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MACROECONOMICS, FIRM-SPECIFIC FACTORS AND EXCESS RETURN: AN EMPIRICAL INVESTIGATION FROM AMMAN STOCK EXCHANGE

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ABSTRACT

This study identifies the determinants of excess stock returns for all industrial firms in Jordan during the period 2007-2014. We use multiple regression model and an unbalanced panel design for obtaining results and analyzing data. The results show that excess stock return is positively and significantly affected by turnover ratio, market to book ratio, return on assets, market return, and dividend yield. It is negatively and significantly affected by financial leverage, and gross domestic product.

JEL: E44

KEYWORDS: Excess Stock Return, Excess Market Return, Macroeconomics Variables, Firm-Specific Variables, Industrial Firms, Panel Data, ASE

INTRODUCTION

Stock markets play important roles in both developed and emerging markets. Stock markets represenet the main source of funding for almost all firms and a means used by investors for investing their money. Moreover, an efficient stock market is vital for economic growth and development.

Shareholders desire higher returns on their stocks for the risk they take. Therefore, they choose to invest in firms that afford a good risk-return trade-off. Firms seeking to increase their dividend yield in an attempt to attract a particular type of shareholders, consequently, increase stock returns. Shareholders can use the stability of dividends as an indication on the firm's future prospects (Ap Gwilym *et al.,* 2000).

Previous studies argue that stock returns can be affected by many variables. These variables can be classified into two groups: (1) macroeconomics variables such as inflation rate, interest rate, money supply, and gross domestic product (GDP), and (2) firm-specific variables such as the size of the firm, financial leverage, profitability, and dividend yield. Therefore, it is important to examine factors that affecting excess stock returns. Excess returns impact different parties such as investors, firms' managers and regulators. The results of this study could benefit these parties in Jordan and around the world in making financial decisions.

The main purpose of this study is identifying the determinants of excess stock return for industrial firms listed on the Amman Stock Exchange for the period 2007- 2014. This study is an attempt to examine the relationship between financial leverage, market to book ratio, firm's size, return on assets, earnings per share, turnover ratio, dividend yield, excess market return, interest rate, inflation rate, money supply, GDP) and excess return. This study attempts to answer the following question: What are the determinants of excess return for industrial firms in Jordan?

The importance of study stems from the importance of the determinants of stock returns (macroeconomics or firm-specific factors) for industrial firms in Jordan where firms could benefit from the results of this study in making decisions as well as attracting investors. Some studies investigate only firm-specific factors (Fama and French, 1992, Morgan and Thomas, 1998, McManus *et al.*, 2004, Gharaibeh, 2014) while others investigate the macroeconomic factors (Apergis *et al*., 2011, Ouma and Muriu**,** 2014).

A few studies carried out, in the context of Jordan, identify the determinants of stock returns (AL–Qudah, 2012, El-Nader and Alraimony, 2012, Ramadan, 2016). However, this study differs from the previous ones in some important aspects. First, this study considers all industrial firms. Second, to the best of authors' knowledge, it is the first study, in the context of Jordan, to include macroeconomics and firm-specific variables. Finally, it based on a recent time period, 2007-2014. The remainder of this study is organized as follows: Section 2 reviews the literature, Section 3 introduces data and methodology, while Section 4 discusses results and the last section concludes.

LITERATURE REVIEW

Many researchers investigate the relationship between dividend policy and excess return in both developed countries and emerging markets (Fama and French, 1992, Morgan and Thomas, 1998, McManus *et al.*, 2004) and find a positive relationship between stock excess return and dividend yield. This relationship can be justified by tax payments, where the tax rate on capital gains is less than tax rate on cash dividends (Litzerberger and Ramaswamy, 1979, 1982, Blume, 1980, Keim, 1985). On the other hand, Christie and Huang (1994) find an inverse relationship between stock returns and dividend yield.

Some researchers examine the empirical relationship between leverage and excess return and find that stock return is positively affected by financial leverage (Fama and MacBeth, 1973, Ben-Zion and Shalit, 1975, Basu, 1983, Bhandari, 1988, Fama and French, 1992, Korteweg, 2004, Adami *et al*, 2010). The higher the ratio of debt in capital structure, the higher the risk and in turn, the higher the stock return. However, others find an inverse relationship between financial leverage and stock returns (Masulis, 1983). On the other hand, Gharaibeh (2014) finds no relationship between capital structure and stock return.

