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CONTENTS

VIABILITY OF PRO-SME FINANCING SCHEMES: A DEVELOPING COUNTRY PERSPECTIVE

*Ashenafi Beyene Fanta**

Abstract

To curb SME financing difficulty, various schemes were suggested as alternative financing techniques that include, among others, relationship lending, factoring, credit scoring, leasing, and credit guarantees. This paper aims at examining the viability of each of the schemes by considering the institutional and legal conditions in developing countries. Critical analysis of extant body of literature revealed that not all pro-SME financing schemes are suitable for SMEs in developing countries. This is because they demand development of legal, informational, and financial frameworks that the countries acutely lack at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can be effectively used to ease SME access to finance if well designed credit offices are in place. Similarly, credit guarantee schemes are crucial as an interim solution if they are allowed to run without government subsidy as it aggravates moral hazard.

Keywords: SME, Relationship Lending, Factoring, Credit Scoring, Leasing, Credit Guarantee

JEL Code: G21, H32

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1 Introduction

Despite their notable contribution to economic growth through creating employment, narrowing income gap and alleviating poverty, SMEs are financially constrained. Credit market imperfections and under-development are among the causes of SME financing problems. Scholars seldom agree on whether SME oriented intervention is warranted because some tend to downplay intensity of the problem and claim the market will take a corrective action, while others contend that unless mechanisms are devised targeted at ameliorating the constraints, SMEs financing problem will remain unresolved. This paper reviews the extant body of literature on mechanisms that mitigate SME financing problems.

It was found that pro-SME financing schemes can be broadly classified into market mechanisms and schemes designed to curb the financing problem. While relationship lending falls into the first category, all the rest are legitimately classified into the second group. The SME friendly schemes themselves can be further classified into those that do not require state intervention and that necessitate active involvement of the government. Factoring, credit scoring, lease financing, and financial statement based lending are schemes supposed to need no public intervention while credit guarantee is largely run by governments. We have brought to light controversies in literature and also provided our own evaluation on the feasibility of each scheme from a developing country perspective.

Relationship lending is considered as the panacea for SME financing troubles, but our review of both theoretical and empirical studies revealed that its real impact on credit access, cost, and collateral requirement are less well understood. Controversial are its causal relation with SME credit access, cost of borrowing, and collateral requirement. No conclusive evidence has been found that answers such questions as how relationship is affected by competition in the banking sector and by borrowers establishing relationship with more than one bank. In the face of all the controversies and based on the fact that dynamisms of the credit market can erode its potential benefits, we argue that this is not a reliable mechanism for easing SME financing problems.

While the SME friendly financing schemes are designed to address the problems of opacity and lack of collateral, their efficacy is marred by absence of the financial, institutional and legal framework in most developing countries. Factoring is crucial as it allows a firm to obtain financing based on the creditworthiness of its customers. However, it demands legal framework, system of record keeping, and is not profitable in developing countries due to high degree of fraud. Similarly, credit scoring, despite its economic soundness for both the lenders and borrowers, it is difficult to run owing to high cost of technology, absence of credit information, and poor record management. Leasing appears to be relatively more feasible provided that there are firms engaged in the business operating in adequate number to avoid the potential development of monopolistic power that leads to leasing services too costly for small firms to afford. Financial statement based lending can help small firms get away with collateral requirement or at least minimize it, but its effectiveness hinges on existence of a well-developed and accountable public accounting service.

Credit guarantees are designed to avert market imperfection, and are mostly administered by the government. While their role on easing small firm credit access is phenomenal, any unheeded subsidy by governments may prove counterproductive. Literature shows that for such a scheme to be judged successful, sustainability and reduction in cost of borrowing need to exist. Unwisely run credit guarantee programs may place heavy burden on the government and distort the credit market by intensifying moral hazard. In general, our review of the schemes believed to mitigate SME credit access yielded in the fact that not all are suitable for developing countries. This is because they demand development of legal, informational, and financial framework that the market acutely lacks at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can efficiently run if well designed credit offices are in place. Considering their great potential in easing access, credit guarantee schemes are crucial as an interim solution.

The rest of the paper is organized as follows. Section 2 reviews literature on relationship lending, bringing into light the most contentious matters that occupy much of the space in literature. Section 3 discusses schemes supposed to ease SME access to the credit market by assessing the utility of each from a developing country's perspective. The last section concludes.

2 Relationship lending

Literature classifies lending into relationship-based and transaction-based (see Berger and Udell, 2006). Relationship lending relies on 'soft information' acquired through a continuous bank-customer relationship, as opposed to transaction based lending that heavily relies not on relations but rather on hard borrower information amenable to objective verification. Studies record that informational opacity of SMEs renders transaction lending less feasible, while making relationship lending more SME friendly (see Petersen and Rajan, 1994 and Berger and Udell, 2002). According to Boot (2000) relationship lending has two most notable characteristics. The first is that the lender acquires customer specific information with an exclusive right to use in making credit decisions. Such information is obtained mostly through routine interactions with the customer and may include the movements of deposit account, personal integrity, business outlook, managerial capability etc. Secondly, the lender evaluates the worth of acquired information through multiple interactions over time and across mixtures of products. The lender exercises full advantage over competitors in extending credit to a relationship customer as the other lenders cannot accumulate a comparable amount of information over a short period of time.

Berger (1999) identifies three conditions to be fulfilled for a lending to be of a relationship type. First, information the lender passes need to be more than what is publicly available. Secondly, information should be accumulated over time through a continuous interaction with the borrower. Thirdly, such information should be confidential in nature and the lender should keep it with utmost care. This is because the lender may lose its principal position as a source of credit if competitors get hold of the same proprietary information gathered over time. In general, combination of the foregoing attributes render lending relation based.

Benefits and costs of relationship lending can be discussed both at SME level as well as from market point of view. From individual borrowing firm perspective, relationship is supposed to impact the cost of loan, access to credit, and extent of collateral requirement (see Berger and Udell, 1995). Theory postulates that firms that raise loan from a bank with which they have a long standing relation can do so at a reduced rate of interest. It is also posited that lending based on relationship is likely to reduce collateral requirement because the proprietary information can serve as a substitute for fixed assets that can be pledged as a security for a loan. Besides, relationship lending increases access to disenfranchised firms such as SMEs.

From market point of view, relationship is has two crucial benefits to the credit market that can potentially attract more lenders (Boot 2000). The first is that it helps lenders cut cost of information acquisition as the borrower reveals valuable information that he would not have shared with the financial market. The bank that can cut costs in such a manner will transfer part of the advantage to the borrower by charging a lower interest. Moreover, as discovered by Berlin and Mester (1999), a bank that keeps core deposit by its relationship borrowers can withstand systemic shocks and hence avoid loss of profit. At the same time such a lender can transfer part of the benefit to borrowers by charging a lower interest. In either case, it is a win-win for both the lender and the borrower. Secondly, relationship lending encompasses various contractual characteristics that can potentially enhance welfare. Explaining how this is so, Boot (2000) states that relationship lending offers flexible terms that can be modified through agreement between parties at either end of the loan contract. It may also contain various covenants that can help avert potential conflicts of interest, and in cases where lending is secured by collateral, relationship lending is believed to ensure a less costly monitoring, without which a loan may not be extended at all.

However, relationship lending is not without cost. It indeed has costs that include a 'soft budget constraint'[1] and hold-up problem. Soft budget constraint arises when borrowers expect that their extended relationship with the bank makes the bank lenient in taking action when they fail to abide by terms of the loan contract. For instance, the borrower may not be diligent in respecting repayment schedule out of a belief that the bank will tolerate because the loan is not backed by hard information that facilitate strict enforcement of contractual agreements. Similarly, the bank may not be able to take action immediately as this may spoil a long standing relationship with the borrower, causing the borrower to leave for good, and rendering all the proprietary information the bank has collected over years worthless.

The other problem of relationship lending is a hold up problem wherein the borrower becomes locked into a single bank allowing the bank to extract unreasonable rent by charging more than the market rate. The bank has proprietary information about the borrower that it exclusively owns, and may believe that the borrower cannot get credit from other lenders. This leads to the bank charging more than normal interest because the borrower is believed to have no choice than absorbing it all. Degryse and Cayseele (1998) based on European small business data, report that the hold-up effect is so huge that it offsets the benefits that can be extracted from relationship lending. The hold-up problem can however be mitigated by establishing multiple bank relationship, albeit at the cost of reducing credit access. Elsas and Krahnen (1998) from a review of thousands of credit files of banks in Germany, find that firms that managed to establish multiple bank relationships averted a lock-in threat.

Studies on the link between relationships and access and cost of borrowing are plagued by controversies that include determining effective proxy for relationship. Some studies merely use length of relationship as measure of degree of relationship while others go beyond number of years to using the number and type of financial services obtained from a bank. Empirical studies report controversial results in relation with various aspects of relationship lending, including relationships and cost of loan; relationships and collateral requirement; length of relationship and cost of loan; number of relationships and cost of loan; competition in the banking sector and relationship; and bank size and relationship. Bringing into light the aforementioned matters of controversy is believed to help in forming a tentative view about relationship in terms of its importance in easing SME financing problems. The following paragraphs present the controversies with their associated empirical evidence.

Small businesses are informationally opaque and hence face the problem of information asymmetry. Theory in the mainstream finance predicts that a lender charges informationally opaque borrowers a higher interest to compensate for default risk not sufficiently measured due to lack of information. Relationship lending is supposed to mitigate the problem of information asymmetry, and hence lead to lower interest rate on SME loan. Earlier empirical studies report insignificance of relationship lending in reducing interest rate. For instance, Petersen and Rajan (1994) did not find any significant change to rate in response to prolonged relationship, nor to acquisition of financial services. On the other hand, Berger and Udell (1995) show that a prolonged banking relationship reduces interest rate. Similarly, Boot (2000) finds that relationships give rise to better contract terms so much so that it offsets hold-up problem. Blackwell and Winters (1997) explain such an effect is explained on the ground that banks acquire valuable information at virtually no cost and they then transfer part of the benefit in the form of reduced interest. Offering a different perspective, Berlin and Mester (1999) find that reduced interest may also be in response to borrowers deposit held at the bank that serves as major source of loanable funds. Contrary to the foregoing results Degryse and Cayseele (1998) report that a prolonged relationship increases interest rate while acquiring other financial services can lead to a reduction. Likewise, Hernandez-Canovas and Martinez-Solano (2008) find that although relationship enhanced SME access to credit in Europe, it is actually at the cost of raising interest rate.

Equally contentious is the effect of relationship on collateral. Inability to pledge collateral is one of the reasons why SME face a serious challenge in accessing credit. Most transaction based lending schemes require collateral as a condition for extending credit, and therefore relationship lending is considered to be ideal way out of a rigid collateral based lending. This follows the theoretical argument that lenders, through their relationship, acquire valuable borrower information that can substitute collateral. Nonetheless, empirical results are not conclusive. Berger and Udell (1995) find that firms with longer relationship are

[1] The concept 'soft budget constraint', first introduced by (Kornai, 1979) , was intended to reflect a case in socialist economies where public enterprises tend to rely on state bail out in case of adverse performance. Kornai (1979) claims that the soft budget syndrome leads to enterprises not acting prudently to at least cover their cost of doing business on the expectation that the state will intervene if they face a budget shortage. This, according to him, explains why state owned enterprises in the socialist system are inefficient. The soft budget constraint is opposite hard budget constraint where firms must operate within a fixed amount of budget and where there is no hope for a bail out by another party. Although the concept was originally intended to describe an economic system, its scope of application has expanded significantly since its introduction. Presently the concept is applied to conditions in which one party expects to be bailed out by another party in times of adversity (see for details Kornai et al, 2003). In bank-borrower relationship soft budget constraint is said to exist when the borrower fails to act prudently in servicing loan expecting that the bank would modify loan terms in his favor owing to a long standing relationship.

likely to get loans without pledging collateral. Similarly, Degryse and Cayseele (1998) based on a review of eighteen thousand loan files from Belgian banks, find that relationship decreases the probability of pledging collateral, only slightly though. In contrast, Ono and Uesugi (2009) find that borrowers with a long-term relationship are more likely to pledge collateral, and relationship entails increased cost of monitoring for the lender. Based on this finding, they argue that relationships and collateral are not substitutes, they are rather complementary. Similarly, Hernandez-Canovas and Martinez-Solano (2008) report that relationship foster trust between the bank and borrower, but with increased likelihood of pledging collateral. Shedding more light on the matter Harhoff and Körting (1998), find that collateral requirement increases with a rise in loan volume and decrease in firm size. Also explaining cases where collateral requirement can prevail even where there is a relationship, Degryse and Cayseele (1998) report that firms are more likely to pledge collateral when they shop other information sensitive financial services.

The association between the number of relationships on the one hand and loan interest rate and collateral requirement on the other are also debatable. Petersen and Rajan (1994) find that firms that maintain multiple bank relationship were charged a higher rate. Similarly, Degryse and Cayseele (1998) report that while firms without a main bank are charged a higher interest rate, those with a main bank are not. The number of bank relationships affects collateral requirements. According to Harhoff and Körting (1998), collateral requirement increases as the number of bank relationship increases. This is consistent with Cole (1998) who finds that firms with a main bank have a better access to loan. In contrast, for Detragiache et al (2000) "multiple banking ensures a more stable supply of credit, and reduces the risk of premature liquidation of the investment project". Similarly, Hernandez-Canovas and Martinez-Solano (2008) show that maintaining two bank relationships results in getting the cheapest debt. Despite contrasting empirical evidence on the relative importance of single versus multiple relationship, studies suggest that the number of relations are often determined by systemic factors, rather than a choice by a small firm. For instance, Ongena and Smith (2000) find that firms are more likely to maintain multiple relations in countries with relatively stable and unconcentrated banking sector.

Impact of bank competition on relationship is the other bone of contention. While some claim that competition has a diminishing effect on relationship, others contend that competition makes relationship even more valuable. Petersen and Rajan (1994) argue that the value of proprietary information owned by a bank fades away as competition increases because borrowers have a better chance of securing loan. They discovered in their later study (see Petersen and Rajan 1995) that young firms tend to have a better access to credit in a concentrated market than in a competitive one. In contrast, Boot and Thakor (2000) posit that relationship lending increases with increase in bank competition, albeit at the cost of diminishing value of a loan to the borrower. This has been empirically confirmed by Ongena and Smith (2001) who find that competition strips off market power from banks and therefore gives rise to more valuable long-term relationships. In sum, although the theoretical arguments of both sides are seemingly tenable additional empirical evidence is essential to resolve the controversy. More specifically, cross country studies encompassing wide ranging financial systems and economies will shed a stronger light on the debate.

The other controversy relates to the significance of bank size on relationship lending. According to Berger and Udell (2002) smaller banks are structurally better suited to establish a relationship lending with small firms. This is due to the fact that small banks have fewer managerial layers and consequently exhibit lesser agency problem owing to the fact that loan officers can be closely supervised so that they act in the best interest of the bank(see also Cole et al,2004). Describing the conditions when large banks can extend credit to smaller firms (Cole et al,2004) state that" large banks are more likely to extend small business credit when the firm keeps formal financial records, is larger, has a longer track record, and has greater cash reserves". Likewise, Bakker et al (2004) find that owing to their ease in acquiring information via relationships, small banks have edge over large banks in relationship lending. Then it follows that bank mergers and consolidations are likely to lead to worsening of SME financing problem (Akhavein et al. 2004). However, evidence from US reveals that bank consolidation is followed by emergence of de novo banks that target small firms abandoned by the consolidating banks. Eventually, as Udell (2008) puts it "it is not clear that banking industry consolidation in the US will ultimately be associated with more credit constraints for SMEs". Neither is it clear whether consolidation adversely affects SME credit access elsewhere in the world.

In general, our discussions in the preceding paragraphs revealed that the extant body of theoretical and empirical literature is plagued by controversies. We noted that lack of uniformity in the proxies used to measure degree of relationship is partly responsible for the disparity in empirical results on a number of important factors.

3 Innovative instruments and support mechanisms

While relationship lending is part of market mechanisms believed to enhance SME credit access, it is not amenable to intervention. The market rather than a policy intervention is a key to its ability to serve the SME sector. In particular, its efficiency in encouraging banks in developing countries to channel funds to the small firms is questionable, because the market in those countries is seriously underdeveloped, and banks are uncompetitive, inefficient, and often face various regulatory strings. It is therefore not reliable enough as it puts much of the responsibility in the shoulders of banks that pursue the ultimate goal of maximizing wealth rather than aim at promoting small businesses development. It then follows that instruments and schemes that enhance SME access to credit ought to be crafted. We discuss in the following series of paragraphs SME friendly innovative techniques that include factoring, credit scoring, lease financing, financial statement lending, and credit guarantee schemes. Whilst the first four schemes function without needing direct state intervention, the last one heavily relies on governmental action.

3.1 Factoring

Factoring is a financing scheme wherein a firm sales its accounts receivables to a financial institution called a factor. Through factoring, a firm transfers credit risk and receivable collection management to the factor, and customers are notified to effect payment on their account directly to the factor. A factor is a financing firm that makes business buying and collecting accounts receivables of other firms. When factoring, a firm transfers its receivables to the factor and immediately collects cash by the amount of face value of receivables less interest, factoring fee and portion of the receivables held as a cushion against uncollectable. The seller of receivables is paid the remaining balance only when receivables are collected in full. Although factoring allows a firm to effectively transfer receivable collection management, transfer of credit risk to the factor depends on mode of the factoring contract: recourse or without recourse. If factoring is on a without recourse basis, the seller transfers the entire credit risk to the factor whereas when it is on a recourse basis the factor is free because credit risk is ultimately borne by the seller(see Bakker et al. 2004).

The most unique attribute of factoring is that it is founded based on a factors assessment of risk portfolio of a debtor, rather than the seller that transfers it. This is important because a high risk firm unable to obtain credit from the formal market can raise funds on account of its debtor's good credit standing. Factoring is important even in low credit risk firms because it helps firms to free cash that is temporarily tied up in receivables, thereby raising the amount of cash available to take advantage of investment opportunities.

Factoring was originally designed to assist larger businesses in the management of working capital, enabling them to turn less liquid receivables into cash. Besides, it permits firms to transfer collection activities and the associated costs, which consume considerable amount of time, to the factor. Sopranzetti (1999) postulates that factoring can also be used to avoid under investment problem[2] that highly indebted firms face. He argues that through factoring highly indebted firms can avert raising additional debts by converting their receivable into cash.

Following realization of its potential role in easing credit access, factoring has become part of alternative SMEs financing schemes. Two aspects make factoring attractive to SMEs. First, it averts the problem of information asymmetry that impedes SME access to formal credit market. In a factoring contract, the factor values credit standing of the debtor much more than the seller. In other words, a factoring contract relies on the value of the underlying receivables rather than the seller of those receivables. Consequently, informationally opaque firms can access a short term finance using the good credit standing of their clients.

Factoring constitutes part of the financial market in many advanced countries and emerging markets. The global factoring turnover stood at €2.23 trillion in 2013 (FCI 2014), and it is a fast growing market with a 10% average annual growth rate since 1993. However, the market is concentrated in a few developed countries and emerging market with sizeable share controlled by the former. The biggest market is in Europe with a total turnover of €1.35 Trillion, accounting for 60% of the global annual turnover compared to just €23billion for Africa that accounts for only 1% of the global turnover. Country wise, with annual turnover of €308billion the UK has the largest factoring market in the world, followed by France(€200billion), Italy(€178billion), and Germany(€171billion). More than half the European factoring market is controlled by UK, Italy and France. Growth is very fast in Asia followed by Australasia.

Despite its promising features as alternative financing tool for SME, participation of the sector in the factoring market is unremarkable. Data from UK shows that factoring and trade discounting constitutes only 6% of additional SME financing (Soufani 2000). According to Soufani (2002) lack of SME awareness of its potential in easing credit access is one of the factors that explain low level of participation. Besides, despite a belief that factoring resolves the problem of information asymmetry by focusing on the debtors credit standing, evidence from UK shows that factors do consider the sellers ability in credit monitoring and bankruptcy risk (see Sopranzetti 1998). Consequently, a seller that has a higher bankruptcy risk would be unable to factor the entire pool of accounts receivable

[2] Underinvestment problem was first identified by Myers (1977), and involves a condition in which a highly levered firm becomes unable to add more leverage because so doing may send a wrong message to the firms current stockholders. He postulates that additional high risk debt by an already indebted firm, even where there are positive net present value projects, may eat up part of value of the firm because of its adverse consequences in net worth of future projects.

(Sopranzetti, 1998). Such a seller will factor high quality receivables without recourse, moderate credit risk receivables with recourse and does not factor at all high risk receivables. In general, this casts doubt on the notion that a factoring contract is seller-risk-blind. Strengthening the foregoing claim, Soufani (2000) reports that factoring is not available to all firms, as evident in UK where only firms with a better credit screening capacity (measured based on turnover ranging from £250,000 to £3 million) are part of the market.

Factoring was posited to be of paramount significance especially in countries with weak secured lending laws, inefficient bankruptcy systems, and weak information infrastructures. Contrary to the foregoing hypothesis, however, cross country comparison shows that factoring fared well in developed countries and not so in developing ones. As reported by Bakker et al (2004), while factoring is undertaken on a without recourse basis in developed countries, it is done on a recourse basis in emerging economies due to the fact that information is not adequately available to assess the level of default risk. In terms of volume, factoring market is found to be larger in countries with a higher level of economic development (Klapper 2006). This implies that firms in developed countries can take more advantages of factoring than firms in emerging economies.

Bakker et al (2004) attribute the disparity in the prevalence and efficiency of factoring market across countries to the difference in information infrastructure, legal environment, tax, and regulatory environment. Information about debtor's payment history is essential for factors in assessing the probability of default, and absence of credit data limits the coverage to few high quality receivables. Similarly, the legal and judicial system plays a pivotal role in fostering the development of factoring. The judicial system need to be efficient in handling disputes between a factor and the seller so that factoring firms feel secured of potential risk of default on the side of sellers. Equally important for development of the factoring industry is an encouraging tax system. If the tax rule of a country subjects factoring to VAT or other forms of sales tax, firms will be discouraged because it raises cost.

In general, although factoring has a potential as an alternative means of financing for SMEs, its success in developing countries hinges on legal and institutional development, the absence of which has impeded access to the formal credit market. As reported by Klapper (2006), the industry in developing countries is plagued by widespread fraud in the form of bogus receivables, ghost customers etc.

3.2 Credit scoring

Credit scoring is a techniques used by financial institutions to determine credit rating of a loan applicant in order to measure the probability of default. Based on loan repayment history and personal characteristics of the customer, credit scores are developed by the help of statistical software to predict the likelihood of default. Information for credit scoring is usually obtained from customer application form and credit bureau. A higher score represents good credit standing while a lower score represents a poor standing. While some banks set a cutoff point and strictly apply the score in the accept/reject decision, others use the score only as a supplement. Shedding more light on how a score is used, Berger and Frame (2007) classify banks into "rule" banks and "discretion" banks. The "rule" banks base their accept/reject decision on the score, whereas "discretion" banks use the score only as supplementary information to the body of evidence they have about the customer's credit standing.

Credit scoring was first used by large banks in issuing credit cards, car loans and mortgage loans (Mester 1997), and banks started applying credit scoring in extending credit to SMEs latter on. The most important benefits of credit scoring are that it minimizes loan processing time, reduces cost, and increases credit availability. As Mester (1997), in his study on banks in the US city of Philadelphia reports, banks were able to process a loan in less than an hour while it takes, on average, 12 hours otherwise. The huge cut in the loan processing time gives rise to reduction in the loan processing cost that allows a bank to charge a smaller amount of interest. Besides, credit scoring results in cost savings that eventually results in a lower interest rate on loans. Its use also makes more credit available to businesses especially to SMEs because credit scoring enables banks to measure credit risk more accurately and consequently makes SME loans attractive to large banks as well, increasing the overall supply of credit to the sector (Mester 1997).

Country case studies (that concentrate in the US) report a positive correlation between credit scoring and SME credit access. Mester (1997) finds that credit scoring breaks the geographical barrier that impedes SME credit access because banks can extend credit without a need for physical presence in the place where SMEs operate. This implies that so long as information obtained from credit bureaus can be reasonably trusted, it does not matter whether the SME is operating in the neighborhood or located far away. Similarly, Frame et al (2004), in their survey of 99 large banks in the US, find that credit scoring increases SME lending. They study the effect of credit scoring by income groups as Low and Moderate Income area and Middle and High Income area, and conclude that credit scoring increases access irrespective of disparity in income. They report that banks extended $2.2 billion more loans in 1997 as a result of using credit scoring. Berger et al (2005) who study impact of credit scoring by classifying borrowers in "marginal[3]" and "nonmarginal[4]", report interesting results that credit scoring has a differential effect on the two groups. They find that availability of loans less than $100,000 that corresponds to "marginal" group increases but at increasing loan price because of its higher risk. On the other hand, no significant increase in credit availability is observed for relatively higher loans in the range of $100,000 and $250,000 corresponding to "nonmarginal" group, except that loan price has declined along with a fall in their credit risk.

With a positive impact on access to funds, credit scoring is seemingly an ideal tool for SME financing. However, its potential utility in developing countries is marred by absence of requisite conditions. Wendel and Harvey (2006) identify several factors that restrain the development of credit scoring in developing economies that can be summarized into the following three major issues: absence of credit information, poor record management, and high cost of credit scoring technology. Credit bureaus are necessary as they allow a lender to easily access customers' loan repayment history, and it can serve as a more reliable source on which to base credit decisions. No less important is maintenance of customer credit information in a way compatible with the credit scoring model. The cost of credit scoring software may be at times not affordable to smaller banks whose business mostly depends on the SME sector. In general, while credit scoring opens another opportunity to SMEs, its functionality in developing countries is restrained by absence of credit information and poor credit record management.

3.3 Lease financing

Leasing is a contract wherein a firm rents assets agreeing to pay periodic rents to the owner. The owner of the leased asset, often known as a lessor, allows the assets to be used by another firm called a lessee in consideration of rents collected. The lessee acquires the right to use the asset over the term of the lease. Lease contracts can be classified into capital or operating depending upon the length of the term and whether ownership title to the leased asset will eventually be transferred to the lessee. Leasing contracts that stipulate ownership to be transferred to the lessee are called capital leases. Leasing is one of the widely used schemes of acquiring capital equipment. It is more popular in developed countries. For instance, in the US about a third of capital equipment used by corporations are leased (Chemmanur et al. 2010)

Leases offer an alternative to raising debt especially when credit is difficult to come by. Firms that are unable to raise debts can use leases. Leasing instead of financing acquisition through debt is considered economically sound based on the ground that periodic rents offer a higher tax shield than interest expense. However, literature is inconclusive as to whether leasing can substitute debt. While some scholars posit that leases can substitute debt, others contend that the two are only complementary. Deloof et al (2007), in their study of Belgian SMEs, find that leasing and debt can be substitutes when the tax differential between the lessor and the lessee are removed. On the other hand, Lewis and Schallheim (1992) argue that lease and debt are complementary. Their argument is founded on the premise that leasing transfers excess tax shields and firms that make use of lease often tend to have more debt built up in their capital structure compared to firms that do not use lease financing. For Lewis and Schallheim (1992), more leases do not essentially decrease debt but rather increase the firm's potential for raising debt, leading the firm to be equally leveraged as firms that do not use leasing.

Apart from its possible advantage as a source of a higher tax shield, leasing reduces the lessee's transaction cost of buying an asset and also eliminates uncertainties about cost of maintenances. Moreover, leasing helps transfer of technological risk (Chemmanur et al. 2010) that may arise due to the asset being functionally inappropriate or obsolete in the face of a better product demanded by the market. Chemmanur et al (2010) consider leasing as an equilibrium solution when there exists a two sided asymmetry in which the lessee is uncertain about the quality of the leased asset and lessor about the maintenance cost.

Leasing has been identified as one of the financing sources for SMEs (Marianne et al. 2001). Explaining the special use of leasing in SME financing, Berger and Udell (2006) show that the financing problem SMEs face due to their opaqueness can be mitigated as the underwriting decision in leasing relies on the value of the underlying asset rather than value of the firm.

Leasing as alternative SME financing scheme can be effective where there are leasing firms available in adequate number. While such firms are available in developed countries, their presence in developing economies is restrained by financial and non-financial constraints. According to a study by IFC (1996), supply of credit and access to the capital market are crucial for the development of the leasing industry. In addition, there has to be a legal framework that assures property right. Due to a weak credit market and legal framework, leasing has not witnessed a robust growth in developing countries, especially in the SSA region. This is evident from the fact that IFC's investment experience in SSA accounts for only 4.7% of its worldwide investment, compared with 29.2% in Asia, 52.1% in Europe, Middle East and North Africa, and 13.2% in South America (World Bank 2008).

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3 these are borrowers that did not have access to credit previously, and can get credit only due to bank's use of credit scoring (see (Berger, Frame, and Miller 2005)

4 these includes borrows that can borrow from the bank even in the absence of credit scoring (see (Berger, Frame, and Miller 2005)

3.4 Credit guarantee service

While all the previous schemes function without public intervention, credit guarantees require active involvement of the government either directly as a guarantor or indirectly as promoter of guarantee programs. As defined by Deelen and Molenaar (2004) a credit guarantee is "a financial product that a small entrepreneur can buy as a partial substitute for collateral". The foregoing definition highlights the fact that a guarantee serves as a security where a borrower does not have collateral to pledge for a bank loan. It also implies that guarantee is a financial service for which a borrower pays. In a credit guarantee, the guarantor stands between the lender and the borrower to make good a loan when default takes place.

