod, 1996).

The bank reform package introduced by the Central Bank in October 1988, known as PAKTO 1988, relaxed many bank establishment regulations to foster competition in the banking industry. As a result, the Indonesian banking industry witnessed an accelerated increase in the number of banks. The private-owned banks were able to perform the intermediary functions better than government-owned banks. After the deregulations the GBs still engaged in politically motivated loans. In many of the cases, there were inadequate loan assessment (Bennet, 1999). GBs lent mostly to affiliated companies which led to high risk exposure arising from highly correlated risk between the bank and the borrowers, since they were all in the same corporate groups. They used various means to fund affiliated companies in excess of the lending limit regulations (Bennet, 1999).

The period since the implementation of the 1988 banking package, up to the 1997 Asian Financial Crisis, was characterised by the reduction of GB domination and market mechanisms were applied to set interest rates and loan allocations (Bennet, 1999). These mechanisms were mainly by way of the Banking Act (BL 7/ 1992) that was introduced in October 1992. Requirements for GBs and domestic-owned banks were made the same to create a more competitive banking industry. The legal status of GBs was transformed to limited liability companies to become private corporations (Pangestu, 2003). The Banking Act abolished the GBs obligations to allocate credit to support government projects (Harun, 2008). The extensive growth in the number of banks during this period of time also brought contemporary

problems along. Most of the banks did not apply adequate risk management and engaged in risky lending practices. As a result, banks experienced high levels of non-performing loans (Bennet, 1999). The asset quality of both government-owned and private-owned banks deteriorated significantly.

At the end of 1993, the NPLs of the largest GBs reached 21 percent of total loans (Bennet, 1999). There were no deposit insurance schemes in Indonesia at that time. The Central Bank performed the function of lender of last resort and protected the large government-owned banks under the "too-big to fail" policy.

The closure of sixteen banks in November 1997 marked the commencement of the Indonesian banking crisis. The restructuring of the banking sector (November 1997-2000) took the form of bank liquidations; bank mergers; bank close-downs; and bank re-capitalization at a huge cost to the government (Alijoyo et al. (2004) and Batunanggar (2002)). The number of government-owned and private-owned banks reduced. Some of the former domestic-owned banks temporarily became government-owned banks but the government's shares in those banks were sold off again during 2000-2002 period (Sato, 2005).

3. Research Methodology

3.1 Sample, Types and Sources of Data

All Indonesian GBs (4 large GBs and 26 small GBs) that operated over the 2003 to 2011 period were included in this research. This constitutes a total observation of 270 (30 banks for 9 years). One large bank (Bank Ekspor Indonesia) that only existed for a part of the research period (from August 1999 to 1 September 2009) was excluded. This research utilised secondary data from The Indonesian Central Bank Library, Infobank magazine and the library of The Indonesian Banking Development Institute (LPPI). The central bank library provides individual bank ownership data and financial statements whereas Infobank magazine provides loan allocation data based on loan types and economic sectors. Information from LPPI also supplements loan allocation data not provided by Infobank magazine.

3.2 Variable Definition and Measurement

Table 3.1 reflects all the variables, their definitions and how they are measured.

Table 3.1. Variables Definition and Measurement

	Variable	Definition	Measurement	Remarks
1	Loan Portfolio Concentration (CONC)	The risk arising from an uneven distribution of counterparties in credit or any other business relationships or from a concentration in business sectors or geographical regions which is capable of generating losses large enough to jeopardise an institution's solvency (Deutsche Bundesbank, 2006)	$HHI = \sum_{i=1}^{N} \left(\frac{p_i}{Q}\right)^2$	HHI= Hirschman Herfindahl Index Q= $\sum_{i=1}^{10} p_i$ pi = the percentage of credit to each sector N = 10 for E-HHI and 3 for THHI
2	Loan Portfolio Payment Default Risk (RISK)	A different risk inherent to each industry, region or product of a bank(Cronje, 2013)	(Substandard+ Doubtful+Loss)/Total Loans	
3	Loan Portfolio Return (RETR)	The net income obtained from bank's loan portfolio	Gross Interest Income/ Total Loans	
4	Interest Rate (INT.RATE)	The money paid by a borrower (debtor) for the use of money that they borrow from a lender (creditor)	1-month SBI Rate	The end of year SBI Rate is obtained from www.bi.go.id
5	GDP (GDP)	The market value of all officially recognized final goods and services produced within a country in a year, or other given period of time	Constant GDP	The end of year GDP is obtained from www.bi.go.id

The dependent variable in this research is the loan portfolio return of GBs measured by the ratio of gross interest income to total loans. Three independent variables are used: bank size, loan portfolio concentration and loan repayment default risk. Interest rate and GDP serve as the macroeconomic variables. Banks are categorised into two size groups, being large state-owned banks, and small regional development banks. The categories were established by using the means of all government-owned banks as a cut-off point, with dummy variables (1 for large GBs and 0 otherwise) to identify the two sizes. The loan portfolio concentration was measured using the Hirschman Herfindahl Index (HHI). It was also used by Winton (1999), Acharya et al. (2002) and Hayden et al. (2006).[3] For this research, two types of HHI's are applied, namely Economic Sector HHI (E-HHI) and Loan Type HHI (T-HHI). The loan repayment default risk is measured by the ratio of non-performing loans (NPLs) to total loans.

3.3 Data Analysis

All research data is numerical, therefore quantitative data analysis was undertaken. Firstly, descriptive statistics of the variables (means and standard deviations) were calculated to determine data tendency and deviations. Secondly, univariate statistics in the form of the test of mean were used to find the differences in loan portfolio composition, risk and return of small and large GBs. The Mann-Whitney non-parametric test was applied since the data was not normally distributed. Thirdly, to determine the impact of bank size, loan portfolio composition and loan repayment default on portfolio returns, the following panel data regression equation was used:

$Return_{it} = \alpha + \beta SIZE_{it} + \lambda EHHI_{it} + \gamma THHI_{it} + \zeta NPL_{it} + \delta MACRO_t + \varepsilon_{it}$ (3.1)

Where:
$Return_{it}$= loan portfolio return for bank i in year t
$SIZE_{it}$ = size dummy
$EHHI_{it}$ = economic sector loan portfolio concentration
$THHI_{it}$ = loan type portfolio concentration
NPL_{it} = loan portfolio default payment risk for bank i at year t
$\alpha, \beta, \gamma, \zeta$ = regression coefficients; and
ε_{it} = the disturbance term.

This research employs the feasible generalized least squares (FGLS) estimation in the panel data regression since independent variable collinearity was verified. FGLS allows for heteroskedasticity and has two unique features: modelling of cross-sectional correlation and first order autocorrelation.

4. Findings

Descriptive Statistics

Table 4.1 details the summary statistics for the variables in the equation 3.1. The first part presents the descriptive statistics regarding loan allocation based on economic sectors and loan types. The variation for loans allocated to each sector (standard

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[3] The Indonesian economic sectors to which banks can lend are 10. Central bank classification as follows: Agriculture, hunting and agricultural facilities; Mining; Manufacturing; Electricity gas and water; Construction; Trade, restaurants and hotels; Transportation, warehousing and communications; Business services; Social services; others. The loan types are three, namely: working capital, investment, and consumption.

deviation of EHHI) is higher than that for loan types. The standard deviation for loan allocation to each sector is higher than that of loan types. The average gross NPL percentage of small GBs of 2.314% is low in contrast to the average gross NPL percentage of large GBs of 5.332%. By analyzing the mean and the standard deviation of HHI as concentration measure, it can be seen that loan portfolios based on economic sectors are less concentrated than portfolios based on loan types for both small and large GBs. It cannot be compared directly since there are only three loan types compared to the ten different identified economic sectors. However, both measures show that overall the large GBs loan portfolios seem to be more diversified than that of the small GBs.

Table 4.1 shows that although small GBs have the highest concentration risk based on sectors and loan types, they have lower loan repayment default risk and higher returns. As stated by Deutsche Bundesbank (2006), focusing on specific segments may create concentration risk but as long as the targeted sector consists of high quality borrowers with low intrinsic risk, it may result in high return. As the small GBs focus on consumer loans with many direct salary deductions for loan repayments (see Figure 4.5), the associated payment default risk is low. Consumer loans provide small GBs with high return since the interest rate earned from this segment is, based on data from Indonesian Statistics Bureau (www.bps.go.id), approximately 1.5-2 % higher than that of other types of financing.

Table 4.1 Descriptive Statistics of Research Variables

Variables	Large GBs (N=36)		Small GBs (N=234)	
	Mean	Std. Dev	Mean	Std. Dev
I. LOAN PORTFOLIO STRUCTURE: COMPOSITION				
Based on Economic Sectors:				
Agriculture	0.068191	0.052665	0.034942	0.068018
Mining	0.022139	0.024522	0.001965	0.006945
Manufacturing	0.180098	0.144999	0.010324	0.013830
Electricity, Gas and Water	0.018893	0.018663	0.005794	0.029015
Constructions	0.148913	0.302377	0.055674	0.070526
Trade, hotel, and restaurants	0.159366	0.115836	0.115937	0.104866
Transportation and Communication	0.029779	0.027212	0.009723	0.015698
Business Services	0.056795	0.037919	0.045757	0.113680
Social Services	0.008278	0.009092	0.026857	0.099949
Others	0.307548	0.281297	0.693029	0.228094
Based on Loan Types:				
Working Capital	0.452313	0.224230	0.193315	0.150502
Investment	0.195630	0.150543	0.085162	0.088688
Consumption	0.352057	0.319355	0.721523	0.205866
II. LOAN PORTFOLIO STRUCTURE: CONCENTRATION				
By Economic Sector (EHHI)	0.389398	0.321598	0.597555	0.206989
By Loan Types (THHI)	0.536872	0.174982	0.637804	0.178287
III. LOAN PORTFOLIO RISK				
Payment Default Risk (RISK)	0.053319	0.044656	0.023141	0.022903
IV. RETURN (RETR)				
Gross Interest Income Ratio	0.190357	0.055973	0.236316	0.093927

Loan Portfolio Concentration and Composition: Small and Large Government-owned Banks

Loan Portfolio concentration that represents the extent to which banks apply and focus on loan diversification is measured by the Herfindahl-Hirschman Index (HHI). The loan portfolio concentration of small and large GBs based on economic sectors (EHHI) and loan types (THHI) is graphically depicted in Figures 4.1 and 4.2.

Economic Sector Bank Loan Portfolio Concentration (EHHI)

Differences exist between the EHHI of small and large GBs with small GBs being the most concentrated and showing an increase in concentration over the period 2003 to 2011. In contrast, the EHHI concentration levels of large GBs tend to decrease over the research period (Figure 4.1). These findings indicate the overall tendency of large GBs to move towards a more diversified loan portfolio composition.

Figure 4.1 Loan Portfolio Concentration Based on Economic Sectors: Small and Large Government-owned Banks
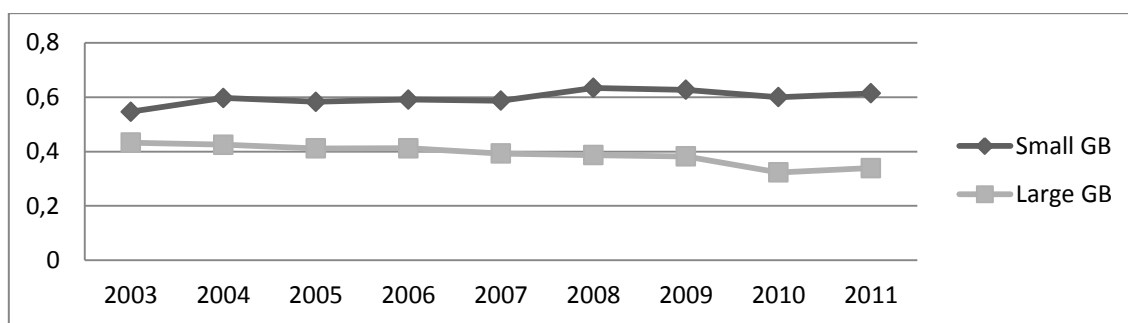
Loan Type (THHI) Bank Loan Portfolio Concentration

The average loan type concentration levels (THHI) of small and large GBs are depicted in Figure 4.2. From 2003 to 2007, the THHI levels of both small and large GBs are very similar and do not change much. It is only from 2008 onwards that the concentration levels show definite changes. Small GBs tend to become more concentrated whilst the loan portfolios of large GBs become more diversified.

Figure 4.2 Loan Portfolio Concentration Based on Loan Types: Small and Large Government-owned Banks
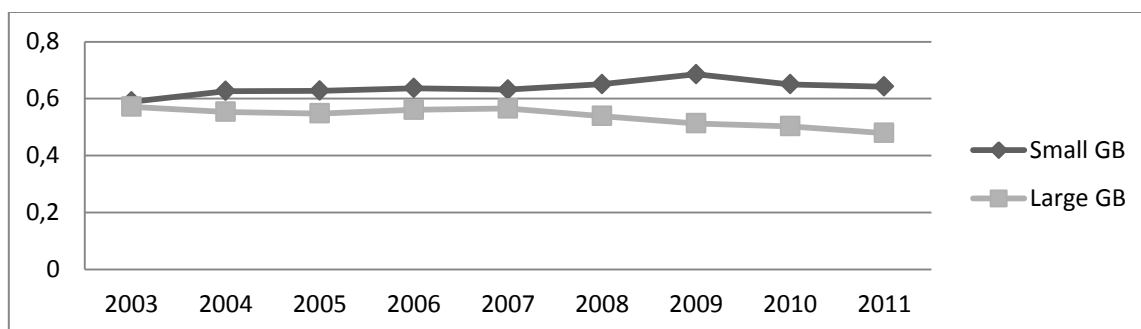
Loan Portfolio Composition: Small and Large Government-owned Banks

In terms of loan allocation, small GBs are the major players in providing loans to unspecify others (last category of the economic sectors that primarily refers to consumers).

Consumer loans represent the majority of small GB loans with only a very small portion of loans allocated for working capital and investments. Large GBs become more involved in financing different business sectors with working capital becoming their most prominent type of finance as confirmed in Figure 4.5.

These findings serve as a good indicator that regional development banks (small in size) and state-owned banks (large in size) differ in their market segment and product type focus.

Figure 4.3 Percentage Loan Portfolio Allocation to Different Economic Sectors for Small vs Large Government-owned Banks
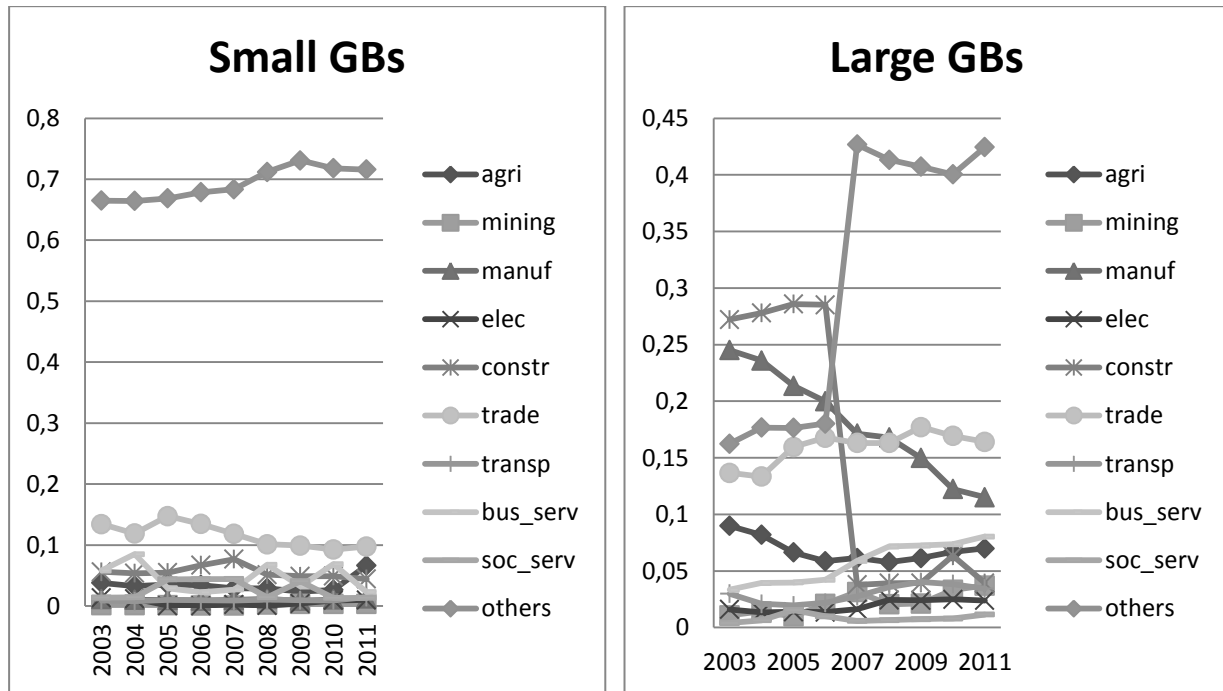
Loan Portfolio Performance (Risk and Return) of Large vs Small Government-owned Banks

According to Cronje (2013) loan portfolio risks are classified into two broad categories namely intrinsic, and concentration risk. Within the context of this study intrinsic risk refers to the risk inherent to each sector, and each loan type of a bank. Intrinsic risk cannot be measured in this study since comparative risk information like loan defaults for each sector and each loan type is not available. Only loan repayment default information, provided in the form of NPLs for the total loan portfolio is available for individual banks and is used as proxy of overall bank loan portfolio risk. In this research, the ratio of gross NPLs to Total Loans (TLs) is used as the proxy for loan repayment default risk (See Figure 4.7). The higher the NPL percentage, the higher the loan portfolio risk.

Figure 4.7 Loan Repayment Default o Risk of Small and Large Government-owned Banks for the period 2003 to 2011
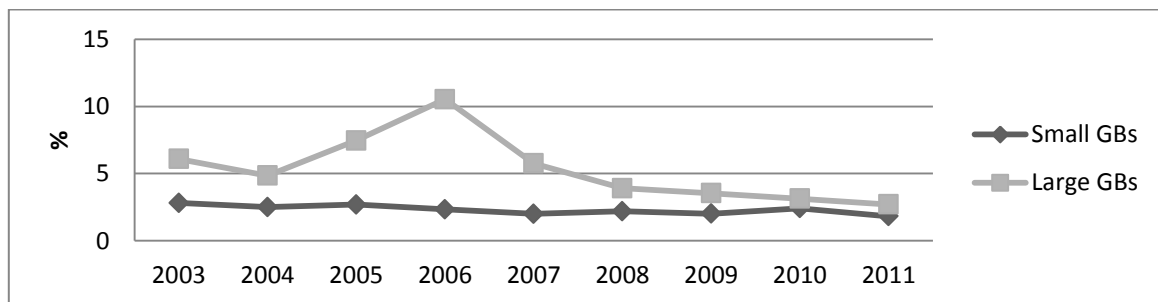
The NPLs of the small and large GBs differs the most from each other in 2006, but the differences decrease with minor NPL differences remaining in 2011. The gross NPLs of large GBs are higher than that of the small GBs over the entire period. It is interesting to note that the NPLs of large GBs spike in 2005 and 2006 (prior to the GFC) whilst after the commencement of the GFC it decreased every year. On the other hand, small GBs experience a decrease in gross NPLs over the total study period with no increase associated with the GFC. Overall, (except for the 2005 and 2006 spikes in the NPLs of large GBs) the NPLs for both the small and large banks show a decreasing trend from 2003 to 2011. It indicates that the overall credit risk of banks decreases and that the quality of their loan portfolios improved over the nine-year study period.

Figure 4.8 Loan Portfolio Return of Small and Large Government-owned Banks
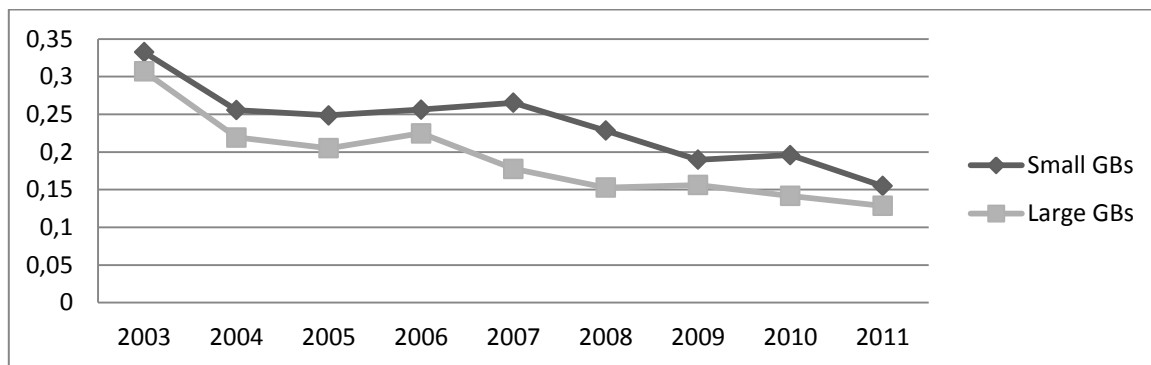
To measure the loan portfolio return, the ratio of gross interest income to total loans is used in this research since in the broader sense it reflects the comparative pricing applied by banks. The ratio of gross interest income to total loans, after loan repayment defaults, constitutes the actual achieved return.

Figure 4.8 depicts the gross interest income ratios for small and large GBs over the period 2003-2011. In general, both small and large GBs experience a downward trend in their gross interest income from 2003 to 2011. This is due to changes in the central bank interest rate (*Central bank rate serves as the reference rate since 2005, hence no data available prior to 2005*) (from 12.75% in 2005 to 6% in 2011). It affects all banks but notwithstanding such changes, banks still apply different rates based on inter alia their specific market segments and supply and demand for the loans that they provide. Small GBs show the highest gross interest income in all years. Considering this situation, small GBs in general have a higher average return than large GBs over the nine year research period. The result is in line with the findings of Carter et al. (2004) that small banks earn higher returns than large banks due to their performance structure, information advantage and development of relationships with customers. However, the findings of Carter et al. (2004) is based on the risk adjusted yield of return whereas this research uses the gross interest income to total loans ratio.

Differences in the Loan Portfolio Structure and Performance of Small and Large Government-owned Banks

Table 4.2 displays the results of the Mann-Whitney test performed to verify the descriptive statistics findings presented in the previous section of this paper with regard to the differences in the loan portfolio structure and performance of small and large GBs.