Some studies find a negative relationship between stock returns and firm's size (Ben-Zion and Shalit, 1975, Banz, 1981, Keim, 1983, 1985, Chan *et al.*, 1991, Fama and French, 1992, Rao *et al.*, 1992, Morgan and Thomas, 1998, McManus *et al.,* 2004, AL–Qudah, 2012, Gunarathna, 2014). Investors in large firms require less return on their stocks than investors in small firms because large firms are more diversified, have easy access to financial markets and show less risk than small firms.

Some researchers investigate the relation between stock return and market return and suggest a positive relationship between the two variables (Fama and MacBeth, 1973, Blume, 1980, Reinganum, 1981, Keim, 1985, 1986, Lakonishok and Shapiro, 1986, Fama and French, 1992, Bae and Duvall, 1996, Morgan and Thomas, 1998, McManus *et al.*, 2004). That is, the higher the market returns, the higher the stock return. Market return leads to increase risk, which in turn leads to increase stock return.

Previous literature suggests an inverse relationship between stock return and stock liquidity (Baradarannia and Peat, 20113, Akram, 2014, Gharaibeh, 2014, Chiang and Zheng, 2015). That is, the higher the liquidity, the lower the return. Investors who hold liquid stocks can sell their stocks readily and quickly without a significant loss of value, accordingly, require less return. However, some studies find a positive relationship between stock liquidity and stock return (Zaremba and Konieczka, 2014).

Previous studies argue a positive relationship between the ratio of the market value per share to the book value per share, as a proxy of growth, and stock return (Bergrren *et al*., 2014). Firms borrow to expand their operations which cause increasing debt in their capital structure which leads to increase risk and, as a result, increasing stock return.

Many studies examine the relationship between profitability and stock return. Some studies find a negative relationship between stock return and return on assets (Bergrren *et al*., 2014). However, (Gharaibeh *et al*., 2007, Alnajjar, 2014) find a positive relationship between stock return and profitability. On the other hand, Njoki (2014) finds no relationship between stock return and return on assets.

Previous literature disagree on the relationship between stock return and inflation. Some studies find a positive relationship between inflation and stock return (Apergis *et al.,* 2011, Ouma and Muriu**,** 2014) which is most likely clarified by the insufficiency of the hedging role of stocks against inflation. However, El-Nader and Alraimony, 2012; and Ramadan, 2016 suggest that stock return is inversely affected by inflation. The increasing inflation rate, in general, tights the future economic policies and the whole economy is inversely affected (Maysami and Koh, 2000). On the other hand, some studies find no relationship between inflation and stock return (Bae and Duvall, 1996, Rapach, 2002, Sun, 2008**,** Butt *et al.,* 2010, Kirui *et al.,* 2014, Alam and Rashid, 2014).

Previous research suggests that gross domestic product (GDP) is related to stock return. Some studies find a positive relationship between stock return and gross domestic product (Hassapis and Kalyvitis, 2002, Singh and Varsha, 2011, El-Nader and Alraimony, 2012, Ramadan, 2016). This relationship is due to the response of stock market participants to macroeconomic factors tightening to increasing (decreasing) production. For example, increasing (decreasing) employment, is affecting positively by earnings and future business conditions. This relation is most likely due to the relationship between expected economic growth and the cost of capital (Hassapis and Kalyvitis, 2002). On the other hand, some studies find no relationship between gross domestic product and stock return (Sloan, 2012, Kirui *et al.,* 2014).

Previous research debates the relationship between stock returns and interest rates. Some studies find a negative association between interest rate and stock return (Maysami and Koh, 2000, Alam and Rashid, 2014, Ramadan, 2016). This relationship is due to increasing the cost of investment in the stock market as well as the increasing of the cost of borrowing from banks. However, some studies find no relationship between stock return and interest rate (Bae and Duvall, 1996, Sun, 2008, Butt *et al.,* 2010, Quadir, 2012, Kirui *et al.,* 2014, Ouma and Muriu, 2014).

Previous research suggests a relationship between stock return and money supply. Some studies find a positive relationship between money supply and stock return (Ouma and Muriu, 2014, Alam and Rashid, 2014, Ramadan, 2016). The movements in money supply could affect economic activities positively. Gan *et al.* (2006) show the cost of keeping cash is negatively affected by increasing interest rates which in turn leads to reduce stock returns. However, others find no relationship between stock return and money supply (Butt *et al.,* 2010, El-Nader and Alraimony, 2012).