Credit guarantee programs are designed in response to market imperfections.(see Zecchini and Ventura 2006). They basically aim at enabling credit constrained group to access bank credit (Beck et al. 2010). Its main targets are SMEs and startups that have the capacity of repaying a loan but unable to get it either because they have no collateral or they are financially opaque (Deelen and Molenaar 2004). The guarantor provides assurance to hesitant lenders that the borrowers will honor their obligation and would responsible in case they default. Credit guarantee schemes are believed to introduce otherwise reluctant lenders to new clients showing them that if not for the lack of collateral and financial information lending to these firms is commercially viable. Vogel and Adams (1997) posit that lenders experience with borrowers under a guarantee program enables them to collect sufficient information useful in granting credit at a latter point of time without a guarantee. Similarly, borrowers learn how to obtain formal credit and graduate into borrowing without a guarantee. A guarantee scheme also help firms to wither away credit restrains during periods of credit crunch. Explaining the significance of guarantee schemes, Janda (2008) postulates that guarantee programs are vital in the time of credit crunch owing to the fact that banks become overly cautious in lending especially to smaller firms. Intervention through a credit guarantee works well in providing assurance to lenders that their money will be paid back irrespective whether the borrower honors the debt or not. Empirical evidence shows that governments often rush towards setting up guarantee programs to mitigate credit famine following systemic financial crisis. For instance, following the 2008/9 financial crisis, the British government launched credit guarantee program by the amount of £50 billion in order to boost bank credit to the SME sector (Economist 2009). This testifies that guarantee programs serve as mechanisms for averting problem of credit access during the financial crisis.

Despite their salient benefits in enhancing SME credit access, literature is inconclusive as to the real economic impact of guarantee programs. Although its advocates argue that such schemes boost welfare because they reduce bank's need to extract rent from entrepreneurs (see Arping et al, 2010), critics claim that it intensifies the problem of adverse selection and moral hazard instead of mitigating them. According to Janda (2008) adverse selection comes into play where the firm's benefits from the program have low profit and socially inefficient projects. Moral hazard occurs when lenders fail to diligently screen credit owing to the fact that they are any ways insured by the guarantor against risk of default. Janda (2008) therefore claims that both moral hazard and adverse selection can be mitigated by removing state subsidy. Arping et al. (2010) also agree that guarantee schemes may end up being counterproductive by undermining firm's incentive to cut costs. Honohan (2010) harshly criticizes guarantee schemes as a mere political tools devoid of a perceptible welfare enhancement and that their benefits are at best vague.

Opinion is also divided as to whether credit guarantee programs are merely short-term solutions to market imperfection or a lasting panacea to fill the financing gap SME are facing. Levitsky (1997) calls for more resources to be deployed for maintaining guarantee schemes as they provide a lasting support for SME. Vogel and Adams (1997), on the other hand, see credit guarantee merely a short term solution while SME credit access can be improved through a financial reform. This implies that credit guarantee is not sustainable to be used as a lasting solution for easing SME financing problem. Supporting the foregoing view Honohan (2010) argues that guarantee schemes cannot substitute institutional development that aims at enhancing the effectiveness of the financial system. Despite the ongoing controversies, credit guarantees are considered by many as superior to other government sponsored SME support programs. As Janda (2008) puts it, they are robust policy measures that are better than interest subsidy. In terms of effect on the credit market, guarantee programs are believed to cause less damage than provision of cheaper funds to lenders (Vogel and Adams 1997).

Credit guarantee scheme funded by the state is a common place in most developed countries (Zecchini and Ventura 2006), and it helped stimulate the formation and growth of SMEs beyond what is achievable without. Credit guarantee programs have proved the most efficient tools of job creation. For instance in Canada, the state created a job with an average guarantee cost of approximately $2,000 (Riding and Haines 2001), and this is the cheapest way of job creation the government could ever find. In a more recent study Riding et al. (2007) report that about half the guarantee service recipients in Canada started business using guarantee backed loans. Most surprisingly, they find that with 10,000 loans per annum, the government managed to create 22,000 new full-time jobs. Their job creating capacity is higher in low income areas (Craig et al, 2008), implying that such schemes are critically important in cutting unemployment in most developing countries. Guarantee schemes also reduce business failure and bankruptcies (Hancock et al, 2007), accelerate growth (Bradshaw 2002), and stimulate investment (Uesugi et al. 2006). They also raise tax revenues of the government and serve as additional source of revenue when the state operates the program on a fee basis (Bradshaw 2002).

Nonetheless, in most emerging markets and developing countries the schemes did not succeed as well. Nigrini and Schoombee (2002) based on a study on credit guarantee programs in South Africa, report that although it offered the government a viable solution to SME financing problem there are constraints casting a shadow on its utility. Similarly, Boocock and Shariff (2005) report that it did not work well in Malaysia as there were so many defaults compelling lenders to absorb significant portion of the loss. Defaults are higher where the government is involved in the risk assessment (Beck et al. 2010). Zecchini and Ventura (2006) based on their study on the state sponsored guarantee programs in Italy, report that the scheme is not sustainable due to significant subsidy element. Their claim is consistent with the premise that subsidy gives rise to moral hazard problem causing depletion of the fund. This is also supported by Columba et al. (2010) who find that moral hazard effect is at times so large as to entirely deplete the benefits that can be extracted from it. They argue that the program offers no incentive to banks to be diligent in screening loans, raising the risk of default. Moreover, the program is believed to have flaws from the dimension of competition that is vital in the formation of most efficient group of firms. Kang and Heshmati (2008) charge that subsidized guarantee programs decelerate death of inefficient firms. According to them, firms that do not put scarce societal resource into its best use will stay in the game for a prolonged period, also placing barrier to entry against more efficient new firms.

Empirical evidence shows that there are certain requisites to the success of guarantee programs. Competent financial system with sound banks is one of the preconditions since it compels banks to compete for clients (Levitsky 1997). Reinforcing the above claim, Cowling (1998) in his study on credit guarantee scheme in UK, discovered that usage rate is the greatest in regions with a relatively well developed financial markets, and localities with poorly developed financial intermediaries are unable to make use of guarantee scheme as a tool for averting financial restraint. Zecchini and Ventura (2009) stresses that care in selecting target groups of beneficiaries is the other vital pre requisite for the successful guarantee scheme. They report that state sponsored guarantee schemes in Italy are relatively more successful owing to sufficient caution exercised in identifying target groups. In addition, Uesugi et al. (2006) drawing from Japanese experience, find that a guarantee scheme can be sustainably run if it attracts low-risk firms or highly profitable high-risk firms.

4 Conclusion

Scholars seldom agree on whether SME oriented intervention is warranted because some group downplay intensity of the problem and claim the market will take a corrective action, while others contend that unless mechanisms are devised targeted at ameliorating the constraints, SMEs financing problem will remain unresolved. This paper shows that different mechanisms are suggested to mitigate SME financing problems, and they can be broadly classified into market mechanisms and schemes designed to curb the financing problem. While relationship lending falls into the first category, factoring, credit scoring, lease financing and credit guarantee are classified into the second group. Some of the schemes do not require state intervention while others necessitate active involvement of the state. The paper has brought to light controversies in literature and also provided evaluation on the feasibility of each scheme from a developing country perspective.

Relationship lending is considered as the panacea for SME financing troubles, but review of both theoretical and empirical studies revealed that its real impact on credit access, cost, and collateral requirement are less well understood. Controversial are its causal relation with SME credit access, cost of borrowing, and collateral requirement. In the face of all the controversies and based on the fact that dynamisms of the credit market can erode its potential benefits, we argue that this is not a reliable mechanism for easing SME financing problems.

While the rest of SME friendly financing schemes are designed to address the problems of opacity and lack of collateral, their efficacy is marred by absence of the financial, institutional and legal framework in most developing countries. For instance factoring is crucial as it allows a firm to obtain financing based on the creditworthiness of its customers. However, it demands legal framework, system of record keeping, and is not profitable in developing countries due to high degree of fraud. Similarly, credit scoring, despite its economic soundness for both the lenders and borrowers, it is difficult to run owing to high cost of technology, absence of credit information, and poor record management. Leasing appears to be relatively more feasible provided that there are firms engaged in the business operating in adequate number to avoid the potential development of monopolistic power-that leads to leasing services too costly for small firms to afford. Credit guarantees are designed to avert market imperfection, and are mostly administered by the government. While their role on easing small firm credit access is phenomenal, any unheeded subsidy may prove counterproductive.

In general, review of existing literature revealed the fact that not all the pro-SME financing schemes are suitable for SMEs in developing countries. This is because they demand development of legal, informational, and financial framework that the market acutely lacks at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can run efficiently if well designed credit offices are in place. Considering their great potential in easing access, credit guarantee schemes are crucial as an interim solution.

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FACTORS INFLUENCING KNOWLEDGE SHARING AMONGST HIGHER EDUCATION ACADEMICS AT A UNIVERSITY IN SOUTH AFRICA

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Abstract

The aim of this paper is to explore the factors influencing knowledge sharing amongst higher education academics, using the actor-network theory (ANT) as a theoretical lens. Knowledge sharing in higher education is not institutionalised, therefore knowledge is not always captured nor systematically stored and organised. This leads to a lack of retention of valuable institutional know-how, inefficient work processes and reinventing the wheel. The research questions revealed social, process and technology factors as affecting the formation, growth, stability, and institutionalisation of knowledge sharing in a network of aligned interests. ANT was utilised in conjunction with historical and contextual analysis, tracing the development of the explicit sociotechnical conditions within which to enable sharing of knowledge amongst academics. The study was qualitative in nature, employing an interpretive case study methodology. Semi-structured questions were used to interview eighteen academic staff members as actors from a University of Technology in South Africa, exploring the factors inductively. Culture and management support emerged as the most important social factors. Management is identified to hold a significant position in influencing the uptake and sustainability of knowledge sharing. Factors of technology and processes are centred on facilitating opportunities to share and ensuring effectiveness and efficiency. Knowledge sharing strategies should adopt a blend of personal interaction and technology-based approaches. A general framework of factors influencing the formation, growth and institutionalisation of knowledge sharing was developed to inform knowledge sharing strategies in higher education. Recommendations are made in light of these factors for implementation by higher education managers.

Keywords: Knowledge Management, Knowledge Sharing, Actor-network Theory, Higher Education, Sociotechnical Factors

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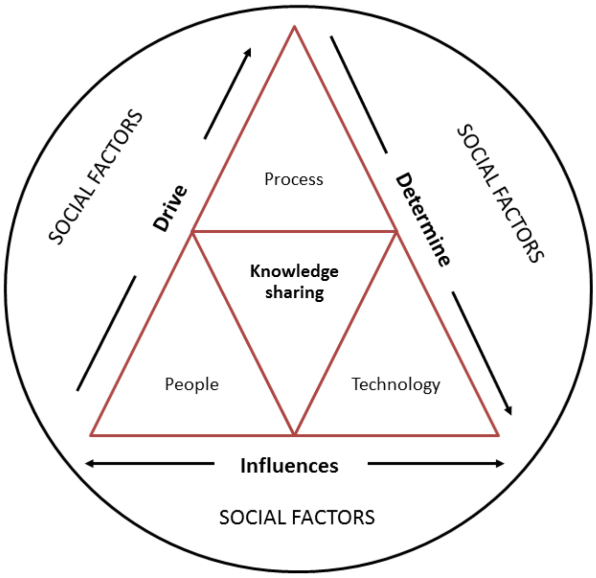
1 Introduction

Educational institutions generate operational knowledge in a similar manner to that of businesses, including operational knowledge generated through the processes of teaching and learning (Chen & Lin, 2009). Academics want to know what their colleagues are doing and what methods and approaches they are using (Aczel, Clow, McAndrew & Taylor, 2004) to avoid duplication and inconsistencies in lectures especially when newly-appointed academics recreate their own lectures (Arntzen, Ribière & Worasinchai, 2009). Higher education institutions (HEI) are increasingly compelled to operate like a business (Malik, 2005; Suliswaro, 2012). As a result, they are also exposed to market pressures, which means that innovation and competition should be placed high on their agenda. It is arguable that knowledge management is not institutionalised in higher education and therefore knowledge in higher education is not always captured nor systematically stored and organised. This leads to the lack of retention of valuable institutional know-how, inefficient work processes and reinventing the wheel. The research objective was to develop a framework to guide the implementation of knowledge management strategies for the higher education context. In order to achieve this objective, four research questions had to be explored. The first research question sought to determine those factors that have an influencing role on the success of forming a knowledge sharing network. The second question sought to determine those factors that can have a positive influence on the growth of the knowledge sharing network. The third question sought to determine those factors that pose a threat to the stability of a knowledge sharing network and the fourth question sought to determine those factors which can help to institutionalise the knowledge sharing network. The factors that emerged from the research, and which serve to answer the four research questions, provided insight into how to implement knowledge sharing strategies in higher education in South Africa. This paper therefore seeks to determine the factors that influence knowledge sharing in an academic context, ensuring that not only is explicit knowledge systematically shared, but that personalisation of this knowledge occurs through the systematic sharing of tacit knowledge. The factors were explored using the actor-network theory (ANT) as a theoretical lens. The study considered the lack of knowledge sharing amongst academics as a social phenomenon and as such can be studied using a social theory, ANT, to tease out factors influencing knowledge sharing. ANT was utilised in conjunction with historical and contextual analysis, tracing the development of the explicit sociotechnical conditions within which to enable sharing of knowledge amongst academics. As argued by Hong, Kim and Suh (2012), the paper considers knowledge sharing to be the main process which sustains knowledge management. Furthermore, Armistead (1999), and Biloslavo and Zornada (2004) argue that the key variables for knowledge sharing are people, technology and processes. Thus, people initiate and sustain knowledge sharing, technology facilitates efficient sharing and use and eliminates sharing barriers, and processes ensure that knowledge sharing takes place. Therefore drawing from the work of Armistead (1999), effective teaching and learning through knowledge management is achieved when people, processes and technology come together. The Figure 1 was used to conceptualise the social phenomenon.

Figure 1. Problem conceptualisation



2 Current work

2.1 Introduction

Literature on knowledge management makes it clear that the most valuable resource of an organisation is the knowledge of its employees. The importance of knowledge management has been highlighted in studies within business and academia (Lubega, Omona & Van der Weide, 2010). Studies on knowledge management show that by effectively harnessing the knowledge of an organisation through various knowledge management techniques, the right knowledge can be supplied to the right people at the right time. This will enable people to put this knowledge into action to enhance organisational efficiency and effectiveness (Holsapple, 2001; Bush & Tiwana, 2005; Hong et al., 2012). It is posited that knowledge management is an enabler of improved organisational performance, improved decision making, creating core competences, a source of competitive advantage, and an enabler for improved problem solving (Holsapple, 2001; Liao, 2003; Bush & Tiwana, 2005; Durcikova & Gray, 2005; Hewett & Watson, 2006; Lubega et al., 2010). As Martin (2000:17) puts it, "[t]hat knowledge is of fundamental importance for organisations of any size and industry is no longer a question". Knowledge management is also an enabler of organisational learning as it facilitates the continuous sharing and exchange of knowledge that perpetuates the learning process within the organisation (Lubega et al., 2010). Work done by Olfman, Raman and Ryan (2005), and Khalil (2012) indicate that knowledge management was a thing of the corporate world and very little research exists on management practices in higher education and on sharing amongst academics. Furthermore, Baskerville and Dulipovici (2006), Bhatt (2001), Choi, Kang and Lee (2008), and Biloslavo and Zornada (2004) suggest that research into knowledge management has gained more focus theoretically rather than empirically and that this gap is not adequately addressed by existing empirical research. There is a lack of empirical research which fully encompasses people, processes and technology which should be considered together for successful knowledge management. There is also a lack of empirical research that adequately addresses the dynamics of knowledge management postulated in the research. These findings validate the need for empirical research into the sociotechnical aspect of knowledge sharing for sustaining knowledge management.

2.2 Knowledge management in higher education

Drawing from the work of Biasutti and El-Deghaidy (2012) it is arguable that knowledge management in higher education is not a high priority to the point where knowledge sharing processes are integrated into daily routines. HEIs are engaging in dissemination of information, rather than knowledge sharing activities, resulting in a lack of knowledge to support academic action and decision making (Rowley, 2000). There should therefore be recommendations for its implementation so that these institutions can harness its full potential. The knowledge management that originated from the business context cannot simply be reapplied to the educational context (Sulisworo, 2012). As a result, HEIs should have their own framework in place for knowledge management, and hence knowledge sharing, which should encompass the organisational culture, store of experiences, insights, values and the information technology (IT) infrastructure (Sulisworo, 2012).

2.3 Knowledge sharing

Knowledge management consists of a collection of methods, techniques and tools (Liao, 2003) that facilitate four activities, including the capturing, storing, sharing and using of knowledge (Lee, 2001). Knowledge sharing is considered to be the main process of knowledge management and hence the focus of this study (Hong et al., 2012). Knowledge sharing in particular has become an area of concern (Choi et al., 2008). This is because knowledge management can only be sustained through continuous sharing, which is dependent on people. Therefore the aim of preserving knowledge management efforts is to create a culture of sharing in an organisation (Ahmad, Ives & Piccoli, 2000). Given the importance of knowledge sharing and the reliance on people to sustain knowledge sharing activities, knowledge sharing barriers has received significant focus in the literature. It is considered the most difficult of the knowledge management activities (Ruggles, 1998).

Due to the high reliance on people to initiate and sustain knowledge sharing, often the reluctance to share has impeded on knowledge management initiatives. As a result, many organisations have had to implement reward schemes to encourage knowledge sharing. This initiative has led to increased focus in literature on how to increase knowledge sharing (De Pablos, Zhang & Zhou, 2013). Kankanhalli, Tan, and Wei (2005) actually characterised knowledge sharing as the provision of one's personal expertise and knowledge for economic reward or social benefits. However research on this topic has led to divergent results (De Pablos et al., 2013). Given the fact that the incentives that have been implemented in response to knowledge sharing problems have not proved to succeed in some cases, begs the question as to whether knowledge management strategies have considered knowledge sharing dynamics from all perspectives. These dynamics not only include social factors such as willingness or perceived usefulness, but also the processes and technologies that facilitate knowledge sharing initiatives. This is why an all-encompassing sociotechnical view is needed. This research will consider knowledge sharing from all perspectives to provide a comprehensive framework for implementing knowledge management strategies.

2.4 Knowledge sharing factors

The review of literature revealed that those studies employing theories in the study of knowledge sharing factors focused mainly on social factors. Very little studies focus on sociotechnical factors and in particular the influence of processes on knowledge sharing intentions. Very little data were found on the factors that would impact on the formation and growth of a knowledge sharing actor-network. However, it was found that there is a high reliance on people to initiate and sustain knowledge sharing. Factors influencing institutionalisation of knowledge sharing have not explicitly received focus in the literature, but the implication is that technology and processes have a strong influence on institutionalisation. Most factors reported were factors that are strongly related to those impacting on the stability of a knowledge sharing actor-network, that is, the factors that negatively impact on people sharing their knowledge. However, the researcher attempted to glean as many factors from the literature that could be mapped to the concepts of ANT to obtain an historical analysis of factors. This historical analysis is presented as a conceptual framework in Figure 2, which follows under the underpinning theory.

The review of literature revealed that there is a growing body of research on the enablers for knowledge sharing. Call (2005) argues that people and processes are key to the success of a knowledge management system. Furthermore, Armistead (1999) argues that effective learning through knowledge management is achieved when people, technology and processes come together. However, it has been noted in the literature that technology should feature as an enabler for knowledge sharing, and should not be the core focus. A strong relationship between culture and suitable technology has been reported in the literature (Hackett, 2000). It has also been asserted that cultural, behavioural and organisational issues should be addressed before technical issues (Annansingh, Eaglestone, Nunes & Wakefield, 2006).

Further observations revealed that knowledge sharing processes are not integrated into the daily routines in higher education (Biasutti & El-Deghaidy, 2012). In particular it was reported that a key factor that impacts on processes in academia is knowledge sharing mechanisms (Arntzen et al., 2009). Processes were highlighted as very important, particularly by Sulisworo (2012) and Rowley (2000), who asserted that HEIs must consciously and explicitly manage their knowledge management processes. Studies have noted the importance of a systematic approach to knowledge sharing for access to quality knowledge resources and to make communication with relevant persons possible for the exchange of tacit knowledge (Ravitz & Hoadley, 2005; Wang & Wedman, 2005).

3 Underpinning theory

3.1 Background

Information technology is able to efficiently process data into information. However, it is human interaction that adds the meaning to information to create knowledge. Humans are slow at transforming data into usable knowledge, which is why various technologies and subsystems are better suited to the task (Bhatt, 2001). There must be interaction between technology, people and techniques for representing knowledge for knowledge management to be successful. Within the academic domain, and particularly in sociotechnical studies, the actor-network theory (ANT) has been utilised as a theoretical lens for analysing interactions between technology and humans (Goody & Hall, 2007). Knowledge sharing issues in organisations not only relate to technological but also behavioural factors (Liao, 2003). Furthermore technical and social issues have proved to influence the institutionalisation, implementation and operation of technology-based systems (Kling & Scacchi, 1982; Goody & Hall, 2007).

3.2 Overview of actor network theory

The actor-network theory was developed in the 1980s by Callon and Latour (Goody & Hall, 2007). It is particularly applied in the study of technologies. ANT regards both humans and non-humans, such as technology, documents, concepts (like knowledge management), data repositories, and the like, as actors (Goody & Hall, 2007). The reason why ANT also considers non-human actors is to examine the enabling or restrictive role that they play in a particular context (Sarker, Sarker & Sidorova, 2006). It examines the shifting relationships between the actors (or members) of a network. These shifting relationships are examined in respect of the four moments of translation. 'Translation' in the context of ANT is the alignment of interests of the actors in a network with that of a focal actor. The four moments of translation include: Problematisation, interessement, enrolment and mobilisation (Sarker et al., 2006). They address the formation, growth and stability of a network of aligned interest. Successful network formation is dependent on the successful implementation of the four moments of translation. The four moments of translation involve the rallying of support from all the actors in a network and maintaining alignment with the obligatory passage point (OPP) (Sarker et al., 2006). The OPP is "[a] situation that has to occur for all of the actors to be able to achieve their interests, as defined by the focal actor" (Sarker et al., 2006:56). In this context, the OPP would be knowledge sharing.

3.3 Actor network theory and information systems research

Lee (2001:iii) states that "[r]esearch in the information systems field examines more than just the technological system, or just the social system, or even the two systems side by side; in addition, it investigates the phenomena that emerge when the two interact." It is for this very reason that ANT is promoted by Aanestad, Berg and Hanseth (2004) as making a significant contribution to IS research. Their argument in favour of ANT as a suitable analysis tool is that it can help researchers understand the interaction between social and technical systems. ANT is therefore a suitable theoretical lens for understanding the sociotechnical factors influencing knowledge sharing in higher education. ANT not only encompasses technological and human factors, but also actors on an individual level and organisational level, thereby lending itself to varying levels of analysis (Sarker et al., 2006). Not only did ANT enable the researcher to explore the formation of the actor-network, but the stability of the network of aligned interest was analysed in terms of the extent to which the institutionalisation of knowledge sharing process will contribute to the institutionalisation of the network. Furthermore, due to the fact that actor-networks are often competing with other actor-networks, particularly for resources, actor loyalty must be maintained to prevent the network from fragmenting (Goody & Hall, 2007). This is why factors of betrayal were also explored.

3.4 Conceptual framework

A conceptual framework based on ANT was developed to guide the collection, analysis and interpretation of data. This framework is depicted in Figure 2 which follows. The components of ANT are incorporated into the framework from two perspectives:

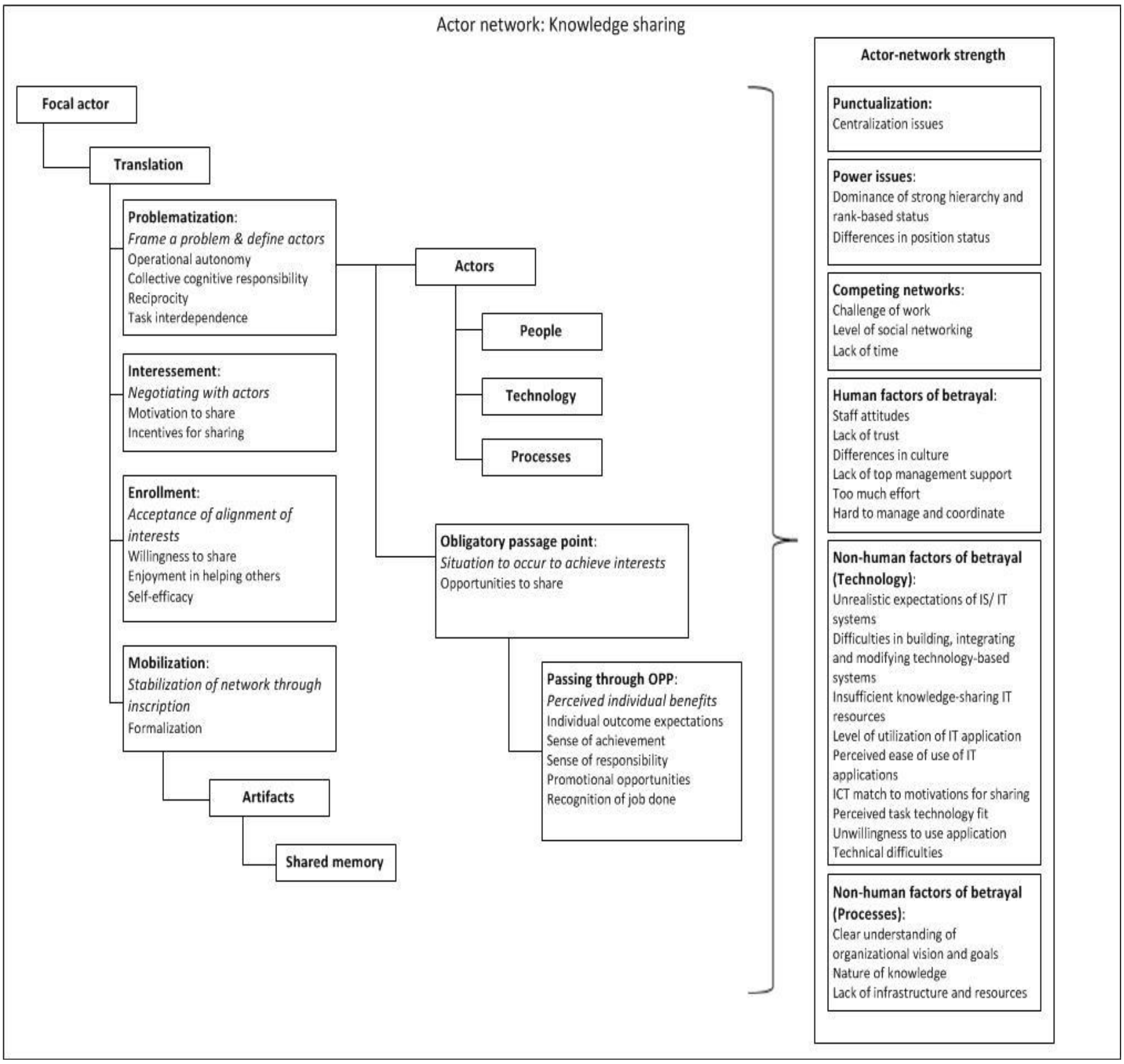
a) Those components which lead to the formation and growth of a knowledge sharing actor-network, and

b) Those components which could impact on the stability of the actor-network

The actor network is formed by the application of the four moments of translation by the focal actor.

These four moments of translation are aimed at identifying heterogeneous actors in the actor-network, including people, processes and technology. The role of each actor is determined, and methods for negotiating with actors to align with the interest of the focal actor are applied to encourage the actors to pass through the OPP. Once the actors are enrolled into the actor-network, mobilisation must occur in order to formalise the network through a process of inscription. This is a matter of institutionalisation. Punctualisation was incorporated into the framework as a potential threat to the strength of the actor network, as this is a typical issue within knowledge sharing research. Other elements of ANT are incorporated into the framework as potential threats to the stability of the actor network, including the threat of power issues, competing networks, and the betrayal of the respective actors within the network. The knowledge sharing factors gleaned from the literature were incorporated into the framework under the respective ANT components. From this perspective typical knowledge sharing factors can be viewed through ANT as a lens. The collection of data, and the analysis and interpretation from the perspective of the conceptual framework will either validate or refute these factors in respect of the higher education context and may reveal new factors, all of which will lead to the refinement of the original conceptual framework for the academic context.

Figure 2. Conceptual framework



4 Methodology

4.1 Research approach

The research was an interpretive case study based on the theoretical framework of ANT. Rich qualitative empirical material was collected that communicated the views of the actors in the context of the study. The factors were explored inductively, but the use of ANT employed deductive analysis to conceptualise the factors and explain them in relation to each other. Given that the purpose of case study research is to obtain an in-depth understanding of a given situation, the interest of a study of this nature was in discovery rather than confirmation (Laws & McLeod, 2004).

4.2 Population

The population included all academic staff members from a selected university of technology (UoT) who are actively participating in teaching and learning activities and are appointed at a level of junior lecturer, lecturer or senior lecturer. The selection from varying levels of tenure and several faculties ensured a variety of responses from different disciplines and levels of experience in order to obtain a well-rounded view of the academic domain.

4.3 Sampling

A purposive sampling method was used. The sample constituted eighteen academic staff members from the population. This sample included one academic from each level of tenure from Applied Sciences, Business, Education and Social Sciences, Engineering, Health and Wellness Sciences and Informatics and Design. An email was sent to each academic selected to invite them to take part in the research. In the event that this was unsuccessful, convenience sampling was used.

4.4 Data collection

Face-to-face interviews, with semi-structured interview questions, were used to obtain the views of the academic actors. Interview questions were developed based on the review of literature where gaps were identified. Furthermore, the conceptual framework of ANT guided the interview questions. The major themes that emerged from the review of literature included social factors, technology factors and process factors. Eighteen (18) interviews were completed in total, with one respondent of the total sample not holding a position in line with the sampling criteria, that is, their level of tenure. This was mainly due to accessibility and willingness of the participants.

4.5 Data analysis

Data organisation and reduction was performed using coding (Ary, Jacobs & Razavieh, 2002). Coding involved selecting keywords or phrases that related to the major themes, including social factors, technology factors and process factors. The main themes were related to the concepts of ANT, used as a lens for interpretation. Table 1 below provides an example of how the data were coded.