The Mann-Whitney test shows that there are statistically significant differences in the EHHI and THHI loan portfolio concentration and in the loan portfolio performance (risk and return) of small and large GBs. It therefore confirms that size does matter in explaining the loan portfolio structures and the performance of GBs in Indonesia.

Table 4.2 Univariate Statistics for the Loan Portfolio Structure and Performance of Small and Large Government-owned Banks

	Large Banks (n=36)	Small Banks (n=234)	Difference	Mann-Whitney Test	
				Z	Prob> Z
EHHI	0.3894	0.5976	-0.2082***	4.78	0.0000
THHI	0.5369	0.6378	-0.1009***	3.373	0.0007
Risk	5.3319	2.3141	3.0179***	-6.368	0.0000
Return	0.1904	0.2363	-0.0459***	3.959	0.0001

Legend: The Mann-Whitney tests are conducted for testing the loan portfolio structure and performance median differences between the small and large GBs over the nine-year study period. Statistically significant differences at 1%, 5%, and 10% significance levels are respectively indicated by ***, **, and *.

5. Empirical Results

Table 4.3 presents the FGLS used to determine the relationship between GB sizes, their EHHI and THHI loan portfolio concentration levels and their loan repayment default risk (loan portfolio risk) with their loan portfolio returns.

Table 4.3 FGLS: Relationship between Bank Size; Loan Portfolio Structures; and Loan Portfolio Risk with Loan Portfolio Return

		Loan Portfolio Return
CONSTANT	Coefficient	0.5894***
	z-Statistic	10.52
	P-value	0.000
SIZE	Coefficient	-0.0555***
	z-Statistic	-3.59
	P-value	0.000
EHHI	Coefficient	-0.0330
	z-Statistic	-0.75
	P-value	0.454
THHI	Coefficient	0.0145
	z-Statistic	0.26
	P-value	0.796
NPL	Coefficient	0.0014
	z-Statistic	0.76
	P-value	0.447
INT.RATE	Coefficient	-0.0020
	z-Statistic	-0.81
	P-value	0.421
GDP	Coefficient	0.0000***
	z-Statistic	-8.50
	P-value	0.000
Number of observations		270
Number of banks		30

Legend: This table present the FGLS of equation 3.1. The dependent variable is Loan Portfolio Return (Gross Interest Income - Intinc). The independent variables are bank sizes (small and large GBs), loan portfolio concentration based on economic sector (EHHI) and based on loan types (THHI), and loan repayment default (NPL), interest rate and GDP.

The table contains coefficients, z-statistics and P-values from FGLS regression with year dummy. Definitions of variables are provided in Table 3.1. ***, **, and * respectively correspond to 1%, 5%, and 10% significance levels.

Table 4.3 shows that Size and GDP significantly affect loan portfolio returns. The negative coefficients of the size dummy regressors show that the relationship of large GBs with loan portfolio returns is less than that of small GBs. The 1% statistical significance of the size coefficient provides evidence that the size of GBs does affect loan portfolio returns. The estimation result also support the previous descriptive analysis which shows that the loan portfolio returns of small GBs are better than that of large GBs. Finally, the positive and significant relationship between GDP and loan portfolio return represents the impact of economic cycles on the portfolio return from market segments that banks conduct business with.

Conclusions

Previous research like that of De-Haas et al. (2010) indicates that bank size is one of the bank loan portfolio determinants, as it may affect the market segment focus of banks. This paper attempts to determine whether large and small GBs differ in terms of their loan portfolio composition, risk and performance.

The findings support the hypotheses that small and large GBs differ with regard to loan portfolio composition, risk and return. The loan portfolios of small GBs are more concentrated with focus on the consumer sector whereas large GBs have more diversified loan portfolios with more exposure to the trade and manufacturing sectors although a high level of concentration in the consumer sector started in 2007. The prominent consumer sector exposure do not support findings of previous research like Mian (2003) that indicate the role of GBs to be primarily for financing or subsidizing of social projects. This is not surprising since the legal status of GBs was transformed to limited liability private companies with the introduction of the Banking Act BL 7/ 1992 in October 1992. Regulations for government-owned banks and private-owned domestic banks were aligned to create a more competitive banking industry (Pangestu, 2003). Furthermore, after the implementation of the 1992 Banking Act, GBs were no longer forced to allocate credit to support government projects. Considering these legislation changes large GBs became more involved in financing different business sectors with working capital becoming their most prominent type of loans compared to the consumer loans of the small GBs. However, since 2007 large GBs also entered the consumer loan market extensively due to the fact that it is a higher priced and safer market segment.

The gross NPLs of large GBs is higher than that of the small GBs over the entire period but overall, (except for the 2005 and 2006 spikes in the the NPLs of large GBs) the NPLs for both the small and large banks show a decreasing trend from 2003 to 2011. Regulation PBI 2/11/PBI/2000 jo PBI 15/2/PBI/2013 of the Central Bank that implemented a 5% standard for the net NPL ratio of banks may have prompted all GBs to adjust their credit risk assessment and/ or qualifying criteria for loans. The decrease in the overall NPLs of Indonesian banks may also result from the prudential regulations like productive asset quality, loan loss provision, and loan restructuring enacted by the Central Bank since 2003 (Indonesian Banking Booklet, 2003 and 2011). On the other hand, it may also be complimented by external economic factors not researched in this study.

Differences in the loan portfolio composition and concentration risk of GBs result in different loan portfolio returns. Small GBs show a higher loan portfolio return compared to the large GBs. Focusing on segments with low intrinsic risk provides small GBs with a better return. The findings support the corporate finance theory according to which banks should implement focus strategies to reduce agency problems and exploit their management expertise in certain sectors. The findings do not support the traditional banking and portfolio theory according to which banks should diversify their loan portfolio to reduce risk (Hayden et al., 2006).

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ESTIMATING THE TOURISM POTENTIAL IN NAMIBIA

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Abstract

This paper investigates the determinants of tourism in Namibia for the period 1996 to 2012. The results indicate that an increase in trading partners' income, depreciation of the exchange rate, improvement in Namibia's infrastructure, sharing a border with Namibia are associated with an increase in tourist arrivals. Governance indicators such as rule of law, political stability and no violence are also associated with an increase in tourist arrivals to Namibia. The results show that there is unexploited tourism potential from Angola, Austria, Botswana, Germany and South Africa. This suggests that it is important to exploit the tourism potential as this would help to accelerate economic growth and generate the much needed employment.

Keywords: Tourism Potential, Panel Data, Fixed Effects, Unit Root

JEL classification: F170, C500, C230, C330, C590

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1. Introduction

Tourism is the largest export earner in the world as it generates foreign exchange. Foreign exchange generated by tourism exceeds those from sectors such as petroleum, motor vehicles, textiles and telecommunication equipment in recent years (Eita et al, 2011). The World Travel Tourism Council (2014) indicated that tourism is a labour intensive industry and employs 9 percent of world employment. The World Travel and Tourism Council (WTTC) also indicated that in 2013 tourism accounted for about 10 percent of world GDP. Tourism is an important sector in many economies as it generates foreign exchange that can be used to finance infrastructure and other projects that accelerate economic growth. It also promotes international peace through the provision of incentives for peacekeeping and closure of the gap between different cultures.

The WTTC estimates that tourism accounts for a significant proportion of the GDP and employment of developing countries and this indicates that it is important for economic development. According to WTTC (2014) the direct impact of tourism in the Namibian economy in 2013 is estimated at 3.7 percent of GDP and 4.5 percent of total employment. Since tourism touches all sectors of the economy its real impact is higher. The total direct and indirect impact of tourism is that it accounts for 19.4 percent of total employment and 15 percent of total GDP. The sector also accounts of 7.9 percent of the total exports of goods and services.

Before and after independence in 1990, Namibia has depended on the extraction of mineral resources, agriculture and fishing for growth and development but high unemployment remains a challenge facing the government. The tourism sector is now regarded as the sector with real opportunities for employment creation and economic growth. The government of Namibia recognizes the role of tourism in the economy and has recently identified it in Vision 2030 and the National Development Plans as a priority sector. Vision 2030 is a long-term national development framework reflecting the aspirations and objectives of the people of Namibia. The kernel of this is the desire to enhance the standard of living and improve the quality of life of the Namibian people. Vision 2030 calls for every Namibian to have the standard of living equal to those in the developed world. The development of the tourism sector is regarded as the key factor in the Broad Based Economic empowerment. Given its importance and role in the Namibian economy, it is important to investigate factors that determine tourism in Namibia. This will help to analyze if there is unexploited tourism potential among Namibia's trading partners. An econometric model is a useful tool in analyzing tourism arrivals in a country.

In light of the above discussion, the objective of this paper is to investigate factors which determine tourist arrivals in Namibia using an econometric model of international tourism. It then investigates whether there is unexploited tourism potential among Namibia's trading partners in this sector. The rest of

the paper is organized as follows. Section 2 discusses the overview of tourism in Namibia. Section 3 discusses the literature and model. Section 4 discusses the methodology for estimation and Section 5 discusses data and unit root test. Section 6 presents the estimation results, while Section 7 discusses the tourism potential. The conclusion is presented in Section 8.

2. Overview of Tourism in Namibia

Namibia experienced a boom in the tourism sector between 1996 and 2012. The total number of tourist arrivals in Namibia between 1996 and 2012 is presented in Figure 1. Tourist arrivals in Namibia increased from 461310 in 1996 to 1027229 in 2012.

Figure 1. Total number of tourist arrivals in Namibia
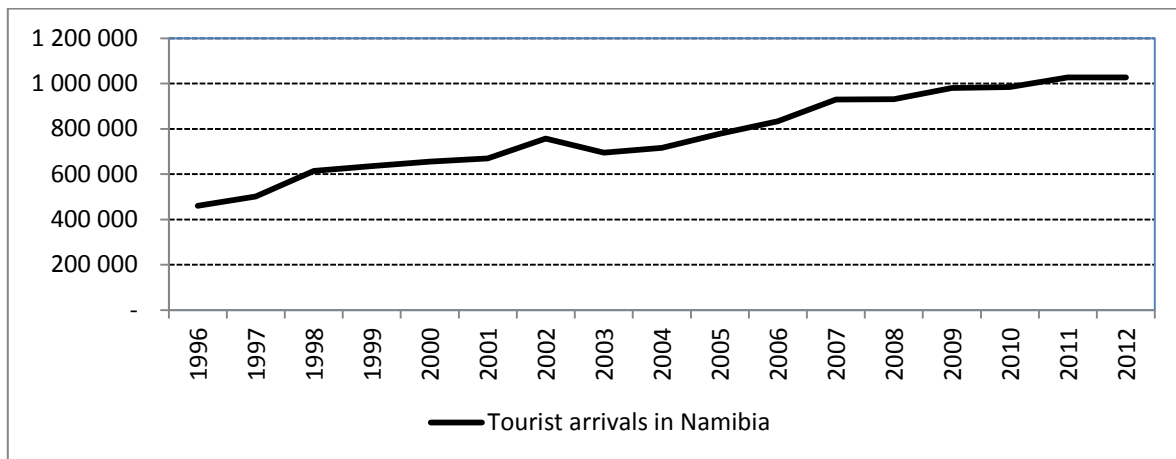
Source: Data obtained from Namibia Tourism Board and Ministry of Environment and Tourism of Namibia

The composition of tourist arrivals in Namibia is presented in Table 1 and shows that African countries are the main source of tourists to Namibia. With the exception of Germany in third place in Namibia's overall tourist ranking, African countries occupy the top six positions. Angola and South Africa are leading source tourists for Namibia. Other European countries (United Kingdom, Netherlands, France, Italy, Switzerland, Scandinavia, and Austria) also account for a significant amount of tourist arrivals in Namibia. The United States of America is the eighth main source of tourists for Namibia.

Table 1. Top sources of tourist arrivals for Namibia in 2012

Market	Tourist arrivals
Angola	361480
South Africa	272930
Germany	79721
Zambia	61120
Zimbabwe	42945
Botswana	28658
United Kingdom	21584
United States of America	17946
Netherlands	12346
France	13729
Italy	11207
Switzerland	11433
Scandinavia	10115
Austria	6016
Australia	7633
Total including others	1027229

Source: Namibia Tourism Board and Ministry of Environment and Tourism of Namibia

According to the WTTC (2006; 2014), travel and tourism in Namibia is estimated to directly produce N\$ (Namibia dollars) 3.1 billion or US\$381.2 million and this is equivalent to 3.7 percent of the GDP in 2013. The broader travel and tourism (which include direct and indirect impact) is estimated to contribute N\$ 15.3 billion or US\$ 1.9 billion and this accounts for 15 percent of Namibia's GDP. The broader tourism and travel also generated about 103500 jobs (total of direct and indirect) in 2006. This represents 19.4 percent of the total employment in Namibia.

WTTC (2014) also indicated that the travel and tourism sector plays an important role in generating foreign exchange. It is estimated that this sector contributed N\$6.6 billion or US\$804 million in 2013. This accounts for 7.9 percent of total exports of Namibia.

3. Literature and the Model

There are two main groups of literature on the tourism industry. The first is international trade, which according to Eilat and Einav (2004) is a starting point because tourism is part of international trade. The second group is the empirical tourism literature.

The general starting point for theoretical and empirical literature on international trade is the Heckscher-Ohlin theory or pattern. It states that international trade depends on the relative factor endowments. This is important when factors of production are capital and labor as this makes it less necessary for tourism analysis. In the case of tourism, the most important factors of production are unique to the specific country and not easy to measure, evaluate or compute. Eilat and Einav (2004) gave examples of the Eiffel Tower, Pyramids and nice beaches. In Namibia, sand dunes of the Namib Desert are good examples of these unique factors of production, and it makes the investigation of the determinants of international tourists to the country less attractive theoretically. The ability of unique factors of production such as Sand Dunes of the Namib Desert to attract tourists to Namibia is best measured by the number of international visitors who visit them. An investigation of the variables that have an impact on the demand for tourism is very important when dealing with this sector of the economy. The variables that have an effect on tourism will be discussed later in this paper.

There are two groups in the empirical literature of tourism. The first group comprises of studies that use time series and cointegration econometric techniques to investigate the determinants of tourism demand and forecast the future tourist arrivals (among others, Katafono and Gounder, 2004; Narajan, 2005; Durbarry, 2002; Divisekera, 2003; Cheung and Law, 2001). The second group involves studies that deal with determinants of tourism using panel data econometric techniques (such as Eilat and Einav, 2004; Luzzi and Flückiger, 2003; Walsh, 1997; Roselló *et al*. 2005; Naude and Saayman, 2004; Eita et al. 2011). This current study falls within the second group of the empirical tourism literature. Following the review of the second group of the empirical tourism literature and theory, the demand for tourism from country *i* to country *j* is specified as:

(1):
$$T_{ij} = f(Y_i, P_j, ER_{ij}, TC_{ij}, INFRA_j, A_{ij})$$

where T_{ij} is the number of tourist arrivals in country *i* from country *j*, Y_i is the income of country *i*, P_j is price or cost of living in country *j*, ER_{ij} is the exchange rate measured as units of country *j*'s currency per unit of country *i*'s currency, TC_{ij} is the transport costs between country *i* and country *j*, $INFRA_j$ is the measure of infrastructure in country *j*, and A_{ij} represents any other factor that determines the arrival of tourists from country *i* to country *j*. Equation (1) is specified in log form as for estimation purpose as:

(2):
$$\ln T_{ij} = \gamma_0 + \gamma_1 \ln Y_i + \gamma_2 \ln P_j + \gamma_3 \ln ER_{ij} + \gamma_4 \ln TC_{ij} + \gamma_5 \ln INFRA_j + \gamma_6 \ln A_{ij} + \varepsilon_{ij}$$

The income of the source of tourism country is the most widely used variable. As Lim (1997) states, travelling to another country is generally expensive and is regarded as a luxury good and therefore disposable income is an appropriate variable as it affects the ability of tourists to travel. Since disposable income data are hard to find, many studies uses real GDP per capita, nominal or real GDP or GNP. This study uses GDP of the tourism country as a proxy for income. An increase in income is positively related to the number of tourist arrivals, and hence γ_1 is expected to be positive.

The price of tourism is another most commonly used explanatory variable for tourism arrivals in many studies (such as Naude and Saayman, 2004; Katafono and Gounder, 2004; Walsh, 1997; Luzzi & Flückiger, 2003). It is the cost of tourism services which tourists pay at their destinations. A tourist price index which comprises of goods purchased by tourists is appropriate, but since this index is not available, most studies use the consumer price index as a proxy for price of tourism services. A rise in price at destination means that the cost of tourism service is increasing & this discourages tourist arrivals ($\gamma_2 < 0$).

The exchange rate variable is added to the list of explanatory variables in addition to the price. This is the nominal exchange rate defined as the currency of the tourist destination country per currency of tourist source country. A depreciation of the exchange rate makes tourism goods and services cheaper and encourages tourist arrivals ($\gamma_3 > 0$).

The cost of transport between the source and destination countries can be an important part of the cost of tourism goods and services. According to Luzzi and Flückiger (2003), the cost of transport should take into account the costs of an air ticket and the cost of the whole journey. The cost of transport should comprise all components of costs to the destination. The cost of transport to the destination could probably be measured as weighted average

price of air, sea and land. It is difficult to get data on all components of transport costs between the source and destination countries, and most studies have used distance in kilometers between the tourism source and tourism destination countries. This current study follows Eita *et al.* (2011) and also uses distance in kilometers between the source and destination countries as a proxy for transport costs. An increase in transport costs causes a decrease in the number of tourist arrivals, and this means that $\gamma_4 < 0$.

Infrastructure is also another variable that has the potential to determine tourist arrivals in a country. Studies such as Naude and Saayman (2004) used the number of hotel rooms in the country as an indicator of tourism infrastructure. The number of hotel rooms available in the country is an appropriate indicator of the capacity of the tourism sector in the country. According to Naude and Sayman, the higher the number of rooms the greater the capacity of the tourism sector and this implies that the country is highly competitive. The other measure of infrastructure used by Naude and Sayman is the number of telephone lines per employees. An increase or improvement in infrastructure in both the destination and source countries attracts the number of tourist arrivals, hence $\gamma_5 > 0$.

This study adds some additional variables that have a potential to explain variation in tourism arrivals in Namibia. These are governance indicators and a dummy variable to represent countries that border Namibia. After introducing these variables, Equation (2) is re-specified as:

(3):
$$\ln T_{ij} = \gamma_0 + \gamma_1 \ln Y_i + \gamma_2 \ln P_j + \gamma_3 \ln ER_{ij} + \gamma_4 \ln DIS_{ij} + \gamma_5 \ln INFRA_j + \gamma_6 BORDER + \gamma_7 \ln RULELAW_j + \gamma_8 \ln POLSTABILITY_j + \varepsilon_{ij}$$

where DIS_{ij} is the distance in kilometers between Namibia and its trading partners and is a proxy for transport costs, $RULELAW_j$ is the rule of law, and $POLSTABILITY_j$ is political stability. Countries which border Namibia are given the value of 1 and 0 for otherwise. It is expected that being a neighbor to Namibia is associated with an increase in tourist arrivals. That means the coefficient of γ_6 is expected to be positive. It is expected that tourists will be attracted to the visit countries that respect and have rule of law and politically stable. This implies that γ_7 and γ_8 are expected to have positive signs.

4. Estimation Procedure

Panel data models can be estimated using pooled, fixed and random effects. The pooled model makes assumption that cross-sections are similar or homogeneous. Fixed and random effects reject homogeneity of the cross-sections and bring in

variation in the estimation of the panel data models. It is important to determine whether random or fixed effects model is the appropriate model. If the model is estimated using randomly selected sample of cross sections from a large group (population or large group of cross-sections), then random effects would be the appropriate model. However, if the estimation is between pre-determined selections of cross-sections, then fixed effects model will be appropriate (Egger, 2000). This suggests that in the fixed effects model is appropriate in this current study. That is because it deals with tourism arrivals in Namibia from 11 selected trading partners in the tourism sector. The top 11 trading partners were selected based on the tourism data for the period 1996 to 2012. In addition, the study uses the Hausman test in order to determine whether fixed effects model is more suitable than the random effects model. If the null hypothesis of no correlation between individual effects and the regressors is rejected, then the fixed effects model will be appropriate to estimate panel data model.

Random effects and pooled models can estimate a model with variables that do not change with respect to time. However, fixed effects model cannot estimate a model with variables that are time invariant. Studies such as Martinez-Zarzoso and Nowak-Lehmann (2001) suggest that a second step is required to estimate these time invariant variables.

5. Data and Unit Root Test

5.1 Data

The study uses annual data and the estimation covers the period 1996 to 2012. Eleven countries are included in the estimation. The number of tourist arrivals in Namibia ($\ln T_{ij}$) is used as a dependent variable. These data were obtained from the Namibia Tourism Board and Ministry of Environment and Tourism of Namibia.

GDP per capita ($\ln Y_i$) of Namibia's trading partners in the tourism sector is taken as a proxy for income of the tourist source country. The data for this variable in USA\$ were obtained from the World Bank Development Indicators and the IMF's International Financial Statistics. The Namibia dollar/US\$ exchange rate ($\ln ER_{ij}$) was obtained from various issues of the Quarterly Bulletin of the Bank of Namibia. Namibia's inflation rate ($\ln P_j$) is used as proxy for prices in Namibia. Data for this variable were obtained from the Bank of Namibia.

The study also attempted to include a proxy of the infrastructure variables ($\ln INFRA_j$). Consistent data for appropriate variables such as tourism capacity proxied by the number of hotel beds, the number of roads, railways, building completed are not available for trading partners. This study acknowledges that there are consistent data on hotel accommodation capacity in the last few years (2008 -2011), but since

this study covers the period 1996 to 2012 this variable could not be included in the estimation. This study uses air transport passengers carried in and out of Namibia as a proxy for infrastructure. The data for this variable were obtained from the World Bank Development Indicators. Distance in kilometers (DIS_{ij}) between Windhoek (capital city of Namibia) and capital cities of trading partners in the tourism sector is used as a proxy for transport costs and were obtained from http://www.timeanddate.com.

A dummy variable (BORDER) is generated for countries that share borders with Namibia. It takes the value of 1 for countries that have borders with Namibia and 0 otherwise. The rule of law ($RULELAW_j$) variable reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights. The data for this variable were obtained from the World Bank's Worldwide Governance Indicators website.

Data for political stability, absence of violence and no terrorism in Namibia ($POLSTABILITY_j$) reflects perceptions that there is no likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The data

for this variable were also obtained from the World Bank's Worldwide Governance Indicators.