A few studies carried out in the context of Jordan identify the determinants of stock returns (AL–Qudah, 2012, El-Nader and Alraimony, 2012, Ramadan, 2016). However, this study differs from the studies of AL–Qudah (2012), El-Nader and Alraimony (2012) and Ramadan (2016) in the following aspects. AL–Qudah (2012) considers the following independent variables (Balance of payments, Number of Employees and the size of the company, interest rate, budget deficits, gross domestic, and inflation rate). Ramadan (2016) considers the following independent variables (interest, inflation rates, money supply, and GDP). El-Nader and Alraimony (2012) examine the independent variables (Real money supply, real gross domestic product, consumer price index, real exchange rate, and weighted average interest rates on loans and advances. In contrast, this study examines the independent variables (financial leverage, earnings per share, the size of the firm, stock liquidity, profitability, the ratio of the market value of share to the book value per share, dividend yield, market return, inflation rate, interest rate, money supply, and GDP). AL–

Qudah (2012) and El-Nader and Alraimony (2012) examine the determinants of stock return. Ramadan (2016) identify the determinants of stock prices. In contrast this study examines excess return.

DATA AND METHODOLOGY

This section presents the population and the sample of study, sources of data, statistical approach, variables definition, study hypotheses and the model of study. All industrial firms listed in the Amman Stock Exchange during the period (2007- 2014) are selected to identify the determinants of excess return. The sample differs from year-to-year during the period of study because of missing data for some firms in some years. The final number of observations is 516. We use industrial firms because the industrial sector considers is the biggest sector in Jordan and contributes most to the Jordanian Gross Domestic Product (GDP). The Amman Stock Exchange and the Central Bank of Jordan are the main sources of data.

We use a T–test to determine the significance of associations between each explanatory variable and the explained variable. We use an F–test to examine overall significance of the regression model. We use two statistical software packages (SPSS and STATA) for obtaining summary statistics and diagnostic tests as well as the multiple regression model results. We use an unbalanced panel data statistical approach for identifying the determinants of excess return. In addition, we use a correlation coefficients matrix to identify initial information about relationship direction between each explanatory variable and the explained variable as well as detecting Multicollinearity. Variance inflation factor (VIF) can also be used for checking Multicollinearity (Asteriou and Hall, 2007**;** Gujarati and Porter, 2010; and Wooldridge, 2013).

Variable Definitions

Excess return (the dependent variable) is calculated by subtracting risk free rate on T-bills from the natural logarithm of stock return. However, we calculate stock return itself by dividing the sum of the stock price at the last trading day and the dividends paid during the year on the price of stock at the first trading day in the same year. Twelve-month treasury bills are used instead on three-month because of data availability. The calculations algebraically appear as follows:

$$(LnRi_{,t} - R_{f,t}) = Ln(\frac{Pi_{,t} + Di_{,t}}{Pi_{,t-1}}) - R_{f,t} \tag{1}$$

Where, $R_{f,t}$, $Pi_{,t}$, $Pi_{,t-1}$, $Di_{,t}$ are the risk free rate, stock price at the last trading day, stock price at the first trading day, and dividends for firm i in year t, respectively.

We calculate financial leverage by dividing total liabilities by total assets, algebraically expressed as follows:

$$LEVi,t = \frac{TLi,t}{TAi,t} \tag{2}$$

Where, TLi,t, TAi,t are total liabilities, total assets for firm i in year t, respectively.

We calculate market to book ratio by dividing the market value of stock by its book value. Algebraically the calculation appears as follows:

$$MBi,t = \frac{MVi,t}{BVi,t} \tag{3}$$

Where, MVi,t , BVi,t are market value of stock, book value of stock for firm i in year t , respectively. We calculate firm size by taking the natural logarithm of the market capitalization, expressed algebraically as:

$$SIZEi,t = LN(MCi,t) \tag{4}$$

Where, MCi,t equals market capitalization for firm i in year t .

Earnings per share equals net income divided by the number of shares outstanding as follows:

$$EPSi,t = \frac{NIi,t}{\#Si,t} \tag{5}$$

Where, NIi,t $\#Si,t$ denote net income and number of shares outstanding for firm i in year t , respectively.

Return on assets equals net income divided by total assets as follows:

$$ROAi,t = \frac{NIi,t}{TAi,t} \tag{6}$$

Where, NIi,t , TAi,t are net income and total assets, for firm i in year t , respectively.