4.6 Reliability and validation

The reliability of this study is grounded in the detailed description of the research processes, offering opportunities for its replication. Reliability is enhanced by the interview schedule testing via a pilot, and the fact that the researcher conducted the interviews, transcribed the interview responses and performed the content analysis, all of which ensured that the researcher engaged with the data to ensure an enhanced understanding of the data and the responses in its entirety. The validity of interview data was assessed by correlations made with other responses given by the interviewee (Fowler, 1993), and data that feature in several places in the analysis. Validity was further enhanced by the transcribed interviews being subjected to scrutiny by all of the eighteen respondents. The systematic methodology also contributes to validating the findings (Clifton, Larkin, & Watts, 2006).

Table 1. Coding scheme

Category	Code	Meaning unit
Technology	Lack of a technology-based resource or lack of suitable technology	"A FAQ facility should be available to provide solutions for these problems. If a resource that provides solutions to problems is not available, staff give up or don't get things done" "Trying to find something on the MIS was a problem because the steps to find it changed"
Processes	Lack of structure and opportunities to share	"There is no systematic manner of accessing that knowledge which is needed" "There should be sharing on technical knowledge" "There needs to be regular reviews of subjects in terms of the content and what industry needs" "Record keeping – if you are looking for a book or course work, what you need should be available within the department, there are things staff should know, basic things should be available and clear to new staff"
Social	Lack of communication and sharing	"Staff don't share, they are holding on to their knowledge" "Lack of communication that keeps staff informed about current work. This leads to lack of harmonisation" "There is a lack of social cohesion, which impacts on the level of sharing" "People are not open"

5 Results and discussion

5.1 Factors influencing the formation of knowledge sharing actor-network

The findings show that a focal actor to drive the formation of a network of aligned interest for knowledge sharing should be a person equipped with both management and academic skills. Such a person would be better suited to filter knowledge between levels. The factors constituting problematisation were found to be the lack of accessible knowledge, lack of effectiveness and efficiency, and a lack of social cohesion. The lack of accessible knowledge was reported to be caused by a lack of available knowledge resources and a systematic approach to knowledge sharing. A systematic approach for the exchange and supply of knowledge is required for access to quality resources (Ravitz & Hoadley, 2005). The lack of access to knowledge has an impact on effectiveness and efficiency. Effective harnessing and supply of knowledge enables people to put this knowledge into action to enhance organisational efficiency and effectiveness (Holsapple, 2001; Bush & Tiwana, 2005; Hong et al., 2012). The lack of collaboration on academic activities also impact on effectiveness. This lack of social cohesion was reported to be influenced by issues of trust and communication. Kankanhalli et al. (2005) assert that the level of trust can have an impact on the level of collaboration in the organisation. This leads to a lack of communication to share tacit knowledge.

It was found that the main factor influencing interessement was culture. Developing a culture for knowledge sharing emerged as a factor influencing efforts to solicit academic support for knowledge sharing. Call (2005), Ahmed et al. (2000) and, Cranfield and Taylor (2008) cite culture as fundamental for the success and preservation of knowledge sharing in an organisation. However, it seems that culture in this context is not so much an issue of willingness, but more emphasis must be placed on the way people work. The variables reported to influence culture are that of a knowledge sharing driver and nurturing of a sharing culture amongst academics. An enabling environment was also found to impact on interessement, underpinned by time, environment and manageability. These variables relate strongly to knowledge sharing processes. Aczel et al. (2004) postulated that the biggest incentive for sharing knowledge lies in the system which facilitates such sharing. Management support also emerged as a factor of interessement, but in the effort to develop and nurture a knowledge sharing culture. Fong and Lee (2009) found that top management support was the most important motivating factor to share knowledge. Incentives also materialised as a factor of interessement in the form of workload alleviation, thereby reinforcing incentives for sharing to be context-specific (Kankanhalli et al., 2005). A systematic knowledge resource, or structured system, facilitated by processes and technology, was reported as necessary for facilitating opportunities to share, and hence interessement efforts.

Factors of enrolment were discovered for each of the heterogeneous actors in the knowledge sharing actor-network. Human factors of enrolment relate to the academics' responsibility to the institution, underpinned by collective cognitive responsibility, reciprocity and the benefit to the student. Chen and Lin (2009) found collective cognitive responsibility as important in the academic context, while Kankanhalli et al. (2005) also found reciprocity to be constrained by context. In particular, the academic context compels academics to share, as knowledge production is a key element of their job. Factors of personal development, underpinned by recognition, personal growth, enjoyment in helping others and self-efficacy also emerged. Personal factors of enrolment overlap with that of the corporate context, as internal motivating factors are not constrained by context (Kankanhalli et al., 2005), showing that knowledge sharing increases when employees understand that it helps them to develop personally and earn personal recognition (Kogut & Zander, 1992). Factors of manageability, operational effectiveness and efficiency, and access to professional knowledge emerged as those factors for the enrolment of processes and technology. Therefore the role of the nonhuman actors are to make knowledge sharing manageable, ensure access to professional knowledge and ensure operational effectiveness and efficiency, thereby affirming the notion that effective learning through knowledge management is achieved when these heterogeneous actors interact and when time and opportunity is created for such sharing (Armistead, 1999; Mårtensson, 2000).

5.2 Factors influencing the growth of knowledge sharing actor-network

The growth of the knowledge sharing actor-network was analysed from two perspectives, including enablers and factors of sustainability. The main enablers for knowledge sharing emerged as a structured system, technology, support and institutionalisation. Structure is created through employing technology and processes, facilitating opportunities, platforms and mechanisms for sharing. This is regarded as positively influencing knowledge sharing (Daud and Sohail, 2009; Sulisworo, 2012). Support also emerged as IT support, management support, a coordinator of knowledge sharing activities, and training on how to use technology and processes, as staff attitudes to knowledge sharing are linked to the level of organisational commitment in the form of support from superiors (Daud & Sohail, 2009). Institutionalisation was suggested to include standardisation, recognition and ensuring that there are opportunities and time to share. The organisation should develop and nurture transformation amongst staff by nurturing an environment for sharing, and changing the culture and procedures to enable sharing (Bhatt, 2001; Nonaka & Takeuchi, 1995).

The respondents revealed issues of time constraints and workloads as potentially impacting on the sustainability of knowledge sharing in an environment where there are competing networks. The respondents revealed four main categories that encompass sustainability. These main categories included review, leadership, accountability and institutionalisation. Leadership emerges through the promotion of the value of knowledge management, identifying opportunities to share and developing metrics for assessing the impact of knowledge sharing (Lee & Roth, 2009). A system of review and evaluation is critical for ensuring that systems are responsive to the changing culture and environment of the organisation (Mårtensson, 2000). Accountability is seen to prevent academics from operating in 'comfort zones' which is in contradiction to a knowledge sharing culture and learning environment.

5.3 Factors influencing the stability of knowledge sharing actor-network

The respondents felt that centralisation is positive as it pertains to generic knowledge that is applicable to all academics, but not discipline-specific knowledge. Centralisation of control and knowledge sharing processes was seen to be negative. Increased flexibility, as it pertains to the influence of organisational structures, will promote collaboration (Kim & Lee, 2006). Centralisation can reduce the interest in knowledge sharing due to a reduced level of knowledge sharing initiatives and a decrease in communication amongst employees and between employees and their supervisors (Kim & Lee, 2006). Centralising a knowledge resource, or systematic store of knowledge, was however found to be positive in increasing accessibility to professional knowledge to the institution at large and facilitating its dissemination (Sulisworo, 2012).

There is a link between the level of punctualisation and the power issues that could emerge out of punctualisation. The respondents revealed three variables that would generate power issues that could undermine the knowledge sharing actor-network. These variables are centralisation, self-preservation and politics. Kim and Lee (2006) suggest that participatory management practices for knowledge sharing can balance the involvement of both managers and their subordinates. Not only did Bhatt (2001) assert that the culture and procedures of an organisation must change to enable knowledge sharing, but also the power structures. Therefore, the gradual entrenchment of knowledge sharing behaviour in the organisation will not only affect the way people work, but also the power structures that existed prior to the knowledge sharing initiative.

Factors of competing networks of aligned interest were explored as factors in the work environment that would impact on the academics' willingness and the opportunity to share their knowledge. Two broad themes emerged, including the level of social networking and time. The level of social networking is perceived to have an impact on the respondents' willingness to share their knowledge while time is perceived to impact on their opportunity to share knowledge. The lack of time has been ranked amongst the top inhibiting factors of knowledge sharing while social networking is related to the organisational culture (Fong & Lee, 2009; Mårtensson, 2000).

Human factors of betrayal in the context of this research pertains to the personal factors that the respondents perceive to impact on their willingness to share their knowledge. Those respondents harbouring personal factors revealed them to be the lack of trust and recognition, the level of participation of colleagues and management support. There is an alignment with personal factors of betrayal and personal motivations to share and align with the knowledge sharing actor-network. Daud and Sohail (2009) found management support to be a significant predictor for positive knowledge sharing. Lack of trust and the level of participation of colleagues might go hand in hand, as Kim and Lee (2006) consider both to be factors of organisational culture.

The broad themes that have emerged as the factors relating to technology include the lack of or insufficient knowledge sharing IT resources, insufficient IT support, technical difficulties or accessibility to IT resources, task technology fit and skill in using IT resources. Some of these factors are attributed the fact that knowledge sharing is not an established practice in the institution. Technical problems seem to have a negative impact on opinions about using technology. These perceptions, however, stem from existing problems, not necessarily in a knowledge sharing context. Accessibility pertains to mobility, which satisfies the culture of the institution. Task technology was one of the most important issues to the respondents after the reliability of technology, as this is important for defining the role of technology in the knowledge sharing actor-network. Skill in using technology, however, seemed to be the prevailing factor that would undermine the role of technology as an actor in the knowledge sharing actor-network. Skill in using IT resources is composite of the perceived ease of use of IT applications, lack of skills, and lack of training. Without the proper training, HEIs cannot expect technology to be effective in facilitating knowledge sharing (Lee & Roth, 2009). The perceived ease of use and lack of skill could eventually lead to the unwillingness to use applications and as such impact on the level of utilisation of IT applications. The factor of insufficient knowledge-sharing IT resources as discovered in this research, however, shows that there is a need for IT to support knowledge sharing activities, as long as there is an abundance of tools for interaction, are easy to use, and helps its users to locate knowledge required for professional application (Carroll, Choo, Dunlap, Isenhour, Kerr, MacLean & Rosson, 2003).

The analysis revealed that processes rank as the most important enabler for knowledge sharing. This provided an indication of where there are shortcomings. The role of processes in the actor-network is that of a facilitator. Process factors included the lack of management of processes, process structure, lack of guidance and the organisational culture. Sulisworo (2012) and Rowley (2000) emphasised the importance of consciously and explicitly managing knowledge sharing processes while Biasutti and El-Deghaidy (2012) suggested that knowledge sharing processes must be integrated into the daily routines. The process structure was important to the academics, as it was raised as a factor by the majority of the respondents, with the focus on manageability. The lack of guidance relates to guidelines for sharing and training for utilising processes. When new tools, technologies, processes and procedures are employed for knowledge sharing, the organisation must update the skills of its employees to adapt to these changes (Bhatt, 2001). The respondents also felt the organisational culture will impact on the uptake of knowledge sharing processes. This is because in the absence of trust, even formal methods of sharing are insufficient to encourage sharing with others in the same environment (Kim & Lee, 2006).

5.4 Factors influencing the institutionalisation of knowledge sharing actor-network

The respondents offered their views on how knowledge sharing can be formalised, including implementing processes, incorporating a structured, systematic platform, using technology, offering support, standardisation, and institutionalisation. Support manifested in various forms, including that of management, training support and administrative functions. The notion of support shows that the emphasis within the institution is on enabling, rather than coercing, staff to share knowledge. Both standardisation and institutionalisation lead to formalisation. Standardisation focuses on formulating and implementing the guidelines that ensure order and uniformity in the context of knowledge sharing. Institutionalisation aims to integrate knowledge sharing into the workloads of staff so that a knowledge sharing culture is institutionalised. Kim and Lee (2006:374) define formalisation of employee knowledge sharing as "the degree to which organisational activities are manifest in written documents regarding procedures, job descriptions, regulations and policy manuals".

The findings that emerged from the analysis served to inform the development of the general framework in Figure 3 which follows. The framework is guided by the theoretical framework of ANT and the problem conceptualisation in Figure 1. The general framework represents new knowledge about knowledge sharing in the academic domain from the perspective of the participants in the research. The framework in Figure 3 demonstrates a new approach to knowledge sharing where the knowledge sharing strategy of the institution is aligned to ANT.

6 Conclusion and recommendation

6.1 Introduction

This research set out to determine the factors that affect knowledge sharing amongst higher education academics. The factors were explored using ANT as a theoretical lens. Therefore, this research presented a novel way of exploring knowledge sharing factors. A similar study has not been undertaken and hence there are no studies that have presented results similar to that expected by the researcher for the academic context. However, the literature did provide the background to what would constitute the actors in a knowledge sharing actor-network, or the main themes of the research. The themes were based on the prevailing factors in the literature that impact on knowledge sharing not only in the business context but also in academia. The main research objective was to develop a framework to guide the implementation of knowledge management strategies for the higher education context. In order to achieve this objective, four research questions had to be explored to reveal factors affecting the formation, growth, stability and institutionalisation of a knowledge sharing actor-network.

6.2 Summary of findings

The findings of this study support the problem conceptualisation in Figure 1. Effective knowledge sharing is achieved when people, processes and technology come together. This study affirms these concepts to be a socially constructed phenomenon, as people continuously have an influence on the processes and technology that support knowledge sharing. The exploration of problematisation in this context revealed process factors to receive significant focus before human and technology factors. The organisational culture and management support emerged as the most important human factors, influencing several areas of the framework, including factors influencing the formation, growth and stability of the actor-network. Management is identified to hold a significant position in influencing the uptake and sustainability of knowledge sharing. Factors of technology and processes were centred on facilitating opportunities to share and ensuring effectiveness and efficiency. Hence, they are reported to hold a significant influence on enabling and sustaining knowledge sharing. People, process and technology factors that emerged indicate that knowledge sharing as a process is not yet well established and thus the factors for the formation and growth of a knowledge sharing actor-network are important. This is why nurturing a culture for knowledge sharing, and leadership and support have emerged as human factors. Technology factors relate mainly to the provision of suitable IT and support, and process factors are centred on identifying and creating opportunities to share, as well as making provision for sharing in the core responsibilities of the academic staff. Factors of institutionalisation affirm the need for a certain level of formalisation in the higher education context. The findings show that the culture of the institution has determined its entrenched behaviour.

The views of the respondents show that management are tasked to embody the leadership skills that are required for the gradual assimilation of the principles of knowledge sharing in the institution. Management support is a very important factor, as leadership is seen to be important for the promotion of the value of knowledge management, identifying opportunities to share and developing metrics for assessing the impact of knowledge sharing. The findings also suggest that knowledge sharing strategies should adopt a blend of personal interaction and technology-based approaches. Hence the approach to knowledge sharing is context driven and designed around the shared culture of the institution. The outcomes of this study has contributed to the development of a general framework for the formation, growth, stability and institutionalisation of knowledge sharing to guide the development and implementation of knowledge sharing strategies not only in higher education but in every organisation.

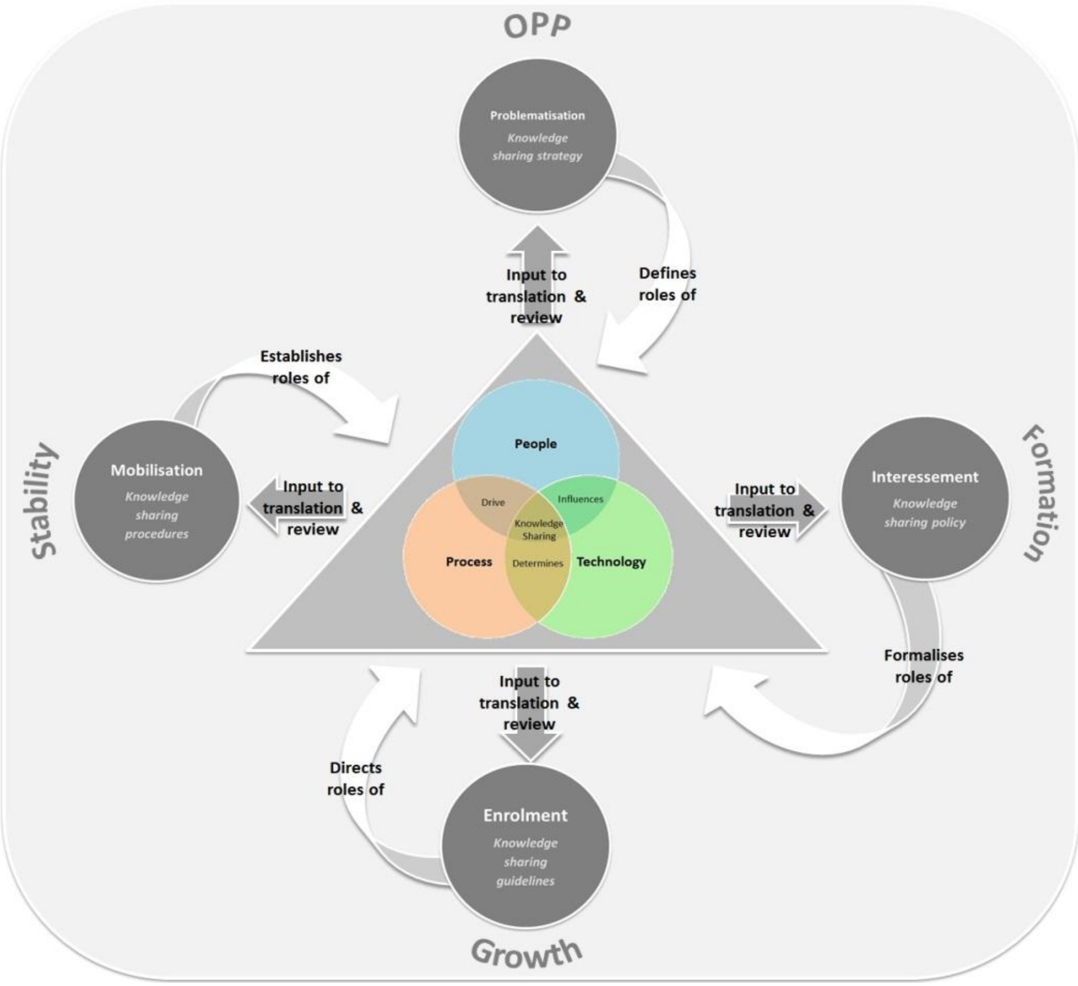
6.3 Research implications and recommendations

The structure of the institution suggests the focal actor should change at different points in time during the translation process. The initial stages of the translation process could be driven at the institutional level so that supporting departments could also share in the interest of the actor-network from an enabling point of view. For interessement it is recommended that institutional-level management negotiate with a representative of the faculty, being the dean. This way the dean can negotiate with the respective heads of departments (HOD), and the HODs with their respective departments. This is more suitable given the different cultures of each faculty and of each department within a faculty. The HOD possesses management and academic experience, liaising not only with their academic staff, but also with higher levels of management. Furthermore, power issues are less likely to eventuate in a situation where management simply play a supportive role while the HOD drives the knowledge sharing within their respective departments. The focal actor should show sustained support for knowledge sharing to enable a culture for sharing, and this culture should be nurtured during interessement. Stagnation in positions can lead to the idea that knowledge acquisition is not necessary.

Therefore rotation in positions such as subject coordinator, teaching different subjects, and academics sitting on committees can prevent staff from creating silos and also serve to nurture a knowledge sharing culture through sustained learning. Senior staff members also need to provide guidance in knowledge sharing within their departments to encourage younger staff to share their ideas. The workload model ideally should incorporate knowledge sharing as a core responsibility, such as time allocation on timetables for staff to meet. A centrally accessible knowledge sharing platform that not only houses a knowledge repository, but is able to push knowledge to relevant persons, is needed. It creates a store of knowledge, or collective memory of the institution. This will enable knowledge resources to be harnessed in a systematic manner. Processes must be carefully designed to consider the needs of the users, or academic actors. The strength of the knowledge sharing actor-network lies in the ability to integrate knowledge sharing processes into daily work processes. The structure of the institution lends itself to varying levels of punctualisation. The unique nature of knowledge at these varying levels need to be shared, which implies that a punctualised actor be formed at the institutional level. However, sharing must be more vigorously pursued at lower levels, such as within subjects and departments, as these are the kinds of knowledge that academics encounter on a daily basis and which is more dynamic. Here tacit knowledge is exchanged through personal, non-formal methods to improve on the way that academics perform and improve effectiveness and efficiency. The infrequency of sharing at the faculty and institutional level means that sharing can occur on technology-based platforms where these kinds of knowledge can be kept and where change is infrequent. A less dynamic knowledge environment would require non-personal or formal methods of sharing knowledge, such as through knowledge repositories. Here the academics are not required to meet on a personal basis, which means that they are able to retrieve only that knowledge which is applicable to them.

Given that the aligned interest should be a collective interest of the entire institution, it should be interpreted as a strategic plan and should be put into practice via a policy with guidelines for what must be shared and how it must be shared. The policy and the guidelines should be drafted in consultation with the academics and key players. Implementing knowledge sharing is not a once-off initiative but a continuous process of consultation and revision in response to the changing dynamic of the institution (Sulisworo, 2012). This will prevent irreversibility. Management need to review knowledge sharing strategies to ensure that systems are responsive and not rigid. This can be achieved through annual knowledge sharing strategy review workshops with knowledge champions to gauge the suitability of the current knowledge sharing strategies to change in response to the changing needs of the academic actors. This would require processes and technology to change in order to prevent the betrayal of these actors. Training should also be part of the efforts to institutionalise knowledge sharing. Training should not only address the technological skills gap, but also be aimed at equipping individuals with the skills for knowledge sharing processes. The general framework in Figure 3 could also be used in contexts other than the academic domain to align the development and implementation of a knowledge sharing strategy to ANT. The knowledge sharing strategy should emerge out of problematisation. Out of the strategy, or its annual reviews, will come new policies, guidelines and procedures which will inform, formalise, direct and establish the roles of people, technology and processes for the knowledge sharing actor-network and entrench knowledge sharing in the organisation. The interessement stage of translation should involve the development of knowledge sharing policy, emerging out of the knowledge sharing strategy. Enrolment of the actors should involve the development of guidelines for the actors and mobilisation will achieve institutionalisation of knowledge sharing through integration of knowledge sharing in the procedures of the organisation.

Figure 3. General framework



6.4 Research limitations and future research

Although this research has followed a rigorous process of analysis, the findings should be considered with caution due to some limitations of the research. The research utilised data that were collected from a single institution. Therefore the findings cannot be interpreted for contexts beyond the institution of study. Future research could replicate this study in other HEIs to validate these findings and verify the external validity of the findings. Future research could also use quantitative techniques to further validate the findings in other HEIs. Quantitative methods of survey are more reliable and have higher validity than qualitative interviews and would improve the generalizability of the data. This research only focused on academic employees of an HEI. Future studies could include supporting departments, as it has emerged that they have an influence on the overall effectiveness and efficiency of the institution. It should also be noted that the institution under study did not have established knowledge sharing processes, and as a result the findings for an institution that already engages in formal knowledge sharing activities might reveal different factors. Future studies could compare the factors that emerge out of such institutions with those institutions that do not have mature knowledge sharing processes. Furthermore, the dynamics of a UoT may be different to that of a traditional university. Future studies could explore these differences. Given the novelty of this research and the scant use of ANT as a guiding framework in a study focusing on knowledge sharing, further studies should explore whether these factors are in fact specific to the case or if there are overlapping factors between different HEIs. Further studies could also use a similar methodology in the corporate context. It should be determined whether the same research instrument will generate similar or different results for a different context.

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MEASUREMENT OPTIONS FOR NON-CONTROLLING INTERESTS AND THEIR EFFECTS ON CONSOLIDATED FINANCIAL STATEMENTS CONSISTENCY. WHICH SHOULD THE DISCLOSURE BE?

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Abstract

This paper aims at emphasizing some drawbacks arising from the alternatives consolidation approaches allowed by the IFRS 3 revised 2008. We develop our analysis working on simulated figures to demonstrate that subsidiaries with similar underlying economics might have a different impact on the calculation of the group equity and income. That is merely due to the accounting treatment chosen by the parent company. This fact does not respect the consistency among values within consolidated financial statements and causes lack of comparability among consolidated financial statements prepared by different reporting entities. Since nowadays there is not any Standard requiring disclosure suitable for the comprehension of this matter, we suggest which relevant disclosure should be provided to better understand the composition of the group results.

Keywords: Financial Statement, Disclosure, IFRS

JEL Code: M41, G34

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1 Introduction

Referring to the business combinations that result in a parent-subsidiary relationship, IFRS 3 revised 2008 (IFRS 3R)[5] allows the parent to measure the non-controlling interests (NCI) either at their fair value or as their proportionate share in the subsidiary identifiable net assets[6]. The second option can be applied only whether the NCI represent ownership instruments and entitle their holders to a pro-rata share of the subsidiary net assets in the event of liquidation[7]. It should be pointed out that the parent is permitted to choose the consolidation approach for each business combination[8].

The different value attributable to the NCI occurs in a different goodwill recognised in the group accounts.

Goodwill is the resource by which we can synthetically figure out the future economic benefits arising from the assets acquired in a business combination that are not individually identified and separately recognised (IAS 38, § 11).

When we consider the nature of goodwill and the objective of the financial statements under the IASB Framework, the conceptually sound approach in accounting for goodwill consists in its full recognition. In fact, the role of the financial statements is to provide financial information that supports the users in making decisions. In order to make these forward-looking economic decisions, the relevant information is those that help the users to predict the entity future

[5] The revised version of IFRS 3 was issued in January 2008 and applies to all business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after 1 July 2009.

[6] The first version of IFRS 3, issued in 2004, required any minority interest was stated at its proportionate share of the net fair value of the subsidiary's identifiable assets, liabilities and contingent liabilities (IFRS 3, § 40).

[7] Amendment introduced by the Annual Improvements to IFRSs 2010.

[8] In 2005 the IASB issued the Exposure Draft of proposed amendments to IFRS 3, Business Combinations (ED 3). For what concern the reporting method for NCI, the accounting options allowed by the IFRS 3R were not present in the above-mentioned Draft. According to ED 3, the parent company should measure and recognise NCI as the sum of the non-controlling interest's proportional interest in the identifiable assets acquired and liabilities assumed plus the non-controlling interest's share of goodwill, if any. Further, it should be pointed out that the measurement of goodwill arising from consolidation implied the valuation of the subsidiary as a whole, being its value the difference between the fair value of the acquiree (subsidiary) and the net amount of the recognised identifiable assets acquired and liabilities assumed (ED 3, § 49). These requirements evidence how the Exposure Draft was definitely based on the entity theory.

net cash inflows (amount, timing and uncertainty)[9]. Consequently, in the case of business combination, the group accounts should present all the resources that contribute to generate the acquiree future cash flows, including those that are part of goodwill. According to this theoretical reasoning, the recognition of the full goodwill would provide financial information with greater predictive ability and greater relevance than does the partial goodwill approach allowed by IFRS 3R. However, in practice, the recognition of full goodwill has some troubles in measuring the goodwill related to the parent and the one related to the NCI. Thus, IFRS 3R still allows two alternative accounting treatments that are called, respectively, as "full goodwill approach" and "purchased goodwill approach".

The first one sees the group as a single economic entity and the consolidated financial statements aim at showing the total resources managed within the group, regardless of the percentage of controlling shareholders ownership. The group accounts present the full fair value of the subsidiary identifiable assets and liabilities and the whole goodwill of the subsidiary.

According to the purchased goodwill approach, the consolidated financial statements show the full fair value of the subsidiary identifiable assets and liabilities and just the goodwill related to the controlling interests.

The full goodwill approach shares the conceptual background of the entity theory and the consolidated financial statements provide useful information to all the group shareholders, including the non-controlling interests; conversely, the purchased goodwill approach is still anchored to the parent company extension theory[10]. The latter improves the proprietary theory claiming the consolidated financial statements to show the full fair value of the subsidiary identifiable assets and liabilities. Nonetheless, it keeps reflecting the point of view of the "proprietors" when prohibits to recognise the goodwill attributable to the NCI.

Moreover, a parent-subsidiary relationship could be represented according to a third manner. Because of the transition to the IFRS 3 issued in 2004, business combinations occurred before 31 March 2004 shall be accounted for discontinuing amortisation of goodwill and testing it for impairment, whilst the NCI keep being measured at the carrying amount previously recognised in the consolidated financial statements. For subjects already applying IFRSs, the carrying amount was variously recorded, according to the options given by the pre-existing IAS 22; for subjects facing the first adoption of IFRSs, the carrying amount was recorded as required by the national GAAPs. In Italy, for example, the NCI have been recorded at their proportionate share in the subsidiary equity book value.

Indeed, the non-controlling interests within the group equity might be the aggregate of non-homogeneous values: some of them could include the goodwill related to the NCI, others could express the NCI portion of the subsidiary identifiable net assets measured at fair value and others can express the NCI portion of the subsidiary identifiable net assets at carrying amount.

The question is: do IFRS address the issue of non-consistency within the consolidated financial statements and require disclosure to reliably explain the effect of the measurement options on group equity and income?

Consolidated financial statements would be supposed to provide useful information to assess the quantitative effects of various NCI measurements on the group financial position and performance. However, we claim that neither the accounting numbers, because of their level of aggregation, nor the disclosure required by any Standards, supports the users in understanding the composition of the group results. Further, the deficiencies in the notes hamper effective financial statements analysis and limit empirical research on the value relevance of the information provided by financial statements reporting NCI under alternative accounting treatments.

Our study is built on simulated figures that allow us to demonstrate how subsidiaries with similar underlying economics might have a different impact on the measurement of the group equity and income. It is merely due to the reporting method for NCI chosen by the parent company. This fact does not respect the consistency among values within consolidated financial statements and causes lack of comparability among consolidated financial statements prepared by different reporting entities.