5.2 Unit Root Test

Unit root is the first step before the estimation of Equation (3). Unit root test helps in determining whether there is cointegration between variables in the model. Rejection of the unit root in variables suggests that the panel data model can be estimated using traditional econometric methods. Failure to reject the null of unit root suggests that it is important to test for cointegration between variables in the panel data model.

This study uses LLC (Levin, Lin and Liu, 2002) and the IPS (Im, Pesaran and Shin, 2003) to test for unit root. The results for unit root test are presented in Table 2. According to the IPS test statistic exchange rate, Namibia's infrastructure, rule of law and inflation rate are stationary. The remaining variables are nonstationary. The LLC test statistic rejects the null hypothesis unit root for all variables, suggesting that all variables are stationary. This study uses rejection of the null of unit root by one test to assume that the variable is stationary. That is because the two test statistics yield conflicting results for some variables. Equation (3) can now be estimated using traditional econometric methods. There is no need to test if the variables are cointegrated.

Table 2. Panel Unit root test

Variable	IPS test statistic	LLC test statistic
$\ln Y_i$	0.707 (0.760)	-2.685 (0.004)***
$\ln ER_{ij}$	-5.146 (0.986)***	-5.762 (0.000)***
$\ln T_{ij}$	-0.78 (0.217)	-1.52 (0.004)***
$\ln INFRA_j$	-2.719 (0.023)**	-2.154 (0.015)**
$\ln RULELAW_j$	-2.626 (0.000)***	-3.632 (0.000)***
$\ln POLSTABILITY_j$	-1.385 (0.675)	-2.085 (0.018)**
$\ln P_j$	-4.885 (0.000)***	-4.813 (0.000)***
	-4.885 (0.000)***	-4.184 (0.000)***

*Notes: ***/**/* significant 1%/5%/10% level.*
Probabilities are in parentheses.

6. Estimation Results

The results for the pooled, fixed effects and random effects models are presented in Table 3. The results in the second Column are those of the pooled model. The pooled model assumes that there is no heterogeneity among countries and no fixed effects are estimated. It therefore assumes homogeneity for all countries. It is a restricted model because it assumes that the intercept and other parameters are the same across all trading partners.

The results of the fixed effects model are in the third Column. The fixed effects model assumes that countries are not homogeneous, and introduces heterogeneity by estimating country specific effects. It

is an unrestricted model as it allows for an intercept and other parameters to vary across trading partners. The F-test is performed to test for homogeneity or poolability of countries. It rejects homogeneity of countries even at 1 percent significance level and this means that a model with individual effects must be selected.

The results of the random effects model are in Column 4. This model also acknowledges heterogeneity among countries, but it differs from the fixed effects model because it assumes that the effects are generated by a specific distribution. It does not explicitly model each effect, and this avoids the loss of degrees of freedom which happens in the fixed effects model. The LM test is applied to the null

hypothesis of no heterogeneity. The LM test also rejects the null hypothesis of no heterogeneity in favour of random specification.

The Hausman specification test is used in order in order to determine whether fixed effects or random effects are the appropriate model. The results of the

Hausman test indicate that fixed effects model is appropriate. Therefore interpretation and analysis of the results will only focus on the fixed effects model. That is because the pooled and random effects models are rejected in favour of fixed effects models.

Table 3. Estimation results

Variables	Pooled Model	Fixed Effects model	Random Effects model
Constant	-59.873 (-9.109)***	3.867 (3.149)***	-17.639 (-1.091)
$\ln Y_i$	1.394 (11.775)***	0.141 (1.993)**	0.166 (2.373)**
$\ln ER_{ij}$	0.088 (0.231)	0.532 (4.093)***	0.523 (4.031)***
$\ln INFRA_j$	-0.532 (-1.612)	0.324 (2.761)***	0.307 (2.618)***
$\ln P_j$	-0.006 (-0.124)	-0.022 (-1.291)	-0.022 (-1.272)
$\ln RULELAW_j$	0.361 (0.338)	0.252 (0.703)	0.253 (0.707)
$\ln POLSTABILITY_j$	-0.128 (-0.534)	0.088 (1.083)	0.083 (1.027)
EU	4.674 (10.696)***		1.544 (1.108)
BORDER	21.750 (13.070)***		7.306 (1.722)*
DIS	6.345 (11.504)***		2.128 (1.276)
Adjusted R-squared	0.677	0.965	0.546
F-test statistic		137.262***	
LM test statistic			430.592***
Hausman test statistic		104.26***	

*Note: ***/**/* significant at 1%/5%/10% significant level   t-statistics are in parentheses*

The results of the fixed effects model shows that an increase in trading partner's GDP per capita income causes tourist arrivals to Namibia to increase. An increase (depreciation) in the Namibia dollar/USA\$ exchange rate attract tourist to Namibia. Improvement in Namibia's infrastructure is associated with an increase in tourist arrivals. This means that it is important to improve infrastructure in order to increase tourist arrivals. Improvement in governance indicators such as rule of law, political stability and no violence is also associated with an increase in tourist arrivals. However, the coefficients of these variables are not statistically significant. As expected, a rise in Namibian prices discourages tourist arrivals in Namibia. These results compares favorably with other tourism studies in the literature.

Table 4 presents country specific effects. The country specific effects show the effects that are

unique to each country but not included in the estimation. They show that tourist arrivals in Namibia differ from country to country and each country is unique. There are unique features in some countries which promote tourist arrivals in Namibia from countries such as Angola, Germany, South Africa, Zambia and Zimbabwe. These are countries with positive effects and as presented in Table 4. The country specific effects also show that there are countries' characteristics (unobservable) that discourage tourist arrivals in Namibia from countries with negative fixed effects and not shaded in Table 4. An investigation of the factors which discourage tourist arrivals in Namibia from countries with negative fixed effects is important for policy making, as this would help to identify constraints to the tourism sector.

Table 4. Country specific effects

Angola	2.482321
Austria	-1.806728
Botswana	-0.016571
France	-1.142328
Germany	0.708145
Italy	-1.358909
South Africa	2.265614
UK	-0.526647
USA	-0.941508
Zambia	0.209882
Zimbabwe	0.165722

7. Tourism Potential

The fixed effects model estimated in Equation (3) is simulated in order to determine the within sample tourism potential. The actual tourist arrivals are then compared to the potential tourist arrivals in order to see if there are countries with unexploited tourism potential (at least from 2007 onwards). The trade potential results are presented in Figure 2. Figure 2 shows that among others, Angola, Austria, Botswana, Germany, South Africa have unexploited trade potential. It is important to promote Namibia tourism to these countries in order to exploit the unexploited tourism potential. A further analysis of each country to identify possible constraints to Namibia's tourism is required.

Figure 2. Trade Potential (in logs)
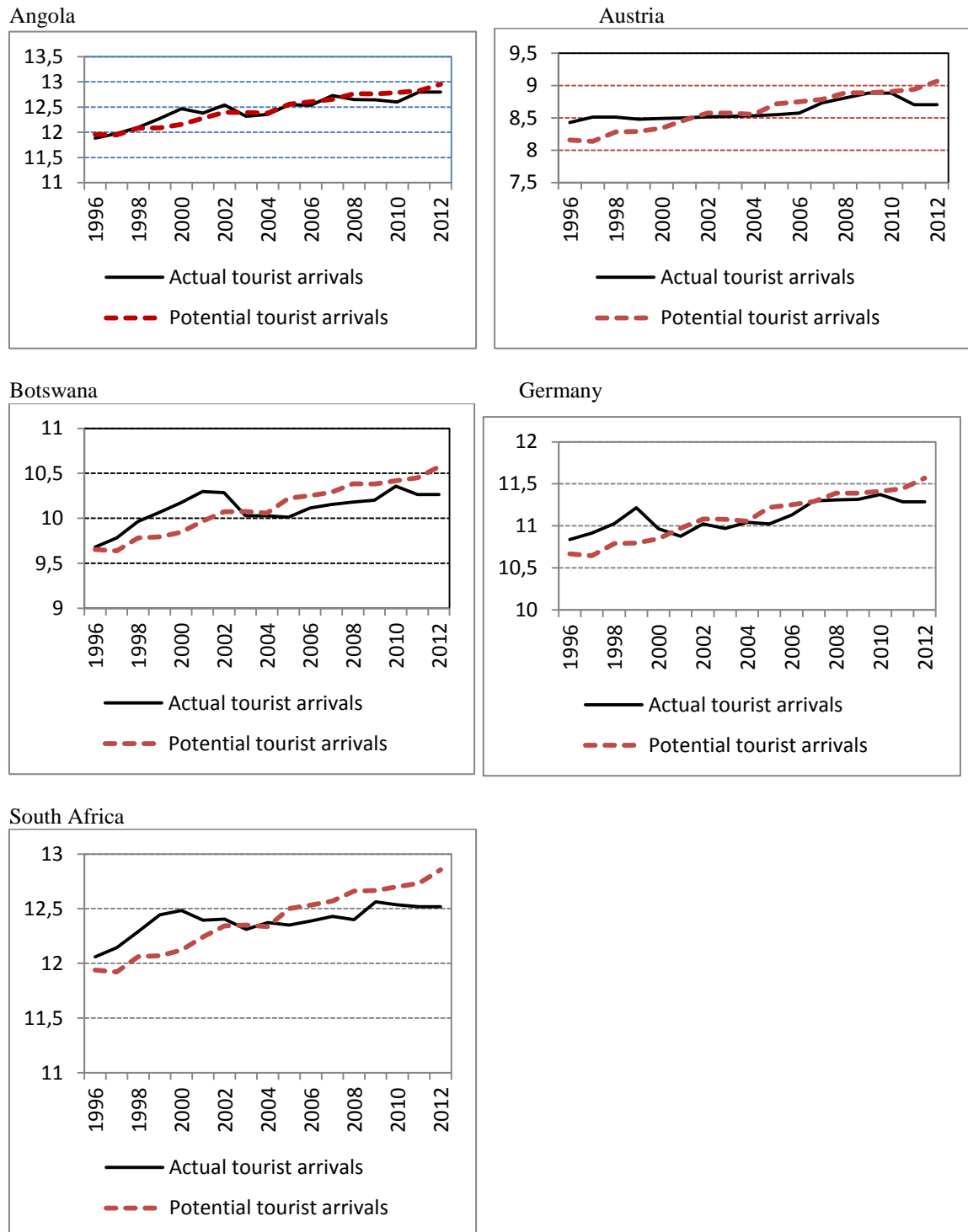
8. Conclusion

This paper investigates the determinants of tourist arrivals in Namibia for the period 1996 to 2012 using a model of international tourism and analyzed if there are some markets with unexploited tourism potential. The study revealed that the main source of tourist arrivals in Namibia is African countries, mainly neighboring countries. Neighboring countries account for the largest number of tourists followed by Germany, USA and other European countries.

The model was estimated for 11 main trading partners in the tourism sector. The estimation results show that trading partners' income has a positive effect on tourist arrivals in Namibia. A depreciation of the Namibia dollar/USA$ exchange rate and improvement in Namibia's infrastructure attract tourists. Having a border with Namibia is associated with an increase in tourism arrivals in Namibia. An increase in Namibian prices discourages tourist arrivals to Namibia. Governance indicators such as rule of law and political stability have a positive effect on tourist arrivals in the country (although statistically insignificant). The estimated model was simulated to determine if there is unexploited tourism potential. The results revealed that there is unexploited tourism potential in Angola, Austria, Botswana, Germany and South Africa. The results suggest that it is important to promote tourism to markets where there is unexploited trade potential. Factors which inhibit the tourism sector in Namibia need to be investigated. This can contribute to increase in economic growth and employment generation.

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IMPLICATIONS OF OWNERSHIP IDENTITY AND INSIDER'S SUPREMACY ON THE ECONOMIC PERFORMANCE OF THE LISTED COMPANIES

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Abstract

We adopt a multi-theoretic approach to investigate a previously unexplored phenomenon in extant literature, namely the differential impact of ownership identity and director dominate shareholding on the performance of emerging market firms. The main research question addressed is, whether the impact of this relationship is conditional on the identity of the block investor. First, the relationship between overall block ownership and firm performance is tested by employing multiple regressions on 500 firm-year observations for the period from 2007 to 2011. Then, the block ownership is classified as the state, individuals, insiders, financial institutions, corporate and foreign investors and the influence of these identities on firm performance is examined. It was found that only the ownership categories such as the government, institutions and foreign ownership have positive influence on the firm performance. The results also indicate that high level of insider ownership also negatively associated with the firm performance. The main contribution of this paper is the examination of the relationship between block ownership and firm performance from the perspective of the identity of investors.

Keywords: Ownership Structure, Firm Performance, Director Domination

JEL Classification: G32, G34

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1. Introduction

The corporate governance literature classifies ownership identity as an influential internal governance mechanism (Shleifer & Vishny, 1997). Agency theory highlights that principals and agents often have conflicting goals and capacities to influence corporate behaviour and outcomes (Milgrom & Roberts, 1992). An important contribution of agency theory is that it facilitates a structured approach to the analysis of economic motivations and the incentives of managers and shareholders (Eisenhardt, 1989). However, agency theory has been criticized in the sociology literature for its failure to pay sufficient attention to the context in which exchange and principal-agent relations are embedded (Hamilton & Biggart, 1988).

Studies that investigated ownership structure and performance relationship focused only on the conventional separation of ownership and control concept, in reality there are many different types of ownership in existence, for example, institutional investors, corporate investors, government investors, individual investors, insider ownership (Boone et al., 2011). These ownership types have different behavioral characteristics which provide them with different levels of involvement in companies.

The increased volatility of corporate ownership portfolios observed in recent years has led to renewed interest in ownership structures, especially with respect to multinational enterprises. As the economies of the world become more and more globally integrated, such issues will become more prominent and will affect our understanding of the interweaving systems of corporate relations, through which formal and informal networks of power are established (Heubischl, 2006 and Pfeffer, 1972). They can be understood as a potential source for inter-corporate power and coordination leading to corporate control.

We investigate this issue by analyzing a sample of KSE-100 indexed Pakistani companies where outside block ownership is common but does not necessarily reside with one category of investors. The argument advanced in this study is that the blockholders represent different segments of investors in the market (corporate, individuals, institutions, state, foreign and director ownership) and therefore, their incentives to monitor managers can vary from one group to another. In a non-homogenous block ownership environment, it is important to account for

these differential influences in order to arrive at a conclusion about the relationship between ownership identity and firm performance.

The remainder of the paper proceeds as follows: Section II reviews the relevant literature on ownership identity and performance relationship. Section III provides Hypotheses development and IV description about Pakistani environment while Section V describes the data collection procedure and analytical methodology employed. This is followed by the discussion of empirical findings in Section VI. The last section offers some conclusions on the topic.

2. Literature Review

a) Ownership Identity

According to Zeitun & Gary (2007), ownership structure depends on a country's social, political, economic and cultural norms. In an emerging market like Pakistan, these factors are likely to be entirely different from those of developed countries, which may limit the application of empirical models tested in mature markets.

There is substantial empirical literature on the impact of ownership structure on the financial efficiency of firms (Morck et al., 2000; Anderson & Reeb, 2003; Burkart et al, 2003; Caselli & Gennaioli, 2003; Bartholomeusz & Tanewski, 2006; Villalonga & Amit, 2006; Balsmeyer & Czarnitzki, 2010; and Bozec et al, 2010). The findings, however, are not conclusive and the spectrum of results is quite wide. Thus, for US firms the analysis by Demsetz and Villalonga (2001) and Holderness (2003) revealed no relationship between ownership structure and performance. Studies conducted by Claessens & Djankov, (1999); Gorton & Schmid, (2000); Sarkar & Sarkar (2000); Sun & Tong, (2003) and Lee, (2008) report that the financial performance of a firm is positively influenced by the level of ownership structure. While Franks & Mayer (2001) find a higher turnover of directors in closely held firms in comparison to their widely held counterparts, investigations conducted by Kaplan & Minton (1994) and Kang & Shivdasani (1995) reveal that firms with block shareholdings are more likely to replace managers or to restructure their firms following a period of underperformance. Additionally, the presence of large shareholders increases the susceptibility of a firm to and probability of a takeover thereby proving managers with incentives to generate attractive returns to shareholders (Shleifer & Vishny, 1986 and Shivdasani, 1993).

Many empirical studies that have investigated the relationship between block ownership and firm performance have analyzed either the overall level of block ownership (Demsetz and Lehn, 1985; Demsetz, and Villalonga, 2001) or just inside block ownership (Morck et al., 1988; McConnell and Servaes, 1990; Craswell et al., 1997; Himmelberg et al., 1999; Short

and Keasey, 1999) or block ownership samples gathered in unique microstructure settings such as bank block ownership in the bank centered economies of Japan and Germany (Morck, et al. 2000; Gorton and Schmid 2000), state non-tradable block ownership in China (Qi et al., 2000; Sun & Tong, 2003; Wei et al., 2005; Gunasekarage et al., 2007) and, institutional and foreign block ownership in privatized firms (Claessens & Djankov, 1999). The findings reported in these studies are inconclusive.

b) Director Domination Ownership

Agency theory argued that dominating director ownership implies better incentives to monitor, greater incentive alignment, undeviating partaking and therefore higher expected profits and share prices (Larner, 1971; McEachern, 1975; Herman, 1981 and Sorenson, 1996). But higher insider ownership may also imply greater managerial entrenchment, diversion of funds and thereby leads to lower efficiency (Jensen and Meckling 1976; Morck et al, 1988; Gugler, 1999; and Dyck & Zingales, 2004).

A large number of empirical researches scrutinize the relationship between insider dominating shareholding and firm performance in developed countries which based on "single equation models" generally found a positive or perhaps insignificant relationship between insider ownership and performance (Short 1994), While non-linear relationships between managerial ownership and market valuation (e.g. Morck et al. 1988, McConnell and Servaes, 1990, Thomsen and Pedersen 2000). But, as mentioned, more recent simultaneous estimations of the "causes and consequences" of insider ownership have found insignificant performance effects (Loderer & Martin 1997; and Himmelberg et al, 1999).

Gugler, Mueller & Yurtoglu (2008) stated that in the US, firm performance initially rose with an increase in the insider ownership but fell when the insider ownership exceeded 60 percent of the companies. Loderer & Martin (1997) used the sample of 867 US companies found a weak bowl-shaped effect of director ownership on both measures estimated by simple regression. Therefore, research interpret these results as evidence that managers have inside knowledge and increase their shareholdings prior to good acquisitions whereas high share prices and Q-values induce them to sell out.

Cho (1998) examines investment as an intermediate variable between director ownership and performance measured by Q-values of 326 Fortune 500 firms in 1991. He found that Q-values have a positive impact on dominating director ownership and that director ownership has a significant non-monotonous effect on investment, which again has a positive impact on Q-values. When taking this into account in a 3-equation model simultaneously determining director ownership, Q-values and

investment, the non-monotonous effect of ownership structure on Q-values becomes insignificant.

However, previous research found a positive association between low levels of insider ownership and performance (Kim, Lee, & Francis, 1988; Mehran, 1995; Hossain, Prevost, & Rao, 2001; Elayan, Lau, & Meyer, 2003; Welch, 2003). On the other side, researchers report the relationship between dominating director ownership and firm performance is non-monotonic (Chen et al., 1993; Griffith, 1999; McConnell & Servaes, 1990; Morck, Shleifer, & Vishny, 1988; Short & Keasey, 1999), supporting convergence-of-interest hypothesis at some low levels of insider ownership and an entrenchment hypothesis at higher levels of director ownership which indicate non-linear relationship between ownership and performance. However, stewardship theorist claims that there is no relationship between insider ownership and performance (Demsetz, 1983; Demsetz & Lehn, 1985; Demsetz & Villalonga, 2001).

3. Hypotheses Development

The standard assumption is that each of the ownership categories has different objective with implications for corporate strategy and performance (Edwards & Nibler, 2000; Morck et al., 2000 and Thomsen & Pedersen, 2000). Thomsen & Pedersen (2002) argue that the identity of large owners e.g. family, bank, institutional investors, government, and other companies has important implications for corporate strategy and performance. Evidence suggests that blockholder identity may matter because shareholders can have heterogeneous incentives and capacities to monitor managers (Gedajlovic, 1993 and Thomsen & Pederson, 2000).

a) Associate Company Shareholding

In corporate shareholding or associated company shareholding is that where the shares are held by one company in another. Business groups are also one of the major ownership categories that also called associated company ownership or family ownership.

Business groups consist of a collection of firms, which are linked together by common ownership, and director interlocks. Group affiliation has both benefits and costs. Among the beneficial effects, Chang and Hong (2000) find that group companies serve as an organizational structure for appropriating quasi rents, which accrue from access to scarce and imperfectly marketed inputs such as capital and information. Khanna and Rivkin (2001) defined Business group as a set of firms which, though legally independent are bound together by a group of formal and informal ties and are accustomed to taking coordinated action. However, groups are also associated with the larger possibility of (i) inefficient transfer of resources from more profitable firms to financially constrained firms (Shin and Park, 1999) and (ii) exploitation of minority

shareholders by means of tunneling of resources through pyramids and extensive crossholdings by the controlling family (Johnson et al., 2000, and Bertrand et al., 2002).

Alchain (1969) argued that group business create the internal capital market facility. Scharfstein & Stein (1994) extended the Alchain argument by comparing the financing arrangement with-in the group and financing through bank (in case bank is not a group member). They argued that group headquarter is better able to monitor and access to information regarding member company than bank. Where capital market is underdeveloped, business groups facilitate capital allocation among group members (Perotti & Gelfer, 2001). Hoshi (1991), and Kim & Limpaphayom, (1998), in their studies found that Japanese keiretsu structure of companies had close relationship with their main bank and this relationship played a significant role in reducing the costs of financial distress. Kester (1986); Berglof & Perotti (1994) argued that keiretsu structure also reduces the informational asymmetries between creditors and shareholders.

Hypothesis H_{1a}: There is a positive relationship between the higher proportion of corporate ownership and profitability among Pakistani firms.

b) Directors' Shareholding

The classical publication of Adam Smith (1776: 700) have suggested that "negligence and profusion, therefore, must have prevail" in management controlled companies because it cannot be expected that those who mange others' money will watch over it with the same "anxious vigilance" as they would watch over their own. Meanwhile, Jensen & Meckling (1976) and Fama & Jensen (1983) argue that insider ownership can cause two types of fully differentiated behaviour: convergence of interests with shareholders and the entrenchment effect.