Turnover ratio equals the number of shares traded divided by the number of shares outstanding as follows**:**

$$TURNi,t = \frac{\#TSi,t}{\#OSi,t} \tag{7}$$

Where, $\#TSi,t$, $\#OSi,t$ are the number of shares traded and the number of shares outstanding for firm i in year t , respectively.

We calculate excess market return by subtracting the risk free rate from the natural logarithm of market return. Market return equals market index (ASE index) in the current year divided by market index (ASE index) in the previous year as follows:

$$(LnR_{m,t} - R_{f,t} = Ln(\frac{INDEX_t}{INDEX_{t-1}}) - R_{f,t} \tag{8}$$

Where, $INDEX_t$, $INDEX_{t-1}$ are ASE market index in the current and previous year, respectively.

Dividend yield equals cash dividends per share divided by stock price at the first trading day of year as follows:

$$DYi,_t = \sum \frac{DIVi,_t}{Pi,_{t-1}} \tag{9}$$

Where, $DIVi,t$, $Pi,t-1$ are dividends and stock price in the first trading day for firm i in year t , respectively.

Interest rate equals the interest rate on loans.

We calculate inflation by dividing the product of the difference in consumer price index in the previous year and consumer price index in the current year by the consumer price index in the previous year. This relationship is represented algebraically as:

$$INF\ t = (\ CPIt - CPI\ t - 1) \div CPI\ t - 1 \tag{10}$$

Where, $CPIt, CPI\ t - 1$ are the consumer price index in the current and previous year, respectively.

Money supply: equals the yield from subtracting the money supply in the narrower from (M1) in the previous year from the money supply in the current year on the money supply in the previous year as follows:

$$M1\ t = (M1, t - M1, t - 1) \div M1, t - 1 \tag{11}$$

Where,

$M1, t,\ M1, t - 1$ are the money supply in the current and the previous year, respectively.

Gross domestic product is calculated by dividing the product of the annual change in gross domestic product by the gross domestic product in the previous year as follows:

$$GDP\ t = (GDP\ t - GDP\ t - 1) \div GDP\ t - 1 \tag{12}$$

Where, $GDP\ t,\ GDP\ t - 1$ are the gross domestic product in the current and previous year, respectively.

Study Hypotheses

To answer the questions posed in this study, the following hypotheses are constructed:

H01: There is no relationship between financial leverage and excess return.
H02: There is no relationship between market to book ratio and excess return.
H03: There is no relationship between firm's size and excess return.
H04: There is no relationship between return on assets and excess return.
H05: There is no relationship between earnings per share and excess return.
H06: There is no relationship between turnover ratio and excess return.
H07: There is no relationship between dividend yield and excess return.
H08: There is no relationship between excess market return and excess return.
H09: There is no relationship between interest rate and excess return.
H010: There is no relationship between inflation and excess return.
H011: There is no relationship between money supply and excess return.
H012: There is no relationship between GDP and excess return.

The Model of Study

We develop the following model for identifying the determinants of excess stock return:

$$\begin{aligned} ERi,t &= \beta 0 + \beta 1TURNi,t + \beta 2MBi,t + \beta 3EPSi,t + \beta 4SIZEi,t + \beta 5LEVi,t \\ &+ \beta 6ROAi,t + \beta 7IRt + \beta 8INFt + \beta 9GDPt + \beta 10M1t + \beta 11EMRt + \beta 12DYi,t \\ &+ Ei,t \end{aligned} \tag{13}$$

Where: $ER, TURN, MB, EPS, SIZE, LEV, ROA, IR, INF, GDP, M1, EMR, DY$, are excess return, turnover ratio, market to book ratio, earnings per share, firm's size, financial leverage, return on assets, interest rate, inflation rate, gross domestic product, money supply, excess market return, and dividend yield, respectively. E is a random error, i denotes firm, t denotes year, $\beta(s)$ denotes the parameters.

RESULTS

We examine the reliability of results by doing some tests. We use diagnostic tests for examining whether data is ready for analysis as well as the reliability of results. We use correlation matrix and variance inflation factor (VIF) for detecting Multicollinearity problems.

Diagnostic Tests

We use a correlation coefficients matrix to provide us with a picture of the direction of relationship between two independent variables as well as the dependent variable. A correlation coefficient of 70% or more indicates Multicollinearity (Asteriou and Hall, 2007; Gujarati and Porter, 2010; and Wooldridge, 2013). Table (1) provides the correlation coefficients between independent variables as well as between independents and the dependent variable for detecting Multicollinearty problems and shows the direction among variables.