The matter is relevant because IFRS Conceptual Framework sets out comparability as a quality of information that is likely the most useful to users. The principle of comparability refers to the ability to compare financial statements from year-to-year, company-to-company, and industry-to-industry. To achieve the goal of comparability, consistency is the main way.

Since nowadays there is not any Standard requiring disclosure suitable for the comprehension of this matter, we also suggest which relevant disclosure should be provided to better understand the composition of the group results[11].

The remainder of the paper is organised as follow. Section 2 relates to prior studies on consolidated financial statements and IFRS. Section 3 develops simulations with the aim at evidencing how different accounting options on NCI affect the group

[9] IASB (2010), Conceptual Framework for Financial Reporting, OB2 and OB3.

[10] The parent company theory is not properly a group theory. It arises from different technical approaches belonging to both the entity and proprietary theory.

[11] IFRS 3R only requires to disclose, for each business combinations, the amount of the non-controlling interests in the acquiree (subsidiary) recognised at the acquisition date and the measurement basis for that amount (B64.o).

results. Section 4 describes which disclosure would be helpful to estimate the group results according to homogeneous criteria. Section 5 sets out our findings and conclusions. Finally, section 6 suggests future developments of our study.

2 Literature review

IFRS 10, Consolidated financial statement, sets out the rules for presenting and preparing consolidated financial statements when an entity controls one or more other entities. This standard was issued in May 2011 and replaced the previous IAS 27, Consolidated and Separate Financial Statement. However, it does not deal with the accounting requirements for business combinations and their effect on consolidation, including goodwill arising on a business combination. These aspects are prescribed by the IFRS 3, Business combinations, which is the standard where we find the presence of different accounting options related to the non-controlling interests.

Although nowadays the preparation of financial statement is ruled by generally accepted accounting standards (GAAPs), the group accounting originated from the development of the two main group theories in the late nineteenth and twentieth century.

The first theory, named proprietary theory, was illustrated by several authors, above all Hatfield (1909) and Sprague (1922). The second theory, the entity theory, is attributable mainly to Paton (1922). In the same or in the following years some others scholars contributed to the development of the theoretical framework of both theories (Dickinson, 1918, Kester, 1930, Canning, 1929 for the proprietary theory and above all Moonitz, 1942, for the entity theory).

Beside those contributes, we can find two other perspective theories on which the preparation of consolidated financial statements is based: the parent company theory and the parent company extension theory (Baxter and Spinney, 1975). A complete analysis on the different group theories is presented by Zambon (1996).

Regarding the standard setters position, the IASB and the FASB stated that consolidated financial statements should be prepared mainly according to the perspective of group entity even though there are some topics still linked to the parent company. For example, the accounting for NCI is one of those topics.

Even if it is assumed that the International Financial Reporting Standards are more oriented to the entity theory, this support is not sustained by empirical findings in the economic literature. Several scholars considered in recent years some topics regarding consolidated financial statements but almost none of them analyzed group theories effects on financial statements.

In the last two decades, Harris et al., 1994, Niskamen et al., 1998, Abad et al., 2000, Goncharov et al., 2007, Müller, 2011 concentrated on consolidated financial statements relevance compared to separate financial statement one. Furthermore, Bartov et al., 2005, Jermakowicz et al., 2007, Barth et al., 2007, Lin and Paananen, 2007 pondered on the IFRS impact on consolidated financial statements preparation. Other scholars as Beckman, 1995, Nurnberg, 2001, Zeff, 2005, Aceìtuno et al., 2006, claimed the superiority of the entity theory and its implications on NCI recognition.

However, we did find only few contributions and empirical studies on the influence of group theories on consolidated financial statements comparability, consistency and usefulness. Swanson and Mielke, 1997, Abad et al., 2000, Santos and Lourenco, 2007, found inconsistent and weak results (So and Smith, 2009).

Swanson and Mielke, 1997, tested listed company Compustat data with the Olson model (1995) and it resulted that NCI disclosures have decision-usefulness. As opposite, the findings of Abad et al., 2000, raise doubts on the significance of NCI components of equity and earnings. These findings suggest us that more and improved research is needed.

We do not aim at finding which should be the best theoretical approach for the preparation of consolidated financial statements, because this would need a deeper reasoning on other issues related to consolidation process (for example, in assessing when an entity controls another one, how to measure the full goodwill[12] as of the acquisition date, the reporting method for investments in associates and joint ventures, and so on). Our purpose is to demonstrate which are the main consequences of the coexistence of accounting numbers raised from contrasting perspectives in viewing the group.

We are confident that Standard Setters will definitely choose only one viewpoint in the consolidated financial statements building. Under the present state, we emphasize the role of disclosure in providing more comprehensive information on the composition of the group financial position and performance. There are empirical evidences that disclosures are at least partially valued by the investors (Davis-Friday et al., 1999).

3 Hypothesis for assessing the quantitative effects of different reporting options for NCI

In the following model, we consider a holding company and three directly controlled operating subsidiaries with the same percentage of ownership.

At the reporting date, December, 31st, 2013, we consolidate the subsidiaries adopting the three

[12] About this issue, the original version of Exposure Draft of Proposed AMENDMENTS TO IFRS 3 (2005) prescribed that the acquirer shall measure and recognise goodwill as of the acquisition date as the excess of the fair value of the acquiree, as a whole, over the net amount of the recognized identifiable assets acquired and liabilities assumed. (§ 49)

measurement bases for NCI that might coexist after the IFRS 3R first adoption. The subsidiaries have the same underlying economics and their individual financial statements present the same structure and amount of assets and liabilities, revenues and expenses. Thanks to this hypothesis, the different impact of the subsidiaries consolidation on the group representation arises only from the method adopted in accounting for NCI.

3.1 Detailed features of the group

The following detailed features of the group were identified:

a) The group is made by the parent company (P) that controls three subsidiaries (Alfa, Beta, Gamma), holding 60% of the voting power of each one;

b) the subsidiaries were funded on January, 1st, 2000 and we suppose they are identical in business, organisation, technical and capital structure;

c) the parent obtained control over:

- Alfa, on January 1st, 2004, transferring a consideration of 33.600;
- Beta, on January 1st, 2006, transferring a consideration of 32.400;
- Gamma, on January 1st, 2010, transferring a consideration of 30.000.

The results of the purchase price allocation (PPA) are shown in Table 1.

Table 1. Purchase Price Allocation

	Alfa 01/01/2004	**Beta** 01/01/2006	**Gamma** 01/01/2010
Consideration transferred by P	33.600	32.400	30.000
Revaluation surplus	9.600	8.400	6.000
Goodwill	6.000	6.000	6.000
% Equity book value (EBV)	18.000	18.000	18.000

d) At the date P obtained control over subsidiaries, the only asset to be revalued at fair value is an item of property. Each subsidiary bought its item of property on January 1st, 2000, at the cost of 20.000. The asset useful life is 20 years.

Table 2 reports the data related to the item of property.

Table 2. Property's value relevant for consolidation

	Alfa 01/01/2004		**Beta** 01/01/2006		**Gamma** 01/01/2010	
	Parent	NCI	Parent	NCI	Parent	NCI
Historical cost	12.000	8.000	12.000	8.000	12.000	8.000
- Accumulated depreciations	-2.400	-1.600	-3.600	-2.400	-6.000	-4.000
Net property	9.600	6.400	8.400	5.600	6.000	4.000
Revaluation surplus*	9.600	//	8.400	5.600	6.000	4.000
Revalued amount	19.200	6.400	16.800	11.200	12.000	8.000

Note: *We suppose that the revaluation surplus is equal to the net carrying value at the business combination's acquisition date.

e) since the time of the acquisition, the subsidiaries have been paying dividends to the shareholders, without retaining any earnings as well as the parent to its owners;

f) the parent income statement just presents the dividends received from the subsidiaries.

3.2 First simulation

In order to demonstrate how different reporting methods for identical economic substance cause different effects on financial performance and position of the group, we develop a simplified consolidation process. We do not consider taxation and we assume that no intercompany transactions occurred.

The parent company consolidates:

- subsidiary Alfa recording NCI at their proportionate share in the subsidiary equity book value;
- subsidiary Beta recording NCI at their proportionate share in the fair value of subsidiary net identifiable assets (purchased goodwill approach);
- subsidiary Gamma recording NCI at their fair value (full goodwill approach).

Table 3 shows the income statement values referred to the parent and subsidiaries separate/individual financial statements.

Table 3. Parent's and subsidiaries' income statements

2013	**Parent**	**Alfa**	**Beta**	**Gamma**
Revenues/Dividends	7.200	27.000	27.000	27.000
Expenses	0	22.000	22.000	22.000
EBITDA	*7.200*	*5.000*	*5.000*	*5.000*
Depreciations	0	1.000	1.000	1.000
Impairment of Goodwill	0	0	0	0
EBIT	*7.200*	*4.000*	*4.000*	*4.000*
Interest costs		0	0	
Net income	*7.200*	*4.000*	*4.000*	*4.000*

Table 4 presents the income statement values adjusted for consolidation (depreciation of revaluation surplus and dividends).

Table 4. Parent's and subsidiaries' income statements adjusted for consolidation

2013	**Parent**	**Alfa**	**Beta**	**Gamma**	**Consolidated**
Revenues/Dividends	0	27.000	27.000	27.000	81.000
Expenses		22.000	22.000	22.000	66.000
EBITDA		*5.000*	*5.000*	*5.000*	*15.000*
Depreciations		1.600	2.000	2.000	5.600
Impairment of Goodwill		0	0	0	0
EBIT		*3.400*	*3.000*	*3.000*	*9.400*
Interest costs		0	0		0
Net income	*0*	*3.400*	*3.000*	*3.000*	*9.400*

As shown above, the group net income consists only of the results from the subsidiaries, which present identical individual income statements. Nonetheless, unlike Beta and Gamma, subsidiary Alfa contributes to group results with an amount of 3.400.

It does not depend on its performance but only on the reporting method adopted in the consolidation of Alfa. In fact, net income share of Alfa attributable to NCI is higher than Beta and Gamma ones because Alfa NCI are measured at their proportionate share in the equity book value. In a nutshell, depreciation of revaluation surplus does not affect NCI.

Also the statement of financial position gives evidence of the inconsistency between the economic substance – which is identical for all subsidiaries – and the accounting pattern.

Table 5 synthesizes the values presented in the separate/individual statements of financial position prepared by the parent and its subsidiaries.

Table 5. Parent's and subsidiaries' statements of financial position

31/12/2013	**Parent**	**Alfa**	**Beta**	**Gamma**
Other assets	0	34.000	34.000	34.000
Property	0	20.000	20.000	20.000
- Accumulated depreciation	0	-14.000	-14.000	-14.000
Property net value	0	6.000	6.000	6.000
Goodwill	0	0	0	0
Investment in ALFA	33.600			
Investment in BETA	32.400			
Investment in GAMMA	30.000			
Total assets	*96.000*	*40.000*	*40.000*	*40.000*
Total Liabilities	*0*	*10.000*	*10.000*	*10.000*
Equity	96.000	30.000	30.000	30.000

Table 6 reports the same values adjusted for consolidation (revaluation surplus and goodwill):

Table 6. Parent's and subsidiaries' statements of financial position adjusted for consolidation

31/12/2013	Parent	Alfa	Beta	Gamma	Group
Other assets	0	34.000	34.000	34.000	102.000
Property	0	29.600	34.000	30.000	93.600
- Accumulated depreciation	0	- 20.000	- 22.000	- 18.000	- 60.000
Property Net value	0	9.600	12.000	12.000	33.600
Goodwill	0	6.000	6.000	10.000	22.000
Total Assets		*49.600*	*52.000*	*56.000*	157.600
Total Liabilities		*10.000*	*10.000*	*10.000*	30.000
Equity	96.000				82.800
NCI		12.000	14.400	18.400	44.800

The group statement of financial position evidences that some assets are undervalued because the property in Alfa is recognised at 60% of its revalued amount (9.600). In particular, at the reporting date, subsidiary Alfa shows a residual undervaluation of its property (2.400).

Another undervaluation occurs both in Alfa and in Beta, because the goodwill related to the NCI is not recognised.

As opposite, NCI in Gamma exactly worth the 40% of Gamma fair value (18.400)[13].

3.3 Second simulation

In the second simulation, we consider the same data of section 2.2, adding an impairment loss on goodwill of each subsidiaries[14], equal to the 8,33%[15] of its carrying amount.

Table 7 shows the income statement values already adjusted for consolidation.

Table 8 shows the statement of financial position values already adjusted for consolidation.

This second simulation evidences that, consequently to the impairment of goodwill, the consolidated income statement does not report the impairment loss attributable to NCI of Alfa and Beta.

3.4 Quantitative findings

In order to make clearer the non-consistency within the consolidated financial statements previously prepared, we compare the evidences of both simulations.

The following tables allow us to contrast the adjustments made in the simulation 1 and in the simulation 2.

Table 9 and Table 10 present, in detail, the comparison between the different items of the group equity.

We can observe that, even though the economic substance changes from the simulation 1 to the simulation 2, due to an impairment loss for goodwill, Alfa and Beta NCI are still measured at the same amount in both simulations.

Table 11 and Table 12 show in detail the composition of the group net income.

It is evident how the recognition of an impairment loss increases the non-homogenous composition of the group results attributable to the parent and to the NCI, respectively. In fact, for ALFA and BETA, the consolidated income statements report only the impairment loss of goodwill related to the parent.

4 Role of disclosure

Once we illustrated the quantitative effects of the coexistence of different accounting treatment for NCI, we ask ourselves which disclosure would be helpful to estimate the group results according to homogeneous criteria.

With reference to the figures of the first simulation, we claim the notes[16] should present, at least, the following information:

- the portion of goodwill arising from consolidation related to the controlling interests (18.000) and the one related to the NCI (4.000). The group statement of financial position shown in table 6 only report the aggregate value of 22.000;
- the amount of the NCI within the group equity still measured according to the pre-acquisition carrying amount of the net assets of the subsidiaries (as it was allowed by IAS 22); in the simulation (table 6), the NCI of Alfa are measured at 12.000. The disclosure suggested allow users to understand the composition of the NCI within the group equity
- the amount of the residual undervaluation of the property in Alfa (2.400); in fact this asset is not recognised at its full fair value in the consolidated statement of financial position.
- the residual undervaluation of the property amount related to group total assets and related to the NCI; we need this information to assess the magnitude of undervaluation.

[13] In order to simplify our data, we suppose that the portion of goodwill attributable to the parent and to the NCI of Gamma is proportional to their respective percentage of ownership. In some circumstances, a subsidiary's goodwill might not be attributed on a proportional basis, as for example when the fair value of controlling and non-controlling interests includes a control premium or a non-controlling discount.

[14] In order to simplify our data, we suppose that in the goodwill impairment test, each subsidiary represents a cash generating unit.

[15] We set the percentage of 8,33% in order to simplify our data.

[16] That after stating, for each business combination, the measurement basis applied to the NCI. Actually, this disclosure is already required by the IFRS 3, § B64, (o), (i).

Table 7. Parent's and subsidiaries' income statements adjusted for consolidation

2013	**Parent**	**Alfa**	**Beta**	**Gamma**	**Consolidated**
Revenues/Dividends	0	27.000	27.000	27.000	81.000
Expenses	0	22.000	22.000	22.000	66.000
EBITDA	*0*	*5.000*	*5.000*	*5.000*	*15.000*
Depreciations	0	1.600	2.000	2.000	5.600
Impairment of Goodwill	0	500	500	833	1.833
EBIT	*0*	*2.900*	*2.500*	*2.167*	*7.567*
Interest costs	0	0	0	0	0
Net income	0	2.900	2.500	2.167	7.567
attributable to:					
Parent		1.300	1.300	1.300	3.900
NCI		1.600	1.200	867	3.667

Table 8. Parent's and subsidiaries' statements of financial position adjusted for consolidation

31/12/2013	**Parent**	**Alfa**	**Beta**	**Gamma**	**Group**
Other assets	0	34.000	34.000	34.000	102.000
Property	0	29.600	34.000	30.000	93.600
Accumulated depreciation	0	20.000	22.000	18.000	60.000
Net value	0	9.600	12.000	12.000	33.600
Goodwill	0	5.500	5.500	9.167	20.167
Total Assets	*0*	*49.100*	*51.500*	*55.167*	*155.767*
Total Liabilities	*0*	*10.000*	*10.000*	*10.000*	*30.000*
Equity	96.000				81.300
NCI		12.000	14.400	18.067	44.467

Table 9. Composition of the group's equity attributable to parent company and NCI: example 1

		Parent			**NCI**	
	Alfa	**Beta**	**Gamma**	**Alfa**	**Beta**	**Gamma**
Equity book value	18.000	18.000	18.000	12.000	12.000	12.000
Revaluation surplus	9.600	8.400	6.000	//	5.600	4.000
Goodwill	6.000	6.000	6.000	//	//	4.000
Purchase price	33.600	32.400	30.000	//	//	//
NCI at the acquisition date	//	//	//	12.000	17.600	20.000
- Consolidation adjustments for depreciation	-6.000	-4.800	-2.400	//	-3.200	-1.600
Group's equity attributable to:						
Parent	27.600	27.600	27.600	//	//	//
NCI	//	//	//	12.000	14.400	18.400

Table 10. Composition of the group's equity attributable to parent company and NCI: example 2

		Parent			**NCI**	
	Alfa	**Beta**	**Gamma**	**Alfa**	**Beta**	**Gamma**
Equity book value	18.000	18.000	18.000	12.000	12.000	12.000
Revaluation surplus	9.600	8.400	6.000	//	5.600	4.000
Goodwill	6.000	6.000	6.000	//	//	4.000
Purchase price	33.600	32.400	30.000	//	//	//
NCI at the acquisition date	//	//	//	12.000	17.600	20.000
- Consolidation adjustments for depreciation	-6.000	-4.800	-2.400	//	-3.200	-1.600
- Consolidation adjustments for impairment	-500	-500	-500	//	//	-333
Group's equity attributable to:						
Parent	27.100	27.100	27.100	//	//	//
NCI	//	//	//	12.000	14.400	18.067

Table 11. Composition of the group's net income attributable to parent company and NCI: example 1

	Parent			NCI		
	Alfa	**Beta**	**Gamma**	**Alfa**	**Beta**	**Gamma**
Net income	2.400	2.400	2.400	1.600	1.600	1.600
- Consolidation adjustments for depreciation	-600	-600	-600	//	-400	-400
Group's net income attributable to:						
Parent	1.800	1.800	1.800	//	//	//
NCI	//	//	//	1.600	1.200	1.200

Table 12. Composition of the group's net income attributable to parent company and NCI: example 2

	Parent			NCI		
	Alfa	**Beta**	**Gamma**	**Alfa**	**Beta**	**Gamma**
Net income	2.400	2.400	2.400	1.600	1.600	1.600
- Consolidation adjustments for depreciation	-600	-600	-600	//	-400	-400
- Consolidation adjustments for impairment	-500	-500	-500	//	//	-333
Group's net income attributable to:						
Parent	1.300	1.300	1.300	//	//	//
NCI	//	//	//	1.600	1.200	867

Other relevant disclosure should point out, for each business combination not accounted for using the full goodwill approach, the goodwill related to the NCI. Such information is helpful to estimate the group equity and income according to homogeneous criteria, but would be a heavy burden for the reporting entity.

The above listed information relates to the statement of financial position. As far as the income statement is concerned, the notes should signal:

- the whole amount of costs deriving from the PPA which still affects the group net income attributable to the parent. In the simulation, the parent share of depreciation of the higher value assigned to the property (1.800). The group income statement shown in table 4 only report the aggregate value of depreciation (5.600);
- the whole amount of costs which would affect the group net income attributable to the NCI for the subsidiaries still measured according to the pre-acquisition carrying amount of their net assets. In the simulation, they would be depreciations of 400 for Alfa property;
- the previous amount (400) related to:
  - the group EBIT;
  - the group net income;
  - the group net income attributable to the NCI.

We need this information to assess the magnitude of the "lack of costs" in the group income statement.

Referring to the figures of the second simulation, the best disclosure helpful to understand the composition of group results would be the same we have described in the first simulation, with the further information related to the goodwill impairment loss attributable to the NCI of Alfa and Beta.

This requirement would imply the measurement of the NCI at their fair value, even though the reporting entity has chosen another, and maybe easier, measurement basis.

Since additional complexity and undue costs might arise from this disclosure, we suggest that the notes to the financial statement identify, at least, the subsidiaries in which the impairment loss has occurred.

Thus, users of financial information receive qualitative information about the subsidiaries, for which goodwill no longer exists or has decreased[17], although the consolidated financial statement recognises only the part of this asset related to the parent company.

5 Concluding remarks

There are many drawbacks generated by the accounting options in IFRS 3R.

From a general point of view, the decision to introduce measurement options for the NCI represents an inconsistency with the IASB policy to enhance comparability between financial statements by excluding options in accounting treatment for similar transactions during the revision of pre-existing Standards or when the Board issues a new Standard. Further, it is a backward step in the ongoing process to reduce the divergences between IFRS and US GAAP[18].

More specifically, the requirements in IFRS 3R hamper the consistency within financial statements due to the circumstance that the reporting entity is allowed to choose between the full goodwill approach and the purchased goodwill approach for each business combination.

[17] As stated before, the impairment loss on goodwill is attributable to each subsidiary because of the convergence between legal entity and cash generating unit.

[18] The US Statement of Financial Accounting Standard (SFAS) 141, Business Combinations, only accepts the full goodwill approach.

Our study focuses on the disclosures that could be helpful to the financial information users to better understand the effects on the composition of the group equity and net income of adopting different measurement bases for the NCI. After stating for each business combination the measurement basis applied to the NCI, we suggest the notes should present, at least, the following information:

- the portion of goodwill arising from consolidation related to the controlling interests and the one related to the NCI;
- the amount of the NCI within the group equity still measured according to the pre-acquisition carrying amount of the net assets of the subsidiaries (as it was allowed by IAS 22);
- the amount of the residual undervaluation of assets not recorded at their full fair value (as it was allowed by IAS 22);
- the amount of the residual undervaluation of assets related to the group total assets and related to NCI.

As far as the income statement is concerned, the notes should signal:

- the whole amount of costs and revenues deriving from the PPA which still affects the parent profit or loss (the parent share of: depreciation and amortisation expenses of the higher/lower value assigned to tangible and intangible assets; the higher/lower value assigned to the inventories; the lower value of investments in associates and joint ventures, etc.);
- the whole amount of operating costs and revenues which affects parent profit or loss and influence the group EBIT (impairment of goodwill and the above listed costs and revenues, unless the lower value of investments in associates and joint ventures);
- the whole amount of operating costs and revenues which affects parent profit or loss and influence the group EBIT related to:
  - the group EBIT;
  - the group net income;
  - the group net income attributable to NCI.

Finally, the notes should identify the subsidiaries reported using the purchased goodwill approach for which an impairment loss of goodwill has been recognised in the consolidated financial statements (not affecting the measurement of the NCI)[19].

6 Future developments

Related to the comparability and consistency within consolidated financial statements, the consolidation of investments in subsidiaries and the recognition of NCI are not the only issues that might deserve to be deeply studied.

Also the parties of IFRS are aware of these issues and they pondered them during a recent IASB meeting about Phase I of the Post-implementation Review (PiR) of IFRS 3.

The staff of IFRS Foundation gathered many inputs from users, preparers, accounting firms, national standard-setters and endorsement advisory bodies and have assigned a high degree of relevance to the issues related to these matters. The staff admitted that 'we have learnt that when NCI arises in a business combination the practical implementation matters that arise are significant and contribute to divergence in practice'.

One of the divergence that can occurs in practice is related to changes in ownership interest while retaining control, that is to say when, after a parent has obtained control of a subsidiary, it may change its ownership interest in that subsidiary without losing control. It can occur when the parent buys shares from – or sells shares – to the NCI or when the parent issues new shares or acquires its share. It can also happen when 'other' non-controlling interests are converted to 'ordinary' NCI.

As established by IFRS3 R, such transactions are accounted for as equity transactions because they involve just equity holders (controlling and non-controlling shareholders). Consequently, any gain or loss is not recognised in the consolidated financial statements. Moreover, no change in the carrying amount of assets (including goodwill[20]) and liabilities is recognised in consequence of such transactions. The amount of non-controlling interest is adjusted to reflect their related changes in the subsidiary equity. Any difference between the amount by which the NCI are adjusted and the fair value of consideration transferred by or to the parent is recognised in the group equity attributable to the parent.

Since IFRS do not provide any rules to quantify the adjustment made on the NCI, several methods are used in practice. It could be an additional issue about consolidated financial statements comparability and consistency, above all if the NCI were initially measured at their proportionate share in the identifiable net assets of the subsidiary.

For simulation, when a parent sells part of its interests (we suppose the ownership interests decrease from 80% to 70%) in a subsidiary, but retains control of it, the adjustment to the NCI could be determined as:

a) 10% of the total net assets of the subsidiary (including goodwill);

b) 10% of the total identifiable net assets of the subsidiaries (excluding goodwill);

c) 10%/80% of the parent share of the total net assets of the subsidiary (including goodwill).

Approach a) and c) will assign part of subsidiary goodwill to the NCI, even if they are initially reported for using the purchased goodwill approach.

[19] See footnote 14.

[20] Ifrs 10, Consolidated Financial Statements, Basis for Conclusion, BCZ 168.

We suggest that it would be interesting studying which is/are the best accounting policy/policies consistent with the conceptual framework.

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INVESTMENT DECISION AND VALUE CREATION

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Abstract

The value creation supposes that the undertaken investment leads to draw a surplus with regard to the alternative use that the providers of capital would have been able to make it. This research proposes an analysis of the relation between the investment decisions and value creation on a sample of 82 French firms that compose the SBF 250 index, from 1999 to 2005. We show that the relation between the investment and the firm value is direct and positive.

Keywords: Investment Decisions, Value Creation, Growth Opportunities, Cash Flow

JEL Code: D92, G31

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1 Introduction

At the most basic level, the choice of investments based on value creation means not subsidize unprofitable units with funds from more profitable and do not over-invest in central units declining.

In a decision concerning an investment, a company faces usually the alternative of internal and external growth. Internal growth proceed by creation of additional assets, for example through the purchase of new equipments, investment in research and development (R & D), ... It opposes the external growth witch is a mode of development that relies on voluntary or forced merger between two or more companies with equity participation in the capital of another company or a merger or by a divestment operation.

In this article, we attempt to answer theoretically the question of whether investment decisions: either internal growth or external growth operations are creative or destructive of value for shareholders of engaged companies this process.

Then, we analyze empirically the relationship between investment and firm value. Also, we attempt to test the validity of the POT hypothesis in the French market.

2 Literature review

The main researches performed on the corporate investment link the impact of the investment announcement to other financial theories such as the theory of Free Cash Flow (FCF) of Jensen (1986) or the hypotheses of the pecking order theory (POT) of Myers and Majluf (1984). It was proven that the impact of announcements on stock prices varies according to the quality of the investment opportunity of the company, it's FCF and the nature of the funding source used.

Previous studies have shown the necessity to consider these two theories both in analyzing market response to investment announcements.

If managers have no personal advantage to pay dividends, the market can interpret this no payment as a signal of financial difficulties. This will directly lead to a decline in the shares value whose first victims will be the shareholders. The best way to solve this problem is to increase the part of the debt in the capital structure. The analysis of this relationship shareholder - manager, regarding the FCF assignment is important.

Internal financing is the preferred by the company because it gives managers the freedom with respect to the financial market constraint. Whether to outside finance, the debt will be preferred. The reason is that the managers, holders of privileged information, know that the share is worth more than its market value, Therefore the market information is incomplete. Under these conditions, the issuance of new shares could only be made at an undervalued price which would lend to wealth transfer from old to new shareholders.

In order to determine whether an investment must be realized or not, we must estimate the value creation that will generate. There is value creation if the project return is greater than the opportunity cost that represents investing in this project. This opportunity cost depends on the project risk. More the project is risky, more the opportunity cost is high.

But the relationship between the investment and the value creation differs whether growth operations are internal or external.

2.1 Internal growth operations

Several studies have focused on the study of the stock market reaction to the announcement of fixed assets investment decisions. However, empirical evidence of the evaluation of the effects of these announcements is relatively rare

Given the different forecasts, it is difficult to determine the expected market reaction to investment announcements. A priori, stock prices may vary following the decision of changing spending of capital. It can be expected that the market considers the announcement of the increasing in these spending as good news, while it interprets the announcement of the decreasing in these expenses as bad news.

Economists have been noted that investment in R & D facilitates innovation and generates new knowledge and new technology. Several authors assert that technology or knowledge, in general, contributes to the growth of the firm.

There is a significant number of researchs that are trying to identify the market reaction to R & D expenditures. The Studies of [Sougiannis (1994), and Zantout Tsetsekos (1994), Green et al (1996) and Goodacre and McGrath (1997)][21] had the same result. The authors find that investments in R&D are positively valued by the market, although the evaluation may vary according to the firm size and the industry.

The study of Lev and Sougiannis (1996)[22] shows the existence of a direct and positive correlation between expenditure on R&D and economic growth, results and productivity gains of companies.

Among the studies that analyze the relationship between investment in R&D and the market reaction, some have identified a positive and significant link between R&D expenditures and return on equity. While other lead to the opposite conclusion. According to Lantz and Sahut[23], this difference in stock price reactions to announcements of increase of R&D expenditures is due, on the one hand, to the more or less aggressive competition in the sector, on the other hand, the fact that studies are made on years previous or after 1985 seemed to be a pivotal year in terms of stock behaviors in the United States.

2.2 External growth operations:

The mergers and acquisitions (MA) operations record, for many years, an explosive growth.

Moreover, the relationship between mergers & acquisitions operations and value creation has changed over time. Given the increase in the number and value of mergers & acquisitions operations and parallel the recognition more and more marked the concept of value creation, it is particular interest to investigate whether there is a positive or negative relationship between them .

