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EFFECT OF ASYMMETRIC INFORMATION ON THE PERFORMANCE OF LISTED MANUFACTURING COMPANIES

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ABSTRACT

Firms with high growth opportunity and superior performance are associated with level of information asymmetry (Chiyachantana, 2013). With respect to type of information, firms with superior operating performance, high growth opportunity are likely to disclose the investment and structural change as well as legal and miscellaneous information. The general objective of the study was to analyse the effect of information asymmetry on the performance of listed manufacturing companies in Rwanda.

Specific objectives were to analyse the effect of moral hazard asymmetric information on the performance of manufacturing companies in Rwanda; to analyse the influence of adverse selection asymmetric information to the performance of manufacturing companies in Rwanda; to determine the correlation between cost forecast asymmetric information and performance of manufacturing companies in Rwanda.

BRALIRWA and other manufacturing companies received recommendations and suggestions concerning asymmetric information and performance of the company according to the research findings. This research use both correlational and analytical research designs, the target population of this research was 128 employees from seven departments of BRALIRWA Ltd related to the research topic, where sample size of 79 employees obtained using Yamane formula. The 79 were selected using purposive sampling technique in order to get the most appropriate respondents. The researcher used the primary and the secondary sources during the data collection, where by questionnaires were used. This descriptive statistics used in this research were percentages and frequencies, Correlational and regression analysis were also used as inferential statistics to establish the relationship between variables. The researcher used Statistical Packaging for Social Sciences (SPSS) version 16 in this study to analyze and present data. In relation to the first research objective, this research found that the coefficient r betweenmoral hazard asymmetric information and performance of manufacturing companies equal to 0.980. This leads to confirm that there is significant relationship between moral hazard asymmetric information and performance of BRALIRWA. In relation to the second research objective, the study found that the coefficient r equal to 0.986. This leads to confirm that there is significant positive relationship between adverse selection asymmetric information and performance of BRALIRWA. In relation to the third research objective, this research found that the coefficient r equal to 0.971. This leads to confirm that there is significant correlation between cost forecast asymmetric information and performance of BRALIRWA. This study concluded that the performance disadvantage of less powerful buyers was less pronounced in BRALIRWA when the buyer had detailed information and this result can be explained by the buyer's negotiation behavior. It is recommended for all registered manufacturing companies that decision to introduce to financial management information needs to be accompanied by strong commitment, sufficient manpower and financial resources, widespread internal support, and an agenda for effective communication. Basing on the findings related to the problems as well as the theoretical aspects presented in the literature review this research recommends manufacturing companies of Rwanda to speed up the campaign to focus on the management of asymmetric information as among the best tool to the profitability of manufacturing companies.

Key words: - Asymmetric information, moral hazard information, adverse selection and performance

Introduction

All-over the world, asymmetric information affects manufacturing companies' business transactions, whereby manufacturing company needs to undergo significant structural transformation to be able to become the main driver of economic growth due to the market microstructure information (Frank, 2000). Worldwide, the usage of asymetric information has been a tremendous growth in manufacturng industries in the recent past. The most obvious example is perhaps the manufacturing companies, where through the introduction of information technology related products in transaction, electronic payments, security investmentsand information exchange, companies now provide more diverse services to customers with less manpower (Gautam & Riitta, 2001).

As a result of industrialization, the need for corporate finance emerged. For this reason, the business managers needed in private companies were mostly transferred from State Economic Enterprises. Asymetric information was useful tool designed to help in the management and control of the corporate-financial in Spain.In order to deploy financial performance strategies, Spanish firms have needed to invest in technology to promote information (Elena, Raquel,Pérez & Clara, 2011).According to Yosra and Sami (2013)asymmetric information complexity of Tunisian companies affected exports due to low level of cost forecast information. Indeed, openness to international markets encourages exporters to track changes at all levels in order to have information on time and thus act in a timely manner.

The main objectives of forecasting cost information in Ghana was to ascertain the financial position of the business in the future, the performance of the organization and be able to ascertain the breakeven point of the organization basing on the capital investment(Soudani, 2012). Business performance has increased over several years Uganda and this performance was mainly measured in the terms of financial performance. Businesses in Uganda contain transactions which generate information for better analysis of business performance (Augustine, Maureen & Jian, 2014).