Table 1: The Correlation Matrix

	ER	EMR	TURN	MB	EPS	SIZE	LEV
ER	1.000						
EMR	0.2402**	1.000					
TURN	0.1061*	0.0035-	1.000				
MB	0.2920**	0.0353	0.1029*-	1.000			
EPS	0.2069**	0.0070	-0.1367**	0.3201**	1.000		
SIZE	0.1628**	0.0280	-0.1987**	0.4104**	0.6419**	1.000	
LEV	0.1666**-	-0.0116	0.0993*	-0.0091	-0.2296**	-0.1543**	1.000
ROA	0.2906**	0.077-	-0.2413**	0.1195**	0.6688**	0.5003**	-0.2651**
IR	0.1180**-	-0.5558**	0.0729	0.0339	0.0063-	0.0184	-0.0214
INF	-0.1077*	0.5440**-	0.0561	0.0451	0.0204	0.0217	-0.0070
GDP	0.0026	-0.0052	0.0842	0.1367**	0.0380	0.0767	-0.0407
M1	-0.0548	-0.3301**	-0.0158	0.0097	-0.0124	0.0093	0.0105
DY	0.3588**	0.1343**	-0.0691	0.0332	0.2817**	0.2078**	-0.1798**
	ROA	**IR**	**INF**	**GDP**	**M1**	**DY**	
ROA	1.000						
IR	-0.0180	1.000					
INF	-0.0092	0.6729**	1.000				
GDP	0.0561	0.4167**	0.6868**	1.000			
M1	-0.0504	0.3845**	0.4171**	0.1396**	1.000		
DY	0.4009**	-0.1007*	-0.0663	0.0085	-0.0645	1.000	

*This table presents the correlation coefficients among variables. ER, EMR, TURN, MB, EPS, SIZE, LEV, ROA, IR, INF, GDP, M1, and DY are excess return, excess market return, turnover ratio, market to book ratio, earnings per share, firm's size, leverage, return on assets, interest rate, inflation rate, gross domestic product, money supply, and dividend yield, respectively. **, * Correlation coefficient is significant at 0.05, 0 .10, respectively by using 2-tailed test.*

Table (1) shows the highest correlation coefficient is 0.6868 which is less than 0.70 (cut-off point) which is an evidence against the presence of multicollinearty. Table (1) also shows the highest correlation occurs between gross domestic product (GDP) and inflation rate, which is positive and equal to 0.6868. That is, the higher the gross domestic product, the higher the inflation rate. Next the correlation between inflation rate and interest rate is also positive, implying that the higher the inflation rate, the higher the interest rate. On the other hand, the lowest correlation coefficient is between gross domestic product (GDP) and excess stock return, which is positive and equals 0.0026, indicating that the higher the GDP, the higher the stock return.

Table (2) presents the Variance Inflation Factor (VIF) for all independent variables, which is an alternate method to detect multicollinearity (Asteriou and Hall, 2007; Gujarati and Porter, 2010; and Wooldridge, 2013). Table (2) shows that the highest variance inflation factor (VIF) is for inflation rate which equals 4.93 followed by gross domestic product. The lowest VIF occurs for financial leverage at 1.10, implying that the variance inflation factor (VIF) for all independent variables is less than 10 (cut-off point) which is an evidence against the multicollinearity problem among variables.

Table 2: Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
INF	4.93	0.2027
GDP	3.24	0.3088
EMR	2.52	0.3968
EPS	2.48	0.4028
ROA	2.21	0.4528
IR	2.12	0.4715
SIZE	1.93	0.5180
M1	1.31	0.7645
MB	1.29	0.7752
DY	1.22	0.8182
TURN	1.11	0.9001
LEV	1.10	0.9105
Mean VIF	2.12	

This table shows the variance inflation factor (VIF) for all independent variables used in the analysis and the mean of VIF as well. Column headed variable provides the independent variables while the second column shows the variance inflation factor. The last column reports the tolerance value for all independent variables.

Table (3) provides the Durbin-Watson (DW) tests statistics, which detect the autocorrelation among errors. It ranges from zero to four. A DW statistic equal to two or close to two, it is evidence against autocorrelation among errors (Asteriou and Hall, 2007; Gujarati and Porter, 2010; and Wooldridge, 2013). In addition, this table provides the R Square and adjusted R2.