We can conclude from different studies linking MA operations to investment that during the 70s years, the results of these studies were not unanimous when the improvement of performances linked to a MA operation . This may be due to sampling or econometric methods used. Over the years, these studies have focused on aspects more specific of these operations, such as their payment method, the fact that it is a domestic or international operation ... It appears that the MA allow an improvement of the performance of firms which process it, especially the target firms. The acquiring firms seem, on the contrary, have generally a value destruction both long and short term.

The divestment is a restructuring operation just like the MA operations of another entity, moreover Weston (1989) reported that 35-40% of MA produced in the 1980s correspond to divestments of other firms.

It is useful to remember that the value creation following the divestment transaction is assumed to correspond to the richness generated to the shareholders. Several studies have shown that the generated value of the divestment depends for shareholders, one hand, on the financial situation of the company before the divestment operation and, the other hand, on the announcement of the transaction price.

Klein (1986)[24] found positive and significant abnormal returns of announcements of initial negotiations of sell-offs when an offer price is announced and insignificant retyrns when the price is not announced.

Afshar et al (1992)[25] find a stock reaction much greater (positive) when the divestment announcement is the result of a contractual agreement, rather than a simple declaration of intent.

3 Methodology

The objective of our research is to lay the foundations of the relationship between investment and firm value.

To achieve this goal, we use the following linear regression:

[21] Del Brio E., Perote J. and Pindado J. (2003), "Measuring the impact of corporate investment announcements on share prices", Journal of Business Finance and Accounting, Vol.30, n°5-6

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$$V_{it} = a_0 + a_1 I_{it} + a_2 CF_{it} + a_3 D_{it} + a_4 S_{it} + \varepsilon_{it} \quad (1)$$

Where V_{it} : The value of the firm i at the end of the period t,

V_{it} is equal to the market value of equity which is none other than the market capitalization (MC_{it}).

Market capitalization$_{it}$ = Number of outstanding shares * Share price $_{it}$.

V_{it} is the dependent variable. For independent variables, they are among four.

* I_{it} : the investment of the firm i during the year t

$$I_{it} = \Delta FA + DA_{it} \quad (2)$$

ΔFA: The increment in fixed assets = FA_{it} – $FA_{i(t-1)}$.

DA_{it}: Depreciations and amortizations of the firm i during the year t.

* CF_{it} : The cash flow which is calculated by adding to the net income the depreciations and amortization minus the change in the working capital needs (WCN).

$$(CF_{it} = NI_{it} + DA_{it} - \Delta WCN_{it}) \quad (3)$$

* D_{it} : The increment in debt.

$$D_{it} = D_{it} – D_{i(t-1)} \quad (4)$$

* S_{it} : The increment in shares outstanding.

S_{it} = outstanding shares$_{it}$ – outstanding shares $_{i(t-1)}$

Therefore the final model is as follows:

$$MC_{it} = a_0 + a_1 I_{it} + a_2 CF_{it} + a_3 D_{it} + a_4 S_{it} + \varepsilon_{it} \quad (5)$$

All the variables have been scaled by the total of assets of the period.

Our model is that of Del Brio and al (2003). In addition, the fact that such study has not been made on the French market, this model has the ability to predict the effect of changes in financial decisions on the firm value, and subsequently the interaction between investment and financing decisions.

The sample of our study is constituted by all the firms quoted in the Paris Stock Exchange and composing the SBF250 index and which are introduced before 1999 (firms introduced in 2000 and later are not included in our sample). For lack of unavailability of the data, the definitive sample consists of 82 firms.

The period of study spreads out over 7 years: from 1999 to 2005.

4 Results and interpretations

4.1 Descriptive analysis and correlation matrix

Table 1 presents the descriptive statistics for the variables used in this analysis.

The average investment is 0.1808. it varies between (-0.4529) and 0.5832. This variable is almost unchanged for the whole sample (Standard Deviation = 0.4180).

The increment in debts D is the most volatile variable among other variables (Standard Deviation = 7.4323).

The review of the correlation matrix shows the inexistence of a critical correlation between the different independent variables. The only negative correlation between the explanatory variables is that between the CF and investment.

4.2 Analysis of the regression model results

The probability of Hausman specification test (chi2 (4) = 265.97 with a probability> chi2 = 0.000), being less than 10%, allows to choose the fixed effects model.

The results of our model reflect the expected relationship between firm value and the explanatory variables. As we see it in the table above, with the expected relationship with investment is direct, which indicates that when the firm undertakes investment, the market reacts upwards. CF also has a direct relationship indicating that the greater the CF, the greater the increase in market value. A similar argument applies to increases in debt are offset by increases in value. This increase in debts can be explained by the greater tax shields obtained by firms. This is consistent with the theory of signal which states that the debt policy is a signal used by managers to prove to the market the good financial health of their firm. Thus, managers communicate the characteristics of their firm through the financial structure.

This can be explained by the fact that the firm which borrows signals to the market that the returns on the investment undertaken can cope with the financial expenses of debt. that is to say, the firm says it is able to repay at a predetermined maturity and that at the effective date of repayment, it honors its commitments without problems.

The negative relationship was found with the increment in shares outstanding. This can be explained by the fact that the market interprets this increase as a bad news because it can be a source of asymmetric information existing between current and prospective shareholders. This is consistent with the pecking order theory (POT), which states that firms prefer to self-finance their investments, borrow, failing that, and, only exceptionally, use the capital increase (and thus issuance of shares and dilution of the power of current shareholders). In other words, the increase in capital is a solution of last resort for firms. Saying this, we expect a negative relationship between the increment in shares outstanding and firm value and it was the case for our results.

Table 1. Descriptive statistics

variable	Mean	Standard deviation	Maximum	Minimum
I	0.1808	0.4180	0.5832	-0.4529
CF	0.0693	0.2472	0.1441	-0.3272
D	1.7688	7.4323	0.3410	-0.3275
S	-0.0252	0.4263	0.9999	-0.2392
V	1.4342	2.1816	0.1648	0.0033

Table 2. Correlation matrix

	CF	I	V	S	D
CF	1				
I	-0.0528	1			
V	0.1367	0.0607	1		
S	0.0992	0.0289	0.1330	1	
D	0.0119	0.1413	-0.0641	0.0465	1

Table 3. Linear regression of the impact of the investment on firm value

Variables	Coefficients	T	Significativity
Constant	2.95231	1.53	0,127
S	-0.3928096	-2.43**	0,015
I	1.86771	20.55*	0,000
D	8.174267	4.41*	0,000
CF	0.5813599	6.01*	0,000
F	13.72*	-	-
R2	52.15%	-	-

Note: * Significant at the 1% level, ** significant at the 5% level

Our results are consistent with those found by Del Brio and al (2003)[26] in their study. For them, they also found a both significant and positive relationship between firm value on the one hand, and investment and CF, on the other hand. For variable increment in debts, they find that increases in debt are offset by an increase in firm value. Regarding the latter variable, the increment in shares outstanding, they find that its relationship is negative with the firm value. Finally, we can say that Spanish firms prefer debt to the capital increase in financing of their investments.

In their study about indebtedness of French and German firms (comparative study), Kremp and Stöss (2001)[27] found that French firms have significantly improved their financial situation on the end of the 80s and the first half of the decade 90 significantly increasing their equity level.

According to Baude (2005)[28] The rise in share prices during the second half of ninety years have first highly valued the firm's equity and have therefore allowed them to take on more debt. And the bursting of the stock market bubble from the middle of 2000 would have reduced this credit excess without cancel it in 2004.

According to the pecking order theory (POT), debt is preferred to capital increase, this means that the debt has more advantages to the firm. These benefits include the fact that the cost associated with this type of financing is known in advance and does not vary in time, which is not the case when the company makes a capital increase. Also, the use of borrowing does not change the firm allocation of capital between shareholders.

But this type of financing has also drawbacks. The increase in debt can create an imbalance in the financial structure of the firm which may affect its future solvency. Similarly, use of borrowing is reflected in higher financial costs which has the consequence of reducing the future income of the firm for an amount equal to the cost of loan repayment and for a period equal to the loan maturity.

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But the capital increase can lead to the entry of new shareholders not inevitably favorable to the management team and may even, in the worst case, lead to losing control of the firm in favor of the new shareholder. Also, the return on investment expected by shareholders may be higher than interest rate of debt.

Finally, we can conclude that the choice of financing depends on the firm conditions, the industry, the financial market, the economic situation...

5 Conclusions

Regarding the influence of internal and external growth operations on firm value, studies and empirical researchs performed on this point are numerous and attempt to analyze these operations according to their powers to explain the firm value and stock returns.

The study of decision-making environment must be open to other stakeholders whose wealth is also influenced by the investment decision. In investing, the firm changes its relationships with suppliers, customers and employees.

According to our results, we can conclude that:

✓ The relationship between investment and firm value is direct and positive;

✓ French companies prefer the recourse to cash flow first then the debt in the financing of investment, which is consistent with the pecking order theory.

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CORPORATE GOVERNANCE IN HIGH-GROWTH FIRMS

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Abstract

The purpose of this paper is to explore the governance structures in high-growth firms – "Gazelles". We analyse and compare 865 high-growth firms and 396 SMEs in Norway. The data reveals that high-growth firms differ from average SMEs on several core characteristics. They are smaller and younger, and have more owners and larger boards than the average SME. The analysis shows that high-growth firms are a special case where owners and managers appear to have shared interests, and the strategic and advisory role of the board are thus more important than the monitoring role. This knowledge is useful both for understanding high-growth firms as a particular context, and for how corporate governance systems may have different functions in different types of firms.

Keywords: Firm, Corporate Governance, SMEs, Board

JEL Code: G30, G34

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1 Introduction

High-growth firms make a huge contribution to employment and value creation in a society. It has been shown that these firms generate a disproportionately large share of new jobs compared with firms without high growth, even during a recession (Henrekson & Johansson, 2010; Jawahar & McLaughlin, 2001). High-growth firms typically constitute 2–5% of the total business population in a country (Sims & O'Regan, 2006). Clayton and colleagues found that in the US, 2% of the population of firms in 2012 was high-growth firms, yet they were responsible for 35% of all gross job gains between 2009 and 2012 (Clayton, Sadeghi, & Talan, 2013). In Norway, the 4% most rapidly growing firms contributed 50% of all new net employment in the country between 2008 and 2012. Thus, despite the small number of firms in the high-growth category, their impact on value creation and employment is substantial. This great economic impact of high-growth firms makes them both important and interesting to study. Among the most intriguing questions about high-growth firms are: how do these firms manage to obtain their growth magnitude, and can other firms copy their success? Is growth contextually determined, or is it a result of deliberate strategies? The growth phenomenon has been discussed in depth over decades (e.g. Davidsson & Henrekson, 2002; Penrose, 1995; Storey, 1994) and reviews of the growth literature find that drivers of growth are both internal and external to the firm (Gilbert, McDougall & Audretsch, 2006). Responding to a request for internal, strategic explanations for growth, recent research on high-growth firms has applied management-oriented and strategic perspectives that consider the contribution of internal resources to growth (Barbero, Casillas, & Feldman, 2011; Casillas, Moreno, & Barbero, 2010; Hansen & Hamilton, 2011; Moreno & Casillas, 2008; Wiklund, Patzelt, & Shepherd, 2009). An intriguing question is whether high-growth firms have common characteristics in the ways in which they are managed and governed. While traditional research on corporate governance as well as corporate governance codes worldwide have tended to reflect a generalist view of corporate governance functions based on agency theory, recent literature has called for a contextual approach to the structure and functioning of governance arrangements (Lynall, Golden, & Hillman, 2003). Specifically, scholars have argued that in small and medium-sized enterprises (SMEs) and other non-public companies, corporate governance serves different functions than it does in publicly traded firms (Bennett & Robson, 2004; Huse, 2000). In line with this reasoning, we suggest that high-growth firms represent a specific context, in which corporate governance arrangements may serve particular functions. The first question thus concerns whether high-growth firms have common characteristics that differentiate them from the average SME. The second question asks whether high-growth firms have particular corporate governance arrangements, and if so, why.

In this chapter, we address these questions through an analysis of Norwegian high-growth firms, where we compare 865 high-growth firms with a randomized sample of 396 SMEs. The discussion is organized into three parts. First, we review recent empirical research on high-growth firms and provide a picture of their common characteristics, to establish empirically our case of high-growth firms in a particular context. Second, we present research on corporate governance that has addressed high-growth firms as a specific context for corporate governance, particularly focusing on the role of the owners, boards, and CEO/founders. Next, we present our empirical study in two sequences. The first is an overview of the characteristics of the high-growth firms in our sample; the second is a description of some corporate governance arrangements. Both are compared with the SME sample. Finally, we discuss our findings and implications for viewing high-growth firms as a particular context for corporate governance research.

2 Characteristics of high-growth firms

Scholars have argued that rapid growth has a time aspect, which is apparent in the fact that most studies consider high-growth firms to be young and small; hence, they are in an early stage of their life cycle. Empirical evidence supports this assumption (Storey & Greene, 2010). For example, Clayton and colleagues found that the propensity to be a high-growth firm declines with age (Clayton et al., 2013). Furthermore, other scholars have found that high-growth companies are in general small, young, and more innovative (Coad & Rao, 2008; Grundström, Sjöström, Uddenberg, & Rönnbäck, 2012). Thus, empirical evidence suggests that a life-cycle perspective is suitable for the analysis of these firms. Depending on the model selected, a firm's life cycle will include three (Bonn & Pettigrew, 2009; Quinn & Cameron, 1983) or four stages (Filatotchev, Toms, & Wright, 2006; Lynall et al., 2003; Quinn & Cameron, 1983), and the transition to the second stage in both models is characterized by rapid growth. Firms at the high-growth stage may consider transitioning to public ownership (Bonn & Pettigrew, 2009) and may investigate other methods of expansion (Jawahar & McLaughlin, 2001) or other strategic moves, indicating that the high-growth phase is a period dominated by organizational transitions. A firm in the growth stage of its life cycle thus faces many demands, some of which are in conflict. Internal and external complexity rapidly increases during the growth stage, but formal strategic planning systems seldom develop in tandem with these changes (Bingham & Eisenhardt, 2011).

In a review of small firm growth, Macpherson and Holt (2007, p. 178) note that "growth cannot be achieved without managerial capabilities to provide specialist functions and processes designed to support and exploit entrepreneurial actions." In the high-growth phase, a firm typically must create and develop internal structures, increase coordination and communication, and manage new functions and organizational units (Lynall et al., 2003; Smith, Mitchell, & Summer, 1985). In a study comparing high-growth SMEs and non-high-growth SMEs, Moreno and Casillas (2007) found that the high-growth SMEs were smaller than their non-growth counterparts, and they had less available slack in non-financial resources, but greater access to financial resources. In contrast, Wiklund, Patzelt, and Shepherd (2009) found that access to financial and human capital did not affect growth directly, but both types of capital had a positive impact on entrepreneurial orientation, which in turn had a positive impact on growth. Two conflicting theories have addressed the role of resources in high-growth firms. The resource constraint argument suggests that firms with fewer resources tend to leverage them more efficiently, which is often the case in entrepreneurial firms (Moreno & Casillas, 2007), while the slack resources argument suggests that the availability of slack resources may promote growth (Penrose, 1995). While high-growth firms by definition have had some success in pursuing growth, it is difficult on the basis of theory to predict whether they have better access to resources than the average SME.

Nevertheless, the empirical findings indicate that high-growth firms have some specific features in common that differentiate them from other SMEs. The most consistent findings are that they are younger and smaller than the average SME; they are in transition and thus have less structured and institutionalized internal organizational arrangements. While we know little of the management and leadership of high-growth firms, the very fact that these firms are in a phase of constant transitions makes it plausible that when internal structures and systems are less developed, the management and governance of the organization play a crucial role. For example, Daily and Dalton (1992) define a threshold firm as one that is at the point of transition from entrepreneurial to professional management, usually at a time following a high-growth phase, that is, the initial public offering (IPO). Thus, the high-growth phase involves managerial challenges that probably will involve both owners and the board.

3 Functions of corporate governance in a life-cycle perspective

The Cadbury Report, published in the UK in 1992 and still the basis of corporate governance codes throughout Europe (Calder, 2008), describes corporate governance tasks as follows:

"The shareholders' role in governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate governance structure is in place. The responsibilities of the board include setting the company's strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship" (Calder, 2008, p. 12).

Thus, the main actors involved in the implementation of corporate governance in a company are the shareholders, the board of directors, and the CEO (Johnson, Daily, & Ellstrand, 1996).

It is often assumed that good governance can be defined across firms and contexts: "The 'holy trinity' of good corporate governance has long been seen as shareholder rights, transparency and board accountability" (Calder, 2008, p. 2). The most common theory by far in studies of corporate governance is agency theory, which is based on a similar assumption to the universal governance codes—that a primary goal for governance is to protect shareholders' interests (Daily, Dalton, & Cannella, 2003). However, despite the universal design of corporate governance codes, empirical evidence suggests that there is no one best practice of corporate governance, and scholars call for context-specific studies and a contingency perspective on the study of governance arrangements (Gabrielsson & Huse, 2004; Hambrick, Werder, & Zajac, 2008; Zona, Zattoni, & Minichilli, 2013).

Agency theory is based on the assumptions that the separation of ownership and management in a firm creates conflicts of interests (Hillman & Dalziel, 2003), and that a central function of the board is to monitor management on behalf of the shareholders. Moreover, the theory suggests that incentives such as equity ownership by directors in the board may serve to align interests and hence reduce the agency problem (Daily et al., 2003). Thus, in a context where there are conflicts of interest between the shareholders and management, the directors on the board should be external to the firm, and/or the interests of the directors should be aligned with those of the shareholders through methods such as director shareholding. In addition, the power of the CEO relative to the board (expressed in CEO duality) is considered an important factor in a board's ability to carry out its monitoring function (Finkelstein & D'Aveni, 1994).

According to the resource dependence perspective on corporate governance, an important function of a board is to provide the company with resources (Hillman & Dalziel, 2003). These resources may be of different kinds, and several types of resources and expertise have been discussed in the literature, such as building relationships with external stakeholders, facilitating access to capital, strengthening legitimation in the market, and expertise in the firms' strategic and operational activities (Hillman & Dalziel, 2003). Empirical findings support the resource dependence theory; for example, firms with strong human capital on the board have been found to have better subsequent performance, higher pricing at their initial public offering, and increased credibility and legitimacy in the market (Hillman & Dalziel, 2003). Thus, a basic assumption underlying resource dependence theory is that the composition of the board reflects the resource acquisition potential of the firm (Hillman, Cannella, & Paetzold, 2000).

While agency theory and resource dependence theory address different functions of a board, a combination of the two theories has been applied in studies of corporate governance that adopt a life-cycle perspective (Filatotchev et al., 2006; Lynall et al., 2003). Filatotchev and colleagues (2006) propose a model of a firm life cycle with four stages, in which each stage represents specific challenges and opportunities that call for different governance arrangements. The monitoring and resource provision functions of the board are described as related to two fundamental strategic purposes: wealth protection and wealth creation. The authors describe the high-growth phase as a transition from a tightly knit group of owners and founders to a more open governance system with external stakeholders, in which the IPO represents the threshold of the next stage. In this phase, the firm needs "access to resources and expertise that may fuel and support its growth" (Filatotchev et al., 2006, p. 260), and the wealth creation purpose of the governance arrangement predominates. Accordingly, it is suggested that the monitoring function of the board is of low priority, while the resource provision and strategic advisory functions are paramount. This rests on the assumption that in the early stages of the life cycle, the interests of the owners, founders, and management are more closely aligned and thus the agency problems are less relevant (Filatotchev et al., 2006; Garg, 2013). In addition, Lynall and colleagues (2003) propose that in the early stages of the life cycle, and when the CEO has dominant power, the composition of the board will reflect the resource dependence needs of the firm. In an empirical study of high-tech university spin-offs, Filatotchev et al. (2006) found that these firms had small boards (with an average of four members), and that the boards were typically dominated by insiders (60% of the firms had external board members). The most important roles of board members were to provide legitimacy, expertise, and external relationships with potential sources of new ideas. Venture capitalists on the board were considered crucial in the transition of the firm through growth to the next stage of the life cycle. Rosenstein et al. (1993) also underscored the directors' service role. In a study of high technology firms receiving venture capital backing, they found that CEOs valued outside board members, particularly during the early developmental stages of their firms. These CEOs especially appreciated the outside directors' information and expertise. Interestingly, CEOs reported that they tended to value outside directors less over time (Rosenstein et al., 1993).

Several other studies indicate that the boards of directors represent resources that are critical to the development of a growth strategy in young, high-growth firms (Carpenter & Westphal, 2001; Lynall et al., 2003; Zahra & Pearce, 1989). In particular, these studies have addressed the composition of the board, most often operationalized as the proportion of outside directors. While some scholars argue that SMEs are often "closely held," most studies find that high-growth firms, as well as SMEs, have a rather high proportion of outside directors in their board. Nelson (2003) studied firms at IPO and found that the proportion of insider board members was 43%; thus, more than half of the board members were external to the firm. This is consistent with the suggestion that external board members may contribute to legitimacy and signal status in the market. In a sample of 158 spin-off firms from universities, Filatotchev (2006) found that 44% of the directors were non-executives.

Board size and diversity have also been addressed in studies of high-growth firms. Reasoning that larger firms have larger and more diverse boards, Bennett and Robson (2004) suggest that in small firms, size and diversity may be major benefits, but may act as constraints for larger firms. However, empirical findings indicate that SMEs and high-growth firms have smaller boards (Bennett & Robson, 2004) but have been found to have greater gender diversity than larger, mature firms (Minguez-Vera & Lopez-Martinez, 2010).

4 The role of the founder in SMEs

The role of the founder is particularly interesting to study in high-growth firms. While these firms may have fewer agency problems and less need for ownership control and management monitoring than do larger, mature firms (Certo et al., 2001), the high-growth phase may prompt a need to replace the founder-manager with professional management (Lynall et al., 2003). As the founder often has a central role in the management of the firm at this stage, this may create conflict or a power struggle between the new owners and the founder (Gedajlovic et al., 2004). At the same time, while there is a potential conflict of interest between the founder and the owners, a crucial criterion for venture capitalists in their investment decisions is their belief in the founder's competence. The role of the founder-manager is believed to be important for success in this phase until the IPO phase. Contrary to the suggestion that the founder should at some point be replaced by professional managers (Daily & Dalton, 1992; Gedajlovic et al., 2004; Zahra & Filatotchev, 2004), there is empirical evidence suggesting that founder-managed firms consistently perform better than do professionally managed firms. For example, Fahlenbrach (2009) noted that founder-CEO firms had higher valuation, better stock market performance, and more actively pursued active growth strategies than did professionally managed firms. Villalonga and Amit (2006) found that Fortune 500 family firms had higher valuation if they had active involvement by the founder, either as a CEO or as a chairperson of the board. These findings indicate that a founder in a strong position may be beneficial in high-growth firms.

5 Methodology

5.1 Data collection

The leading Norwegian business newspaper, Dagens Næringsliv (DN), publishes a list of high-growth firms (labelled "gazelles") each year; its lists published in 2010, 2011, and 2012 provided the population for our data set. If a company appeared on the list once or more during these three years, it was included in the population. To be defined as a high-growth firm, six requirements must be fulfilled.

1. The firm must have completed approved accounts.
2. It must have at least doubled its revenue during the previous four years.
3. It must have earned revenues of at least one million NOK (137,000 EUR).
4. It must have a positive EBIT (Earnings before interest and tax).
5. It must have avoided negative growth.
6. It must be incorporated (i.e., is registered as a corporation or limited liability company).

If a company fulfils all six criteria, it is considered a gazelle; otherwise, it is considered a "regular" company. Criterion 2 requires that the companies in our sample are at least five years old. By applying all six criteria, we obtained a sample of firms with a stable pattern of high growth during the previous four years.

A questionnaire was administered to the CEO of each company. A total of 2116 gazelles were identified for 2012, 1996 for 2011, and 2579 for 2010. The interviews conducted were computer-assisted telephone interviews. The questionnaire was originally written in English and was then translated into Norwegian. A total of 1000 responses was obtained from the gazelles, including 459 responses from the 2012 list (a response rate of 21.7%), 268 responses from the 2011 list, and 273 responses from the 2010 list. To correct for possible selection bias caused by non-respondents, the sample was compared with the population of gazelles on the basis of the number of employees. A mean comparison test showed no significant differences between the groups ($p<0.05$). In addition, a comparison group of SMEs was randomly sampled from the total population of Norwegian SMEs. This step yielded 501 responses.

No publicly listed companies were included in our sample. There are several international definitions of SMEs. We followed the definition used by the EU and defined SMEs as companies with fewer than 250 employees. Furthermore, as recommended by McKelvie and Wiklund (2010), we excluded acquisition growers so that only organically grown companies were included in the sample. Companies with no board members were also excluded from the sample. The final sample consists of 1261 respondents, 865 high-growth firms, and 396 SMEs in the comparison group.

5.2 Measurements

To gain an understanding of the characteristics of the high-growth firms in the sample, a number of descriptive variables considered relevant in the literature were measured: age (foundation year), size, growth intentions, revenue growth, access to capital resources, and access to labour resources. Furthermore, we registered the geographical location of the firms and the type of industry, which would indicate the major external contingencies of the firms.

Size was measured as the number of employees. A two-item, seven-point Likert-type scale (1 = completely disagree, 7 = completely agree) was used to measure *growth intentions*. The two items used were adopted from the scale developed by Kolvereid (1992); they indicate whether the company intends to grow in terms of revenue and number of employees during the following five years. The scale showed satisfactory reliability, with a Cronbach's alpha of 0.75. *Revenue growth* was measured by subtracting the revenue in 2010 from that in 2007. *Access to capital* and *access to labour* were measured on a seven-point Likert-type scale through two single items that indicate whether the companies experience problems in attracting qualified personnel and capital. Thus, the higher the score on this variable, the less access there is to personnel and capital.

Independent directors were defined as board members who are neither owners nor employees of the company. The variable was measured as the number of independent directors relative to the total number of directors, computed as the percentage of independent directors. Similarly, g*ender diversity* was computed as the percentage of women on the board. To capture the *roles of the founder*, we applied three dummy variables. The first indicates that the founder is a member of the board (founder-director). The second indicates whether the founder is part of the senior management team (founder-manager). The third measures whether the founder is an owner of the company (founder-owner). Combining these three dummy variables provides eight groups of founder roles.

6 Results

Table 1 shows the distribution of type of industry and location of both subsamples. The table shows a fairly similar distribution between the two samples, for both geographical location and type of industry. Thus, it appears that no particular industry or geographical location is more beneficial than others for high-growth firms.

Table 1. Distributions

	High growth		**SMEs**	
	Frequency	*Share of total (%)*	*Frequency*	*Share of total (%)*
Foundation year				
>1979	62	7.2	92	23.3
1980–1989	77	9.0	69	17.5
1990–1999	185	21.5	85	21.5
2000–2005	343	39.9	61	15.4
2006–	193	22.4	88	22.3
Sector				
Primary	20	2.3	16	4.0
Industry	105	12.1	57	14.4
Construction	144	16.6	60	15.2
Retail	249	28.8	81	20.5
Transport	45	5.2	27	6.8
Hotels/hospitality	16	1.8	25	6.3
Services	259	29.9	130	32.8
Education, health and culture	27	3.1	0	0
Location				
Capital	231	26.7	95	26.0
East	168	19.4	61	16.7
South	79	9.1	31	8.5
West	228	26.4	102	27.9
Middle	74	8.6	29	7.9
North	85	9.8	48	13.1

The literature suggests that high-growth firms are young and small. As we only include SMEs in our sample, no large firms are included. Nevertheless, Table 2 shows that the high-growth firms are generally half the age of the average SME firm in Norway. An independent-sample *t*-test revealed that age, size, and growth intentions differed significantly between the two groups of firms. Thus, consistent with earlier findings on high-growth firms, Norwegian high-growth firms are young and small, and are in a transition phase of further growth.

Table 2. Descriptive statistics on firm attributes

Variable	High growth		SMEs		
	mean	*std. dev.*	*mean*	*std. dev.*	*t-value*
Foundation year	1997	14.4	1986	28.9	9.5**
# Employees	13.2	20.8	16.8	26.0	2.4*
Growth intentions	4.4	1.7	3.9	1.9	5.5**
Revenue growth (2007–2010)	14466	43272	–405	64513	11.6**[1]
Access to capital	2.6	1.9	2.7	2.0	0.4
Access to labour	4.3	2.0	3.6	2.2	5.6**

It is also interesting to note that the standard deviation of the age variable in the comparison group of firms is double that of the group of high-growth firms. Thus, high-growth firms have less variation in age than the general population of firms, which is consistent with the life-cycle perspective. Regarding size, measured as number of employees, the differences are smaller but the mean size of an SME in Norway is still 30% larger than the average high-growth firm. Similar to the results for age, there is considerably more variation in size within the general SME population of firms than between high-growth firms. Taken together with the careful selection criteria for the sample of high-growth firms, our results confirm that these firms are special. They are significantly different on several criteria—the most central, of course, being previous growth and future growth intentions. We also ran a correlation analysis of future growth intentions and age, and the younger firms have significantly stronger growth intentions than the older ones. In Table 2, we also observe a difference in access to labour, indicating that the high-growth firms find it harder to recruit qualified people. Because the high-growth firms also have strong growth intentions and thereby plan to hire new people, the results indicate that the problem in attracting qualified labour is more relevant for the high-growth firms.

6.1 Corporate governance characteristics

Table 3 shows the corporate governance structure characteristics that we included in the study. The results show that high-growth firms have a greater number of owners than the general population of SMEs. The difference is not large, but it is significant. However, there are few owners in either group of firms. The larger number of owners in high-growth firms may indicate that firms in the high-growth stage need investors, and as the firms in our sample have grown rapidly in recent years, it indicates that the entrepreneur has been successful in finding additional investors. This is also reflected in the size of boards, as they are significantly larger in high-growth firms than among the SMEs.