McKnight & Weir (2009) found that higher managerial ownership reduces company agency costs, supporting the earlier findings of Coles, Lemmon and Mescke (2005). This may be because higher personal shareholding by directors bonds them to the company and acts as a method for mitigating agency costs in listed companies. Studies by Ang, Cole & Lin, (2000) and Singh & Davidson (2003) validate that higher director ownership reduces the misalignment between shareholders and managers and lowers agency costs. However, an optimal level of insider ownership is determined by firm size, industry, investor protection level, and performance of the firm (Hu & Izumida, 2008).

Previous studies find mixed results for director ownership and its effects on the firm value and performance. Demsetz (1983) and Demsetz & Lehn (1985) argue that insider ownership and company financial value have endogenous effects and that there should be no systematic relationship. However,

controlling the endogenous effect of insider ownership and company financial performance, Bohren and Odegaard (2001) find a positive relationship between insider ownership and company value in the Norwegian context.

In a review of a number of these studies;

Hypothesis H_{1b}: There is a positive relationship between the higher proportion of insider's ownership and profitability among Pakistani firms.

c) Individual Public Shareholding

In many emerging countries, public ownership is among the largest group of blockholders (Claessens et al., 2000). Sun & Tong (2003) reported that public ownership has positive impact on firm performance after share issue privatization, using listed firms' data during the period 1994-2000. Delios & Wu (2005) reported a U-pattern relationship between individual public ownership and Tobin's Q using the data of public firms listed on China's two stock exchanges during 1991-2001. In a review of a number of these studies:

Hypothesis H_{1c}: There is a positive relationship between the higher public shareholding and profitability among Pakistani firms.

d) Foreign Shareholders

It is important to disentangle the effects of foreign ownership in a firm belonging to foreign industrial corporations and foreign financial institutions. Agency theory suggests that since foreign corporate ownership stakes are larger and less fragmented than stakes held by foreign institutional shareholders, the incentives of these larger shareholders are more aligned to perform an effective monitoring role. Gorg & Greenaway (2004) argue that the main challenging question in the international business strategy is the outcome gained from foreign ownership of firms. It is mainly accepted that foreign ownership plays a crucial role in firm performance, particularly in developing and transitional economies. There are important governance implications for firms with and without foreign holdings which ultimately have a bearing on the performance of firms. These performance differences arise from the possession of certain firm specific advantages that accrue to the firm with foreign ownership. These firm specific advantages stem from advanced technological know-how, marketing and managing skills, export contacts, coordinated relationships with suppliers and customers and reputation (Aitken & Harrison, 1999).

Empirical studies found evidence supporting such a conjecture. For instance, Boardman, Shapiro & Vining (1997) find significant performance differences among multinational enterprises or their subsidiaries and domestic firms in Canada. Harris & Robinson (2003) report that presence of foreign owners in companies in the UK manufacturing

industry leads to an improvement in the productivity. Chibber & Majumdar, (1999) find that the extent of a foreign firm's control over a domestic firm is positively associated with the degree of resource commitment to technology transfer. Djankov & Hoekman (2000) find foreign investment is directly associated with the provision of generic knowledge and specific knowledge. Goethals & Ooghe (1997) in their study of Belgium (held on 50 foreign and 25 local companies) concluded that foreign companies have a better financial performance compared to domestic companies. Among emerging economies, Willmore (1986) analyzing a matched sample of foreign and domestic firms in Brazil and finds foreign firms to have higher ratios of value-added to output, higher labor productivity and greater capital intensity among others. However, from Thailand Wiwattanakantang (2001) found that foreign controlled firms exhibit superior performance.

As a consequence, we expect to find a positive relationship between the foreign ownership and firm performance of Pakistani corporations:

Hypothesis H_{1d}: There is a positive relationship between the higher proportion of foreign ownership and profitability among Pakistani firms.

e) State Shareholding

The government shares are held by the federal and provincial State. State ownership is an involvement ownership type because governments have power not only from the corporate legal property right point of view, but from state policy setting, implementation and reputation.

De Alessi (1980 & 1982) defines state-owned enterprises as 'political' firms with general public as a collective owner. A specific characteristic of these firms is that individual citizens have no direct claim on their residual income and are not able to transfer their ownership rights. Boycko, Shleifer & Vishny (1996) argue that in most cases the agency problem in government owned companies arises from political issues rather than managerial issues.

However, Boycko, Shleifer & Vishny (1996) argue that in most cases the agency problem in government owned companies arises from political issues rather than managerial issues. The conflict of interest between government and other owners often arises because the State is more interested in political outcomes compared to the other owners who are more interested in the financial returns. Gursoy & Aydogan (2002) found that when compared to the family-owned companies, government-owned companies have lower accounting-based returns but higher market-based returns in Turkish listed companies. Sun, Tong & Tong (2002) report that the relationship between government owners and Chinese companies' performance follow an inverted U-shape pattern.

Accordingly, we propose the following hypotheses:

Hypothesis H_{1e}: There is a positive relationship between the higher proportion of state ownership and profitability among Pakistani firms.

f) Institutional Shareholding

The role of financial institutions on the theoretical literature of ownership identity has been crucial pragmatic as anti-takeover barriers (Sheard, 1991). Meanwhile, Gedajlovic & Shapiro (2002) argue that these financial institutions are well positioned to monitor the executives of the firms within their network. Heaw-Wellalage & Locke (2011) stated from Sri Lanka that institutional ownership is predominant and approximately 95% of multinational subsidiaries are owned and operated by institutional investors and performed betters as compare to domestic companies. Hayashi (2003) found that institutional ownership was responsible for 60% of all outstanding equity in US, compared to 8% in 1950. As a result of the growing volume of equity controlled by institutional owners, the role of institutional investors has changed from passive investors to active monitors. Meanwhile, Chirinko et al. (1999) explain that financial institutions might be important mainly because of their role as supplier of debt but also as equity holder and their representation on supervisory board. Jensen (1989) argues that joint ownership of debt and equity by large informed investors results in stringent managerial monitoring and create strong incentive for managers to make value maximizing decisions. Cornett et al. (2007) explain institutional shareholders have more opportunity, resources and ability to monitor and influence managers.

Institutional shares are held by investment bank, insurance companies, mutual fund companies and/or other investment institutions. Nickel, Nicolitsas & Dryden (1997) did not found the effect of dominant external shareholders on company performance, except when the dominant external shareholder is a financial institution. Chaganti & Damanpour (1991) investigated the effect of institutional investors that presence of higher proportion of institutional investor leads to relatively higher performance. Xu and Wang (1997) found positive and significant correlation between profitability and large institutional shareholders in China.

Navissi & Naiker (2006) find institutional owners have greater incentive to monitor management in New Zealand context, and it positively affects firms' financial performance. This may be due to fact that unlike boards of directors, institutional investors have increasingly used their power to pressure managers to come into line with the shareholders' interests (Cornett et al., 2007). Moreover, higher institutional ownership is always associated with higher board remuneration and incentive-related executive compensation, and it reduces the likelihood of CEO duality on the board (Henry, 2010). Gürbüz, Aybars & Kutlu (2010) analyze 164 firms from Turkey and demonstrate a positive relationship between corporate governance and institutional ownership on firm financial performance. Clay (2001) finds a significant positive relationship between company performance and institutional ownership percentage in US, where a 1% increase in institutional ownership leads to 0.75% increase in company financial performance. Similar results were found by Lin (2010) who posits that when the institutional ownership is higher than 81.2% in Taiwanese companies, firm values start to increase.

Hartzell & Starks (2003) find that institutional ownership mitigates agency costs between shareholders and managers, because it increases the monitoring. In line with the above findings, using firms from the North American casino industry, Tasi & Gu (2007) posit a negative agency costs relationship between institutional ownership and agency costs. However, Henry (2010) employed Australian listed companies' data and found negative results. In a review of a number of these studies:

Hypothesis H_{1f}: There is a positive relationship between the higher proportion of Institutional ownership and profitability among Pakistani firms.

g) Others' Categories of Shareholding

Other categories of the shareholding consist of public companies, charitable and other trusts, NGOs, Cooperative societies, etc. Literature is considerably thin about this class of ownership and need to research on it seriously. These blockholders usually have a long investment horizon. Allen and Philips (2000) present evidence that supports the argument that corporate ownership provides significant benefits to firms involved in certain business agreements by reducing the costs of monitoring the alliances or ventures between firms.

Hypothesis H_{1g}: There is a positive relationship between the higher proportion of 'others categories' of ownership and profitability among Pakistani firms.

4. Corporate Landscape in Pakistan

The ownership structure of companies in Pakistan together with other governance mechanisms makes an investigation of block ownership in this country interesting. First, being an emerging economy with a relatively inactive market for corporate control, Pakistan investors can be expected to rely on internal governance mechanisms such as block ownership to minimize agency conflict and to generate a return for their investment. Second, and in relation to the first point, corporate ownership in Pakistan is characterized by a strikingly high level of concentrated ownership; this has remained unchanged for a long period of time.

There are considerable differences in corporate governance frameworks and practices between Pakistan and most developing economies. Pakistan is

a common law country having one tier board structure and the majority of large public companies display concentrated ownership structures with strong family ownership or associate companies. As a result, the Pakistani corporate environment is characterized by power asymmetries among controlling shareholders, minority shareholders and management, in favor of the first. In order to improve the corporate governance environment in Pakistan, an array of institutional and government initiatives have been implemented from last decade. Institutional investors, National Investment Trust (NIT), Investment Corporation of Pakistan (ICP), have increased their participation as minority shareholders of large public companies and currently play an important role in developing local corporate governance practices.

Securities and Exchange Commission of Pakistan (SECP) is the principal regulator of securities market and non-bank companies, including non-listed companies. State Bank of Pakistan (SBP) regulates Commercial Banks & Non-Banking Financial Institutions with prudential regulations. Since its establishment, it has initiated a number of reforms aimed at improving corporate governance policies, structures and frameworks in Pakistan. The most important reform was the implementation of the code of Corporate Governance in March, 2002 and revised in May, 2012.

Pakistan Institute of Corporate Governance (PICG) playing a pivotal role in conjoining SBP and seventeen other associations that were all concerned with corporate governance. PICG is today a hybrid Institute of Governance and Institute of Directors. As the Institute of Governance, it increases awareness and champion the cause of good governance practices and, as the Institute of Directors, it develops professionalism and encourages engagement of corporate bodies and individuals in the role of effective oversight. PICG providing knowledge about best practices in corporate governance to all key stakeholders affected by corporate governance by improving the quality of corporate governance in Pakistan.

5. Methodology

In line with prior studies that examine the relationship between ownership and firm performance (Gedajlovic and Shapiro, 1998; Thomsen and Pedersen, 2000; Khanna and Palepu, 2000), this research uses the following regression specification:

Performance = f (ownership variables, control variables)

a) Data Collection

Our sample comprised KSE – 100 index companies for five years 2007 to 2011. Companies were excluded in case of non availability of data and/or missing data. According to the Karachi Stock

Exchange official brochure (Published in 2012) "The KSE-100 Index was introduced in November 1991 with base value of 1,000 points. The KSE - 100 Index comprises of 100 companies selected on the basis of sector representation and highest market capitalization, which captures over 90% of the total market capitalization of the companies listed on the Exchange. Out of the following 33 Sectors, 32 companies are selected i.e. one company from each sector (excluding Open-End Mutual Fund Sector) on the basis of the largest market capitalization and the remaining 66 companies are selected on the basis of largest market capitalization in descending order. This is a total return index i.e. dividend, bonus and rights are adjusted." (p. 7)

Data on required variables is collected through secondary sources. Data on Corporate Governance internal mechanism are collected through company information page, compliance with the code of corporate governance report, directors' profiles and directors' report to the shareholders. Data related to financial part of the study is collected from financial statement part of Annual Reports.

b) Reliability Analysis

Reliability analysis was used to assess internal consistency (degree of homogeneity among the items). Cronbach's Alpha coefficients were computed and the overall assessment was 0.87. According to Nunnally (1978), a data collection instrument with a good internal consistency should have Cronbach's Alpha coefficients that are higher than 0.7. The items were therefore, found to be highly homogeneous.

Variables

The variables employed in our equations are described in Table 1.

a) Performance Variable

The concept of enterprise performance allows many interpretations. In applied studies it is common to associate improvements in firm performance with increased profitability, higher efficiency, and increased output (Bevan et al., 1999).

Demsetz & Villalonga (2001) divided the measures according to the time perspectives and the measuring identity: the accounting profit is backward-looking and are calculated by accountants under the constraints of standards; Tobin's q, on the other hand, is forward-looking and are caught by the community of investors under the constraints of markets.

The variables employed in this study for firm profitability were ROE (return on equity), ROA (return on assets), Tobin's Q (Q) and EVA (Economic Value Added).

Table 1. Description of variables

Corporate Ownership (O_COR)	Percentage of associated company ownership in a company to the total equity.
Individual Ownership (O_IND)	Percentage of Individual Public ownership in a company to the total equity.
Director Ownership (O_DIR)	Percentage of Company Directors ownership in a company to the total equity.
Institutional Ownership (O_INS)	Percentage of Institutional investor's ownership in a company to the total equity.
Foreign Ownership (O_FOR)	Percentage of foreign investor's ownership in a company to the total equity.
State Ownership (O_STA)	Percentage of Government ownership in a company to the total equity.
Other's Ownership (O_OTH)	Percentage of ownership other than above said types in a company to the total equity.
Director Domination (D_DOM)	Companies having more than 51% executive director's domination.
Return on Equity (ROE)	Net Profit divided by Total Equity (Demsetz & Villalonga, 2001; Gugler & Yurtoglu, 2003 and Bjuggren & Wiberg, 2008)
Return on Assets (ROA)	Net Profit divided by Total Assets (Barber & Lyon, 1996; Core, Guay & Rusticus, 2006 and Bhagat & Bolton, 2010)
Tobin Q (Q)	The ratio between the market value and replacement value of the same physical asset (Demsetz & Villalonga, 2001; Gugler & Yurtoglu, 2003; Bjuggren & Wiberg, 2008)
Economic Value Added (EVA)	Net Operating Profit After Taxation (NOPAT) Weighted average cost of capital (WACC) Invested Capital (IC) EVA = NOPAT – (WACC x IC)
Financial Leverage (FL)	Total Debt/Total Equity (Jensen, 1986 and Kim & Sorensen, 1986)
Firm Size (F_SIZE)	Natural Logarithm of Total Assets (Pedersen & Thomsen, 1999)
Firm Age (F_AGE)	Number of years from the incorporation (Anderson & Reeb, 2003; Han & Suk, 1998)

b) Control Variable

Financial Leverage, measured as the ratio of debt to capital employed, is included as a control variable in the regression models because a firm's capital structure may influence its investment decisions and the discretion afforded managers (Harris & Raviv, 1991).

Firm value will be included in the equation for ownership concentration to deal with the potential problem of reverse causality: it has been argued that although ownership may affect performance, ownership structure may also be affected by the firm leverage. In line with Chen and Jaggi (2000), debt-to-equity ratio (FLV) was used to measure firm leverage.

A company increases its leverage with the intention of increasing its return on stockholder equity. A 1.5 ratio indicates that the company is using Rs. 1 in equity financing for each Rs. 1.50 in assets. The ratio provides a direct relationship: the higher the ratio, the higher the debt, or the lower the ratio, the lower the debt. A ratio of one indicates that the company has no debt.

In the existing empirical studies ownership concentration tends to be negatively affected by firm size (Demsetz and Lehn, 1985, Himmelberg et al. 1999). This result reflects probably wealth limitations (it is simply more costly to acquire large portion of equity in larger firms) and the concern with risk diversification. But size is also sometimes considered as a proxy for managerial discretion (Himmelberg et al., 1999); in that case we expect size will positively affect ownership concentration. Size may also be viewed by potential shareholders as a proxy for reputation. I measure size as the natural logarithm of the firm's assets.

6. Findings and Discussions

a) Descriptive Statistics

Table 2 reports the descriptive statistics for the sample data. The highest mean value is for corporate ownership that is 41.6%, the highest percentage of corporate ownership is 98.9%, and the lowest ownership representation is 0%. This is consistent with the view that group ownership/corporate ownership of listed companies in Pakistan is relatively high. The highest director ownership in the sample data is 90%, while 8% firms of the KSE-100 are

directors dominating. Nevertheless, Bhabra (2007) reports an average director ownership for her sample of larger New Zealand firms was 9.34%, and Short and Keasey (1999) report an average insider ownership of 13% in their UK sample. Overall, companies listed on the KSE-100 indexed companies having higher director's ownership compared to companies in developed markets.

The mean of domestic public ownership is 17% while institutional shareholding is 11%. This indicates that a very high percentage of shares on the Karachi stock market are owned by institutional investors and general public. Foreign ownership highest is 84% while the mean value is 9.9% that is 5th largest form of ownership in Pakistani companies. The market based financial performance measure, Tobin's Q, has a mean of 1.034 that is comparable to developed markets. However, the return on equity (ROE) and return on assets (ROA) mean values are 0.13 and 0.069 respectively; which indicates that KSE listed companies are not performing well. The control variables, firm age, leverage and log of firm size are also listed.

Table 2. Descriptive Statistics (N = 475)

	Min	Max	Mean	SD
Individual Ownership (O_IND)	0.00	1.00	0.169	0.176
State Ownership (O_STA)	0.00	0.90	0.069	0.194
Institutional Ownership (O_INS)	0.00	0.586	0.109	0.107
Corporate Ownership (O_COR)	0.00	0.989	0.416	0.315
Director Ownership (O_DIR)	0.00	0.90	0.108	0.205
Foreign Ownership (O_FOR)	0.00	0.84	0.099	0.150
Other Type Ownership (O_OTH)	0.00	0.46	0.030	0.080
Director Dominate Firms (DOM_D)	0.00	1.0	0.080	0.272
Firm Age (F_Age)	5	152	37.19	26.68
Firm Size (F_Size)	5.112	9.061	7.397	0.703
Financial Leverage (FL)	0.00	3.607	0.148	0.268
Economic Value Added (EVA)	0	1	0.37	0.484
Return on Equity (ROE)	-14.743	1.772	0.130	0.792
Return on Assets (ROA)	-0.876	0.531	0.069	0.135
Tobin's Q	0.047	9.160	1.034	1.095

b) Correlation Test

The influence of overall ownership structure on firm performance has been studied in many markets. In order to provide evidence on this aspect for Pakistan, we first analyze the relationship between ownership structure and firm performance. The correlation matrix among ownership structure, firm performance measures and other control variables is tabulated in Table 3. It is worth notification that the four firm performance variables are highly correlated each other. This proves that the selection of these four performance measures is reasonable since they test the firm performance in same perspectives. The results stated that high level of individual ownership is negatively correlated with ROA, Tobin's Q and EVA. While, high level of state ownership in sample companies is positively correlated with ROA, Tobin's Q and EVA. Both results are consistent with the all three types of performance measurement.

The higher level of institutional ownership has positive relationships with EVA and negative correlation with Tobin's Q.

The relationship between director's dominating organization and market based performance measure (Tobin's Q) is negative, which indicates that the market performance of director dominating companies is poor.

Results of Table 3 also reveals that firms with higher level of director's ownership has negative impact on the economic performance of the company.

c) Regression Analysis

The R^2 value was 9.1%, 20.6% & 18.8%, this was adjusted to 8.0%, 14% & 13.5% (R^2 adjusted) respectively.

To conclude, the results from Table 4 shows that a significant negative relationship exists between ROE, Tobin's Q and director dominated companies and higher level of domestic public ownership variables ($p = 0.000$, < 0.05). The higher level of institutional ownership variable is significant for ROA and Tobin's Q with the F-statistics reported at 0.560, 2.942 and 2.455, Since prob.(F)<0.05, and significant relationship exists between the variables.

Table 3. Correlation Coefficient Analaysis (N = 475)

Variables	O_IND	O_STA	O_COR	O_ISN	O_DIR	O_FOR	O_OTH	DOM_D	ROE	ROA	Tobin's Q
DIS_O	.756 (.000)										
O_STA	-.216 (.000)	.									
O_COR	-.461 (.000)	-.322 (.000)									
O_ISN	.119 (.009)	-.145 (.002)	-.163 (.000)								
O_DIR	.029 (.525)	-.109 (.017)	-.474 (.000)	-.176 (.000)							
O_FOR	-.121 (.432)	-.200 (.322)	.011 (.000)	.211 (.061)	-.112 (.090)						
DOM_D	-.023 (.614)	-.038 (.404)	-.388 (.000)	-.165 (.000)	.844 (.000)	.111 (.019)					
O_OTH	-.197 (.555)	.059 (.873)	-.056 (.076)	.098 (.074)	.033 (.100)	-.186 (.111)	.121 (.099)				
ROE	-.002 (.971)	.045 (.326)	-.047 (.310)	.063 (.174)	-.043 (.353)	.129 (.247)	-.900 (.070)	-.039 (.401)			
ROA	-.201 (.000)	.102 (.026)	.071 (.125)	.060 (.191)	-.083 (.073)	.011 (.195)	.089 (.120)	-.052 (.262)	.323 (.000)		
Tobin Q	-.170 (.000)	.150 (.001)	.054 (.241)	-.111 (.016)	-.077 (.094)	.011 (.025)	.344 (.200)	-.096 (.037)	.120 (.009)	.299 (.000)	
EVA	-.096 (.037)	.088 (.050)	.000 (.993)	.169 (.000)	-.102 (.027)	.199 (.312)	.132 (.333)	-.039 (.402)	.156 (.001)	.348 (.000)	.195 (.000)

Table 4. Regression Analysis Results

Variables	ROE t-Value (Prob.)	ROA t-Value (Prob.)	Tobin's Q t-Value (Prob.)	EVA t-Value (Prob.)
O_IND	-.551 (.582)	-1.706 (.089)	-2.044 (.042)	-1.788 (.074)
O_STA	-.746 (.456)	-.982 (.326)	-1.619 (.106)	-1.175 (.241)
O_INS	.392 (.695)	.688 (.009)	2.966 (.003)	2.525 (.012)
O_COR	-1.392 (.165)	-.840 (.401)	-1.182 (.238)	-1.093 (.275)
O_DIR	-.857 (.392)	-1.299 (.195)	-.249 (.804)	-2.294 (.022)
O_FOR	0.982 (0.327)	1.733 (0.084)	2.424 (0.016)	1.121 (0.263)
O_OTH	.944 (.211)	-.721 (.544)	.329 (.100)	1.100 (.201)
DOM_D	-.018 (.006)	.605 (.545)	0.857 (.392)	-2.056 (.040)
R²	0.091	0.206	0.188	0.209
Adjusted R²	0.080	0.140	0.135	0.144
F-statistics	0.560	2.942	2.455	3.045
Prob. (F.stat)	0.788	0.005	0.018	0.004
Durbin-Watson	1.987	1.972	1.715	1.429

d) Hypotheses Justification

Hypothesis H_{1a}: Associated company ownership has a positive effect on firm performance.