In Tanzania, business forecast information plays a vital role in the capital formation of a country and people consider it as the life blood of a growing economy. Therefore, it is very important to forecast cost information effectively and efficiently. One of the major issues encountered by fund managers today in Tanzania is not the procurement of funds but also their meaningful deployment to generate maximum returns(Mohammad, 2013). Information is an important corporate financial decision since it directly affects the profitability of the firm (Arunkumar & Ramanan , 2013).

Asymmetric information is confronted with problem of alternative decision making especially knowing that resources are relatively scarce and limited, it is therefore pertinent that good information be made available for proper and accurate decision making, maximization of profitability and optimal utilization of scarce resource (Alzoubi, 2012). Performance of manufacturing company is a quality of company which can be achieved by valuable results. For example, a firm having high return on assets (ROA) is said to be performing well. But having high ROA is not a sign of good performance: there are some other variables to be considered such as sales, profit and expenses (Mehran & Izah). A market microstructure is the study of the trading mechanisms used for financial securities for exchanging assets under a specific set of rules (Gheorghe, 2007).

The four top economic activities in Rwanda manufacturing sector are: manufacturing of food products constituting 20.5%; repair and installation of machinery and equipment 11.7%; printing and reproduction of recorded materials 8.7%, and manufacture of furniture constituting 8.5% (Rwanda Development Board ,

2013). Manufacturing companies in Rwanda area major limiting factors to future prospects for economic growth (Government of Rwanda, 2013).BRALIRWA Ltd had an increase of 4.6% versus 2013; the financial performance reflected this growth in the market. Revenue increased by 18.5% to Rwf 77.0 billion. Earnings before Interest and Tax (EBIT) increased by 25.2% to reach Rwf 25.3 billion. Net profit rose 29.8% to Rwf19.0 billion following an increase in income tax to Rwf 5.8 billion(Bralirwa Ltd, 2013). In the 2014 profit and loss account depreciation amounts to Rwf 6.7 billion, an increase of 29% over 2013, an additional charge of Rwf 1.5 billion (Bralirwa Ltd, 2014). Therefore, this study intends to find out whether good performance of BRALIRWA depends on the effective analysis of asymetric information

Literature review

This study reviewed literature on relationship between effects of Asymmetric information and performance of listed manufacturing companies in Rwanda. The literature reviewed in this section is divided into theoretical review and empirical review.

Theoretical Framework

Asymmetric information is that market transactions on the two sides to deal with the subject or content of information in terms of quantity and quality are not equal(Vojtech, 2013). Party transactions have frequently manifests itself even more complete information, while the other has only less information, which may lead to decision-making information vulnerable to mistakes in transactions, or information to the advantage of information not conducive to the behavior of the disadvantaged(Praveen, 1990),

According to Gale (2004), they are different neagtive impact of asymmetric information such as Adverse selection- immoral behavior that takes advantage of asymmetric information before a transaction. For example, a person who is not in optimal health may be more inclined to purchase life insurance than someone who feels fine.This external feature drives off the sellers of good cars (who expect to receive a fair price for their goods), causing a fault in the market, also known as adverse selection (Varian, 2000).When this condition takes place consecutively, at most it creates the concept of a lemons market in which good quality goods are forced out of the market and only the poor quality items could remain.

A situation in which one party in a transaction has more or superior information compared to another, this often happens in transactions where the seller knows more than the buyer, although the reverse can happen as well. Potentially, this could be a harmful situation because one party can take advantage of the other party's lack of knowledge. This is a situation where there is imperfect knowledge. In particular it occurs where one party has different information to another. Information asymmetry often caused by the imbalance interests between market participants, impacts social the principles of equity, justice and the allocation of resources more efficient in the market. Moral Hazard- immoral behavior that takes advantage of asymmetric information after a transaction. For example, if someone has fire insurance they may be more likely to commit arson to reap the benefits of the insurance. Financial disclosures and disclosure arises from information asymmetry and agency conflicts between managers and outside investors(Paul, 2001).