Table 3. Descriptive statistics on corporate governance variables

Variable	High growth		SMEs		
	mean	*Std. dev.*	*mean*	*Std. dev.*	*t-value*
# Owners	2.6	1.4	2.3	1.4	2.6**
# Board members	3.4	1.3	3.2	1.8	2.1*
Independent directors (%)	26%	28%	26%	31%	0.3
Women (%)	21%	25%	23%	28%	1.4
Dummy variables	*Yes*	*No*	*Yes*	*No*	*Chi^2*
Founder-manager	87%	13%	63%	37%	97.3**
Founder-director	90%	10%	63%	37%	140.4**
Founder-owner	88%	12%	64%	36%	97.0**
Founder role triality	81.4%	18.6%	56.6%	43.4%	

Table 3 also shows that the proportion of independent directors on the boards is on average 26% in the high-growth firms, which is not significantly different from that in the comparison group. This is lower than the proportion of outside directors reported in other studies of high-growth firms (Filatotchev et al., 2006; Nelson, 2003). The proportion of women on the boards is 21%, which is 2% less than in the comparison group; however, the difference is not significant.

Regarding the roles of the founder, Table 3 shows large and significant differences between high-growth firms and other SMEs for all three role combinations. The founder has a 30% larger probability of also being a senior manager or a director than in the SME group of firms. We see that by far the most common position for the founder in high-growth firms is a role triality—being owner, board member, and top leader simultaneously. Of the companies, 81.4% have a founder occupying all three roles; in the comparison group, 56.6% of the companies have founder role triality.

7 Discussion

Our first research question was whether high-growth firms have some common characteristics that separate them from the average SME. Our results indicate that there are specific features of high-growth firms that contribute to establishing these types of firms as a specific context, which warrant further studies of their management and governance. The results show that while neither geographical location nor type of industry differentiates between high-growth firms and SMEs in general, several other features signify differences. First, the high-growth firms are younger and smaller, and they are in a phase of transition. Although they appear to have sufficient financial resources available, they report resource scarcity in human resources. These results suggest that in the high-growth phase, financial resources are sufficiently secure, and the larger number of owners is an indication of this. This finding is in accordance with the description by Filatotchev et al. (2006) of the high-growth phase as a transition from a tightly knit group of owners and founders to a more open governance system with more external stakeholders. The reported scarcity of human resources in the high-growth firms is in accordance with the findings of Moreno and Casillas (2007). However, the difficulties of recruiting sufficiently qualified people may be more closely related to a very tight labour market in Norway than to the relationship between human resource availability and growth.

Our second research question addressed whether high-growth firms have particular corporate governance arrangements that are different from those of the average SME, and if so, why. This second question is obviously related to the first one, in that most literature on corporate governance in young and small firms argues that the very reasons for having particular corporate governance arrangements are the common characteristics addressed in the present study. The life-cycle perspective has been the most prominent theory in attempts to provide an explanation for specific governance arrangements in high-growth firms, and the firms in our sample appear to be similar to the descriptions of firms in early phases of the life cycle. We also found that high-growth firms have corporate governance characteristics that are different from those in SMEs. Are these characteristics the result of strategic dispositions related to their stage of the life cycle? We found that the high-growth firms have a larger number of owners, and the founder has a far stronger position than in the average SME. However, one of the most commonly researched characteristics of corporate governance in the literature—the proportion of outside directors on the board—was no different between the two groups, and gender diversity was also similar.

The final research question thus remains: why do high-growth firms have different governance characteristics? We have presented two different theoretical approaches to corporate governance, namely, agency theory and resource dependence theory, and these offer different explanations for this question. Most of the literature we have reviewed here suggests that high-growth firms are in a stage of their life cycle where agency problems are less relevant; thus, the governance arrangements reflect a resource dependence explanation.

The larger number of owners may reflect that the founder has been successful in attracting financial capital. Thus, these firms have no scarcity of financial capital, and they have opened their governance structure to include more owners on the board, rather than recruiting independent directors. This is also reflected in the finding that the boards of high-growth firms are larger than those of SMEs. The relatively low proportion of independent directors may indicate that these firms are not close to an IPO, where the external market will exert pressure on the firm; hence, legitimation of the firm through high-status directors is less relevant. Thus, while a resource dependence perspective could fit our findings, it appears that resources commonly proposed to be provided by outsiders, such as legitimacy, networks, and external linkages, are less essential for these firms. Financial resources may thus be the paramount type of resources, although we do not know what expertise or other non-financial resources the owners can provide. These could be substantial.

An overwhelming majority of the founders of the high-growth firms are concurrently owners, directors, and members of the senior management team. First, this finding supports the assumption that founders and managers of young firms have interests that are aligned with those of the firm owners (Filatotchev et al., 2006; Garg, 2012). These common interests may also play an important role in the firms' ability to pursue a persistent growth strategy. Second, it is a further indication of a resource dependence explanation of board composition in these firms. The founder has unique competence, and as an owner probably a strong interest in further growth, and consequently plays a crucial role in contributing both knowledge and effort to the growth strategy. Founders are often the embodiment of the firm's culture, and they typically possess unique networks and have exclusive knowledge of the firm (Garg, 2012). In founding a firm, founders typically develop the firm's strategy, and they often continue to have strong psychological attachment and involvement over time (Brunninge, Nordqvist, & Wiklund, 2007; Garg, 2012). Furthermore, active founders are the longest-serving members of the organization, and their presence on the board may lead to increased strength within the board's collective mindset (Nelson, 2003).

Contrary to predictions based on the theory of the threshold firm (Gedajlovic et al., 2004; Zahra & Filatotchev, 2004), founder role triality is thus the rule rather than the exception in the high-growth firms. It could be argued that this is because the threshold stage has not yet been reached. However, these firms are well beyond the entrepreneurial stages, in both age and size, and our findings raise the question concerning when it would be preferable to replace the entrepreneur with a professional manager. As we have shown above in this chapter, there are empirical results indicating that the answer to this question could be "never" (Fahlenbrach, 2009; Nelson, 2003).

8 Conclusions and suggestions for future research

While there is quite a large body of literature attempting to explain growth, relatively little is known of the "inner life" of a high-growth firm. The results from our study on Norwegian high-growth firms have yielded some interesting knowledge on their features. However, as is often the case, new knowledge prompts new questions and sheds lights on what we still do not know. We have suggested here that the resource dependence theory appears to be the best model to explain our findings; however, the theory as presented here is quite general and we need more fine-grained studies to establish more precise explanations for the governance arrangements of high-growth firms.

Four questions have emerged from this study. First, our data appear to support the assumption that high-growth firms have fewer conflicts of interest between the owners and the manager, and thus less need for the monitoring function of the board. However, as the founder in almost all of the firms is also the manager, director, and owner, common interests are more or less implicit in the structure. Thus, more knowledge of the relationship between the individual directors, owners, and founder(s) is needed to understand the power and interest relationships in the governance and management of these firms. Specifically, it is likely that the board does not act as one, so we need more knowledge about the individual directors' preferences and behaviour (Krause & Bruton, 2014). Particularly in small boards, one single director may have a large impact on the functioning of the board; for example, the balance between the monitoring role versus the resource provision role.

Second, while we have suggested that a resource dependence approach is relevant to explain the corporate governance arrangements of high-growth firms, we still do not know what kinds of resources are paramount for these firms. That is, what resources are so important that seeking access to them may determine the composition of the board? From our data, it appears that financial resources have precedence, but we need more knowledge of the various resources—both financial and non-financial—that may be beneficial for a firm in the high-growth phase (Barbero et al., 2011). Thus, a more fine-grained theory of resource dependence could be developed for this particular context.

The third question arising from our study concerns the founder role. It appears that theory and practice do not agree on this matter. While the threshold theory asserts that a transition from founder-manager to professional manager is necessary, empirical evidence indicates the opposite—that the founder-managed firms consistently perform better. However, there is a set of roles available for the founder—owner, manager, director, and chair of the board. Are some roles more productive than others, and according to what criteria? What is the impact of having the founder in various roles, and what determines these roles over time as the firm develops? There is little theory on the founder roles in the literature on ventures and high-growth firms, or in the corporate governance literature.

Our final question concerns the independent directors—perhaps the most studied variable in the corporate governance literature, at least within the agency theory perspective. Do independent directors have specific roles in high-growth firms, and what is the reason for their presence? In a study of roles of outside directors in three types of privately held firms, Gabrielsson and Huse (2005) found that outsider directors had different roles across the types of firms. Moreover, do the independent directors act individually or as a group (Krause & Bruton, 2014)?

While many questions remain regarding high-growth firms, the present study has shown that high-growth firms can safely be studied as a specific context, unlike that of SMEs in general, and further theory building and research is needed to "break the code" of the high-growth firm. We hope the findings here will contribute to this development.

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COMMUNICATING MARKETING PRIORITIES IN THE NOT-FOR-PROFIT SECTOR: A CONTENT ANALYSIS OF AUSTRALIAN STATE-MUSEUMS' ANNUAL REPORTS

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Abstract

This paper analyses the marketing priorities evident in the annual reports of Australia's six not-for-profit state-museums (who represent the largest and most influential not-for-profit heritage organisations in the country). The study provides insight into the marketing communication priorities in leading not-for-profit heritage organisations, and offers a finer-grained understanding of what is required for such organisations to effectively manage such priorities. Based on a content analysis of the annual reports, the paper proposes a Marketing Priorities Model for Not-for-Profit Organisations more generally. The Model reflects two important findings: firstly, that the communication of marketing strategies has emerged to play a central role in the annual reporting of the leading not-for-profit organisations in Australia; secondly, that there are several key facets of the organisation's marketing strategies that must be communicated to internal and external stakeholder groups. The Model consequently provides a framework for not-for-profit organisations to adopt in order for them to effectively identify and communicate marketing practices to salient stakeholder groups.

Keywords: Not-for-profit, State-museums, Marketing, Annual Reports

JEL Code: M31, M40

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1 Introduction

Not-for-profit heritage organisations (e.g., museums, art galleries, historic buildings, cultural community festivals and events, etc.) have emerged as an increasingly significant segment of national and regional economies, and are now considered important drivers of economic and social development, particularly through cultural tourism (Cultural Ministers Council Statistics Working Group, 2010; Garrod and Fyall, 2000; Harrison, 2002; Heaney and Salma, 2003; McKercher, 2004; Stylianou-Lambert, 2011; Travers, 2006). In 2009 in Australia, for instance, visitors to heritage sites injected approximately USD$9 million into the economy. In addition, the average amount spent per trip for those participating in heritage activities was USD$1000, almost double the average of USD$500 per trip for those who did not participate (Australian Bureau of Statistics, 2011). Recognition of the contribution that not-for-profit heritage organisations make to regional economic and social development has been recognised by governments and heritage organisations alike (Heaney and Salma, 2003; Hossain, Heaney and Carter, 2005; Tourism Research Australia, 2009; Wray et al., 2010), and there has been a call to increase the marketing capabilities of the sector to maximise this impact further (Lehman and Roach, 2011; Rentschler, 2007; van Aalst and Boogaarts, 2002).

No actor in the not-for-profit heritage sector in Australia has had more pressure to improve the scale and scope of their contributions to economic and social development than that of the largest and most influential organisations – the six state, publically owned and operated museums (hereafter, 'state-museums') (Adams, 2010; Lehman, 2009; Scott, 2005). Internationally, change in the sector began in the mid-1970s, which has been identified as the time from which museum management in Europe, the US and Australia began to incorporate contemporary practices from the wider management field (Kawashima, 1997; McLean, 1993; Rentschler and Geursen, 1999; Weil, 2000). Following this watershed period, there was considerable pressure for museums in Australia—as there was globally—to expand their revenue streams from non-government sources, either by developing new target audiences (Casey and Wehner, 2001), by seeking new funding sources, commercial opportunities, and/or sponsorship (Lehman, 2009; Rentschler, 2004). In addition, in recent years there have been demands for accountability of public monies around the world, with the area of arts and cultural funding no exception (International Federation of Arts Councils and Culture Agencies, 2004). As Weil (2000) states, the result has been an:

…increasing need for government funders, corporate sponsors and other donors to be assured that the considerable sums they were pumping into museums were being well-employed and for the purposes intended.

In short, the museums have been forced to move away from being government-run, publicly-funded agencies to instead become market-driven and innovative organisations responsible for satisfying the needs of an expanding array of salient stakeholder groups (Lehman, 2009; Scott, 2003). The requirement to achieve these greater returns has resulted in not-for-profit museums becoming more akin to for-profit organisations (i.e. competing for market share, customer patronage, and long-term economic and social marketing) (Gurel and Kavak, 2010; Kotler, Kotler and Kotler, 2008). As such (and consistent with almost every other major industry sector), the concept of ‘marketing’ has become a core legitimising characteristic for the museum sector; the concept has found its way into the professional discourse (see Smithsonian Institution 2007; Victoria and Albert Museum, 2014) and has been the subject of recent academic study (see Chung, Marcketti and Fiore, 2014; Lehman and Roach, 2011; Slater and Armstrong, 2010).

Given the increasing importance of ‘marketing’ as a driver of museum success (and for the wider not-for-profit heritage sector, generally), understanding what constitutes the most effective set of marketing policies and practices in the sector would seem to be vital in the present environment (Carson, Gilmore, Mario, and Fawcett, 2004; Cooperative Research Centre for Sustainable Tourism, 2008). Furthermore, as has been demonstrated in a series of case studies assembled by Industry Canada (2011), effectively communicating marketing policies and practices has implications across an organisation’s entire supply chain. To address the paucity of research in this area, this paper seeks to analyse the marketing priorities evident in the annual reports of Australia’s six state-museums. Our overall aim is to provide both an insight into the development and communication of marketing priorities in the not-for-profit heritage sector, and develop a finer grained understanding of what is required for organisations in the sector to effectively manage such priorities into the future.

2 Literature review

Each of Australia’s six state-museums were established in the mid-19th century by their colonial (and subsequently state) governments, and centrally located in the states’ capital cities (see Table 1) (Griffin and Paroissien, 2011). Collectively, the original function of the six museums was to support the economic growth of the colonies, and to research and export ‘local flora and fauna specimens’ back to Britain. In the earliest days of colonial Australia, attempting to attract funding to such intellectual and cultural pursuits as museums was difficult; government and business priorities were concentrated on tasks associated directly with commercial development and nation building (Anderson and Reeves, 1994). Kohlstedt (1983, p.11) noted that the minimal financial support provided to museums was given in part because of the promise of “…practical results in mining and agriculture”. Similarly, Australia’s loyalties at the time tended to lie with England (i.e. the ‘mother country’); for Australian museums, that meant that their “reference points” and management priorities were heavily influenced by the British Museum model. As Anderson and Reeves (1994, p.83) noted:

For at least the first 60 years of settlement, Australian scientists cheerfully and uncritically dispatched the most interesting specimens to the country most of them still called home.

Nonetheless, the latter half of the nineteenth century witnessed a substantial change in the profile of the museum sector; through the establishment of both ‘art’ and ‘science and technology’ museums, the priorities of the colonial institutions became focused on the examination and collection of Australian knowledge and culture (Anderson and Reeves, 1994). Victoria’s Industrial and Technological Museum (est. 1869), for example, had a strong education focus, and was essentially the first attempt at a technical school for young people in the colony, and was considered at the time “…to offer the working classes the opportunity for instruction taken for granted by other groups in society” (Rasmussen, 2001, p.81). By the turn of the century (and with the advent of Australian Federalisation in 1901), the colonial museums became ‘official archives’ and ‘influential research centres’ in each of the ‘new’ Australian states (Harris, 1965). The newly federates states of Australia were solely responsible for the governance and funding of their respective museums, and all were heavily influenced by the diversity of funding models, the ‘tyranny of distance’ issues experienced at the time, and the rampant parochialism evident. One early review of

Australian museums even went so far as to state that from 1830 to the early 1900s:

There was not only no co-operation among museums, but rather a state of complete and utter indifference between them, part of which was undoubtedly due to the local jealousies of the period (Markham and Richards, 1933, p.7).

Given such a competitive environment, it is not surprising that for the first half of the 20th century, the state-museums focused their collections and research efforts in terms of their home state. Similarly, state government control of the museums (i.e. all were established under state-based legislation) meant that they became de facto government departments, with restricted opening hours, and a narrow view of the role museums might play within society. For instance, for a considerable period of time museums were only open during weekdays when most of the general population were at work (Anderson and Reeves, 1994).

Table 1. Australian state-museums

Museum	Established	Location
Australian Museum	1827	Sydney
Museums Victoria	1854	Melbourne
Queensland Museum	1862	Brisbane
South Australian Museum	1861	Adelaide
Tasmanian Museum and Art Gallery	1852	Hobart
Western Australian Museum	1891	Perth

In the period following World War II it has been said that Australian cultural life underwent "…something of a renaissance" (Anderson and Reeves, 1994, p.103), with the federal government accepting a limited role in the funding of the arts. Very little, though, changed in the museum sector, particularly in the way museums viewed their role in society (Casey and Wehner, 2001). In contrast, the 1960s saw a rapid growth in historical museums, predominately in the regional areas of Australia. This has been attributed to both a renewed interest in Australian history and the constraints placed on the major state museums by cautious trustees and reduced budgets (Pigott et al., 1975). The 1960s were also a time when the increasing profile of the marketing profession was impacting on the way museums viewed visitors (Casey and Wehner, 2001), with visitor surveys becoming increasingly significant in providing data for policy and strategy development. The increasing importance of marketing culminated in a series of government-led reviews of the state-museum sector (regarding their 'scope of operations' and 'reliance on public funding') during the 1970s (NB: the first of these reviews being the famous Committee of Inquiry on Museums and National Collections, headed by P.H. Pigott (1975)). Inter Alia, the various reviews' conclusions that:

…[the] better performing museums are those where the executive has strong domain knowledge, and where there is at least a reasonable degree of separation from government through substantial delegation of responsibilities to shape resource allocation and performance (Griffin, 2008, p.44)

culminated in recognition that the sector needed to adapt to increased marketplace competition and respond to challenges inherent to the onrush of globalisation (Condé, 2011). The increased importance of competition and market-based decision capabilities (and the need for greater accountability and transparency) led to significant change in the sector. Most obviously, these changes manifest in new governance mechanisms, increased reporting requirements, the recruitment of specialist managers, and the adoption of 'for-profit' business practices across the sector. In Australia this rise in professionalism has been evidenced by what Rentschler and Geursen (1999, p.13) call "…a shift of authority from the layperson to the professional director". The changes reflected the new expectation that the state-museum sector would be able to transition to one that was much more responsive to consumers and to market demand generally, and be capable of making a greater contribution to their own funding (Lehman, 2009; Rentschler, 2007). Over the past two decades, senior museum staff have had to become steadily more professional, not only in the narrow scope of the individual museum's discipline areas, but also more broadly in the fields of 'business management', 'conservation', 'collection management', 'communications', 'public programming', and 'marketing' (Hudson, 1998). In Australia, the 'corporatorisation' of the state-museum sector culminated in the National Standards for Australian Museums and Galleries (National Standards Taskforce, 2011) report, which was produced collaboratively by Arts Tasmania, History SA, the Museum and Gallery Services Queensland, Museums and Galleries NSW, Museums Australia (Victoria), and the Western Australian Museum. At the core of the National Standards document is the concept of 'marketing' as it relates to the interaction and management of salient stakeholder groups:

The National Standards for Australian Museums and Galleries are focused on key areas of activity common to organisations that care for collections and provide collection-based services to the community. The National Standards have been developed with the aim of supporting Australian museums and galleries in carrying out their day-to-day activities, meeting their responsibilities to their various stakeholders, attracting support, and achieving their other organisational objectives (National Standards Taskforce, 2011, p.8).

Within the National Standards document's core and supporting principles, ten marketing principles (i.e. two internal-marketing and eight external-marketing principles) can be identified:

- Principle #1: The museum defines its key roles and tasks, and recruits and appoints suitable people for specific roles
- Principle #2: The museum defines and communicates the duties, rights and responsibilities of the museum and its workers
- Principle #3: The museum carries out its activities as part of a broader community and contributes to community events
- Principle #4: The museum selects significant collection areas, stories or themes to highlight, based on what is most relevant to its purpose and audiences
- Principle #5: The museum knows who its current and potential audiences are and has strategies to attract and retain them
- Principle #6: The museum promotes its collection, key attractions, programs and services.
- Principle #7: The museum provides information to help visitors locate the museum and find their way around while they are there
- Principle #8: The museum offers visitors a welcoming experience, and its workers respond appropriately to visitor enquiries and feedback
- Principle #9: The museum's public programs are as accessible as possible to people of all ages and abilities
- Principle #10: The museum makes its collection accessible in digital formats and in online environments, as resources permit

These marketing principles serve to focus management's attention on the efficient allocation and integration of a wide variety of organisational resources (e.g. human, infrastructural and economic resources) (Baidya and Basu, 2008; Olaru, 2009). This is particularly the case in the not-for-profit state-museum sector, which is expected to be an exemplar of leading management practices given their high level of professional and scientific knowledge (Museums Australia 2003). Similarly, the National Standards for Australian Museums and Galleries report noted above explicitly includes marketing as a core organising principle for effective management. The development of such standards is evidence of the museum sector attempting to establish benchmarks for best practice as regards their marketing strategies. An important facet of best practice for the not-for-profit heritage sector is how organisations communicate their marketing priorities, given the importance of stakeholder collaboration in the sector (Landorf, 2009). Certainly, it has been recognised in the business sector that a key component of a firm's marketing policies is to:

> …develop meaningful reports for internal management and stakeholders, outlining the enterprise's sustainable development objectives and comparing performance against them (International Institute for Sustainable Development, 2013).

With respect to not-for-profit heritage organisations, Donohoe (2012, p.138) has noted that "…transparent communications and best-practice reporting" are critical components of effective marketing and management practices, as they enable them to identify and fulfil stakeholder groups' expectations. It is appropriate, then, that an analysis of the marketing priorities communicated by the most significant not-for-profit heritage organisations in Australia—the state-museums—takes place. Exploring how marketing practices are communicated in Australian state-museums' annual reports will help establish the 'baseline of best practice' emerging in the not-for-profit heritage sector, and will provide guidance to researchers and practitioners in the sector going forward. Consequently, this paper seeks to address the following research question: What marketing priorities are evident in the annual reports of Australian state-museums (2001 – 2010)?

3 Method

In order to address this research question, this study undertook a content analysis of the annual reports of the six Australian state-museums published between 2001/2 and 2010/11. The Australian state-run museums were selected as the sample on the basis of their role as pre-eminent cultural organisations, both nationally and in their respective states—their size and consequent influence means they dominate the cultural heritage landscape in Australia. In addition, they have a continuous and well-documented history; they provide an example of the tension between the potentially conflicting multiple roles within society (for example, in recent years, museums have developed new roles as economic development 'engines' within communities, and as tourist destinations in cultural precincts driving income and employment) (Kotler and Kotler, 2000). As the pre-eminent cultural institutions, each Australian state-museum faces pressure from many stakeholders to remain relevant, viable and sustainable institutions (Adams, 2010; Lehman and Roach, 2011; Museums Australia, 2003). The rationale for using the state-run museums' annual reports, therefore, is two-fold: firstly, the document is mandated by statute to be published by each of the museums, and must include financial and social measures of performance; secondly, each museum has full control over the content and framing of their marketing activities in this document, which itself is aimed at addressing salient stakeholder groups' priorities.

In total, 60 annual reports were collected for scrutiny; each of the annual reports (downloaded from the respective museum's official websites) was subject to a rigorous content analysis process that followed the five-stage protocol identified by Finn, White and Walton (2000), Hodson (1999) and Neumann (2003). In the first stage, the aims and objectives of the research were identified, and the first round coding rules were developed. Coding refers to the process of converting information into contextual values for the purposes of data storage, management and analysis allowing theme identification (Ticehurst and Veal, 2000). Using the literature review as a guide, we decided to initially organise the data by the broad marketing variables established by the National Standards document (see Table 2).

Table 2. First-Round Coding Variables

Category	1st Round Coding Rules:
Internal Stakeholders	• Any museum communications concerning its key roles and tasks, • Any museum communications concerning its recruitment and appointment processes • Any museum communications concerning the duties, rights and responsibilities of the museum and its workers
External Stakeholders	• The museum's activities as part of a broader community and contributions to community events • The museum's activities concerning the selection of collection areas, stories or themes based on what is most relevant to its purpose and audiences • The museum's activities concerning its interaction with current and potential audiences • The museum's activities concerning the promotion of its collection, key attractions, programs and services • The museum's activities concerning their visitors' experience • The museum's activities concerning its public programs and their accessibility to people of all ages and abilities • The museum's activities concerning the digitisation of its collections for access in the online environment

Note: National Standards Taskforce, 2011

In the second stage of the content analysis, all of the data in the annual reports were converted into MS Word® format, and entered into the codified database. At regular intervals, inter-coder reliability checks were undertaken to ensure that the data were coded consistently with the rules set in Stage One. Where inconsistencies were detected in the coding of specific elements of text, the coding rules were further refined to accommodate the variance in coding practices. In the third stage of the content analysis, the coded data were further interrogated to detect any significant themes in the reporting of marketing issues and priorities over time. The trends and emergent themes detected in the analysis formed the basis for establishing the second round of data categories (see Table 3, Column 1). As was the case in Stage One, the second round of coding rules were developed prior to the coding of the data itself (to maintain a consistent approach between researchers), and to provide a protocol for others to follow should they wish to replicate the analysis.

In the fourth stage of the content analysis, the second round coding categories were populated with data according to the new coding rules and the inter-coder reliability protocols developed during Stage Two (see Table 3, Column 2). The interpretation of the data during the second round of coding, and the verification of the conclusions, was facilitated by the use of the NVIVO (Version 10.0) software package. In the method literature, it is emphasised that computer software programs such as NVIVO, are of significant value in qualitative analysis and any subsequent theory building (Kelle, 1995; Richards and Richards, 1995; Weitzman and Miles, 1995). Where it was appropriate, data were allocated to more than one node for analysis; using the NVIVO software, the contents of each of the initial index nodes were reviewed to identify common themes that arose in the data pertaining to marketing priorities. In the final stage of the content analysis, the results of the second round coding were refined and the research findings finalised. In order to facilitate the theory building process, memos were maintained about the data, their categories, and the relationships between them as they emerged. NVIVO has a facility for the creation and retention of such memos for later consideration and analysis. Utilising the memo capability within the NVIVO package, memo reports were generated by the software after 'Stage Two' coding. From these reports, the trends and emergent themes became clearer. The themes emanating from the 'second round' of coding form the basis of the discussion section that follows.

Table 3. Marketing Priorities Detected in the State-Museums' Annual Reports

Category (2nd Round Coding)	Sustainability Priorities (3rd Round Coding/Memos)
Marketing Strategy	• Market position and 'corporate branding' • 'Corporate' image • Merchandising effectiveness (retail sales maximisation) • Target marketing • Target market feedback
Collaboration	• Partnerships with other museums • Alliances and Joint Ventures with a range of heritage-based organisations • Networking with experts in the area of heritage and culture • Publications with external organisations/institutions
Extension of the museum	• Online presence • Outreach programs • Diversification of services (e.g. catering, venue hire etc.) • Educational service provision (linked to schools and colleges) • Consistency of experience across museum places
Internal marketing	• Full-time, Part-time and Casually paid staff members • Visiting experts • Volunteer groups • Employee development and training
Pricing	• Focus on viability of 'business operations' within the museum • Outsourcing of non-core business activities

4 Results

The first round coding of the annual report data demonstrated that, by the end of the ten-year study period, nine of the ten National Standards Marketing Principles were collectively addressed by the state-museums. Table 4 summarises the number of state-museums to report on the individual National Standards marketing recommendations over the ten-year period, and demonstrates a pattern of increased sensitivity to, and reporting of, the marketing issues now considered the benchmark for 'for-profit organisations' annual reports.

Table 4. Number of SRMs Reporting National Standards Marketing Principles

1st Round Coding Rule	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11
Principle #1	2	1	2	1	1	1	1	2	2	2
Principle #2	0	0	0	0	0	0	0	0	0	0
Principle #3	0	1	1	3	3	2	3	3	3	4
Principle #4	2	2	2	2	2	3	2	3	3	4
Principle #5	2	3	2	4	4	4	4	4	4	4
Principle #6	3	3	3	3	3	3	4	4	4	4
Principle #7	3	3	3	3	3	4	3	3	4	4
Principle #8	2	2	2	2	3	3	3	4	5	5
Principle #9	3	3	3	3	3	3	3	4	4	4
Principle #10	1	1	1	2	2	2	4	5	4	4
Total incidence	**18**	**19**	**19**	**23**	**22**	**25**	**27**	**32**	**33**	**31**

The frequency data indicated that in the first year, data relating to the National Standards Marketing Principles were detected a total of 18 times in the six annual report documents. Both the number of sustainability recommendations detected in the annual reports (and the level of their incidence) increased markedly over the sample period; by the final year of the sample, 9 of the 10 Marketing Principles were detected, with an incidence count of 31 times in the six annual reports for that year (i.e. an increase of 172 per cent over the base year, and at an average increase of 7 per cent year-on-year over the entire sample period). Table 4 details the number of state-museums' annual reports to address the individual National Standards Marketing Principles across the sample period, and demonstrates a pattern of increased reporting of, and sensitivity to, the marketing issues now considered the benchmark in 'for-profit organisations'. (NB: The only National Standards Marketing Principle not detected was that concerning 'the communication of the duties, rights and responsibilities of the museum and its workers', which may be explained by the fact that it represents an internal training issue, and not one specifically relevant to an annual report document.). These findings are consistent with the state-museums' espoused strategy to attract and secure non-government funding sources, and to demonstrate to their financial stakeholders the necessary transparency and the 'returns on investment' achieved in each financial year.

5 Discussion

Along with the five marketing priorities summarised in Table 3, the second-round coding of the data captured the first reference to marketing as an organising principle in each of the state-museums' annual reports (see Table 5). In all but two of the state-museums, marketing principles were present in the Mission and Vision-statement sections of their 2001/2 annual report, demonstrating their importance as organising (and reporting) principles for those museums from the start of the sample period. The two other state-museums adopted marketing principles into their Mission and Vision statement sections soon after (i.e. in their 2002/3 and 2003/4 reports respectively).