   The Linear Regression results: ROE (r=0.165, p<0.05), ROA (r=0.401, p<0.05), Tobin's Q (r=0.238, p<0.05) and EVA (r=0.275, p<0.05). Correlation results: ROE (β= 0.310, p<0.05), ROA (β=0.125, p<0.05), Tobin's Q (β= 0.241, p<0.05) and EVA (β =

0.993, p<0.05). The relationship was not significant, and hypothesis H_{1a} was rejected.

Hypothesis H_{1b}: Director's ownership (insider ownership) has a positive effect on firm performance.

   The Linear Regression results: ROE (r=0.392, p<0.05), ROA (r=0.195, p<0.05), Tobin's Q (r=0.804, p<0.05) and EVA (**r=-0.022**, p<0.05). Correlation results: ROE (β= 0.353, p<0.05), ROA (β=0.173, p<0.05), Tobin's Q (β= 0.094, p<0.05) and EVA (**β =**

-0.027, p<0.05). The relationship was not significant, and hypothesis H_{1b} was rejected.

Hypothesis H_{1c}: Public Ownership has a positive Effect on firm Performance.

The Linear Regression results: ROE (r=0.582, p<0.05), ROA (r=0.089, p<0.05), Tobin's Q (**r=-0.042**, p<0.05) and EVA (r=-0.074, p<0.05). Correlation results: ROE (β= 0.971, p<0.05), ROA (**β=-0.000,** p<0.05), Tobin's Q (**β= -0.000**, p<0.05) and EVA (**β = -0.037**, p<0.05). The relationship was not significant, and hypothesis H_{1c} was rejected.

Hypothesis H_{1d}: Foreign Shareholding has a positive effect on firm performance

The Linear Regression results: ROE (r=0.327, p<0.05), ROA (r=0.084, p<0.05), Tobin's Q (**r=0.016**, p<0.05) and EVA (r=-0.263, p<0.05). Correlation results: ROE (β= 0.247, p<0.05), ROA (β=0.195, p<0.05), Tobin's Q (**β= 0.025**, p<0.05) and EVA (β = 0.312, p<0.05). The relationship was significant, and hypothesis H_{1d} was accepted.

Hypothesis H_{1e}: Government/State Shareholding has a positive effect on firm performance

The Linear Regression results: ROE (r=0.456, p<0.05), ROA (r=0.326, p<0.05), Tobin's Q (r=0.106, p<0.05) and EVA (r=0.241, p<0.05). Correlation results: ROE (β= 0.326, p<0.05), ROA (**β=0.026**, p<0.05), Tobin's Q (**β= 0.001**, p<0.05) and EVA (**β = 0.050**, p<0.05). The relationship was significant, and hypothesis H_{1e} was accepted.

Hypothesis H_{1f}: Institutional Shareholding has a positive effect on firm performance

The Linear Regression results: ROE (r=0.174, p<0.05), ROA (r=0.191, p<0.05), Tobin's Q (**r=-0.016,** p<0.05) and EVA (**r=0.000**, p<0.05). Correlation results: ROE (β= 0.695, p<0.05), ROA (**β=0.009,** p<0.05), Tobin's Q (**β= 0.003**, p<0.05) and EVA (**β = 0.012**, p<0.05). The relationship was significant, and hypothesis H_{1f} was accepted.

Hypothesis H_{1g}: Other Categories of Shareholding has a positive effect on firm performance

The Linear Regression results: ROE (r=0.211, p<0.05), ROA (r=0.544, p<0.05), Tobin's Q (r=0.100, p<0.05) and EVA (r=0.201, p<0.05). Correlation results: ROE (β= 0.070, p<0.05), ROA (β=0.120, p<0.05), Tobin's Q (β= 0.200, p<0.05) and EVA (β = -0.333, p<0.05). The relationship was not significant, and hypothesis H_{1g} was rejected.

7. Implications of the Findings

a)   There is not any significant relationship between Associate company/Corporate ownership and firm performance. The monitoring and control school of thought argues that the free-rider problems associated with diffuse ownership, since the majority shareholder captures most of the benefits associated with this monitoring. Associated company ownership or corporate ownership is the one of the largest shareholding recipe of Pakistani listed companies but

this found out that this type of ownership does not having any impact on the firm performance in Pakistan. The results of the study have therefore, shown there is dire need to reasonably diversify shareholding as a way of attracting more skills and competencies among the shareholders that can be tapped to improve firm performance.

b)   There is a negative relationship between higher insider ownership and directors dominating ownership on firm performance. It has been argued that agency theory views managerial discretion as an opportunity for managers to serve their own objectives rather than the objectives of their controlling shareholders. The controlling shareholders may develop various strategies to prevent managers from using their decision making discretion to pursue self-serving objectives at the expense of firm performance. In fact, the study reaffirmed this position among listed companies in Pakistan. According to Chang and Wong (2003), strategic management of managerial discretion is dependent, to a large extent, on a comparison of the objectives of controlling shareholders and those of managers. Although it is now a well established fact that managers may have self-serving objectives, there is no priori that restricting managerial discretion will better serve the goal of maximizing firm performance.

c)   There is a negative relationship between high public ownership and firm performance. The global trend toward diffuse ownership has confounded many researchers, since it undermines the popular belief that executives are inherently self-seeking and can easily wreck the organization if left without close monitoring. The findings have brought a new dimension that emphasizes block shareholding for creativity and innovation, and less monitoring by shareholders. Thus, diffuse ownership of firms does not provide environment for excellent policies to be developed and implemented by managers due to the Pakistani market structure with compare to the developed economies. The managers are therefore best informed regarding alternative uses for the investors' funds. As a result, the managers end up with substantial residual control rights and discretion to allocate funds as they choose which creates agency issues. The downside of this argument is that it presumes that managers are honest, and always prepared to work in the objective interest of the shareholders, a position that is often not true. The fact that managers have most of the control rights can lead to problems of management entrenchment and rent–seeking behavior.

d)   The positive and significant relationship between foreign ownership and firm performance appears to have gained universal acceptance across the globe due to a number of factors. First, mostly these foreign owned companies are from developed countries and have access to management systems whose efficacy has been tested in many contexts. The massive resource base and bail-out plans for fledgling

affiliates are other factors that enhance performance of foreign owned firms. However, the ability of these companies to re-organize their global operations to be able to assign more costs to harsh tax regimes and profits to tax havens in a bid to reduce their overall tax liability, is the most damning feature of foreign ownership.

e) There is a significant positive relationship between government ownership and firm performance. Government ownership has been roundly criticized for contributing to generally poor performance of firms, due to excessive bureaucracy, tribalism, nepotism, poor human resource policies, political expediency in appointments and lack of respect for laws and regulations of the country. But the current study has confirmed this long-held position wrong. Most of the companies having strong state/government ownership are having monopolistic competition and enjoy the ultimate resources and discretionary powers.

f) There is a positive relationship between Institutional ownership and firm performance. Most of previous studies have found positive significant relationship between institutional ownership and firm performance, due mainly to the differences in investment preferences, professional management and shareholders' goals. Institutional investors manage savings collectively on behalf of other investors toward a specific objective in term of acceptable risk, return maximization, and mature of claims (Davis, 2001). Institutional investors prefer to simply "vote with their feet's" and sell of poorly performing firms.

g) There is no significant relationship between other ownership categories and firm performance. The findings have brought that these types of investment having live long relationships with the company and there is not any practical participation with the decision making process. Thus, this diffuse ownership of firms purchase shares like their saving and just care about the sustainability instead of any other specific corporate goal related to the performance of the company and they have sufficient latitude for innovation and creativity, that is, less monitoring by principals.

Conclusion

Using a panel of Pakistani listed firms during the period 2007 to 2011, this study examines the affects of ownership identity and director domination on firm financial performance by using market based performance measure, accounting based performance measure and as well economic profit of the firms. The results indicate a negative relationship of director ownership and financial performance. Furthermore, these findings suggest negative impact of associated company ownership and performance, indicating higher director ownership adverse effects on ROE and EVA and misalignment of the interests of management and owners. This study validate the

agency issue are placed in Pakistani listed companies where the ownership structure and the firm's performance echo this.

The results of this study have important implications for the ownership structure, insider's dominance and firm performance in Pakistan. It confirms that the effect of director ownership on firm performance is more negative where legal protection for investors is weak. It suggests that although new legislative reforms have been enacted, Pakistani companies are highly dependent on internal governance mechanisms. Due to high director/insider ownership, managerial expropriation is very likely to exist. There is potential merit in promulgating new rules and regulations to control the expropriation of minority shareholders.

The findings provide direction for further research as to (i) what mechanisms are used by block investors such as the government, financial institutions and foreign investors in monitoring managers and (ii) why some categories of investors such as individuals, directors and corporate do not contribute to the internal governance of firms even though they invest a large amount of their wealth in these companies.

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THE RELATIONSHIP BETWEEN COMPANY SIZE AND CEO REMUNERATION: A SCALING PERSPECTIVE

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Abstract

The first objective of the study is to empirically test a number of company size determinants' significance as size proxies in benchmarking CEO remuneration for different sectors of Johannesburg Stock Exchange (JSE)-listed companies. The second objective is to investigate an issue that has not been examined in previous studies, namely the extent to which companies are able to linearly scale their CEO remuneration and company size without changing the remuneration-to-size ratio. To fulfil the first objective, data extracted from the McGregor BFA database were obtained for 2013, where 244 companies in four sectors, i.e. financial, manufacturing, minerals and services, are analysed using descriptive statistics and simple regression analysis. From the results obtained, to fulfil the second objective, a data envelopment analysis (DEA) model is built to estimate the technical and scale efficiencies of 231 companies. A hypothesis test was helpful to find that the following determinants can be used as proxies for company size: total assets (including intangible assets); market value of assets; total equity; market capitalisation; revenue; and total cost. The confidence level to which the null-hypothesis is rejected leads to the conclusion that those determinants are on their own suitable proxies that make further investigations into joint determinants unnecessary. Furthermore, the study concluded that the majority of companies are not able to linearly scale their CEO remuneration and company size without changing the remuneration-to-size ratio. Therefore, the conceptual theory of scaling is to a great extent rejected, since only nine of 231 companies in the sample investigated could achieve economies of scale. The paper is organised as follows: Section I provides the gap of missing knowledge in the literature as well as the conceptual framework of the study. The data and methodology are described in Section II, after which the results and a discussion thereof are provided in Section III. The study is finally concluded in Section IV.

Keywords: CEO Remuneration, Company Size, Data Envelopment Analysis, Return to Scale, Scaling Theory

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1. Introduction

This is an empirical study modelling the relationship between CEO remuneration and company size determinants. The issue of CEO remuneration is part of a company's corporate social responsibility towards investors, employees and other stakeholders (Theunissen, 2012; SAPA, 201; Hurtt et al., 2000). CEO remuneration recently received a great deal of negative media attention in South Africa and companies are accused of the fact that their CEOs are excessively remunerated (Lamprecht, 2014; Finweek, 2012; Joubert, 2011; Ensor, 2010; Financial Mail, 2008; Hindery, 2008). This media attention led to a number of studies investigating CEO remuneration of Johannesburg Stock Exchange (JSE)-listed companies (Nthoesane and Kruger, 2014; Bradley, 2011;

Theunissen and Oberholzer, 2013; Scholtz and Smit, 2012; Oberholzer and Theunissen, 2012; Dommisse, 2011; Theunissen, 2010; Krugel and Kruger, 2006).

The literature agrees that there are many factors that drive or influence CEO remuneration, for example company size, performance, risk, leverage, ownership, age of CEO, tenure (i.e. number of years served as CEO), labour market influences and board size (Hearn, 2013; Sigler, 2011; Fulmer, 2009; Nwaeze et al., 2006; Gunasekaragea and Wilkenson, 2002). Some researchers reduced the number of factors to only company size and performance as the two most significant drivers of CEO remuneration (Nulla, 2012; Oberholzer and Theunissen, 2012; Cordeiro et al., 2006; Zhou, 2000). From all the factors, many authors agree that company size is the single most significant driver and the only factor that

has a constant and a positive correlation with CEO remuneration (Dan et al., 2013; Sigler, 2011; Vermeulen, 2008; Devers et al., 2007; Geiger and Cashen, 2007). Probable reasons for this positive relationship are that larger companies may employ better-qualified managers (Murphy, 1999), have more operations, subsidiaries and layers of management (Lippert and Moore, 1994), require a higher level of responsibility from their CEOs who have more complex tasks and therefore place greater value on decision-making (Janssen, 2009) and have more requirements by the board (Chhaochharia and Grinstein, 2009).

The importance of the study is that it attempts to better understand the concept of company size within the context of CEO remuneration and it will assist company board members in setting CEO remuneration. Many previous studies have investigated the relationship between company size determinants and CEO remuneration. Different determinants were used by the researchers to act as a proxy for company size, for example market capitalisation (Krugel and Kruger, 2006), turnover/sales/revenue (Chhaochharia and Grinstein, 2009; Fulmer, 2009; Nourayi and Daroca, 2008; Geiger and Cashen, 2007; Stanwick and Stanwick, 2001; Zhou, 2000), total assets (Griffith et al., 2011; Chourou et al., 2008; Grinstein and Hribar, 2004; Gunasekaragea and Wilkenson, 2002; Zhou, 2000), number of employees (Sigler, 2011; Nourayi and Daroca, 2008), market value of assets (Heaney et al., 2010) and total expenses (Chen et al., 2008). To emphasise some degree of uncertainty regarding to the appropriate choice for a size proxy, some authors apply multiple determinants of size, for example total assets and sales (Zhou, 2000), earnings and market capitalisation (Gabaix and Landier, 2008), total assets and number of employees (Nulla, 2012), market value of assets and market value of equity (Heany et al., 2010), company value, earnings before interest and taxes (EBIT), sales and equity (Gabaix et al., 2013), as well as total assets, total equity and turnover (Theunissen, 2010).

Except for number of employees, the above-mentioned determinants are in terms of monetary values provided both by companies' statements of comprehensive income and the statements of financial position. All these above-mentioned examples are probably logical choices to define company size. Furthermore, the expectation is also that they are highly correlated with each other. Therefore, the co-linearity problem should be taken into account when multiple size determinants are applied in a multiple regression analysis (Wegner, 2007). Nevertheless, the argument is that these variables are probably not equally effective to define company size within the context of CEO remuneration. The choice of a proxy for size may also differ between the different business sectors (Nourayi and Daroca, 2008). Therefore, what is needed is a framework that links the size aspect to

the responsibility of the CEO. The question is what determinants of company size are most applicable when constructing CEO packages. The first objective of the study is to empirically test the above-mentioned examples' significance as size proxies in benchmarking CEO remuneration for the different sectors. Therefore, the null-hypothesis is that there is no relationship between CEO remuneration and the different company size determinants. The study also argues, according to the idea of Gabaix et al. (2013), that a combination of size determinants should be considered. That is to consider, for example, defining company size by using certain combinations of the statement of comprehensive income's data in conjunction with the statement of financial position's data.

The second objective of the study is to investigate an issue not examined in previous studies, namely the extent to which companies are able to linearly scale their CEO remuneration and size without changing the remuneration-to-size ratio. In other words, the question is whether the CEO remuneration-to-size ratio stays constant when the CEO's remuneration and/or company size changes. Therefore, the study makes it possible to determine the degree to which companies achieve economies of scale, within the context of CEO remuneration, as the input variable, relative to a certain level of company size, the output variable.

To fulfil the objectives, the epistemology dimension preferred is quantitative research. Secondary data extracted from the McGregor BFA (2014) database were obtained for 2013, where 244 companies in four sectors, i.e. financial, manufacturing, minerals and services, are analysed to reach the first objective, to estimate the relationship between CEO remuneration and different company size determinants, by using descriptive statistics and simple regression analysis. From the results obtained, a data envelopment analysis (DEA) model is built to estimate the efficiencies of 231 companies, where the efficiency estimate is relative to the other companies within the same sector. To reach the second objective, companies in each sector are divided into quadrants analysing the average technical and scale efficiency per sector.

Conceptual scope

The focus of this study is on the dependency of CEO remuneration in relation with different determinants of company size. To put these size variables into proper context, the scaling theory is borrowed to provide a conceptual framework, which includes both constant return to scale (CRS) and variable return to scale (VRS). The CRS implies a proportionate rise in CEO remuneration when company size is increased, or in other words, a company's CEO remuneration-to-size ratio is not influenced by the scale of its operations (Avkiran, 1999). Using CRS, a company's

CEO remuneration-to-size is automatically considered fully scale efficient, implying that the company always achieves economies of scale. This is a significant assumption, since CRS may only be valid over a limited range and its use should be justified (Anderson, 1996). Alternatively, is the less restricted VRS approach, which implies a disproportionate rise or fall in CEO remuneration when company size is increased; in other words, if a company grows in size, its CEO remuneration-to-size will not remain constant, but it will either rise or fall. Using the VRS approach, the degree of scale efficiency should be estimated; that is where a company is too small in its scale of CEO remuneration-to-size, which falls within the increasing return to scale (IRS) part of the production function, and a company is too large in its scale of CEO remuneration-to-size if it falls within the decreasing return to scale (DRS) part of the production function (Avkiran, 1999; Coelli et al., 2005).

2. Data and methodology

Method

This is an empirical study using existing data from the JSE-listed companies to model correlations between CEO remuneration and some company size determinants. As existing numerical data are used, there exists a medium to high degree of control regarding to the findings of the study (Mouton, 2011). Validity of the study is ensured by including variables in the descriptive statistics, regression and correlation analysis and the DEA model that can fulfil the two objectives of the study. To ensure reliability, an effort is made to describe the research process in such a way that a repetition thereof will lead to a similar conclusion.

Data

Data were obtained from the McGregor BFA database for 2013. From the database, analysts have a choice between published or standardised data. The former was selected for the study because this is the readily available format provided in companies' annual integrated reports, and this study did not attempt to compare data of different companies, which may require some sort of standardisation.

For this study, companies were grouped into four sectors, namely financial, manufacturing, mineral and service. (In an effort to refine the data, the industrial companies were divided into two groups, i.e. manufacturing and services). The three companies indicated in the oil and gas sector were included in the mineral sector and all the gold companies were excluded since their financial statements' disclosures differ from other companies in this sector. The health sector contains service companies, for example hospitals, which are included in the service sector,

and medicine manufacturers, which are included in the manufacturing sector. A total of 304 companies were detected in the database, of which only 245 are operational and/or provided all the required data. After visual inspection of the plotted data, another company was excluded, since it is extremely large with the most extreme CEO remuneration, to avoid a leverage effect in the regression analysis. The remaining 244 companies consist of 68 financial, 78 manufacturing, 45 mineral and 53 service companies. In a few cases, the monetary values are not in terms of rand (ZAR), where the average exchange rate of 2013 was applied to convert the values.

Design

Dependent variable

The dependent variable (y) represents the sum of components of CEO remuneration, which is in accordance with the terms and classification of the McGregor BFA database. The three components included are:
1. Base pay as measured by 'salary'
2. Prerequisites and pension as measured by the total of 'retirement and/or medical' contributions, 'allowances and benefits', 'motor and travel' allowances and 'fee/levy payment'
3. Annual bonus plans as measured by total of 'bonus paid in current year', 'performance bonus', 'other benefits' and "once-off payments'

The database also provides a fourth component, namely long-term incentives as measured by 'gains on shares'. Since these gains are only disclosed in the year that rights are exercised, it is extremely difficult to value them, especially when only one year's data are under consideration. The exclusion of long-term incentives was also practiced in studies such as Scholtz and Smit (2012), Bradley (2011) and Theunissen (2010).

Independent variables

A literature study was helpful to include independent variables for this study as possible proxies for company size. The variables are classified as data from the statement of financial position (SFP), statement of comprehensive income (SCI) and sundry items. These variables are indicated in parentheses [*] to indicate from which section, and the number in the section, they are extracted from the McGregor BFA database.

Firstly, two statements of financial position's line items were selected as proxies for company size, namely assets and equity, since the CEO is responsible for the investment (acquiring and utilisation assets) and, according to the agent theory, the representative of all shareholders. The total assets (at book value) were used frequently in the past (Nulla, 2012; Griffith et al., 2011; Theunissen, 2010;

Chourou et al., 2008; Grinstein and Hribar, 2004; Gunasekaragea and Wilkenson, 2002; Zhou, 2000). For this study, total assets, excluding intangible assets [SFP: 050], indicated as Total Assets (1) and total assets, including intangible assets [SFP: 051], indicated as Total Assets 2, were selected. Following Heany et al. (2010) the market value of assets was also used, which is represented by the book value of liabilities plus the market value of equity. The calculation is as follows: The average share price for the year [Sundry Items: 149] multiplied by the ordinary shares in issue at year-end [Sundry Items: 101] plus preference shares [SFP: 008] plus outside shareholders interest [SFP: 012] plus total liabilities [SFP: 022].

Gabaix and Landier (2008) and Krugel and Kruger (2006) calculated CEO remuneration relative to market capitalisation, which is the value of the investments by shareholders at a given time. This is calculated by the average share price for the year [Sundry Items: 149] multiplied by the ordinary shares in issue at year-end [Sundry items: 101] plus preference shares [SFP: 008] plus outside shareholders interest [SFP: 012]. Total equity (at book value) was applied by Theunissen (2010). This study also includes total equity [SFP: 013].

From the income statement data, following Chhaochharia and Grinstein (2009), Fulmer (2009), Nourayi and Daroca (2008), Geiger and Cashen (2007), Stanwick and Stanwick 2001 and Zhou (2000), revenue and turnover (sales) were both considered, but revenue is preferred because some companies, especially in the financial sector, do not indicate turnover. The revenue is calculated as turnover [SCI: 060] plus investment income [SCI: 062] plus interest received [SCI: 064]. Total expenses were applied by Chen et al. (2008). In this study, the calculation is as follows: The sum of cost of sales [IS: 053], total cost shown [SCI: 097] and interest and financial charges [SCI: 066]. Gabaix and Landier (2008) used earnings as a proxy for size. In this study, two items were selected, namely EBIT [IS: 098] and earnings before interest and taxes, depreciation and amortization (EBITDA) [SCI: 102]. As a variation of the number of employees, the salaries and wages from the income statement were also included, i.e. staff costs (excluding director's remuneration) [SCI General Supplementary: 345].