Adverse Selection Theory

When two (or more) individuals are about to agree on a trade, and one of them happens to have some information that the other(s) do not have, this situation is referred to as adverse selection(Akerlof& Stiglitz, 1969). In 2001, the Nobel Prize in Economic Science was awarded to Akerlof, Spence and Stiglitzfortheir analyses of markets with asymmetric information". Each of the three quoted papers investigates the implications of adverse selection on the product, labor and insurance markets respectively.

According to Nwauko and Ashinze (2015) Spence in 1973 refers to a similar mechanism when workers "sell" their labor to firms and have private information about their skills. The literature on adverse selection then investigates arrangements that allow segmentation of the market according to unobserved quality, sellers signal the quality of their products by offering product-warranties to customers, or workers signal their ability by getting academic degrees. It is important to emphasize that market segmentation does not primarily come from some information inherent to, say, warranties, but rather from menu of contracts offered to agents that leads to self-selection, revealing their private information.

Moral Hazard Theory

The framework often used to analyze moral hazard situations is the principal-agent problem, whereby one individual – the principal – wants to hire another individual – the agent – to perform a given task. However, once the contract has been signed, the agent can either take an action that is non-observable for the principal (hidden action), or obtain information about some characteristics of the environment that the principal cannot acquire (hidden information).As opposed to the previous case, in which agents were offered a menu of contracts, moral hazard situations imply that every agent is given the same contract; the contract must therefore take into account future information asymmetries, and hence address the incentives problem(Adam, Anders & Fred, 2013).

In addition to adverse selection, moral hazards are also a result of asymmetric information. A moral hazard is a situation where a party shall take risks because the cost that could incur shall not be felt by the party taking the risk. A moral hazard can occur when the actions of one party may change to the detriment of another after a financial transaction. In relation to asymmetric information, moral hazard may occur if one party is insulated from risk and has more information about its actions and intentions than the party paying for the negative consequences of the risk(Alexandra, 2006).

Historical Cost Information Theory

This study will be guided by historical cost theory, according to (John, 2008), cost control is concerned with past information and it requires consistency and comparability that is why it requires the accounting transactions to be recorded at their historical costs. This is called historical cost concept. Historical cost is the value of a resource given up or a liability incurred to acquire an asset/service at the time when the resource was given up or the liability incurred. In subsequent periods when there is appreciation is value, the value is not recognized as an increase in assets value except where allowed or required by accounting standards. The concept of historical cost is important because market values change so often that allowing reporting of assets and liabilities at current values would distort the whole fabric of accounting, impair comparability and makes accounting information unreliable(Alzoubi, 2012).

It is immediately clear that for financial statements to be meaningful, amounts of dissimilar items must be stated in similar units. Money becomes the obvious choice of "similar units". By converting different kinds of objects into monetary amounts, they can be dealt with arithmetically. Revenue that has associated expenses within a given accounting period should be reported in the same period. Matching the expense element to the revenue element makes it possible to assess accurately whether a profit or a loss occurred within that period(Chiyachantana, 2013).

Capital Structure (CS) Theory

According to Javad, Hamed and Elham (2012)a firm funds its operation with capital raised from varied sources of information. A mix of these various sources is generally referred to as capital structure (CS). The CS has been defined as "that combination of debt and equity that attains the stated managerial goals (i.e.) the maximization of the firm's market value". The optimal CS is also defined as that "combination of debt and equity that minimizes the firm's overall cost of capital. The firm's balance sheet constitutes different proposition of debt instruments, preferred and common stock, which represents the CS of the firm.

The CS is an unsolved problem, which has attracted both academics and practitioners as the objective of financial management is to maximize shareholder's wealth (Elena, Raquel,Pérez, & Clara, 2011). The key issue here is the relationship between CS and firm's value, the firm's value is maximized when cost of capital is minimized. In a long term with the combination of low-cost source of financing (more debt) and expensive source of financing (less stock) in capital structure, a firm reaches a descending(Alexandra, 2006).

Risk Return Theory

The risk return theory developed by Olweny and Shipo in 2011 argues that information asymmetry and financial performance of organization are negatively associated. The risk return theory argues that increasing risks by increasing leverage of the organization leads to higher expected returns. This suggests that if an organization intends to increase its profits by increasing leverage, the equity to asset ratio (capital) has to be reduced. Hence, the risk return theory is relevant to this study, because the bankruptcy of organization should be affected by its working capital information.