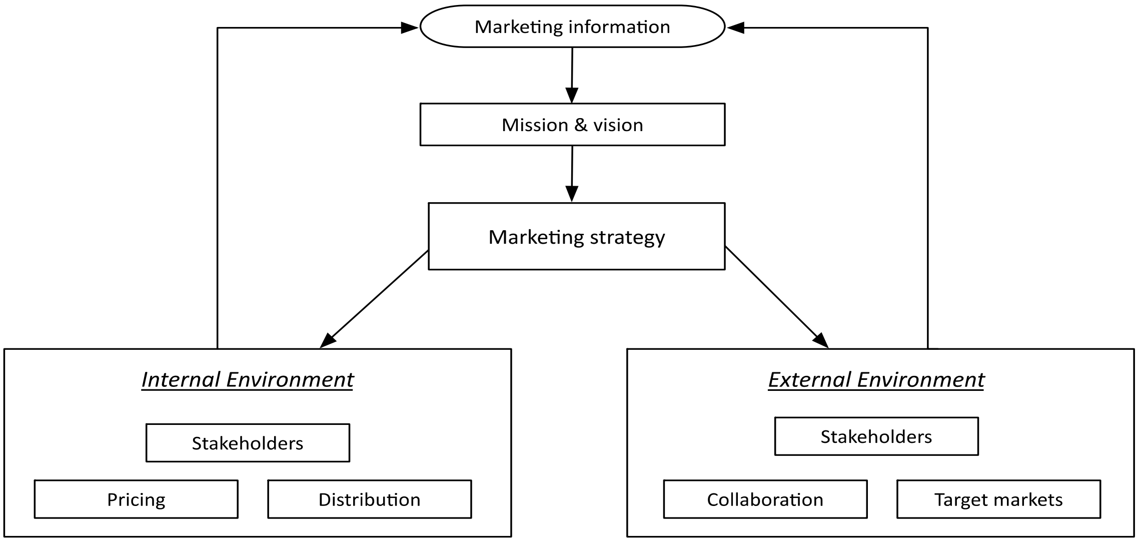
Table 5. Reference to Marketing Priorities in the Not-for-Profit Mission/Vision Statements

Museum	The first reference to marketing priorities (and year)
Australian Museum	Marketing Committee: The Committee considers and provides feedback to the Museum on marketing and development of the Museum's profile and brand name (2003)
Museum Victoria	Museum Victoria undertakes Marketing, Public Relations, Fundraising, Development and Market Research. In addition, it has a vibrant Members Program (2001)
Queensland Museum	Through effective brand management, advertising and public relations, the Queensland Museum will be positioned as a provider of unique educational experiences that entertain and inform. Market research and audience evaluation will ensure that Museum products and services meet the needs and wants of its visitors (2001)
South Australian Museum	With improved marketing the Museum has continued to build its reputation as an attractive location for corporate and private functions. In addition, the Museum has been pleased to assist a number of not-for-profit organisations by providing its facilities for fundraising functions and activities (2002)
Tasmanian Museum and Art Gallery (TMAG)	A concerted effort has been made to raise the profile of the TMAG and increase public awareness of the diversity of public programs and activities undertaken (2001)
Western Australian Museum	Position and promote the Museum throughout the state as an expert, responsive and engaging institution; position and promote the Museum as a major educational centre that integrates teaching and learning theories in the Museum's programs (2001)

The inclusion of marketing priorities in the mission and vision statements of the annual reports - central to the museums' 'corporate' communication strategies - demonstrates the central importance of the concept across the six state-museums (i.e. it demonstrably sets the tone for the annual reports generally, as well as the agenda for the manner in which staff and management interact with salient stakeholder groups). Importantly, the core statements explicitly link the organisations' marketing priorities, as set out in Table 3, to (a) the internal stakeholders of the organisations (i.e. human resource management practices relating to paid staff, external experts, and volunteers), and (b) the external stakeholders of the organisation (i.e. market positioning, target customer groups, business-to-business collaborations, and expanding the museums' product concept).

In addition to this, Table 4 demonstrates the increased emphasis that the six state-run museums placed on reporting their marketing priorities over the ten-year sample period. In the first year of the sample (i.e. 2001/2), only 30 percent of the annual reports included reference to the National Standards Marketing Principles (i.e. 18 incidence of the marketing principles were detected from a possible 60 opportunities to do so); by 2010/11, this number doubled to 52 per cent of the annual reports. The increased emphasis demonstrated in Table 4 is commensurate with the increased pressure on the museums to become market-driven and innovative organisations responsible for satisfying the needs of an expanding array of salient stakeholder groups. The two internal-marketing National Standards Marketing Principles that were not widely detected in this research despite the increased emphasis demonstrated may arguably be absent for two main reasons: firstly, that Human Resource Management activities are not yet fully recognised as marketing issues in these types of organisation; secondly, that the issues inherent to these National Standards Marketing Principles are not priorities of the museums' salient stakeholder groups (and therefore, not reflected in the priorities of management). More generally, the range of data in Table 4 indicates that the National Standards Marketing Principles were not initially considered 'core/general reporting priorities' of the state-museums, and that their recognition coincided with increased exposure to market forces. Similarly, it suggests that the capacity to report marketing priorities grows incrementally inside heritage tourism organisations (such as museums), and that it takes time and management expertise to recognise salient stakeholder groups, ascertain their priorities, and change the structure and culture of the organisation to serve them effectively. The increasing emphasis on marketing principles evident in the data is, therefore, directed in a particular fashion towards the needs of the not-for-profit state-museum sector. However, as was noted above, the state-museums are the dominant influence in Australia's cultural landscape, and can be considered as providing best practice guidelines to the not-for-profit sector, in this case in the development and communication of marketing priorities. With this in mind, we present a Marketing Priorities Model for Not-for-profit Organisations (see Figure 1), based on our analysis of the data. As such, this model both provides an overview of the communication of marketing activities of Australia's pre-eminent not-for-profit heritage organisations, and provides a 'best practice' framework for other organisations in the sector to follow.

Figure 1. A Marketing Priorities Model for Not-for-Profit Organisations



The Model demonstrates that the communication of marketing practices has emerged to play a central strategic role in the annual reporting of the leading not-for-profit heritage organisations in Australia; given the commercial pressures placed upon Australia's six state-museums over the past two decades, the adoption of 'marketing' as part of their Mission and Vision Statements mirrors that which has been present in 'for-profit' corporate annual reports since the 1980s. As with the 'for-profit' sector, it would appear that not-for-profit heritage organisations now must take measures to clearly define 'who and what' they represent and serve in a given marketplace; that is, they must consider constructing Mission and Vision statements to identify and connect with a wide array of salient stakeholder groups in order to remain viable. Importantly, the model indicates that, in the not-for-profit heritage sector, these groups can be collaborative stakeholders (i.e. other museums, other cultural-heritage organisations and/or government agencies) and internal stakeholders (i.e. paid staff, external experts and volunteer support groups). This supports the notion that 'marketing' in the not-for-profit heritage context must be widened to include the allocation and utilisation of a wider range of resources (e.g. relationships with other entities related to the sector, volunteer groups, external experts etc.) that are not controlled directly by the not-for-profit organisation, yet are critical to the marketing process. The model also demonstrates that the concept of marketing has become 'routinised' as a management practice in the state-museum sector, and (given the power of isomorphic pressure to conform to 'best-practices') is likely to become a core legitimising characteristic for the not-for-profit heritage sector as a whole.

6 Conclusion

The purpose of this paper was to provide insight into the best-practice communication of marketing priorities in not-for-profit organisations, and offer a finer grained understanding of what is required for such organisations to effectively manage their marketing priorities. Given the increasing levels of competition for non-government funding and market-relevance that this sector has experienced, providing managers of not-for-profit organisations with a framework for connecting with their stakeholder groups in a more effective/competitive manner in this regard is a timely addition to practice in the sector. Analysis of the data suggests that our Marketing Priorities Model for Not-for-profit Organisations is one that can assist not-for-profit organisations identify and communicate an optimal mix of marketing practices (and related strategies) to their salient stakeholder groups. The data also suggests, however, that not-for-profit organisations necessarily possess operational idiosyncrasies that management must remain cognisant of in order that they not be overlooked in the marketing process. In other words, there appears a danger that not-for-profit organisations that rigidly adhere to marketing frameworks originally designed for for-profit sectors (without due consideration for their own circumstances, resources, and capabilities) may not be in a position to formulate the most effective marketing strategies.

The wide array of organisation and institutional types in the heritage sector, however, poses a challenge for researchers to extend our Model beyond the (albeit) influential state-museum sector. For example, it has been recognised that visitors to 'art galleries' and 'museums' represent distinct sub-sets of the 'heritage' segment, in as much as they are seeking specific types of experiences (e.g. a 'fine arts experience' (Stylianou-Lambert, 2011)). Similarly, 'historical sites' and 'attractions' (where the cultural tourist is immersed in a location as part of their experience) have quite a different set of attributes to other not-for-profit organisation types (Leighton, 2007); in such cases, there is little scope to regularly schedule new exhibitions, and therefore little opportunity to revitalise the product offering. Widening the scope other not-for-profit sectors (e.g. charitable organisations, sporting clubs etc.), there is an opportunity to explore how the mix of marketing principles varies across sectors. As a result, a number of potential research questions suggest themselves: Do not-for-profit organisations in niche heritage sectors possess the same marketing priorities as their larger counterparts?; To what extent does a not-for-profit organisation's resource constraints affect their marketing priorities; How do not-for-profit organisations manage their relationship and network resources in the business-to-business context most effectively? Do resource-poor organisations have the same pressures in communicating their marketing priorities as the larger resource-rich organisations? etc. While there are numerous avenues of potential research, we see our Model as a base-line from which research in to the development and communication of marketing priorities can be viewed, and subsequently built on in the not-for-profit sector.

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INSTITUTIONAL SHAREHOLDERS AND DIVIDEND PAYOUT IN MALAYSIA

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Abstract

This study seeks to furnish insights on institutional shareholders by assessing whether higher presence of institutional shareholders leads to higher dividend payout or vice versa in line with a particular version of the agency theory. The panel data consists of 100 Malaysian firms from the trading and services sector of Bursa Malaysia from the years 2005 to 2008. In line with the 'efficient monitoring hypothesis' theory of institutional shareholders and in conjunction with the outcome model of dividends, we find the presence of institutional shareholders results in higher dividends payout in Malaysia. In spite of the lower fraction of shareholding by institutional shareholders in Malaysia as compared to developed markets, it is clear from the results that the they in fact bring about a positive impact to the firms they invest in by resulting in higher dividends payments. We have provided a framework linking the two theories of dividends (outcome and substitute) and the three theories of institutional shareholders (efficient monitoring hypothesis, conflict of interest hypothesis and strategic alignment hypothesis) to better analyze the two broad ranging theories into greater depth.

Keywords: Dividend, Institutional Shareholders, Corporate Governance, Agency Theory

JEL Code: G34, G35

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1 Introduction

This paper investigates the relationship between institutional ownership and dividend policy in Malaysia. Under the agency setting, large block holding is considered a mechanism to controlling the agency problems which arise whenever managers have incentives to pursue their own interests at the expense of those of shareholders (Faccio and Lasfer, 2000). In the Malaysian financial market, institutional investors have become increasingly important (Wahab et al, 2008). It is also generally assumed that larger dividends payouts help reduce agency conflicts (Easterbrook, 1984, Jensen, 1986, La Porta et al, 2000). However the interaction institutional shareholding share with dividend payout remains largely mixed. One popular argument stems from the notion that institutional shareholders are professional in their decision making capabilities and more vigilant in controlling agency costs (Afza and Mirza, 2011). Hence firms with higher degree of institutional shareholders may have relatively less concerns with regards to agency conflict and thus pay lower dividends. Although this idea sounds convincing and confirmed by a number of studies (see, e.g.; Rennebog and Trojanowski, 2004; Khan, 2006) others report results completely in the opposite direction (see, e.g. Ramli, 2010; Afza and Mirza, 2011; Han et al, 1999).

The possible explanations for the mixed evidence on this subject could be attributed to the *efficient-monitoring hypothesis* of institutional shareholders' (Pound, 1988). Grounded in agency-theory-based explanations that the interests of managers and shareholders in large public corporations often diverge and that shareholders do not have effective control over managers because of information asymmetry and problems related to moral hazard (Milgrom & Roberts, 1992) the *efficient-monitoring hypothesis* offers useful insights on institutional shareholders' affect on firms. Although this hypothesis largely explains institutional shareholders' affect on firm performance, it could arguably explain the impact of institutional shareholders on dividends as well as the latter is in fact an outcome of firm performance.

A prominent theory on dividends is the dividend outcome and dividend substitution model by La Porta et al (2000). It turns out, in line with La Porta et al (2000) revelations, the outcome and substitute theory of dividends could interact in a particular fashion with the *efficient-monitoring hypothesis* outlined above. This study has produced a number of contributions. Foremost, we provide a framework which elucidates the relationship between institutional shareholders and dividends, i.e. where the dividends outcome and substitute model of La Porta et al (2000) and the three institutional shareholders hypotheses (Pound, 1988) is pieced together to better analyze the two broad ranging theories into greater depth. Although agency theory argues that increased institutional shareholders presence could alleviate concerns of agency conflict and hence reduce the need to pay more dividends, another explanation is the increased pressure institutional shareholders exert on management results in payments of excess cash as dividends. In fact in turns out that in Malaysia the latter argument is true where increased presence of institutional shareholders results in increased pressure on managers to pay out higher dividends. Our study looks at the question of dividends and institutional shareholders in a particular industry (observed from the view point of the framework presented in this study) and find that firms within the Trading and Services sector reflect a particular fashion as to how institutional shareholders' presence affect dividends. Next, the definition of institutional shareholders used in this study is broader than the definition used by other studies. The final contribution emerges from the fact that most prior studies on this area have been carried out in developed countries. This study is done in Malaysia, where the corporate governance practices of the stock market not comparable in maturity compared to developed markets.

2 Background literature and hypotheses

Corporate managers are agents of shareholders. Owing to the agency theory, managers are expected to run firms in line with the interests of shareholders. However in the pursuit of managing firms, managers could pursue their own interests at the expense of shareholders. This conflict of interest carries with it several imperatives including agency costs and creates the need for shareholders to control the vocation of managers (called the monitoring of expenditure) (Nivoix, 2005). Institutional ownership is defined as the equity holdings of institutional investors which consist of banks, insurance companies, investment advisers, pension funds and endowments organizations (Bushee 1998). The presence of institutional shareholders in this aspect is seen as a positive pressure on management to ensure they strive towards improved performance of the firm and release any excess cash in the form of dividends. The availability of these free cash flows is an inducement for managers to indulge in activities does not yield benefits to shareholders (Afza and Mirza, 2010). In this regard institutional shareholders could use the powers bestowed upon them through their shareholding to exert their influence on management (Chaowarat and Jumreorvong, 2010).

The many benefits that institutional investors could bring to a company include diligent monitoring (Wan Hussin and Ibrahim, 2003), prevent managerial opportunistic reporting behavior (Mitra and Cready, (2005) and enhanced corporate performance (McConnell and Servaes, 1990). During the 1930s, most organizations' equities were owned by their founders or family. Hence, the agency theory problems occurred since managers may not perform in the best interest of the shareholders (Berle and Means, 1932; Jensen & Meckling, 1976). However, since the twentieth century, the pattern of the ownership changed where individual share ownership has reduced but institutional share ownership has gone up. As a result, institutional investors play an important role in reducing agency conflict and efficiency of the corporate governance practices by firms (Claessen and Fan, 2002; McConnell and Servaes, 1990; Nahar et al., 1998).

Corporate dividend policy should be designed to minimize the sum of capital, agency, and taxation costs (Easterbrook, 1984). Dividends can be used to mitigate agency problems in a company (Easterbrook 1984; Jensen 1986; Rozeff 1982). The payment of dividends may act to help reduce agency costs which arise between managers and external shareholders. Dividends can also minimize agency conflicts by subjecting companies to the scrutiny of capital market monitoring (Easterbrook 1984). Thus firms with increased presence of institutional shareholders could also be expected to pay higher dividends.

However the argument above which leads one to theorize that increased institutional shareholders presence could result in higher dividends payments is not as straightforward as it seems. As discussed earlier in Section 1 the possible explanations for the mixed evidence on this subject could be attributed to the three hypotheses relating to institutional shareholders (Pound, 1988), i.e. *efficient-monitoring hypothesis*, *conflict-of-interest hypothesis*, and *strategic-alignment hypothesis*. Before delving into the three hypotheses above, it is imperative at this juncture to apprehend the dividend outcome/substitute theory of La Porta et al (2000). La Porta et al. (2000) discusses the two models of dividend policy, the "outcome model" and "substitute model" in relation to CG. The outcome model claims that the payment of dividend is the result of effective governance where well governed firms pay dividend because such payments reduces the opportunity for expropriation from shareholders. Shareholders thus successfully pressure managers to disgorge excess cash or free cash flow. On the other hand, the substitute model claims payment of dividend substitute other governance mechanism where poorly governed firms need an alternative means of establishing a reputation for acting in the interests of shareholders if they intend to raise capital from public funds in the future. In their paper, La Porta et al., (2000) found that because legal protection of minority shareholders differs across countries, dividends policies also varies across countries in ways consistent with a particular version of the agency theory of dividends. Common law countries like the US, UK and Malaysia have stronger laws that protect shareholders and better governance and exhibit characteristics of the outcome model while civil law countries have weaker protection of shareholders and weaker governance and hence exhibit the characteristics of the substitute model[29]. This idea has in fact been tested in studies on dividend and institutional shareholders[30].

While the outcome and substitute model of La Porta et al (2000) provides two possible models which explains dividend policy, Pound (1988) offers three possible explanations of institutional shareholders' characteristics in investee firms. The *efficient-monitoring hypothesis* posits that institutional shareholders possess greater expertise and can monitor management at a lower cost than compared to small shareholders. The *conflict-of-interest* proposition suggests that in view of other profitable business relationships with the firm, institutional shareholders are coerced into voting their shares with management. For instance, an insurance company may hold a significant portion of a firm's stock and concurrently act as its primary insurer or a bank may invest in a firm in which it's a significant financier too. Voting against management may significantly affect the firm's business relationship with the incumbent management whereas voting with the management results in no obvious penalty (Bhattacharya and Graham, 2007). In other words the power gained from institutional shareholders' ownership stake may be tampered somewhat by their reliance on the firm for business activity (Heard and Sherman, 1987). The *strategic-alignment* hypothesis posits that institutional shareholders and managers find it mutually advantageous to cooperate. Generally, cooperation reduces the beneficial effects on the firm value that could result from monitoring by large shareholders. Some authors argue that this 'cooperation' could potentially cripple the management-monitoring function of large shareholders, and result in the expropriation of minority shareholders (Bushman and Smith, 2001).

In examining the relationship between institutional shareholders and dividends, the dividends outcome and substitute model of La Porta et al (2000) and the institutional shareholders hypotheses could be pieced together to better analyze the two broad ranging theories into greater depth. A diagram on the possible link the dividend outcome/substitute theory share with the institutional shareholders is presented in Table 1 below.

The *efficient-monitoring hypothesis* posits those institutional shareholders are competent observers of management. If the outcome based dividend model characteristic is prevalent, heightened monitoring by higher institutional shareholders presence would result in effective pressure on management to payout higher dividends and hence a positive relationship. Jensen's (1986) free cash flow theory suggests that managers are reluctant to pay out dividends, preferring instead to retain resources under their control. Eckbo and Verma (1994) argue that institutional shareholders will prefer free cash flow to be distributed in the form of dividends in order to reduce the agency costs of free cash flows. From this perspective, it may be argued that institutional shareholders may counter a tendency for managers to prefer the excessive retention of cash flow and, by virtue of their voting power, force managers to pay out dividends.

The prevalence of the substitute model of dividends would could cause higher institutional shareholders presence to be negatively associated with dividends as the latter would not be necessary to mitigate agency conflict due to the heightened monitoring by institutional shareholders and hence a negative relationship. Zeckhauser and Pound (1990) suggested that institutional shareholders may act as a substituting monitoring device, hence, reducing the need for external monitoring by the capital markets.

The *conflict of interest* hypothesis assumes that management and institutional shareholders are connected through business vocations and hence would be unable to effectively discharge their monitoring roles effectively. The subsistence of the outcome model of dividends would result in a negative relation between institutional shareholding and dividends as firms with higher institutional shareholders could experience lower monitoring functions and shareholder power and hence lower dividends and vice versa. On the other hand the prevalence of the substitute model of dividends could witness higher dividends being paid with increased level of shareholders presence in order to compensate the weaker monitoring of the latter and hence a positive relationship[31].

[29] However the orientation towards the outcome or substitute model according the common law or civil jurisdictions have produced conflicting results where firms in common law countries have also exhibited characteristics of the substitute model while firm in civil law countries have exhibited characteristics of the outcome model when different aspects of governance are tested in relation to dividends (see e.g. Hwang et al. ,2004; Leng, 2008; Al-Najjar and Hussainey, 2009; Khan 2006; Sawicki, 2009). The general dimensions of corporate governance studied in relation to agency costs have been widely categorized into six areas; board membership; ownership concentration; audit committee, internal control and internal audit; take-over defenses; regulation and enforcement; external auditors; monitoring from block holders; see. Brown et al, 2011 for more details).

[30] Khan (2006) reports that dividends and institutional shareholders presence are substitute monitoring devices, on a study of UK firms.

[31] Consistent with Wahab et al (2008), we could not determine the exact nature of the business relationship between the firm and institutional investors. Our method is consistent with those of Brickley, Lease and Clifford (1988), Chaganti and Damanpour (1991) and Cornett et al. (2007), which only assume that such a relationship exists between the institutional investors and the firms.

Table 1. Linkage between Dividend Outcome and Substitute theory with Institutional Shareholder hypotheses

Dividend outcome/ Substitute model	Institutional Shareholders hypotheses	
	Efficient monitoring hypothesis	
Dividend theory	Outcome	Substitute
Relationship	Positive	Negative
	Conflict of interest hypothesis	
Dividend theory	Outcome	Substitute
Relationship	Negative	Positive
	Strategic alignment hypotheses	
Dividend theory	Outcome	Substitute
Relationship	Negative	Positive

The *strategic-alignment-hypothesis* holds that institutional shareholders and managers could realize the benefits of mutual cooperation, which could be detrimental to the expected monitoring functions of the former (Bhattacharya and Graham, 2007). In such scenarios, the prevalence of the outcome model of dividend could see higher institutional shareholders presence (who are strategically aligned with managers) to be associated with lower dividend payment as the force of the former on management diminishes and thus being less forceful to compel management to disgorge dividends. In the advent of the substitute model of dividends, higher institutional shareholders presence would be seen as a sign of weaker monitoring (in light of the *strategic-alignment-hypothesis*) and create the need for higher dividend payments to alleviate agency conflict concerns. The orientation of the *strategic-alignment-hypothesis* and *conflict of interest* hypothesis towards toward lower monitoring effectiveness is also termed by some authors as the 'passive monitoring' hypothesis (Kochhar and David, 1996; Pound, 1988). Some researchers have collectively grouped the three theories above as 'active monitoring' theory and passive monitoring theory (for *conflict of interest* hypothesis and *strategic-alignment-hypothesis* (Harasheh, 2011).

In a nutshell it can be observed that each of the hypotheses relating to institutional shareholders can be analyzed within a particular version of the dividend outcome and substitute model. In this study we examine the assumption relating to the *efficient-monitoring hypothesis* and the dividend outcome/substitute model directly. The assumptions relating to the second and third hypotheses are beyond the scope of this study. Specific information on the existence and nature of business relationship between institutional shareholders and management is needed to test the second hypothesis and information on the extent to which certain institutional shareholders could be strategically aligned with managers is needed to test the third hypothesis on institutional shareholders. Hence this study specifically examines the efficient monitoring hypothesis and posits there is a relationship between the former with the dividend outcome or substitute model.

2.1 Tax-based argument of dividend

Studies on dividends and institutional shareholders have often made sure it mentions the tax-based hypothesis of dividend clienteles and institutional shareholders' preference for dividends. The tax-based hypothesis is not considered in our study and secondly, even if there is any affect of this hypothesis on our model, it is assumed to be constant for a number of reasons. The tax-based dividend hypothesis in general predicts that dividend payout is positively related to institutional ownership because institutions prefer dividends over capital gains under the differential tax treatment (Han et al., 1999). Most studies examining the impact of institutional shareholder level (independent variable) on dividends (dependent variable) have made inferences on the tax-based hypothesis without operationalizing the 'taxation' variable in their models (see e.g. Han et al., 1999; Ramli, 2008; Ramli, 2011; Khan, 2006; Afza and Mirza, 2011). Only one recent influential study (which lamented the fact that in spite of the special tax status of corporate shareholders, it is surprising that no one has investigated the relation between corporate stock ownership and dividend policy) examined institutional shareholders and individual shareholders and their preference for dividends in line with the tax-hypotheses and found no support for both groups on their preferences for dividends (Barclay et al, 2008). Ultimately the ground-breaking study on agency theory and dividend policies around the world by La Porta et al (2000) examined shareholders protection laws (independent variable) and tax advantage (independent variable) on dividends (dependent variable) and found no conclusive evidence on the effect of taxes on dividend policies[32]. In contrast to the Barclay et al (2008) study which examined both individual shareholders and institutional shareholders, our study only examined the latter and it is thus assumed that even if any tax-based hypotheses' affect could be present, it should be fixed on a group of homogeneous shareholders and secondly largely fixed

[32] The La Porta et al (2000) study comprised 33 countries and divided them into common law countries and civil law countries. Malaysia (a common law country) was one of the countries included in that study.

within a particular industry (Trading and Services sector, where the sample for this study is drawn upon).

Studies built-upon the 'prudent-man hypotheses or rule' of institutional shareholders essentially examined dividends (independent variable) in relation to the impact on institutional shareholders level (reverse in direction as compared to our study)[33] and a few of them have considered and operationalized the tax-based hypothesis in their models (see e.g. Allen et al., 2000; Jun et al., 2011). Excerpts from Allen et al, 2000, Vol LX, No 6, pp.3 which reads "firms can attract more institutions as shareholders by paying dividends" and "in our agency model, taxable dividends exists to attract informed institutions" point out the direction of testing the tax-based hypotheses' in relation to the dividends and institutional shareholders where it is clear that for studies which intends to specifically examine the tax-based hypothesis should examine it in relation to the impact of dividends on institutional shareholders level. The supports for the tax-based hypotheses have since emerged from these two studies where both Allen et al., (2000) and Jun et al (2011) find evidence of tax clientele affect of dividends on institutional shareholders. The weight of one study of institutional shareholders on dividends which finds no support for the tax-based hypotheses (Barclay et al, 2008) against two studies of dividends on institutional shareholders with both reporting results in support of the tax-based hypotheses is enticing us to conclude at this juncture that the tax-based hypotheses is more appropriate to tested in studies of dividends on institutional shareholders and not vice versa. However in view of the sparse evidence on this highly specialized area, we are of the opinion that the evidence on the right direction for testing the tax-based hypothesis is still mixed at this moment and more studies are needed before more concrete conclusion could be made. Nevertheless our effort in putting in clearer perspective the current state of knowledge on the tax-based hypotheses is an added contribution of this study.

Based on the arguments above our study assumes the tax-based influences to remain constant for a group of institutional shareholders in a specific industry. In addition we assume homogeneity with regards to institutional shareholders in relation their tax clientele. Majority of the institutional shareholders of Malaysian public listed firms are locally based where they collectively represent about 70 percent of total institutional shareholding in public listed companies on Bursa Malaysia (Wahab et al, 2008) and are assumed to be similar in their preferences for dividends from the tax-based hypotheses.

2.2 Institutional shareholders in the context of Corporate Governance

The role institutional shareholders play in corporate governance is obvious. In recent years institutions have become increasingly involved in corporate governance (Allen et al, 2000). Given the weight of their votes, the way in which institutional shareholders use their power to influence the standards of corporate governance is of fundamental importance (MCCG, 2001). In this respect, institutional shareholders should take a positive interest in the composition of boards, with checks and balances, and to the appointment of a core of non-executives of necessary caliber, experience and independence. Institutional investors are playing an increasingly important role in the stock market (Gompers and Metrick, 2001). Institutional ownership also serve as an alternative monitoring mechanism to dividend because institutional investors' stake and voting power in the firm gives them the incentive and the ability to influence managerial behavior (Shleifer and Vishny 1986). Thus the idea of considering institutional shareholders as credible force of corporate governance in empirical research is a well founded one.

2.3 Recent Trends in Institutional Shareholding

Institutional shareholders have been steadily increasing their percentage of holdings in equity markets worldwide. In the US for example, institutional investors have increased their percentage holdings of US equities and the figure stood at 70 percent in 2006 (Blume and Keim, 2008). Institutional ownership of U.S. firms has gone up remarkably in the last fifty years and they currently jointly have the majority of U.S. shares (Gompers and Metrick 2001).

The institutional shareholding landscape in Malaysia is quite unique to its country and region. In Malaysia, the corporate environment is parallel to many other Asian markets where big conglomerates are family or government owned (Claessens and Fan, 2002; Thillainathan, 1999; Cutler, 1994; Lang et al, 1999). Zhuang et al. (2000) further found that the largest shareholder still possesses an average of 30.3 percent of the total shares among all listed organizations in Malaysia in 1998. He also found that the top five shareholdings averagely exceed 58.8 percent. Additionally, Claessens et al. (200a) collected a sample data of 238 firms in Malaysia, and found 40.4 percent of these firms are closely owned by a single large shareholder. Individual or family shareholders are chief as the large shareholders in Malaysia (Zhuang et al., 2001). The presence of institutional shareholders is still relatively low in Malaysia as compared to developed countries, although this trend is growing. As of 2002 and 2003, the total institutional shareholding in Malaysia only stood at 13%, Wahab et al (2008). The low but

[33] See Section 4 below on Endogeneity for details on the assumptions of the 'prudent-man hypotheses of institutional shareholders.

growing presence of institutional shareholders in Malaysia therefore provides a unique environment and dataset to test the importance of institutional in the context of dividends payments.