A non-financial item is also included, i.e. the total number of persons employed [Sundry Items: 131], which was previously used by Nulla (2012), Sigler (2011) and Nourayi and Daroca (2008).

Statistical analysis

Firstly, descriptive statistics are used to analyse the independent (x) and the dependent (y) variables. Secondly, to test the null hypothesis, simple linear regression analysis is used where the different determinants of company size are alternately the

independent variables (x) and the CEO remuneration the dependent variable (y). Linear regression analysis has frequently been used in the past to analyse and benchmark CEO remuneration (Bradley, 2011; Dommisse, 2011; Theunissen, 2010; Chen et al., 2008; Nourayi and Daroca, 2008; Barber et al., 2006; Krugel & Kruger, 2006). Multiple linear regression analyses were not considered, because the expectation is that there should be a high level of correlation between the different size determinants. Furthermore, to avoid the effect of serial (auto)-correlation, analyses are done only for a single year, namely 2013. To control possible problems of heteroskedasticity and normality, the practice by many related studies was followed where the log (or ln) of variables is used (Chourou et al., 2008; Geiger and Cashen, 2007; Gabaix and Landier, 2008; Stanwick and Stanwick, 2001). If a controversial linear relationship between x and y exists, a linear relationship between log x and log y may be considered. Then, the power curve $\hat{y} = ax^b$ is a suitable curve to describe the relationship between x and y. The equation can be written in logarithmic form $log\ \hat{y} = log\ a + b\ log\ x$. If y', a' and x' are indicated by $log\ \hat{y}$, $log\ a$, $log\ x$, respectively, then this is the equation for linearity, namely y' = a' + bx' with an intercept a' and the slope b (Steyn et al., 1999).

A hypothesis testing is also performed. The null-hypothesis, H_0, there is no relationship between CEO remuneration and the company size determinants, is an assertion about the value of the population measure. The value is the current value provisionally accepted as correct until it is proven wrong. The alternative hypothesis, H_a, specifies for the population parameter a range of values that are not specified by the null hypothesis (Swanepoel et al., 2010). A two-sided alternative hypothesis claims that the population parameter is not equal to the alleged value under H_0.

H_0: regression intercept = 0
H_a: regression intercept ≠ 0
H_0: regression slope = 0
H_a: regression slope ≠ 0

DEA as a measure of technical and scale efficiency

A model is needed to reach the second objective, to investigate the extent to which companies can linearly scale their CEO remuneration and size without changing the ratio between them. For this purpose, DEA was selected, which is a non-parametric efficiency measurement technique, using linear programming to estimate a comparative ratio of weighted outputs to weighted inputs for each company by comparing the efficiency of how the same multiple inputs and the same multiple outputs are converted by a company, relative to other competing companies in the sample (Min et al., 2009; Coelli et al., 2005). DEA effectively estimates the frontier by finding a set of linear segments that

envelop the observed data. DEA can determine efficiencies from an input-orientated (input minimisation) or output-orientated (output maximisation) point of view (Coelli et al., 2005). Applying DEA, technical efficiency and scale efficiency can be estimated. Technical efficiency (TE) is an indication of how well inputs are converted into outputs, while scale efficiency (SE) estimates whether a company operates on a scale that maximises productivity (Murthy et al., 2009). Two approaches are available, i.e. constant return to scale (CRS) and variable return to scale (VRS). The CRS implies a proportionate rise in outputs when inputs are increased (Avkiran, 1999). Alternatively, VRS implies a disproportionate rise or fall in outputs when inputs are increased (Avkiran, 1999). Using CRS, a company is automatically considered fully scale efficient (that is companies are able to linearly scale their inputs and outputs without changing their efficiency), while using the VRS approach, the degree of scale efficiency should be estimated, that is where a scenario is too small in its scale operations, which falls within the increasing return to scale (IRS) part of the production function, and a scenario is too large if it falls within the decreasing return to scale (DRS) part of the production function (Coelli et al., 2005; Theunissen, 2012).
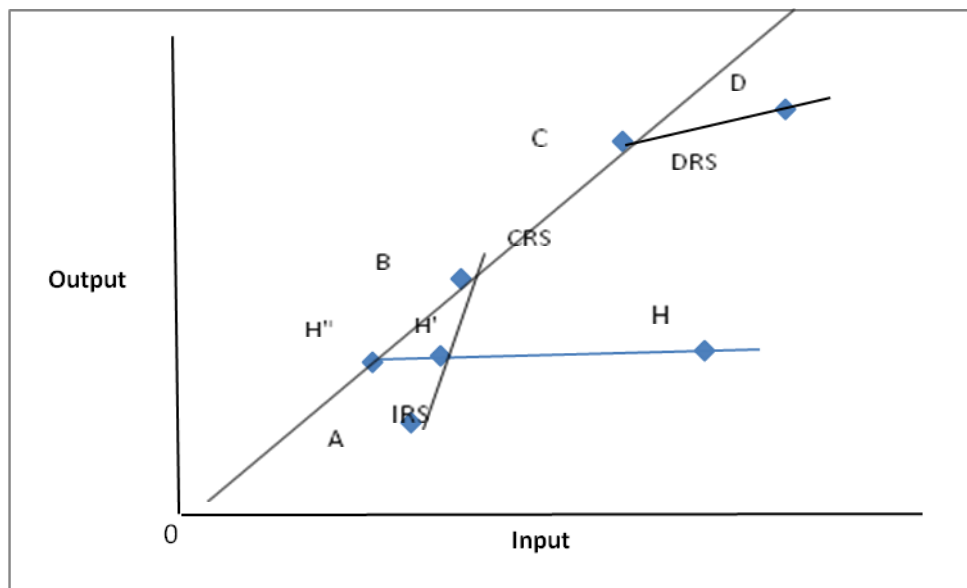
Figure 1. CRS and VRS efficiency frontiers (Source: Adapted from Zhu (2009))

To illustrate, Figure 1 assumes that the observed data consists of a single input, single output with five companies (indicated as decision-making units (DMUs), namely A, B, C, D and H. 0BC is the CRS frontier. A, D and H are not on the efficiency frontier and therefore they are considered non-efficient. H, for example, should move from an input-orientated view, horizontally, to point H" to become fully efficient. The less restricted VRC frontier is indicated by ABCD. Under this approach, H only needs to move horizontally to point H'. To summarise, TE_{VRS} implies that H'H is the technical inefficiency distance. TE_{CRS} indicates the overall improvement that is possible, namely H"H. SE = TE_{CRS}/TE_{VRS}, means that the distance H"H' represents the scale inefficiency, which should be improved upon by keeping the same input mix, but changing the size of operations (Zhu, 2009; Coelli et al., 2005). Suppose company H is 0.70 technically efficient according to the VRS approach – the remaining 0.30 represents the distance H'H. Suppose the CRS technical efficiency is 0.583', then the overall inefficiency of 1 – 0.583' = 0.416' (H'H) can be calculated. The scale efficiency 0.583'/0.70 =

0.83' indicates that the distance to achieve economies of scale is over and above the distance H'H (now 0.416' – 0.16' = 0.25), another 1 – 0.83' = 0.16', the distance H'H".

From an input-orientated view, the following DEA equation is used to create the model (Zhu, 2009):

$$\min \theta - \varepsilon (\sum_{i=1}^{m} s_i^- + \sum_{r=1}^{s} s_r^+)$$

subject to

$$\sum_{j=1}^{n} \lambda_j \chi_{ij} + s_i^- = \theta \chi_{io} \qquad i = 1,2,....,m;$$

$$\sum_{j=1}^{n} \lambda_j \gamma_{ri} - s_r^+ = \gamma_{ro} \qquad r = 1,2,....,s;$$

CRS $\qquad \lambda_j \geq 0 \qquad j = 1,2,....,n.$

$$VRS : Add \sum_{j=1}^{n} \lambda_j = 1$$

The above input-orientated formula calculates input minimisation (where θ indicates the efficiency score). Each observation, DMU_j ($j = 1, ..., n$), uses m inputs X_{ij} (i = 1, 2, ...,m) to produce s outputs Y_{rj} ($r = 1, 2, ...,s$), where DMU_o represents one of the n DMUs under evaluation, and X_{io} and Y_{ro} are the ith input and rth output for DMU_o, respectively. In order to take any slack into consideration, the inclusion of the non-Archimedean ε effectively allows the minimisation over θ to pre-empt the optimisation involving the slacks, s_i^- and s_r^+ (Zhu, 2009). Firstly, the technical efficiencies are calculated according to both the CRS and VRS approaches to arrive at a scale efficiency estimate. Technical and scale efficiencies can take on values between zero and one, where zero signals total inefficiency and one total efficiency.

3. Results and discussion

Descriptive statistics and linear regression analysis (first objective)

After the data was plotted, the heteroskedasticity of the variances was clear where the spread of the larger values of company size is much larger than those of the smaller company size values, which requires a log transformation to stabilise the data. Power curves seemed to be the best transformation for both heteroskedasticity and the residuals of the fit. An exception was made regarding to the two profit determinants of company size, EBIT and EBITDA, because these data contain some negative values where conventional linear regression analysis was applied.

Table 1 exhibits the descriptive statistics of the data. The average values are in all cases much higher than the mean, implying there are a few companies with appreciably higher variable values than the rest of the companies; the frequency distribution is positively skewed. The huge differences between the minimum and maximum values explain the relatively high standard deviation, indicating a wide spread of data. These descriptive statistics, together with the above-mentioned visual inspection of the data, are a clear identification that the effect of non-normality of the dependent variable and the heteroskedasticity of the variances will make a power curve a much more sensible analysis.

Table 1. Descriptive statistics of dependent and independent variables (R million)

	Average	Median	Standard deviation	Minimum	Maximum
Dependent variable					
CEO compensation	7.62	5.15	8.37	0.20	70.15
Independent variables					
Total assets 1	54168	4060	209425	5.812	1823796
Total assets 2	57319	4537	215332	9.215	1861401
Market value of assets	68464	5396	227854	1.359	1909039
Total equity	13705	1829	42914	3.172	444278
Market capitalisation	24850	2714	67792	-0.085	636229
Revenue	23573	2099	128439	0.044	1948725
Total costs	21730	1996	131109	-5061	2007607
EBIT	946	226	6910	-54677	40628
EBITDA	2073	297	7941	-15599	59788
Staff costs	2664	394	5960	0.000	43927
Personnel (actual number)	10372	3321	18703	0.471	111338

Table 2 exhibits that, in total, 244 companies were analysed. Only 231 companies (95 per cent) reported staff cost and only 194 (80 per cent) reported the number of personnel.

Table 2 exhibits a summary of the regression analysis. R^2 is important to indicate to what extent a change in CEO remuneration is explained by a change in the company size determinants. Guidelines supplied by Ellis and Steyn (2003) are applied to interpret the R^2 values. The regression for EBIT in the group All Companies was not sensible, since only 13% of the change in CEO remuneration is explained by the change in EBIT. The regression for EBIT (Financial, Mineral and Service) and EBITDA (All Companies and Financial) is significant and there is a deviation from zero ($0.13 < R^2 > 0.25$), but in the rest of the analyses, the regression is practically important and large enough that a linear relationship between the different company size determinants and CEO remuneration exists ($R^2 > 0.25$).

Table 2. Regression and correlation analysis between CEO remuneration and company size determinants

	R²	n	Intercept				x-variable		
All companies	R²	n	Coefficient R'000 #	p-value	H0		Coefficient R'000	p-value	H0
Total assets (1)	0.33	244	6.14	0.003***	Reject		3.5750	<0.001***	Reject
Total assets (2)	0.37	244	97.48	<0.001***	Reject		0.2575	<0.001***	Reject
Market value of assets	0.39	244	107.67	<0.001***	Reject		0.2477	<0.001***	Reject
Total equity	0.37	244	97.51	<0.001***	Reject		0.2731	<0.001***	Reject
Market capitalisation	0.36	241	137.80	<0.001***	Reject		0.2431	<0.001***	Reject
Revenue	0.45	244	174.16	<0.001***	Reject		0.2318	<0.001***	Reject
Total costs	0.51	230	86.30	<0.001***	Reject		0.2813	<0.001***	Reject
EBIT*	0.13	244	7198.90	<0.001***	Reject		0.0004	<0.001***	Reject
EBITDA**	0.24	244	6543.58	<0.001***	Reject		0.0005	<0.001***	Reject
Staff costs	0.57	231	130.16	<0.001***	Reject		0.2883	<0.001***	Reject
Number of personnel	0.46	194	690.92	<0.001***	Reject		0.2797	<0.001***	Reject
Financial									
Total assets (1)	0.39	68	0.21	0.301***	Not reject		5.0532	<0.001***	Reject
Total assets (2)	0.42	68	21.82	<0.001***	Reject		0.3184	<0.001***	Reject
Market value of assets	0.40	68	31.58	<0.001***	Reject		0.2942	<0.001***	Reject
Total equity	0.27	68	75.79	<0.001***	Reject		0.2644	<0.001***	Reject
Market capitalisation	0.31	68	61.41	<0.001***	Reject		0.2713	<0.001***	Reject
Revenue	0.46	68	49.49	<0.001***	Reject		0.3130	<0.001***	Reject
Total costs	0.49	54	69.41	<0.001***	Reject		0.3003	<0.001***	Reject
EBIT**	0.24	68	5707.51	<0.001***	Reject		-0.007	<0.001***	Reject
EBITDA**	0.20	68	5944.66	<0.001***	Reject		-0.008	<0.001***	Reject
Staff costs	0.66	56	128.64	<0.001***	Reject		0.2968	<0.001***	Reject
Number of personnel	0.45	42	923.28	<0.001***	Reject		0.2650	<0.001***	Reject
Manufacturing									
Total assets (1)	0.54	78	1.19	0.845	Not reject		4.5488	<0.001***	Reject
Total assets (2)	0.58	78	58.03	<0.001***	Reject		0.3046	<0.001***	Reject
Market value of assets	0.58	78	81.86	<0.001***	Reject		0.2783	<0.001***	Reject
Total equity	0.55	78	69.03	<0.001***	Reject		0.3079	<0.001***	Reject
Market capitalisation	0.54	78	147.55	<0.001***	Reject		0.2503	<0.001***	Reject
Revenue	0.62	78	34.87	<0.001***	Reject		0.3358	<0.001***	Reject
Total costs	0.61	78	34.86	<0.001***	Reject		0.3378	<0.001***	Reject
EBIT	0.59	78	5476.66	<0.001***	Reject		0.0014	<0.001***	Reject
EBITDA	0.56	78	5481.41	<0.001***	Reject		0.0010	<0.001***	Reject
Staff costs	0.64	78	56.27	<0.001***	Reject		0.3460	<0.001***	Reject
Number of personnel	0.52	73	504.79	<0.001***	Reject		0.3075	<0.001***	Reject
Mineral									
Total assets (1)	0.45	45	19.96	0.003***	Reject		3.0476	<0.001***	Reject
Total assets (2)	0.49	45	149.46	<0.001***	Reject		0.2402	<0.001***	Reject
Market value of assets	0.46	45	184.21	<0.001***	Reject		0.2257	<0.001***	Reject
Total equity	0.51	45	138.77	<0.001***	Reject		0.2541	<0.001***	Reject
Market capitalisation	0.42	42	227.59	<0.001***	Reject		0.2213	<0.001***	Reject
Revenue	0.45	45	728.05	<0.001***	Reject		0.1491	<0.001***	Reject
Total costs	0.45	45	222.35	<0.001***	Reject		0.2228	<0.001***	Reject
EBIT*	0.15	45	8323.90	<0.001***	Reject		0.0003	<0.001***	Reject
EBITDA	0.37	45	6400.61	<0.001***	Reject		0.0005	<0.001***	Reject
Staff costs	0.47	44	244.40	<0.001***	Reject		0.2467	<0.001***	Reject
Number of personnel	0.49	33	625.63	<0.001***	Reject		0.3007	<0.001***	Reject
Service									
Total assets (1)	0.52	53	0.93	0.954	Not reject		4.7130	<0.001***	Reject
Total assets (2)	0.53	53	42.31	<0.001***	Reject		0.3288	<0.001***	Reject
Market value of assets	0.55	53	59.41	<0.001***	Reject		0.2953	<0.001***	Reject
Total equity	0.52	53	43.20	<0.001***	Reject		0.3440	<0.001***	Reject
Market capitalisation	0.48	53	128.43	<0.001***	Reject		0.2540	<0.001***	Reject
Revenue	0.60	53	38.10	<0.001***	Reject		0.3294	<0.001***	Reject
Total costs	0.58	53	39.99	<0.001***	Reject		0.3285	<0.001***	Reject
EBIT*	0.25	53	7004.27	<0.001***	Reject		0.0007	<0.001***	Reject
EBITDA	0.26	53	6896.06	<0.001***	Reject		0.0005	<0.001***	Reject
Staff costs	0.52	53	59.01	<0.001***	Reject		0.3412	<0.001***	Reject
Number of personnel	0.49	46	336.73	<0.001***	Reject		0.3568	<0.001***	Reject

 # Transformed intercept (except for EBIT and EBITDA where actual numbers are used).
* Regression was not sensible, only 13% of the variance is explained.
** Regression is significant and there is a deviation from zero.
*** Significant at 1% (two-sided).

The coefficients of the intercept (transformed values, except for EBIT and EBITDA) and the x-variables are provided as well as the applicable p values, which indicate with how much confidence H_0 is rejected or not rejected. Regarding Total Assets (1) for financial, manufacturing and service companies, H_0 is not rejected, implying that the indicated intercept is not significant and could be zero. In the rest of the analyses, H_0 will be rejected at a significance level of one per cent, implying the intercepts are significant. In the two cases where a log transformation was not performed, i.e. EBIT and EBITDA, the coefficients of the intercept are for all the company groups higher than the average and the median CEO remuneration, implying that a CEO's fixed remuneration, regardless of the company size, should be higher than the average and/or median remuneration. These high intercept values lead to extremely low x-variable coefficients, implying a very flat regression line. For the financial companies, the x coefficients are even negative, implying a negative slope. H_0 will be rejected at a significance level of one per cent in all of the analyses regarding to the x variable.

According to the findings in this section, it is clear that the following company determinants may be applied as proxies for size, namely statement of financial position-based items, total assets (including intangible assets), market value of assets, total equity and market capitalisation; and statement of comprehensive income-based items, revenue and total cost. The profitability measures, EBIT and EBITDA, and the total assets (excluding intangible assets) are not recommended to use, because their relationship with CEO remuneration is practically not important. Furthermore, staff costs and the number of personnel seem to be excellent proxies for company size, but not all the companies disclose these items.

Technical and scale efficiency (second objective)

To reach the second objective of the study, an input-output DEA model is required to calculate the efficiencies, where the input variable is CEO remuneration and the output variables are multiple determinants of company size. From the above-mentioned recommended size proxies, it was decided to apply two items each from the statement of financial position and statement of comprehensive income. To ensure a variety in the data market values of assets and total equity, the largest and the smallest components in the statement of financial position, respectively, were selected. The two recommended size proxies from the statement of comprehensive income, revenue and total costs, are also included. To summarise, in the DEA model, the input and output variables are:

Input: $\quad x_1 = CEO\ remuneration$
Output: $\quad y_1 = Market\ value\ of\ assets$
$\quad\quad\quad\quad y_2 = Total\ equity$
$\quad\quad\quad\quad y_3 = Revenue$
$\quad\quad\quad\quad y_4 = Total\ cost$

For a company to be technically efficient, it should use as little as possible input (CEO remuneration) relative to as high as possible multiple outputs (company size). Normally, an item such as total costs will not be selected for an output variable, since companies aim to lower costs, but within this context, total costs (and the other three output variables) represent the company size, with the assumption that companies are aiming to expand their size. After the data were cleaned up by eliminating outliers, especially from the financial sector, descriptive statistics were calculated to present the following summary of the data per sector (Table 3).

Table 3. Descriptive statistics of input and output variables in DEA model (rand million) (n = 231)

Sector	Average	Median	Standard deviation	Minimum	Maximum
Financial (n= 56)					
CEO pay	7.01	4.34	7.12	0.20	31.69
Asset MV	166785	13783	396342	113.08	1909039
Equity	16183	2965	30358	3.60	152648
Revenue	14289	1102	35826	3.00	225425
Total cost	2511	103	5736	0.51	25255
Manufacturing (n = 78)					
CEO pay	7.77	6.08	9.02	1.73	70.15
Asset MV	30308	3318	106519	125.08	877256
Equity	9385	1524	29782	70.02	229541
Revenue	15287	4537	34020	38.02	199741
Total cost	2312	668	4704	10.00	22444
Mineral (n = 44)					
CEO pay	8.61	5.54	9.41	0.52	53.67
Asset MV	44750	3475	109599	1.36	629728
Equity	19790	2474	51922	7.77	312330
Revenue	20905	2088	46876	0.04	247538
Total cost	3552	662	7843	5.18	43927
Service (n = 53)					
CEO pay	8.20	5.78	8.18	1.08	50.00
Asset MV	31442	5093	73598	75.40	446218
Equity	6758	1208	17906	53.26	119771
Revenue	16605	5288	27755	13.95	147917
Total cost	2127	792	2969	2.01	10369

Software, purposefully developed by Zhu (2009), was used to calculate the input-orientated technical efficiency estimates to determine how efficiently each company is relative to the other

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companies in its sector. Using both the TE_{VRS} and TE_{CRS}, the model is capable to also provide the relative scale efficiency of each company, since SE = TE_{CRS}/TE_{VRS}. Table 4 exhibits a summary of the three efficiency estimates. For a more detailed analysis, each sector has been broken up into quadrants according to the ranking of CEO remuneration. To explain, the average TE_{VRS} of 0.261, 0.516, 0.236 and 0.443 for financial, manufacturing, mineral and service companies, respectively, implies that the input, CEO remuneration, should on average decrease by 73.9, 48.4, 76.4 and 55.7% for this group of companies, respectively, to operate on the less restricted VRS efficiency frontier. Table 4 provides clear evidence that companies with lower levels of CEO remuneration tend to have higher TE_{VRS} values, implying that they will find it easier than larger companies to move to the VRS frontier.