Empirical Literature

Petur (2010) carried out the research on the classification and estimation of information in Iceland. The main objective was to look how companies can cutting costs in an effective way, while maximizing the effectiveness of IT infrastructure. A method of estimating IT costs is demonstrated. The method use simple probability densities to represents cost estimates. He concluded that having and maintaining costs of IT has never been as important, and will give companies a competitive edge and he said that knowing the accuracy of the estimate motivates businesses to improve the cost estimates until they have an acceptable granularity.

Adam, Anders and Fred (2013) assessed the interaction effect of information integration on manufacturing plant financial performance in USA. The objective of the study was to investigate the interaction effect of information on manufacturing plant financial performance. They surveyed a sample of 518 managers of U.S. manufacturing plants, approximately evenly distributed between those using activity-based costing and volume-based costing. Using hierarchical regression analyses, results indicate that while information integration and cost controls do not provide significant independent effects on plant financial performance, they do interact to positively impact manufacturing plant financial performance. The findings revealed that manufacturing plants will reap the greatest financial performance benefits from investments in activitybased cost controls when combined with information integration.

Gheorghe (2007) carried out a research on the importance of information in making decisions in Roman, main objectives was to know the costs represents a decisive factor for making decisions or planning future activities. He found that the hidden costs management approach should be included in the short-term administration of the company (indicators in the board of control in order to quickly seize significant effects.

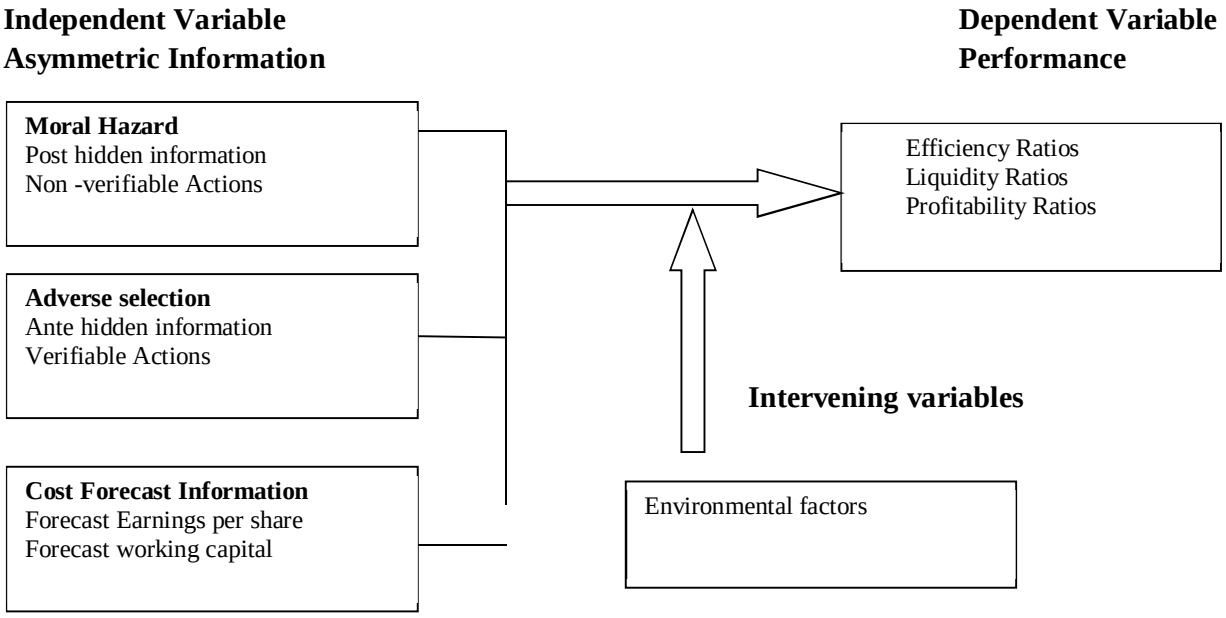
Even today this area has obvious small inertia, but the improvement of the hidden cost-performance method represents a constant challenge for the accounting management.