The five largest public institutional investors in Malaysia are Employees Provident Fund (EPF), Lembaga Tabung Angkatan Tentera (LTAT), Permodalan Nasional Berhad (PNB), Lembaga Tabung Haji, and National Social Security Organization of Malaysia (PERKESO). EPF is the primary pension fund organization in Malaysia which enjoys exclusivity in collecting pension deduction from employees of private sector. LTAT is the endowment and pension fund for members of the armed forces of Malaysia. PNB is one of the major investment arm of the government. PERKESO is the fund established for workplace hazards and accidents compensation. Collectively, the ownership of institutional shareholders identified above represents about 70 percent of total institutional shareholding in public listed companies on Bursa Malaysia (Wahab et al, 2008).

2.4 Prior studies on institutional shareholding and dividends

Previous research evidence on the relationship between dividends and institutional shareholders is mixed. In view of the sticky nature of this topic where both dividends and institutional shareholders have examined been as the antecedent of each other (reverse causality), this section is limited to the discussion of studies which examined the affect on institutional shareholders on dividends[34]. Han, Lee and Suk (1999) find institutional shareholders are inversely related to dividends in the US[35] and make no mention of the outcome/substitute model of dividends. Although the authors attribute these findings to the tax based hypotheses of dividends, taxation was not measured in any way in the study. The attribution of the results of their study makes more clear sense when viewed from the framework presented in this study in Table 1. As emphasized earlier the findings of La Porta et al (2000) was found to yield conflicting results in subsequent research carried out where each CG variable or each broad areas or categories CG could possess its own unique relationship with dividends. Thus board, audit committee, institutional shareholders, auditors, regulations and insider ownership in one country itself does not yield similar results when viewed from La Porta et al (2000) inclination of the dividend outcome and substitution model based on the common law or civil orientation of countries respectively[36]. Thus inference of the results of the study above would render the results to be in line with the substitution model of dividends and the efficient monitoring hypothesis of institutional shareholders. In Pakistan (a common law country) Afza and Mirza (2011) find dividends to be positively related to dividends. Again when viewed from the framework presented in Table 1, the results render the results to be in line with the outcome model of dividends and the efficient monitoring hypothesis of institutional shareholders. In the UK dividends and institutional shareholders are positively related in line with the outcome model of dividends and the efficient monitoring hypothesis of institutional shareholders (Khan, 2005). Ferreira, Massa and Matos (2010) who examined institutional shareholders in relation to dividend studied 37 countries over the period of 2000 – 2007. The authors conclude that institutional shareholders are inversely related to dividends in their joint analysis of all 37 countries. Countries included in their study covered both common law and civil law countries. Although the contributions of La Porta et al (2000) is briefly mentioned in their study, the conclusion achieved did not relate the dividend substitute and outcome theory as well the three institutional shareholders hypotheses mentioned earlier in a concrete manner, where the application of the framework presented in our study would result in clearer and more in-depth justifications for their findings.

In some countries the dividends and institutional shareholders are positively associated in line with agency costs explanation but in rather countries the opposite is true in. In Malaysia, dividends and institutional shareholders are also positively associated (Ramli, 2010). Similarly Leng (2008) observed a positive relationship between dividends institutional shareholders presence in Malaysia. The available evidence on this topic in Malaysia is thus rather sparse. Thus we contribute towards the dearth of literature in Malaysia on this topic.

2.5 Hypothesis

The sole and ultimate aim of this study is examine if institutional shareholders are associated with dividends in a particular fashion when observed from the dividend outcome/substitute model and the efficient monitoring hypothesis framework. In line with the lengthy discussion above on dividends and institutional shareholders, it shows that the outcome model version of agency theory suggests that dividend policy can be used as corporate governance mechanisms to mitigate agency concerns. On the other hand larger institutional shareholders presence could be associated with more power to pressure directors to

34 The issue of reverse causality (endogeneity) of the estimates has been dealt with in Section 3 and 4 below with the use of robust techniques.

35 US is a common law country and hence expected to exhibit features of the outcome model of dividends (which would have resulted in a positive relationship between institutional shareholders and dividends).

36 See for e.g. Al-Najjar and Hussainey (2009) in the UK; Leng (2008) in Malaysia; Sawicki (2009) in South East Asia; Jiraporn and Ning (2006) in US; Jiraporn, Kim and Kim (2011) in the US; Hwang, Park, Park (2004) in South Korea.

managers and hence serve as alternative mechanisms to mitigate agency concerns (Ramli, 2010). The 'efficient monitoring hypotheses' argues institutional shareholders play a significant role in monitoring management (Pound, 1988). Thus the presence of increased large institutional shareholders presence could act as a strong pressure on management to pay out excess cash in the form of dividends which otherwise see the opposite in firms with lower institutional shareholders experiencing lower shareholder power in pressuring management directors to pay dividends. On the other hand the substitute model version of agency theory suggests that dividend policy can be used as alternate mechanisms to mitigate agency concerns when corporate governance is weak. Thus the presence of large institutional shareholders could result in lower dividends payments as dividends are not needed to function as an alternative control device. As previous studies on dividends tend to produce a positive association between institutional shareholders, we posit the following hypothesis (in its alternate form):

Institutional shareholders presence positively affects dividend payout in Malaysia.

3 Research methods and data description

The data used for this study was hand collected from annual reports retrieved from the official website of Bursa Malaysia (the Malaysian Stock Exchange) from 2005 to 2008. Our study is conducted on firms listed under the 'Trading and Services' category of Bursa Malaysia firms. Driven by motivation of previous studies on institutional shareholders and firm performance which examined specific industries (Hallowell, 2006), we choose the trading services sector which is comparatively a key growth sector in the Malaysian economy. Malaysia is moving towards a service based economy where this sector has been growing steadily (http://etp.pemandu.gov.my). The Malaysian government intends to transform the economy into a serviced based one and thus ample investment opportunities, growth potential and incentives is made available for the private sector in this industry. The trading and services sector is the second largest sector in the Bursa Malaysia with a total of 182 firms. Out of 182 firms in the trading and services sector, a total of 100 firms are randomly selected. The trading and services sector is almost similar the 'retail sector' study done in US by Hallowell (2006) and would thus be useful to determine if Malaysian firms in the similar sector exhibit similar characteristics on the topic of this study. Also, due to the exploratory nature of this study, we chose to test the hypotheses on a particular industry first, with the possible extension to all industries in the near future.

This study uses panel regression technique to analyze the model estimates. This study uses the panel data regression to estimate the outcomes of this research. By combining time series of cross section observations, panel data is argued to be more advantageous (Hsiao , 1989), informative and robust due to a greater degrees of freedom and variation in data (Gujarati, 2003). The commonly used Newey-West standardized error panel regression is employed to control for possible heteroskedastic and multicollinearity in the model. In addition, the dynamic two-step Generalized Method of Moments (GMM) panel estimation is employed to remedy possibly endogenous concerns in the model. We thus posit the following model:

$$LNDPS_{it} = a0INTERCEPT_{it} + a1\ IS_{it} + a2\ LNDPS(-1)_{it} + a3\ ROE_{it} + a4\ GEARING_{it} + a5\ SALES\_GR_{it} + a6\ LNTA_{it} + a7\ CFO_{it} + e_{it} \quad (1)$$

Where i: represents company
t: time period

The experimental variable is in bold where:

Dependent variable	
LNDPS	Natural logarithm of dividends per share
Experimental variable	
IS -	Institutional Shareholders' is the fraction of total institutional Shareholders' ownership to total shareholding.
Control variables	
LNDPS (-1)	Lagged one year of the natural logarithm of dividends per share
CFO -	Cash flow from Operating Activities
ROE -	Return on equity (Earnings divided by equity)
SALES_GR -	Sales growth from year *t* to *t+1*
GEARING -	Gearing – (Non-current Liabilities/Equity)
LNTA -	Natural logarithm of total assets

3.1 Dependent variable

This study examines the impact of institutional shareholders' presence on dividends payments, specifically in relation to how the two interacts under the broad realm of agency theory. The dependent variable is measured as dividend per share (DPS). Dividends per share (DPS) is consistent with the same proxies used in other dividends studies (see for instance Khan, 2005). Following test of normality, logarithmic transformation is applied to DPS, thus LNDPS.

3.2 Experimental variable

Institutional shareholders (IS) is measured as the proportion of institutional shareholders to total shareholding (similar to Wahab et al, 2009; Ming and and Gee, 2008; Wahab et al, 2008). However our study captures a larger proportion of institutions shareholding as we measure it as the total percentage of IS from the Top 30 Shareholders List, as disclosed in the annual report of sample firms. The Top 30 Shareholders List disclosed in the annual report accounts for 70 – 90 percent of the total ownership of firms listed in Malaysia. This measurement is more wide ranging than many previous studies (see e.g. Wahab et al, 2008; Hartzell and Starks, 2002; Cornett et al., 2007) who measure IS as the percentage of the top 5 institutional investors' shareholding.

3.3 Control variables

Given that dividends payments are firm-specific, this study includes control variables to control firm specific effects. The natural logarithm of total assets (LNASSETS) is a proxy for firm size and is used as a control variable because it has been reported to be positively related to dividends (Sulong & Mat Nor, 2008). Return on equity (ROE) is expected to show positive relationship with dividends and measured as earnings divided by total equity, consistent with (Abjaoud and Ben-Amar, 2010). GEARING is negatively related to dividends (Collins et al., 1996) because both dividends and debt are alternate mechanisms to reduce the agency costs of free cash flows. Cash flow from operating activities (CFO) is essentially the measure of free cash flows (Abjaoud and Ben-Amar, 2010). In this regard, firms would pay dividends to reduce their free cash flow and hence a positive association. Firm growth (GROWTH) has been established in past studies to be associated with dividends (Rozeff, 1982) and is measured as sales growth from year *t* to *t+1*. Shares buy-back is not considered for inclusion as control variable because they are not a common practice in Malaysia (Ramli, 2010). Only allowed since 1997, share buy-back transactions volume are still low in Malaysia with only 32, 62, 70,127, 145 and 154 firms engaging in share buy-back for the years 2002, 2003, 2004, 2005, 2006 and 2007 respectively (Nadarajan et al., 2009). Although the trend of share-buy-back is increasing, the figures for the year 2007 for example only represented 15.6 percent of total firms listed in Bursa Malaysia (Oh, 2010). The global financial crisis of 2007/2008 could also bring about possible noise in the control variables, and therefore, we have included year dummies as part of the estimate. The year dummy variable is a vector of dummy variables denoting the different years to which firms sample belong to, namely dummy year 2005, dummy year 2006, dummy year 2007 and dummy year 2008 (with dummy year 2007 being the omitted year).

4 Results

4.1 Descriptive statistics

Table 2. Descriptive Statistics (2005-2008, n=100)

	DPS	IS	CFO	GEARING	ROE	REVENUE	TA
Mean	0.061	0.184	137,000,000	0.534	0.086	1,190,000,000	2,750,000,000
Median	0.020	0.170	22,563,841	0.287	0.099	331,000,000	632,000,000
Maximum	0.565	0.660	284,000,000	12.994	10.716	22,300,000,000	83,200,000,000
Minimum	0.00	0.000	(151,000,000)	-6.384	(31.137)	8,179,000	5,575,784
Std. Dev.	0.095	0.157	42,100,000	1.153	2.047	2,900,000,000	9,540,000,000

Note: *DPS* is the dependent variable and is the dividends per share. IS is the fraction of institutional shareholders: ROE is return on equity: CFO is cash flow from operating activities: Revenue is total revenue in a financial year. TA is the total assets of firms.

Table 2 above presents the descriptive statistics. The dependent variable is DPS (dividends per share) and the mean is RM 0.061 or 6.1 cents. The inclusion of non-dividends paying firms improves the results of this study and reduces the biasness attached to including only dividends paying firms. The data for dividends show that on average firms in the Trading and Services sector pay a modest dividend 6.1 cents. Ramli (2010) in her study of Malaysia from 2002 to 2006 reports that dividend payout in Malaysia has been on the rise. Thus dividend is still an important mechanism that reduces agency costs from the institutional shareholders' perspective. The experimental variable (IS) has a mean of 0.184 which means 18 percent of shareholders of firms in this sector are institutional shareholders. This figure is higher than the 12 percent of institutional shareholders in Malaysia in 2002 reported by Wahab et al (2008) because our study used a broader definition of institutional shareholders. The mean for IS confirms the phenomena of low presence of institutional shareholders in firms listed in Bursa Malaysia. Results for developed markets like US and UK reported earlier shows that the presence of institutional shareholders in Malaysia is comparatively lower. The low IS presence in Malaysia compared to the developed markets provides a unique opportunity to test the notion if they still efficiently play their monitoring role.

4.2 Correlations matrix for sample firms (2005-2008)

Table 3. Correlation matrix (2005 – 2008, n=100)

	LNDPS	IS	LNTA	ROE	GEARING	CFO	SALES_GR
LNDPS	1.000						
IS	0.449	1.000					
LNTA	0.504	0.458	1.000				
ROE	0.095	0.062	(0.002)	1.000			
GEARING	(0.092)	0.091	0.092	0.340	1.000		
CFO	0.348	0.222	0.483	0.050	0.019	1.000	
GROWTH	(0.119)	0.047	0.141	(0.029)	(0.007)	0.144	1.000

Note: *LNDPS* is the dependent variable and is the natural logarithm of dividends per share: IS is the fraction of institutional shareholders' ownership to total shareholding. ROE is return on equity: CFO is cash flow from operating activities divided by total assets: GROWTH is sales growth from year t to year t+1. LNTA is the natural logarithm of total assets.

Table 3 shows the correlation or pair-wise Pearson correlation coefficients between the variables in this study. LNDPS has positive relationship with IS, CFO, SALES_GR and LNTA but has negative relationship with GEARING. All the directions of the relationship (positive or negative) between the dependent variable and the experimental variables and control variables are in the direction of prediction. The Pearson correlation test is also carried out to understand the underlying direction of relations between variables (positive or negative relationship) and identify the presence of multicollinearity among variables. Tale 3 above indicates that multicollinearity is not a problem as the correlations are relatively low. According to Gujerati (2003), multicollinearity could be a problem when the correlation between variables exceeded 0.80 thus causing biased results in estimated models. None of the variables above show a correlation coefficient of above 0.80.

4.3 Multivariate Results

We first regress the control variables against LNDPS. The R^2 of the model is strong at around 78 percent and is evident of the appropriateness of the model and is higher than previous Malaysian studies on this topic (see Leng, 2008). It is clearly seen that LNDPS is positively and significantly affected by LNDPS(-1) or lagged one year of dividends at the 1 percent level. The results confirm the dividend smoothing behavior of sample firms in line with Lintner (1956) theory and consistent with Adjaoud and Ben-Amar (2010). CFO which is a measure of free cash flows shows that it affects LNDPS negatively but not significantly. As expected GEARING is negatively and but significantly related to LNDPS at the 1 percent level. GEARING is expected to have a negative relationship with LNDPS because the higher the gearing the lower the equity of firm and hence dividends that needs to be paid. The second reason for this relationship is due to the fact that liability is also an element that disciplines managers and hence reduces the need to pay higher dividends. ROE is a measure of firm performance and in line with the expectation is positively related to LNDPS at the 1 percent level. The results shows that firm with better financial performance pay more dividends. SALES_GR as expected shows negative relationship with LNDPS. However the results are not statistically significant. Nonetheless the results still confirms to Rozeff (1982) idea that firm growth requires more funds and thus impedes the ability to pay higher dividends, hence the negative relationship. The results are also consistent with the findings of La Porta et al (2000) which showed high growth firms pay lower dividends where shareholders are willing to wait when the investment opportunity is good in countries with better investor protection laws like Malaysia. The final control variable is LNTA which is a measure of firm size. The results in Table 4 above shows that larger firms pay higher dividend and the observations are significant at the 5 percent level. The results confirms the prediction where larger firms are in a better position to raise external finance and hence able to pay out more as dividends. Furthermore larger firms are more at stake in terms of reputation for not paying dividend than their smaller counterparts. The results for all the control variables are consistent across Models 1 to 4 except SALES_GR which experiences a significant relationship with dividends when the Newey-West panel regression is employed.

Table 4. Impact of Institutional shareholders on dividends

	(1)	(2)	(3)	(4)
Constant	-2.586484	-2.374271	-2.582057	-2.775593
	*2.386794****	*-.184242****	*-2.54****	*-2.68****
LNDPS(-1)	0.822818	0.805279	0.8289161	0.8332233
	*20.85455****	*19.76822****	*17.44****	*17.85****
IS		0.739081	0.6521903	0.6085957
		*1.631535***	*1.4***	*1.29***
CFO	0.00763	0.00678	0.00007	0.00013
	0.382942	*0.387708*	*0.771*	*0.970*
GEARING	-0.193058	-0.200034	-0.1995213	-0.1856134
	*3.744404****	*3.882353****	*-3.55****	*-3.26****
ROE	0.062863	0.061471	0.0592439	0.0566625
	*2.137178****	*2.097639****	*3.59****	*3.46****
GROWTH	-0.00833	-0.0787	-0.00126	-0.00014
	-0.966495	*-0.862852*	*-2.06****	*-2.18****
LNTA	0.097366	0.07682	0.0921326	0.09413
	*1.91848***	*1.474838*	*1.91***	*1.95***
YEAR_DUM06				0.3177666
				*2.00***
YEAR_DUM05				0.2081243
				*1.42**
YEAR_DUM08				0.23342
				*1.93**
R-squared	0.781109	0.784	0.784	0.784
Adjusted R-squared	0.774542	0.7764	0.7764	0.7764
F-statistic	118.9491***	103.1839***	119.32***	119.38***

Notes: t-statistics are italicized; Significance at the 1%, 5% and 10% is denoted by ***, ** and * respectively. Model 1 examines the affect of the control variables; Model 2 is the full model; Model 3 is the full model using the panel Newey-West regression; Model 4 is the full model using the panel Newey-West regression with year dummies. *LNDPS* is the dependent variable and is the natural logarithm of dividends per share. IS is the fraction of institutional shareholders to total shareholding: ROE is return on equity: CFO is cash flow from operating activities divided by total assets: GROWTH is sales growth from year t to year t+1. LNTA is the natural logarithm of total assets. Year effects – year dummy (YEAR_DUM05, YEAR_DUM06, YEAR_DUM 07, YEAR_DUM08); with YEAR_DUM07 being the omitted year.

The results for IS confirm the idea that the 'efficient monitoring hypothesis' is true in Malaysia for the Trading and Services sector, consistent with Ramli (2010) and Leng (2008). Higher institutional shareholders level results in higher dividends payout and is consistent with the agency theory arguments which claim that due to strong influence and expert knowledge of the equity market, the presence of institutional shareholders act as an efficient monitoring force which successfully exerts pressure for directors to divulge cash in the form of dividends which could otherwise be abused the latter.

The commonly used Newey-West standardized error panel regression to control for heteroskedastic and comtemporaneous errors is employed alongside the pooled panel regression as additional robustness procedures. Year dummies 1,2,3, and 4 are essentially represented by the time period of this study i.e. 2005 to 2008 respectively. The results above show that year dummies 3 and 4 are omitted due to collinearity. However year dummies 1 and 2 has significant affect on dividends at the 10 percent and 5 percent level respectively. The reason why years 2007 and 2008 could have significant affect on dividends could be attributed to the global financial crisis which started showing signs of economic distress worldwide in 2007 and ballooned in 2008.

4.3.1 Endogeneity

Generally endogeneity has been highlighted as an important concern in any corporate governance related study (Brown et al, 2011). The topic of institutional shareholders and dividends could possibly suffer from problems of endogeneity as studies have not only been conducted on the impact of institutional shareholders on dividends but also the latter on the former (see e.g. Jain, 2007). Thus modeling the relation between institutional shareholding presence and dividends could be sticky if there is an endogenous feedback from dividends to institutional shareholders presence. The apparent problem of endogeneity or reverse causality on studies involving institutional shareholders need not be elaborated any further when observing one recent study which states "In studies of institutional dividend preferences there is often an issue of causality as it is not certain whether the institutions buy the stocks because they pay dividends or whether the firms pay dividends because they observe institutions on their share register", Jun et al, 2011, Vol 38, No 1, pp. 222. However the authors of this study make no effort to control the issue of endogeneity apart from spelling out the problem in a fashionable statement.

The reverse causality of dividends on institutional shareholders' presence in fact originated from the 'prudent-man-hypothesis 'of the school of thought which examines the effect of dividends and other firm performance measures on institutional shareholders presence. A the prudent man' law-based investment strategy states that institutional shareholders might be attracted to firms with higher performance and better dividend payout (Del Guercio, 1996). In other words, dividends payouts could determine the quantum of shareholding by institutional shareholders in a firm (Allen et al. 2000). Hence dividends could affect the presence of institutional shareholders and a reverse causality or endogeneity is possible (as compared to the framework of our study which argues institutional shareholders presence affect dividends. In order to alleviate the concerns over possible biasness to the results a diagnostics test have been performed dividends against the experimental variables and all the control variables. In order to detect the presence of endogeneity the Granger causality test is performed. The results are presented in Table 5 below.

Table 5. Granger Causality Test of Dividends versus the Independent variables

Hypothesis	F-statistics	P-value	Endogeneity
1a) IS does not Granger Cause LNDPS	1.70628	0.1855	**No**
1b) LNDPS does not Granger Cause IS	2.37797	0.1967	
2a) CFO does not Granger Cause LNDPS	0.18309	0.8329	**No**
2b) LNDPS does not Granger Cause CFO	0.07921	0.9239	
3a) GEARING does not Granger Cause LNDPS	**2.99552**	**0.0534**	**No**
3b) LNDPS does not Granger Cause GEARING	0.20705	0.8132	
4a) ROE does not Granger Cause LNDPS	**0.00202**	**0.998**	**No**
4b) LNDPS does not Granger Cause ROE	1.98464	0.1415	
5a) SALES_GR does not Granger Cause LNDPS	**0.37261**	**0.6897**	**No**
5b) LNDPS does not Granger Cause SALES_GR	0.16058	0.8518	
6a) LNTA does not Granger Cause LNDPS	**1.91639**	**0.1512**	**No**
6b) LNDPS does not Granger Cause LNTA	2.93225	0.1567	

Note*:* Significance at the 1%, 5% and 10% is denoted by ***, ** and * respectively. *LNDPS* is the dependent variable and is the natural logarithm of dividends per share. IS is the fraction of institutional shareholders to total shareholding: ROE is return on equity: CFO is cash flow from operating activities divided by total assets: SALES_GR is sales growth from year t to year t+1. LNTA is the natural logarithm of total assets.

The results (as shown above) rule out the presence of endogeneity between dividends and institutional shareholders presence along with other control variables. Subsequently even though the presence of endogeneity is refuted, the highly robust Generalized Method of Moments (GMM) regression is applied to improve the rigor of the results. In order to mitigate the possible problems of endogeneity, we perform the first difference GMM estimations, following Khan (2006) who applied in this technique on studies on cash holding and corporate governance while applied a study on dividends and institutional shareholders.

3.4.2 Results of first-difference GMM estimations

The p-value of first-order of serial correlation tests is not significant at any level which leads to the acceptance of the null hypothesis which asserts that there is no first order serial correlation among variables. Furthermore, the p-value of Hansen test of over-identification and Diff-in-Hansen tests of exogeneity are not significant at any level which means that the variables and instruments used for this equation are valid (Hansen test of over-identification) and exogenous (Diff-in-Hansen tests). All the results are consistent with the results of Table 3 above.

Table 5 above shows the first difference GMM estimation outputs. It can be seen from Table 5 that IS is still positively associated with LNDPS at the 5 percent level. The result above show that year dummys 07 is omitted due to collinearity. However year dummies 05 and 08 has significant affect on dividends at the 10 level respectively and year dummy 06 at the 1 percent level. The reason why the year 2008 could have significant affect on dividends could due to the global financial crisis which started showing signs of economic distress worldwide in 2007 and ballooned in 2008.

The results of the GMM estimation in Table 5 above provide further strength to the acceptability of the hypothesis of our study. The results clearly indicate higher institutional shareholders presence results in higher dividends payout in sample firms. In the other words, firm which have higher percentage of institutional ownership tend to disgorge more cash in the forms dividends which could otherwise be used for non-profit maximizing ventures of self benefit of directors (conforming the to the outcome model of dividend and efficient monitoring hypothesis of institutional shareholders).

Table 6. Impact of Institutional shareholders on dividends with GMM

	(5)	(6)	(7)
Constant	-19.568	-19.427	-15.627
	*-4.6****	*-4.65****	*-5.16****
LNDPS(-1)	0.031	0.025	0.0880
	*0.36**	*0.24**	*0.95**
IS	2.676	2.734	17.666
	*1.47***	*1.61***	*2.34****
CFO	0.074	0.087	0.222
	*2.2****	*2.71****	*2.56****
GEARING	-0.276	-0.251	-0.229
	*-4.75****	*-4.42****	*-4.55****
ROE	0.034	0.027	0.028
	*4.52****	*3.06****	*3.1****
GROWTH	-0.078	-0.0645	-0.094
	-1.05	*-0.09*	*-0.33*
LNTA	0.7531	0.756	0.357
	*3.73****	*3.89****	*1.9***
IS*GEARING			-1.430
			-6.02***
IS*LNTA			0.980
			2.34***
IS*ROE			4.188
			3.44***
IS*GROWTH			-0.015
			-0.24
YEAR_DUM06		0.251	0.174
		*3.04****	*2.09****
YEAR_DUM05		0.128	0.274
		*1.74**	*3.34****
YEAR_DUM08		0.234	0.236
		*1.43**	*3.62****
Sargan tests :	319.55	326.16	292.66
	0.192	*0.189*	*0.231*
Arellano-Bond test for AR(1) in first differences:	1.52	1.92	2.37
	0.158	*0.255*	*0.182*
Hansen test of over-identification: Chi square	30.66	30.88	29.51
	0.23	*0.231*	*0.288*
Diff-in-Hansen tests of exogeneity : Chi square	5.85	6.44	6.65
	0.781	*0.598*	*0.374*

Note: z-statistics are italicized; Significance at the 1%, 5% and 10% is denoted by ***, ** and * respectively. This table shows the impact of institutional shareholders' presence on dividends in the first-difference GMM estimations. Model 5 is the full model; Model 6 is the full model with year dummies. Model 7 presents the interaction between IS and firm-specific control variables. LNDPS is the dependent variable and is the natural logarithm of dividends per share. IS is the fraction of institutional shareholders to total shareholding: ROE is return on equity: CFO is cash flow from operating activities divided by total assets: GROWTH is sales growth from year t to year t+1. LNTA is the natural logarithm of total assets. Year effects – year dummy (YEAR_DUM05, YEAR_DUM06, YEAR_DUM07, YEAR_DUM08); with YEAR_DUM07 being the omitted year. AR(1) is the test for first-order-serial correlation in the first-differenced residuals, which asserts under the null hypothesis that there is no serial correlation. Hansen test of over-identification asserts under the null hypothesis that all instruments are valid. Diff-in-Hansen tests of exogeneity is asserts under the null hypothesis that the instruments used for the equations in levels are exogenous. The p-value of first-order of serial correlation tests is not significant at any level which leads to the acceptance of the null hypothesis which asserts that there is no first order serial correlation among variables. Furthermore, the p-value of Hansen test of over-identification and Diff-in-Hansen tests of exogeneity are not significant at any level which means that the variables and instruments used for this equation are valid (Hansen test of over-identification) and exogenous (Diff-in-Hansen tests).

5 Conclusion

5.1 Overall conclusion

In this study, institutional shareholders examined as to their impact on firms' dividend policy. In particular this examined study whether the presence of institutional shareholders results in higher dividends payout other vice versa. Data is collected from 100 firms listed in the Bursa Malaysia for a four year period of 2005 – 2008 from the trading and services sector. In line with the 'efficient monitoring hypothesis' theory of institutional shareholders and in conjunction with the outcome model of dividends, we find the presence of institutional shareholders results in higher dividends payout in Malaysia. In spite of the lower fraction of shareholding by institutional shareholders in Malaysia as compared to developed markets, it is clear from the results that the they in fact bring about a positive impact to the firms they invest in by resulting in higher dividends payments.

5.2 Contributions, limitations and direction for future research

This paper offers a novel explanation for the puzzle why institutional shareholders' presence results in higher dividends payout or vice versa. The fundamental contribution of this study stems from the conceptualization and testing of two contrasting idea within the agency theory dimension of firm dividend policy with institutional shareholders' presence. We have provided a framework linking the two theories of dividends (outcome and substitute) and the three theories of institutional shareholders (efficient monitoring hypothesis, conflict of interest hypothesis and strategic alignment hypothesis) which has not been previously conceptualized in any study before. In this study the efficient monitoring hypothesis has been tested in relation to firms' dividend payout alongside the outcome and substitute models. The value of this new approach at examining dividend policy and institutional shareholder hypotheses lies in building on the novel framework presented in this study to take a closer look at alternate association that results in payout decisions by firms as a result of their institutional shareholders' presence, especially in light of the inconclusive evidence by the immense volume of empirical research around this topic. Future studies should explore the two other institutional shareholders hypotheses in relation to dividend payout in relation to this framework to obtain a clearer understanding of this topic.

This study is carried out on specific industry, i.e. the trading and services sector firms of Bursa Malaysia. Future studies should explore if institutional shareholders have a positive impact on dividend payout of other sectors in Bursa Malaysia, namely the plantation sector, property sector, consumer products sector, industrial products sector, construction sector, technology sector, financial sector and mining sector or the whole Bursa Malaysia. We have measured institutional shareholders on a general definition, i.e. the fraction of all types of institutional shareholders. Future studies on Malaysia could partition institutional shareholders into various groups like local institutional shareholders, foreign institutional shareholders or banks based institutional shareholders, insurance firms based institutional shareholders and etc as studied in other markets to understand further if different groups of institutional shareholders have similar or dissimilar effects on firms' dividend policy.

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Key-note speakers:

- Carsten Gerner-Beuerle, Professor, London School of Economics, the UK;
- Loic Sauce, Professor, ISTEC, Paris, France.

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