The average TE_{CRS} of 0.175, 0.190, 0.102, and 0.246 for financial, manufacturing, mineral and service companies, respectively, indicates the overall possible improvement, implying that, on average, companies in those groups should reduce CEO remuneration by 82.5, 81.0, 89.8 and 75.4%, respectively, to operate on the CRS frontier. In other words, from an input-oriented approach, CEO remuneration should on average be reduced by these latter percentages to enable the companies to linearly scale their CEO remuneration and size without changing the remuneration-to-size ratio. Manufacturing companies, and to a lesser extent service companies, show a trend suggesting that it is easier for larger companies to operate on the CRS frontier than it is for smaller companies.

The average scale efficiency of 0.574, 0.353, 0.371 and 0.524 for financial, manufacturing, mineral and service companies, respectively, indicates that those groups of companies should reduce CEO remuneration by another 42.6, 64.7, 62.9 and 47.6% to move from the VRS frontier to the CRS frontier to achieve economies of scale. The results regarding scale efficiency of all four sectors are similar, namely the scale efficiencies are the highest in quadrant 1, second highest in quadrant 2, followed by quadrants 3 and 4. Table 4 also exhibits that only two, three, two and two companies in the financial, manufacturing, mineral and service sectors, respectively, achieved CRS, implying that only those nine companies are fully scale efficient. Although the CRS approach is based on the assumption that companies are able to linearly scale their inputs and outputs without changing their efficiency, its value is that it has helped to arrive at the conclusion that 54, 75, 42 and 51 companies in the financial, manufacturing, minerals and service sector, respectively, did not achieve economies of scale. A few of these companies fall in the DRS part of the operation function, implying that they are too large in their scale of operations. The majority of the companies fall in the IRS part of operation, implying that they are too small in their scale of operations.

Table 4. Average CEO Remuneration, average SE and return to scale per sector per quadrant

n	CEO pay	Efficiencies			Return to scale		
		TE CRS	TE VRS	SE	CRS	IRS	DRS
Financials n = 56							
Q1	17384	0.204	0.262	0.794	0	12	2
Q2	5765	0.223	0.252	0.621	2	12	0
Q3	3382	0.145	0.198	0.540	0	14	0
Q4	1501	0.129	0.332	0.342	0	14	0
ALL	7008	0.175	0.261	0.574	2	52	2
Manufacturing n = 78							
Q1	16711	0.374	0.470	0.684	3	15	2
Q2	6817	0.163	0.388	0.356	0	20	0
Q3	4437	0.130	0.491	0.243	0	19	0
Q4	2681	0.083	0.724	0.114	0	19	0
ALL	7767	0.190	0.516	0.353	3	73	2
Mineral n = 44							
Q1	20828	0.160	0.194	0.713	1	6	4
Q2	7365	0.116	0.179	0.470	0	9	2
Q3	4317	0.035	0.151	0.191	0	11	0
Q4	1935	0.096	0.419	0.110	1	10	0
ALL	8611	0.102	0.236	0.371	2	36	6
Service n = 53							
Q1	18254	0.317	0.363	0.837	0	11	3
Q2	7247	0.430	0.510	0.730	2	10	1
Q3	4436	0.086	0.286	0.288	0	13	0
Q4	2105	0.144	0.618	0.218	0	13	0
ALL	8204	0.246	0.443	0.524	2	47	4

4. Conclusion

The first objective of the study was to empirically test a number of company size determinants' significance as size proxies in benchmarking CEO remuneration for the different sectors. The hypothesis test was helpful to find that the following determinants can be used as proxies for company size, namely from the statement of financial position, total assets (including intangible assets), market value of assets, total equity and market capitalisation; and determinants from the statement of comprehensive income, revenue and total cost. The high determination coefficients ($R^2 > 0.25$) and the confidence level of rejecting the null-hypothesis ($p < 0.01$) regarding to all these determinants in all sectors, led to the conclusion that they are on their own suitable proxies for company size and no further combinations, for example joint determinants from the statement of financial position and statement of comprehensive income, are necessary.

What makes this study unique is that it also investigated the extent to which companies are able to linearly scale their CEO remuneration and size without changing the remuneration-to-size ratio. An analysis of technical efficiencies according to the CRS and VRS approaches and scale efficiency has been done. The low average TE_{VRS} efficiency estimates of 0.261, 0.516, 0.236 and 0.443 for financial, manufacturing, mineral and service companies, respectively, led to the conclusion that most companies are not able to operate on the VRS frontier. The even lower average TE_{CRS} efficiency estimates of 0.175, 0.190, 0.102, and 0.246 for financial, manufacturing, mineral and service companies, respectively, led to the conclusion that all the companies in the sample, except the nine that achieved economies of scale (SE = 100%), are not able to keep the remuneration-to-size ratio constant when changing the CEO remuneration and/or the company size. Only nine companies are operating on the CRS frontier, implying that they achieved economies of scale. The majority of the companies fall in the increasing return to scale part and few in the decreasing return to scale part of the production function. To explain, say, for example, that the CEO remuneration is dependent on the company size as measured by total assets and the company can achieve economies of scale by paying its CEO 100 monetary units within a specific period; if it is operating on an increasing return to scale, it may, for example, require 50 per cent of the total assets to pay ten per cent of CEO pay, namely ten monetary units. On the opposite side, if it is producing on a decreasing return to scale, it may require, for example, three times as many total assets only to double the CEO pay. The value of this study is that it contributes to the literature because it indicates suitable proxies for company size when benchmarking CEO remuneration. Furthermore, the study concluded that the majority of companies are not able to linearly scale their CEO remuneration and company size without changing the remuneration-to-size ratio. The value of the study lies in the practical implication that many company size determinants are identified that can be used by board members to benchmark their CEO's package. Furthermore, the conceptual theory of scaling is to a great extent rejected, since only nine of 231 companies in the sample investigated could achieve economies of scale. Since most of the companies operate on the increasing return to scale part of the production function, analysts investigating CEO remuneration must keep this phenomenon in mind, i.e. that the remuneration-to-size ratio mostly favours CEOs. Further research that is recommended is to also investigate the scaling issue when other determinants of CEO remuneration, especially company performance, are included.

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MANAGEMENT DEVELOPMENT IN THE CONTEXT OF DEVELOPING UNIVERSITIES TECHNOLOGY IN SOUTH AFRICA

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Abstract

Management development is one of the critical capacity development areas in South Africa, more so in the wake of the vision of transformation of the country. In certain South African Universities, there is a challenge of promoting lecturers to managerial positions without any support of development. This paper reviews this practice particularly in the context of Universities of Technology. The findings reveal that universities in particular need to invest in its management development for purposes of sustainability and continuity.

Keywords: Management Development, Higher Education, Heads of Departments, Learning Organisation

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1. Introduction

According to the Council on Higher Education (CHE) there are about 50,000 instruction and research staff in all of South African Universities including permanent and temporary staff. This number is against almost 940 000 student head count enrolments (CHE, 2010). This translates to instruction and research staff to student ratio of I:19 in South Africa, whereas some Universities in Europe like University of Buckingham has 1 member of academic staff for every 11.4 students.

The report by Higher Education South Africa (HESA) on development of next generation of academics indicates that South African universities face a multi-dimensional challenge of attracting and retaining academic staff (HESA, 2011). The report alluded that young professionals perceive academia as particularly not attractive career option due to relatively low salaries, expanding student numbers and consequent high workloads (HESA, 2011). The study observed that another major challenge to the staffing of Universities is the aging of academics and current limited output of masters and doctoral graduates, which constrains the production of adequate numbers of next generation of academics (HESA, 2011).

In view of the above challenges, the higher education employment environment is becoming increasingly competitive, especially to the detriment of historically under resourced institutions and smaller Universities of Technology which cannot compete equally with the richer and established Universities. Currently, the proportion of academic staff at MUT with PhD qualification is 9% for one of the Universities of Technology against the national average of 37%. There is the dare need for capacity enhancement both in terms of discipline specific professional development as well as management development of academics especially those that assume leadership roles as heads of academic departments.

This paper seeks to explore the extent of management development amongst South African universities' Heads of Departments in the country. Universities are considered to be knowledge banks for all countries where future leaders and a workforce of a country are molded for various careers. It can also be safely assumed that leaders and managers of such institutions, as by-products of these same centres of excellence, are afforded world class training and development to enable them to direct and lead effectively. Some studies have been conducted in United Kingdom (UK) in this regard: in 1980 *'Higher Education: by St. Edward P. And 'Developing University Managers' by Alison Bone and Tom Bourner -1998 respectively*, focused on the issue of management development of university managers. The angle taken in this study was a comparative one, of management development issues that were raised before the millennium both the UK and in the millennium in South Africa.

Management Development

Having been a practitioner at the Human Resource Department and particularly at different skills unit for different employers respectively, an observation has been made that there is a great need for management development in organisation. The success of organisations heavily lies on their management attributes (Strydom; 2011). According to Meyer (2012; 3) "training is an important function in any organisation...if your employees are not competent, there may well be failure awaiting your company". This statement is further confirmed by Lowies & Somera (2012; 4); Babajide (2010) where they stated that; "one common factor to the success of an organisation is the skills, knowledge and experience of the employees." The South African legislation also promulgates the training and development of employees (SDA 1998) and (NSDS 2011). Management and therefore management development is in the agenda of government as the Sector skills plan of 2011 depicted it as one of the critical skills. There is a strong assumption that effective management has a direct loop to sustainable organization which may have a direct impact on country's economy (Strydom;2011). Thompson, Mabey, Storey, Gray &Isles (2001) in Lowies & Somera (2010); Babajide (2010) emphasize the vital role of management development. They took a holistic approach that views it as a process which includes formal learning of skills and knowledge as well as informal and experiential modes of human capital formation. Whilst, Mc Cauley et al (1998) in Wahat et al (2013; 1) explore management development/leadership development and sum it up as 'expanding the collective capacity of organisational members to engage effectively in leadership roles and purposes'. There is a strong belief that managers in organisation which are managers at different levels ought to lead the process of learning.

McGurck, (2009:458) contends that there is an assumption that all managers, whatever their levels in the organisation require 'leadership' skills to communicate objectives to staff and motivate them to deliver or surpass expected levels of performance". He further asserts that management development cannot be divorced from leadership development as the cognitive skills and soft skills are essential as well. This argument is supported by Herbst & Conradie (2011) who take a further angle on the matter where they mention that, for leaders to be able to transform their organisation to become more effective, they first need to understand themselves- personal mastery.

Management Development in the Context of Learning Organization

From the argument and expectations that have been tabled above, these studies enable one to conclude that management development may not exist in an organisation where there is no learning culture (Meyer; 2012). In learning organization context (Senge; 2007) it encourages working as a team, sharing the vision of the organisation, understanding own potential (personal mastery) and capabilities, mental models and systems thinking. Such combination is what is thought to be desirable in organizations who aim to pursue the process of management development actively. It circumference management development as it cut across the argument of where exactly learning should take place, how and what aspects should be covered.

A learning organization as a learning system is an 'ideal' learning that organizations aspire to achieve. It is a long journey of learning where all kinds of learning are incorporated, and it is where employees and employers learn to be productive, and to respect and value each other with the purpose of achieving a common goal. It creates the synergy that all organizations desire to overcome their respective challenges. Functioning in the learning context, organisations; could reap benefits of involvement and engagement as functionalist view (Jackson; 2007) encourages 'hands on' model.

Institutions of higher education environment have become turbulent and 'more complex to manage' lately (Hesa; 2013). This has been exacerbated by students' demands and up risings which have become another norm, more especially at the beginning of each academic year. Management development becomes a critical and crucial exercise at this juncture, especially in higher education where transformation is still at infancy stages (Herbst & Conradie; 2011). In the early 2000s, Institutions of Higher learning were thrown into a merger processes with other universities which generally came with acute challenges and resistance. It was further complicated by the fact that South Africa had been transformed to a democratic governance which for some was still a bitter pill to swallow. This is further aggravated by the fact that the Baby-Boomers are exiting the world of work, with lots of experiences, and the millenniums are entering the exciting world of work with limited experience (Schreuder & Coetzee; 2011). Considering the said challenges one may presume that there are many underlying issues that management in universities need to be prepared for, the assertions made here reflect the diversity of issues and allude to their intensity to which all managements should rise.

In 2011 Higher Education Quality Council (HEQC) conducted an audit to analyse all systems in place at a particular University of Technology in South Africa. After a thorough analysis they made recommendations, amongst which two point are highlighted for the purpose of this paper. These read: (HEQC; 2012 report). First point - "Stakeholders, moreover, recognise that the strategic goals are unattainable without having an effective and

competent management team to drive infrastructure and resource development. Second point- "The absence of effective institutional planning; a dysfunctional institutional culture; characterised by fear for a range of reasons, including low staff morale also added to this demoralising situation." These recommendations were cautioning that particular Institution of Higher learning to pay attention to its management development so that they can respond effectively to those concerns. Are these concerns exclusively to this institution or is it a common issue?

Management, specifically in Higher education in South Africa, as related literature indicates, points to the fact that there is a special need to develop management skills of Heads of Departments (HODs). This assertion comes with the normal practice of just promoting them to management level based on the years of service and high qualifications they possess (Herbst & Conradie; 2011). The newly appointed and promoted individuals' job description basically entails the following responsibilities:

University management
• Academic leadership
• Financial management
• Strategic planning
• People management
• Governance
• Marketing and communication
• Physical resource management
• Health & Safety
• General

It is interesting and of note then to know how these incumbents are prepared for their new roles and capacities; as they will be required to perform at the strategic level of the organization. There are critical questions around the development of HODs that need special attention like the following. Is management development mandatory for newly appointed managers or specifically academic managers? If the opportunity of development is availed, is it ever utilised? How are they mentored, coached and motivated? Are there any clearly articulated programmes for management development as applied within the parameters of the basic education principles?

St.John and Weathersby (1980; 113); Bone & Bourner (1998; 286) (Herbst & Conradie; 2011) hold that 'traditionally, colleges and universities have promoted people successful in their academic pursuits, usually with advanced training in a specialised academic field, to positions of leadership-department heads, academic deans, and presidents.' The study revealed no record of proper induction and development into these newly acquired positions of power. The transition and change from one position to the next may come with insecurity and fear of the unknown.

Plakhotnik, Maria S. Rocco, Tonetter, (2011) suggest that employees in this new phase should be taught processes and procedures required of an administrator and manager of people. Nancy Reardon also (2011; 6) states that new managers need to be taught to manage complexity, remove barriers, negotiate requests, build partnership, build accountability. These individuals are not inducted well into these positions and according to Partington (1994) in Bone & Bourner (1997; 297) and these individuals are expected to perform duties like:
• The changing resource base allocation systems
• More robust accountability at all levels
• The encroachment of government
• The influence of employers and other organisations
• The impact of technological developments
• Fluctuating policies on entry to higher education

Bone & Bourner (1998; 295) highlight the findings that were made in 1997 in UK alone management development has increased though there is an insignificant increase in universities. Another remarkable finding that was made was; "Management development programmes that run successfully in other business organisations have a slow take-up rate in universities and personnel professionals are fighting an up-hill battle in their attempts to promote continuous professional development for managers." South African Skills Development Facilitators (SDF) in public universities are still encountering similar challenges; in the millennium. University SFD or rather skills development unit will draw a skills development calendar for the subsequent year which emanate from skills needs analysis for each individual, this is normally communicated in advance to individuals concerned. However there are always challenges with attendance of such courses or programmes. This results in frustration for the organizer (SDFs), wasteful and fruitless expenditure for institutions.

It is generally held that the effectiveness of a manager lies in her or his ability to:
• Maintain a favourable work environment
• Create opportunities for all employees to perform at their best
• Act as a leader (and a follower, depending on the situation)
• Communicate continuously with other employees and motivate them, and
• Acknowledge and reward good performance considering the limited resources

The authors of Leadership and Management magazine (July 2012: 31) advice those, promotion of employees need to be planned in advance to avoid frustration to incumbents and disappointment to the employer.

Conclusion

It is thus evident that there is work cut out for institutions of higher learning in this country. Preparedness for the new dispensation is the key

attribute to all that intend to hit the ground running and be sustainable in future. A close exploration of practices in an institution of higher education is needed, to analyze management roles thus enabling the institution to move forwards as over recommendations and all that the project will throw up, which can also be a learning curve for sister institutions in the country which also find themselves in the same boat.

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INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) ADOPTION IN VIETNAM: IF, WHEN AND HOW?

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Abstract

The paper examines the perceptions of Vietnamese accounting practitioners and academics regarding the optimal approach and timeline of IFRS adoption in Vietnam. Perceptions were obtained and analysed from 3,000 questionnaires sent to Vietnamese auditors, accountants, and accounting academics across Vietnam in 2012. A total of 728 usable responses were received producing an effective response rate of 24 per cent. The majority of the respondents considered that IFRS adoption should be permitted for voluntary adoption rather than mandatory adoption. The results indicate that the staggered convergence approach is more optimal than the big bang approach of IFRS adoption. A five year period for transition and preparation with some difficulties and obstacles associated with IFRS implementation is anticipated. The findings will assist accounting practitioners, educators, and policy makers to prepare themselves for the implications of IFRS convergence and adoption.

Keywords: IFRS, Vietnam, Perceptions, Accountants, Auditors, Academics, Mandatory, Voluntary, Adoption, Approach, Timeline

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1. Introduction

To date, over 100 countries have permitted or required IFRS reporting (IFRS 2014). Some countries fully adopted IFRS as their national accounting jurisdictions, some required or permitted IFRS only for banks, regulated financial institutions, and listed companies. Others required IFRS in the absence of a national standard dealing with particular issues. The vision of a single set of high quality global accounting standards has been publicly supported by many organisations including the World Bank, the International Monetary Fund, the International Organizations of Securities Commissions (IOSCO), and the International Federation of Accountants (IFAC). Thus, IFRS adoption is increasing within developing and emerging economies. In Vietnam, although IFRS are not mandatorily required; the standards are voluntarily complied by Vietnamese businesses at forms of dual reporting or providing additional disclosures. For example, some Vietnamese publicly listed entities are producing two separate sets of financial statements (one complied with the mandatory Vietnamese accounting standards and the other complied with IFRS provisions) with the

intention to cross-list in the overseas stock exchanges. Most subsidiaries of multinational companies in Vietnam are dual reporting for consolidation purposes by their parent companies. State Bank of Vietnam and other Vietnamese commercial financial institutions also comply with IFRS reporting provisions. Little is known about the motives of Vietnamese businesses who voluntarily comply with IFRS. This papers attempt to bridge this research gap by addressing three research questions of **"If / How / When will IFRS adoption occur in Vietnam?"** The survey provides perception-based evidence regarding the optimal approach and timeline of IFRS adoption from Vietnamese public auditors, corporate accountants and accounting academics. The findings will aid the accounting practitioners, educators, and policy makers to prepare for the implications of this critical accounting phenomenon.

The current paper is structured as follows. Section 2 reviews the literature on the effects both mandatory and voluntary IFRS adoption categories. Section 3 outlines the research methodology. This is followed by the discussion of the survey findings in Section 4 and suggestions for Vietnamese standard setters from the respondents in Section 5. The paper

concludes with a summary of the outcomes together with the limitation and recommendation for future research in Section 6.

2. Literature review

Empirical studies on the effects of IFRS reporting fall into two categories, depending on whether they analyse voluntary or mandatory adoptions. The subsections below review the extant literature in both categories.

Studies of voluntary IFRS adoption

Recent trends in international accounting research seem to indicate that researchers focused on voluntary adoption of IFRS within the European Union (EU) before 2005 (only 25 members of the EU in 2005). In the stream of IFRS adoption to the EU members, Daske *et al.* (2009) classified firms that voluntarily applied IFRS into "serious" and "label" adopters. The distinction was based on actual reporting behavior between firms. It turned out that some adopters seriously modified their financial reporting strategy after adoption (serious adopter); whereas others used the flexibility of IFRS to keep on using their usual financial reporting strategy under the new international label (label adopter). Daske *et al.* (2009) found that markets responded differently around IFRS adoptions, specifically, positive effects of adoption were more pronounced for serious adopters than label adopters. When the two groups of adopters were pooled together, the average effects of adoption become modest. Barth, Landsman and Lang (2008) investigated the effects of voluntary adoption of IFRS on various measures of accounting quality. They found that adoption significantly improved accounting quality by reducing earnings management and enhanced both the value relevance of accounting numbers and the timeliness of loss recognition. In spite of this, they also suggested that the results could be partly attributed to changes in firms' incentives, as well as the varying economic environments of the sample firms.

Empirical studies on the economic consequences of voluntary IFRS adoptions generally analysed direct capital market effects, such as liquidity or cost of capital, or the effects on various market participants, such as the impact on analyst forecast properties or on the holdings of institutional investors. Leuz and Verrecchia (2000) examined German firms that adopt IFRS or US GAAP and found that those firms exhibit lower bid-ask spreads and higher turnover compared with German GAAP firms. Using implied cost of capital estimates, Cuijpers and Buijink (2005) did not find significant differences across local GAAP and IFRS firms in the European Union (EU). Daske and Gebhardt (2006) examined voluntary IFRS adoption by German firms and finds that they exhibit a higher cost of equity capital than local GAAP firms do.

Karamanou and Nishiotis (2009) showed positive short window abnormal returns around the announcement of IFRS adoption. Daske *et al.* (2009) analysed liquidity and cost of capital effects around voluntary IFRS adoptions. They showed that only firms with concurrent changes in their reporting incentives or reporting practices experience liquidity and cost of capital benefits to highlight the endogeneity of IFRS adoptions.

There are also studies on the reaction of market participants to voluntary IFRS adoptions. For instance, Cuijpers and Buijink (2005) found an increase in analysts following around IFRS adoption. Similar, Ashbaugh and Pincus (2001) showed that analyst forecast errors are positively related to differences in accounting standards between IFRS and various local GAAP, and that the accuracy of these forecasts improved after firms adopt IFRS. In the same line, Covrig, Defond and Hung (2007) documented that foreign mutual fund ownership was significantly higher for IFRS adopters compared to national GAAP firms and that the difference in mutual fund holdings increased for firms in poor-information environments and with low visibility. These results suggested that IFRS reporting helped firms attract foreign investment.

The evidence on voluntary IFRS adoptions is somewhat mixed, but on balance suggests that voluntary adopters experience positive capital market effects. However, these results need to be interpreted carefully due to limitations of self-selection. Since it is the firm's choice when to adopt IFRS, it is difficult to attribute any observed economic consequences to the accounting standards itself. It is possible, if not likely, that the effects are attributable, at least in part, to the factors that gave rise to the IFRS adoption decision in the first place. As a result, the evidence of the potential costs and benefits of IFRS for firms with particular characteristics could not provide a rationale for a switch to IFRS or adopting IFRS as mandated standards.