Roger (2004) carried out research on information services costing case study for JCPSG in UK. The main objective examined the ways in which Information Service (IS) costs can be allocated to the activities of schools within the UK Higher Education Institutions (HEIs). Methods for transparency cost allocations, that can be embedded, are identified. These methods are practical, enduring and sustainable. One of the main benefits of the study was the compilation of a complete analysis of the availability of IS resources throughout the University. The results show that in addition to the £8.9 million cost of centrally provided information services the University is spending a further £3 million, through School funds and space costs on providing information services for students and staff. The overall annual cost of information services to the University is, therefore, some £12 million, which is equivalent to almost £1,100 per FTE student, or just under 9 per cent of total income.

Alexandra (2006) carried out a research on the effect of information on buyer-supplier negotiations. The main objective was to investigate the influence of information on buyer-supplier negotiations in different power settings. Based on exchange theory, they expected that buyer with detailed cost information and less power than their opponent may try to (re) gain control over their own outcomes by sharing information. The results founded indicate that the performance disadvantage of less powerful buyers was less pronounced when the buyer had detailed cost information and that this result can be explained by the buyer's negotiation behavior.

Jack and Pokar (2005)investigated the reason for almost universal failure to implement and sustain Financial Management Information(FMI) s in developing countries. It starts with a review of the "received wisdom in implementing these projects, and then analyses problems in its application in the developing country context to identify key factors to explain why Financial Management information (FMI) projects have been so problematic. They confirmed that decision to introduce an FMI needs to be accompanied by strong commitment, sufficient manpower and financial resources, widespread internal support, and an agenda for effective change management. Unless these are in place, the chances of success are limited.

Conceptual Framework:-



Methodology:-

This study targeted BRALIRWA employees from seven departments such as; 8 employees from finance and accounting, 9 employees from quality assurance and control, 12 employees procurement, 6 employees from quantification, 15 employees from administrative, 40 employees from warehousing and distribution and then 38 employees from production department, thus the targeted population used is 128 employees (BRALIRWA, 2016).

The level of precision or sampling error was 7% and 93% confidence level, total population is 128 employees of BRALIRWA from seven department related to the research topic, the sample size was determined using the Yamane formula $n = \frac{N}{1+N(e)2}$, and then, n= 79. According to Yamane (1967), Sampling formula: n= $\frac{N}{1+N*(e)^2}$ then;

$\frac{N}{1+Ne^2} = \frac{128}{1+128*0.07^2} =$ 79 Employees

Results:-

Descriptive Results:-

This section presents the findings and discussion of the study‟s main objective. Frequencies and descriptive statistics are presented this section. The questionnaire responses were based on a likert scale which was coded with numerical values for ease of data analysis. The values assigned to the likert were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

Effect of asymmetric information on the performance of listed manufacturing companies

The first objective of the study was to analyse the effect of information asymmetry on the performance of listed manufacturing companies in Rwanda. The objective was assessed by use of likert scaled statements which were on the questionnaire where the respondents indicated their degree of agreement with the statements.

Table 4.1 Effect of moral hazard on the performance of BRALIRWA

Respondents Views on Moral hazard information	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
Transparency in the industry	29	36.7	27	34.2	9	12.7	10	5.1	4	5.1
Information about the trading process	34	43.0	17	21.5	4	5.1	15	19.0	9	11.4
Market frictions	26	32.9	32	40.5	5	6.3	10	12.7	6	7.6
Order processing	22	27.8	39	49.4	4	5.1	6	7.6	8	10.1
Cost of inventory holding	22	27.8	38	48.1	3	3.8	10	12.7	6	7.6

Table 4.1 indicates that moral hazard information affects transparency in the industry. Out of 79 respondents, 36.7% chose strongly agree, 34.2% chose agree, 11.4% undecided, 12.7% chose disagree, 5.1% chose strongly disagree. Achieving the potential benefits of transparency requires a great deal more development and work to advance from the current position. Limited by scan evidence of effect and inconsistent characterizations of price and performance transparency, the implementation of the strategy may be promising but difficult to realize. Table 4.1 presents that moral hazard asymmetric information facilitates the ability of market participants to observe information about the trading process. Out of 79 respondents, 43.0% chose strongly agree, 21.5% chose agree, 5.1% chose undecided, 19.0% chose disagree and 11.4% chose strongly disagree. This implies that financial intermediaries and financial markets resolve post information asymmetries and the resulting moral hazard problem by improving the ability of investors to directly evaluate the returns to projects by monitoring, by increasing the ability of investors to influence management decisions and by facilitating the takeover of poorly managed firms. Therefore, when these issues are not well managed, investors would not be willing to delegate control of their savings to borrowers.