Studies of mandatory IFRS adoption

The objectives of mandatory IFRS adoption are to reduce the cost of capital and open new opportunities for diversification and improved investment returns (Tweedie 2007). For example, Li (2010) reported a lower cost of capital immediately in the first year of IFRS adoption as mandated standards. However, the cost saving effect occurs only in nations with strong enforcement mechanisms (Karamanou & Nishiotis 2009). A key issue with this argument is the strong legal environment can only be applicable to the well-established capital market (Shi & Kim 2007). There is inconsistency with this argument given that the aim of IFRS is to be a single global set of reporting standards. The standards could not be globally accepted if it is not adopted by major economies such

as the United States, Brazil and Japan (Hail, Leuz & Wysocki 2010a, b)

Similarly, when considering voluntary IFRS adoption, most researchers focus on the European Union (EU) members to examine the effects of mandatory IFRS as there has been recent momentum in the EU. The EU has mandated that all EU-listed companies adopt IFRS beginning in 2005. Many studies examined the market consequences of IFRS mandatory adoption on security market analysis (Christensen, Lee & Walker 2007; Hail & Leuz 2007). The capital market analysts are expected to be key users of financial statements and benefit most if reporting under IFRS increases the quality, credibility and transparency of financial figures (Tarca 2012).

A large and growing body of literature has investigated the impact of IFRS mandatory adoption on the cost of equity. Empirical researches provided mixed evidence. On the one hand, the researchers argued that IFRS mandatory adoption results in a significant lower cost of equity capital (Daske *et al.* 2008; Li 2010). On the other hand, Lee, Walker and Christensen (2008) found limited and mixed evidence of a cost of equity capital reduction from the pre- to post-IFRS periods in the European countries. Impact of IFRS voluntary adoption on cost of equity was also mixed (Leuz & Verrecchia 2000; Barth, Landsman & Lang 2008; Karamanou & Nishiotis 2009). An implication of these mixed results is the possibility that firms have considerable discretion in how they adopt IFRS. Economic consequences such as lower cost of capital depend on the extent to which IFRS adoptions represent a "serious" or "label" commitment to transparency reporting according to IFRS (Daske et al. 2013).

At present, there is no direct evidence for the explanation that concurrent changes in the institutional environment are responsible for observed capital market outcomes. However, Christensen, Hail and Leuz (2013) showed that capital market effects around the introduction of mandatory IFRS reporting are not evenly distributed across countries. There are several possible explanations for this result. First, in countries with weak legal enforcement and manager's reporting incentives, market liquidity and firm value remain largely unchanged around the IFRS mandate (Hail & Leuz 2006). Second, the effects around mandatory adoption are most pronounced for countries that exhibit large local GAAP/IFRS differences and have strong legal enforcement or strong manager's reporting incentives (Daske et al. 2009). The two arguments suggest that the strength of countries' enforcement regimes and firms' reporting incentives play a major role for the documented capital market effects (Christensen, Hail & Leuz 2013). Viewed more broadly, these arguments are also in line with the notion of complementarities, in that the effects of IFRS adoption seem to depend on *other elements* in countries' institutional infrastructure. Consistent with this notion, a recent

study by Lee, Walker and Christensen (2008) suggested that the *other elements* include outsider rights, the importance of the equity market, ownership concentration, disclosure quality and earnings management.

Prior research has suggested that financial reporting practices did not necessarily change after mandatory adoption; firms could adopt the "label" of IFRS and then used its flexibility to retain existing accounting policies. Consequently, uniformity of accounting treatments was not an automatic outcome of the mandatory adoption of IFRS. Further, empirical evidence suggested that accounting quality not necessarily improves after IFRS mandatory adoption.

3. Methodology

A mailing questionnaire survey was conducted across Vietnam in 2012. The sample included 3,000 Vietnamese accounting professionals who were knowledgeable or well acquainted with accounting standards. The sample were categorised in three different groups (1,000 participants for each group). The first group, auditors, was selected because they apply accounting standards extensively to provide the assurance and consulting services to their clients. The second group, accountants, was selected because they are the heads of the accounting departments, being responsible to review or prepare the financial statements of the firms or companies they work for. The accounting academics were selected as the last group of survey participants because they are knowledgeable and well aware of the importance and significance of the study. The questionnaire was validated through pilot study before the commencement of the main research survey. The questionnaire included both close-ended and open-ended format questions. A total of 728 usable responses were analysed producing an effective response rate of 24 per cent.

4. Findings

As shown in Table 1, the majority of the respondents viewed that IFRS adoption should be either permitted for voluntary adoption for all entities (63 per cent), or restricted to a certain capital ownership such as foreign invested entities (62 per cent), publicly listed entities (60 per cent), banks and financial institutions (52 per cent). The descriptive results are further supported by the written comments from the survey respondents. Most of the respondents expressed their view that the businesses should be allowed for IFRS voluntary adoption without intervention from the government. For example, "Let business choose and use either VAS or IFRS, government does not interfere" (R90 2012). "Should let it be voluntary, do not force mandatory, at least for another 10 years" (R313 2012). The respondents also expressed their concern that VAS cannot align with IFRS when the

IASB announces new standards or makes revisions in the existing standards. "Ministry of Finance should update or make companies free to update IFRS when it has been changed automatically" (R46 2012).

Amongst the three groups of accountants, the academic group showed stronger support for voluntary IFRS adoption than the auditors and the corporate accountants.

Table 1. Perceived optimal adoption approach

Ranked order	Approach of adoption	Percentage (%) of respondents "agreeing"			
		Auditor	**Accountant**	**Academic**	**Weighted Average**
	Voluntary adoption (VO)				
1	VO-All entities	60%	64%	64%	63%
2	VO-Foreign invested entities	61%	59%	69%	62%
3	VO-Publicly listed entities	56%	58%	70%	60%
4	VO-Financial institutions	43%	55%	58%	52%
	Mandatory adoption (MA)				
1	MA-Foreign invested entities	34%	51%	51%	46%
2	MA –Publicly listed entities	39%	42%	48%	43%
3	MA-Financial institutions	42%	39%	44%	41%
4	MA-All entities	18%	19%	28%	21%
	Approach (AP)				
1	AP-Convergence	67%	64%	66%	65%
2	AP-Adaption with adjustment	61%	56%	71%	61%
3	AP-Full adoption	24%	36%	29%	31%
4	AP-Not allow	5%	6%	1%	5%
5	AP-No change	7%	3%	5%	4%

In contrast, mandatory IFRS adoption was not supported by the majority of respondents. Less than half of the respondents perceived that IFRS adoption should be mandated for foreign invested entities (46 per cent), publicly listed entities (43 per cent), banks and financial institutions (41 per cent). About one-fifth of the respondents (21 per cent) viewed that IFRS adoption should replace VAS as mandated standards for all reporting entities. Most of the endorsements for mandatory IFRS adoption were from the respondents working for the foreign-invested or publicly listed companies, and the most prevalent amongst these were from these respondents who worked for corporations that were currently compliant with IFRS.

With regards to the adoption approach, about two-thirds of the respondents expressed greater accord on the staggered approach (convergence or adaption) than the "big-bang" approach (full adoption). Respondents perceived the staged convergence approach, that is, introducing IFRS standard-by-standard and eventually having a Vietnamese accounting system comparable to IFRS, as optimal (65 per cent). The adaptation approach, which is selective adoption several IFRS, amend and adjust the standards to suit the Vietnamese context, was also viewed as a viable adoption approach by close to two-thirds of the respondents (61 per cent).One-third of the respondents perceived the full IFRS adoption as the best approach. Time constraints and cost considerations were viewed as key reasons for not fully adopting IFRS, especially in the short term. Typical comments from the supporters of IFRS full adoption are "VASC should consider full[y] adopting IAS/IFRS. It is already made and internationally recognised (R330 2012)"; or "fully

adopting IFRS to save costs of researching and conflict resolution as ultimately VAS will be in line with IFRS. This is also consistent with the region and most of countries in the world (R370 2012)". Several respondents coming from state-owned or private enterprises also favoured a full adoption approach. For example, the Manager of state-owned enterprises commented, "Should apply all IFRS instead of issuing VAS" (R62 2012).

Other respondents commented more specifically to the adoption approach.

"So if we want to adopt IFRS and amend VAS, we should train the professional people who can understand IFRS clearly and have ability to teach what they understand to others. Hence, it will be better when we adopt IFRS and not misunderstand what the standards say" (R27 2012).

"When changing VAS to IFRS, [the policy maker] should consider the larger scale where government officials use the financial reports for their own evaluations such as taxation or qualifying for special treatment from government" (R724 2012).

"[IFRS] should [be] mandatory for large or multinational companies. The business needs transition time and should be voluntary only for small and medium sized companies. In practice, [IFRS reporting] is too expensive and time consuming, thus it is not necessary [for SME]" (R716 2012).

The respondents expressed the important role of the Vietnamese regulator in the adoption process. Typically many comments reflected the notion that "the Committee should be more pro-active in this process" (R30 2012) or "they should independently act without any influence by Vietnam Government" (R90 2012). It was recommended by one academic that:

"The active role of Vietnamese accounting setters should take into consideration the possibility of adopting IFRS. Further, the role of the development of the Vietnamese stock market should take into account the possibility of adopting IFRS" (R730 2012).

Several respondents rejected the full adoption of IFRS and identified major problems that will occur from such an approach. The respondents raised the often-argued case about IFRS not being suitable for the cultural and socioeconomics environment of a former communist country such as Vietnam. Typical comments were as follows:

"VAS is somehow similar to rule-based while IAS closer to principle-based" (R27 2012).

"Vietnam does not accept the capitalist economy and the government still wants to control business operations" (R90 2012).

"From the state management level, some [standards] are not appropriate to the business environment of Vietnam" (R263 2012).

"[Unsuitable] environmental factors for IFRS implementation" (R459 2012).

Other respondents suggested that IFRS should be required for certain types of business ownership only. For example, one auditor respondent expressed that IFRS *"should be applicable to some [businesses] only as it is costly"* (R94 2012). It was further explained by a finance executive of a foreign invested company:

"Currently, the majority of the foreign invested companies apply IFRS in their audited financial statements. Therefore, IFRS implementation will directly impact on the state-owned and private-owned enterprises. In my opinion, conversion to IFRS requires a lot of time. Fully IFRS conversion is impossible unless the transparency of financial statements are popular [required]" (R741 2012).

An additional source of resistance was the concerns that Vietnam has a lack of involvement in the standard setting process. As explained by one of the respondent from the academic group:

"Vietnamese accounting standard setter has not actively involved in issuing IFRS. For example, there is no known comment letter for IFRS exposure draft that Vietnamese standard setters send to IASC" (R730 2012).

In addition, the respondents viewed that there seems to be lack of support for IFRS from the standard setters and other regulatory authorities. The received comments indicate this conservatism from the accountant group *"Ministry of Finance does not support"* (R388 2012) and also from the auditor group *"Will the state authorities and the accounting professional bodies recognise IFRS or VAS?"* (R737 2012).

Some comments were negative and expressed a lack of trust that the accounting transformation would occur. For example, reasons given for this by respondents was that *"the Vietnamese accounting system can contain unclear and inexplicit terms"* (R406 2012); *"Current regulations are too complicated to change and the government does not want to change their power"* (R718 2012); and *"IFRS adoption not really come to life"* (R473 2012).

The comment of one respondent as the Head of a publicly listed company was mystifying. First, the respondent wrote:

"Vietnamese Accounting Standards Board (VASB) is, of course, the central part of this adjustment. You should challenge yourself to allow for problems to occurs and mistakes to be made within your organisation....The biggest problem with IFRS is not the standard itself, it is culture and mindset of people trying to do best they can, but being afraid of 'responsibility'...This is VASB biggest challenge" (R101 2012).

Then the respondent recommended:

"Do your best. Do your best together. Look only forward. Work hard. All of them are important, but do not tackle one or two as more important than the others" (R101 2012).

Useful approaches regarding IFRS adoption processes could be derived from the comments of the respondents made as they were asked to add any relevant suggestions they might wish to make to the Vietnamese Accounting Standards Board (VASB) concerning the accounting legislation and IFRS related policies.

"VASB should take the active role in the process of issuing VAS and equally important revise the 'old' VAS. No updated VAS according to new IFRS version is an evidence of lacking the path as to the process of adopting and converging with IFRS. Further, VASB should have and announce a clear plan for IFRS adoption, adaptation, or convergence" (R730 2012).

"Current VAS rules are so outdated. The VASB needs to speed up, update the existing VAS, and issue new VAS as soon as possible, to match the trend and amendments of IFRS in the world" (R894 2012).

"Full adoption of IFRS to save the cost of researching and conflict resolving as ultimate VAS will be in line with IFRS. This is also consistent with region and most of countries in the world" (R413 2012).

"VAS should be matched with IAS and IFRS as soon as possible" (R828 2012).

"The priorities are framework for convergence, then updating the legal framework and accounting law. Establishment of the VASB should be given full power. Clear objective and strategy" (R287 2012).

"Continue to issue additional VAS to complete the current set of VAS based on IFRS. Clear plan and pathway of VASB's intention towards IFRS" (R859 2012).

"VASB should involve different groups of accounting professionals, especially auditors. These people have practical experience in both accounting and auditing fields" (R215 2012).

"VASB should encourage the participants of academia, the lecturers of universities" (R231 2012).

"They [VASB] should independently act without any influence by Vietnam Government" (R90 2012).

"Need to make clear differences between VAS and IFRS to demostrate the convergence approach is most appropriate and superior. Develop the detailed guidance for first-time IFRS application" (R262 2012).

In terms of the timing of IFRS adoption, the respondents perceived that conversion from VAS to IFRS would not be happening in the short-term (Table 2). In particular, less than 10 per cent of the respondents believed that one year is sufficient for preparation and transition towards IFRS adoption. The optimal timeline for preparation and transition is seen to be between two to five years (viewing by 57 and 62 per cent of the respondents), or over five years period (viewing by 34 and 33 per cent of the respondents).

Table 2. Perceived optimal timeline of adoption

Timeline adoption	Percentage (%) of respondents "agreeing"			
	Auditor	**Accountant**	**Academic**	**Weighted Average**
Timeline for preparation				
1 year	5%	15%	3%	10%
2 – 5 years	59%	57%	52%	57%
Over 5 years	35%	28%	45%	34%
Timeline for transition				
1 year	3%	8%	3%	5%
2 – 5 years	65%	64%	52%	62%
Over 5 years	33%	28%	45%	33%

To allow for a successful transition and conversion to IFRS, the survey respondents perceived that the Vietnamese regulators should conduct the following actions as priority:

- issuance of road map of with a clear timetable of IFRS conversion (R368 2012);
- step by step revision of the current VAS to inline IFRS (R369 2012);
- consistency between VAS and other accounting legislation (R390 2012);
- making IFRS translated version publicly available on a timely manner (R397 2012);
- moving VAS away from information required under a centrally planned economy (R10 2012).

Recommendation to Vietnamese standards setters

The comments, specific observations and recommendations received from the participants of the survey could be used to assist in the adoption policy by the Ministry of Finance and the Vietnamese Accounting Standards Board (VASB). In order to advance the process it is recommended the Vietnamese policymakers consider the significance of this research and the suggestions raised by the participants of the survey.

First, the respondents suggested that the goal of "VAS convergence with IFRS" project should be both functional and operational. It is suggested that the VASB continue to set out the ultimate goal of bringing VAS in line with IFRS. It is further suggested that the VASB maintain awareness of the challenges addressed in this study as well as issues faced by various adopted countries and continue to work with the profession to overcome these obstacles.

Second, based on the comments of the survey respondents, in order to ensure the highest quality of accounting regulation in Vietnam, it is suggested that the Ministry of Finance improve the governance and the consultation process. The standard setting agenda should be transparent, timely and subject to the extensive consultation with the variety of stakeholders including professional bodies, accounting firms, financial institutions, academies and companies representing each industry.

Third, greater clarification and better enforcement of accounting and auditing regulations are suggested before Vietnam can move to IFRS, a more investor oriented system of financial reporting. A support for the adoption of IFRS as mandatory standards become clear after the Ministry of Finance issued Circular 210/2009/TT-BTC. The circular allows companies to decide whether they want voluntarily complying with IFRS for financial instrument transactions.

The respondents anticipated that a completion of Vietnamese accounting standards in accordance with IFRS is a matter of time. During the transition period, the respondents suggest the Vietnamese standard setters consider the convergence process of China and other successful IFRS adopters in Asia. In particular, IFRS is required on the consolidated financial statements of publicly listed companies, permitted as

management choice for the single financial reporting of listed and non-listed companies.

In terms of the development of Vietnamese capital markets, there are some concurrent issues of financial reporting of the publicly listed companies which need to be addressed. First, some listed companies occasionally publish their audited annual reports and quarterly reports late. Other listed companies do not disclose and explain the differences between pre and post-audited financial information. Some listed companies do not even comply with the disclosure requirements (Tower, Vu & Scully 2011). From the issues of reporting practices in listed companies, it is recommended that the market regulators and government authorities (in these circumstance are the State Securities Commission and the Ministry of Finance) establish mechanisms to fix the non-compliance issues. In particular, the survey respondents suggested that:

- The Ministry of Finance enhance the legal framework on accounting and auditing services. The legal framework should be in line with international practices; and
- The State Securities Commission enforces the financial disclosure regulations consistently to both listed and non-listed companies; disregarding the differences in size, and number of shareholders between companies.

Summary and conclusion

Vietnamese accountants viewed that IFRS adoption should be permitted on a voluntary basis rather than become a mandatory requirement. Eventually, when the Vietnamese businesses are more prepared and ready for transitioning from reporting under VAS to IFRS, mandatory IFRS compliance can be required for certain capital ownership structures, including foreign invested companies, publicly listed companies, banks and financial institutions. Regarding the optimal adoption approach, the respondents expressed greater agreement on the staggered approach (convergence or adaptation) than the "big bang" one (full adoption). Regarding the optimal timeline, the respondents viewed a period of 5 years as sufficient for transition and preparation. To allow for a successful and smooth transition, the respondents urged Vietnamese policymakers to announce the roadmap and pathway toward IFRS adoption.

The key implications of the current study to policies and practices are:

- For capital market participants, this study confirms a concern that the adoption of IFRS may not achieve the designed benefits because of inconsistency in the implementation and weak enforcement mechanisms of immature capital markets such as Vietnam;
- For accountancy professional bodies, the result should alert the four professional bodies in this

study, including the Vietnam Association of Accountants and Auditors (VAA), the Vietnam Association of Certified Public Accountants (VACPA), the Association of Chartered Certified Accountants (ACCA) and CPA Australia about their roles and influential levels towards the development of accounting profession in Vietnam;

- For accounting experts in audit firms and universities, the result should encourage these experts to actively contribute their expertise to the journey towards IFRS compliance; and
- For Vietnamese standard setters, the results provide a signal that greater effort is required to effectively and consistently enforce accounting and disclosure standards if the convergence with international accounting practices is to bring the expected benefits to investors and other users.

From a global perspective, the findings of the paper may add to the debate of how and when developing countries adopt IFRS. The IASB has not paid sufficient attention to the different legal framework of each country, and the different company needs when implementing IFRS (Ram 2012). The story of Vietnam, as a representative of developing countries, may be useful for the IASB in the process of improving global convergence of national accounting standards and IFRS. If the IASB continues ignoring these national and organisational specific features, it may lead to the artificial compliance status of adopting countries and companies. Perhaps, the IASB should also place a strong focus on the separate group of developing countries if the IFRS is to truly achieve its aims of global convergence with IFRS.

This paper is subject to the limitation of a single survey questionnaire methodology. Given that information was collected using a single questionnaire administered at a single point of time, the population surveyed may not be representative of the general population. To complement the findings of this study, future research could also be undertaken by exploring how IFRS are perceived and used by respondent groups other than accountants, such as investors, financial brokers, institutional lenders, regulators. Again, the uses of both quantitative and qualitative methods are appropriate and will lead to a better understanding of the relevance of IFRS in emerging economies like Vietnam.

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Survey respondents:

R10 2012, 'Accountant', *Head of private owned service company*,

R27 2012, 'Accountant', *Team Leader of publicly listed service company*,

R30 2012, 'Accountant', *Head of private-owned service company*,

R46 2012, 'Academic', *Head of private-owned service institution*,

R62 2012, 'Accountant', *Manager of state-owned company*,

R90 2012, 'Accountant', *Manager of private-owned service company*,

R94 2012, 'Auditor', *Senior Auditor of private-owned domestic accounting firm*,

R101 2012, 'Accountant', *Head of publicly listed commercial company*,

R215 2012, 'Auditor', *Partner of private-owned domestic accounting firm*,

R231 2012, 'Academic', *Lecturer of private-owned university*,

R262 2012, 'Auditor', *Manager of private-owned domestic accounting firm*,

R263 2012, 'Academic', *Lecturer of state-owned university*,

R287 2012, 'Auditor', *Partner of 100% foreign-invested international accounting firm*,

R313 2012, 'Accountant', *Unknown company, unknow position*,

R330 2012, 'Accountant', *Manager of publicly listed service company*,

R368 2012, 'Accountant', *Manager of publicly listed service company*,

R369 2012, 'Auditor', *Partner of private-owned domestic accounting firm*,

R370 2012, 'Auditor', *Manager of 100% foreign-invested international accounting firm*,

R390 2012, 'Accountant', *Senior Accountant of private-owned service company*,

R397 2012, 'Auditor', *Senior Auditor of domestic accounting firm*,

R406 2012, 'Accountant', *Head of publicly listed commercial company*,

R413 2012, 'Academic', *Lecturer/Manager of private-owned university*,

R459 2012, 'Academic', *Lecturer /Manager of state-owned university*,

R473 2012, 'Academic', *Researcher of state-owned institution,*

R716 2012, 'Auditor', *Manager of private-owned accounting firm,*

R718 2012, 'Accountant', *Team Leader of joint-venture company,*

R724 2012, 'Accountant', *Manager of joint-venture company,*

R730 2012, 'Academic', *Lecturer of state-owned university,*

R737 2012, 'Auditor', *Auditor of private-owned domestic accounting firm,*

R741 2012, 'Accountant', *Manager of 100% foreign invested company,*

R828 2012, 'Accountant', *Head of joint-venture company,*

R859 2012, 'Academic', *Head of state-owned institution,*

R894 2012, 'Auditor', *Partner of private-owned domestic accounting firm.*