Influence of adverse selection asymmetric information on the performance of BRALIRWA

Views of Respondents on Adverse selection	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
Maximizing shareholder value	30	38.0	23	29.1	7	8.9	11	13.9	8	10.1
Short-term financial planning	34	43.0	21	26.6	11	13.9	6	7.6	7	8.9
Financial strategies	13	16.5	49	62.0	4	5.1	6	7.6	7	8.9
Capital investment decisions	31	39.2	19	24.1	10	12.7	15	19.0	4	5.1
Company equity	24	30.4	10	36.7	10	12.7	12	15.2	4	5.1

Table 4.2 presents the indicators of adverse selection in BRALIRWA, out of 79 respondents, 24.1% chose ant-hidden information, 51.9% chose verifiable actions and 24.1 chose both. Adverse selection occurs when there's a lack of symmetric information prior to a deal between a buyer and a seller. Adverse selection describes an undesired result due to the situation where one party of a deal has more accurate and different information than the other party. The party with less information is at a disadvantage to the party with more information. The asymmetry causes a lack of efficiency in the price and quantity of goods and services.

From both table 4.1 and 4.2 above, it is evident that the variation of Pearson coefficient correlation is between -1 and 1. According to Pearson, the correlation of 0.986 (98.6%) is categorized as positive correlation and this leads to confirm that there is significant relationship between both adverse selection asymmetric information, moral hazard information and performance of BRALIRWA.

The correlation between cost forecast asymmetric information and investment decisions of investors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	57	72.2	72.2	72.2
	No	22	27.8	27.8	100.0
	Total	79	100.0	100.0	

Table 4.3 indicates that BRALIRWA forecast analysts rely on data from the past, present and analysis of trends. Out of 79 respondents, 72.2% chose yes and 27.8% chose no. Forecasting starts with certain assumptions based on the management's experience, knowledge, and judgment. Forecasting use historic data to determine the direction of future trends. Businesses utilize forecasting to determine how to allocate their budgets or plan for anticipated expenses for an upcoming period of time. This is typically based on the projected demand for the goods and services they offer. Stock analysts use various forecasting methods to determine how a stock's price will move in the future.

Conclusion and policy recommendations

This research concluded that BRALIRWA focuses on the analysis of asymmetric information so that it can compare its benefits to the stakeholders. This research concluded that BRALIRWA makes related information comparable between different items in order to minimize asymmetric information in the organization .Therefore this is the most important tool available to financial analysts of BRALIRWA for their work. BRALIRWA analysis its performance using shareholders. This implies that BRALIRWA maximize its performance through optimization of its price, variable cost per unit and price.

This study also concluded that the performance disadvantage of less powerful buyers was less pronounced in BRALIRWA when the buyer had detailed cost information and that this result can be explained by the buyer's negotiation behavior. It is also concluded that decision to introduce to financial management information needs to be accompanied by strong commitment, sufficient manpower and financial resources, widespread internal support, and an agenda for effective communication.

Recommendations

Even if this study found that BRALIRWA used different elements in terms of asymmetric information management, it focused only on its performance in consecutive period rather than performance with other companies in the same industry. Hence, BRALIRWA should use comparative analysis using comparison with other companies in the brewery industry.

Basing on the findings related to the problemas well as the theoretical aspects presented in the literature review this research recommends manufacturing companies of Rwanda to speed up the campaign to focus on the management of asymmetric information as among the best tool to the profitability of manufacturing companies.

This research also recommended that, the employees are considered as a very important requirement to the operation and the procedures in every organization, so BRALIRWA have to improve the skills of the employees working in the management of asymmetric information.

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