Table (3) shows the Durbin-Watson value is very close to two, implying that there exists no autocorrelations among errors. Further, Table (3) shows that all independent variables included in the model explains about 32 percent of the variability in the excess stock return, while 68 percent can be attributed to external factors not included in the regression model.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.5670	0.3220	0.3060	0.3410	2.077

This table demonstrates the model summary. The first column labeled model indicates the number of models to be included in the analysis. R refers to the correlation coefficient. The column headed R Squre reports the amount of the coefficient of determination. The fifth column labeled Std. Error of the estimate refers to the standard error of the estimated regression. The last column provides the value of Durbin-Watson (test for detecting autocorrelation among errors).

Summary Statistics

Table (4) presents the mean, standard deviations, minimum, and maximum for all variables (independent and dependent) used in the study. Table (4) shows that the turnover ratio, a proxy of stock liquidity, ranges from about 0.00, implying that at least one industrial firm has no trading for some time during the period of study, to about 31 with a mean of 0.88 and a standard deviation of 2.175, showing a high variation among industrial firms regarding turnover ratio. The market to book ratio ranges from 0.222 to 7.47 with a mean of 1.42, and a standard deviation of 1.07. Earnings per share varies from -0.657, implying that some firms having losses during the period of study to 3.74 with a mean of 0.081 and a standard deviation of 0.427.

Table 4: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
TURN	516	0.8848	2.175	0.0000	30.73
MB	516	1.426	1.069	0.2225	7.473
EPS	516	0.0810	0.4271	-0.6573	3.737
SIZE	516	7.067	0.6601	5.712	9.588
LEV	516	0.3393	0.2061	0.0039	0.9447
ROA	516	0.0004-	0.1117	-0.9687	0.4329
IR	516	8.993	0.2250	8.670	9.480
INF	516	0.0532	0.0421	-0.0070	0.1490
GDP	516	0.0353	0.0134	0.0230	0.0600
M1	516	0.0935	0.0505	-0.0083	0.1660
EMR	516	-0.0929	0.1439	-0.3625	0.1370
ER	516	-0.0932	0.4092	-1.863	1.1370
DY	516	0.0230	0.0416	0.0000	0.4486

This table reports the descriptive statistics for all variables. The first column refers to the variables. The second column labeled Obs. Refers to the number of observations for all variables. Mean is the average for each variable over the period (2007-2014). The column labeled Std. Dev. reports the standard deviation for each variable. Min and Max are the minimum value and the maximum for each variable over the period of study, respectively.

The natural lograthim of firm's size ranges from 5.7 to 9.588 with a mean of 7.06 and a standard deviation of 0.66. Financial leverage varies from 0.003 to 0.944, implying that some firms based slightly on debt to finance activates. It has a mean of 0.339 indicating that 0.339 of the capital structure of industrial firms in Jordan depend on debt for funding, on average, and a standard deviation of 0.206. Return on assets varies from about -0.96, indicating that some firms have losses, to 0.432, implying that some firms earn (JOD0.432) net income.

Interest rate ranges from 0.0867 to 0.0948 with a mean of 0.0899 and a standard deviation of 0.0225, implying a slight variation in interest rate in Jordan over the period of study. Inflation rate ranges from -0.007, indicating that the consumer price index in some year is less than the consumer price index in the previous year, to 0.149 with a mean of 0.05 and a standard deviation of 0.04 indicating that the inflation rate in Jordan varies slightly over the period of (2007-2014).

Gross domestic product varies from 0.023 to 0.06 with a mean of 0.035 and a standard deviation of 0.013. Money supply varies from -0.0083, indicating that money supply in one year is less than money supply in the previous year, to 0.166 with a mean of 0.09 and a standard deviation of 0.05, indicating that the gross domestic product varies slightly during the period of study. Excess market returns range from -0.36 to 0.137 with a mean of -0.09 and a standard deviation of 0.14. Dividend yield, the last independent variable, varies from zero, indicating that some firms do not pay dividends at all at least in one year, to 0.448 with a mean of 0.02 and a standard deviation of 0.04. Excess stock return, the dependent variable, varies from -1.86 to 1.58 with a mean of -0.09 and a standard deviation of 0.41.

Table (5) provides the Hausman test used for determining the appropriate model for analysis (fixed effect or random effect). Rejection of the null hypothesis provides evidence against the random effect. However, the random effect model is more suitable to our data if we fail to reject the null hypothesis. As can be seen from Table (5) the random effect is the more appropriate model than the fixed because the p-value of 0.8191 is higher than both 0.01 and 0.05 (the significance levels) which is an evidence against the fixed effect.

Table 5: Hausman Test

	Coefficients			
	(b)	B)(	b-B)(	Sqrt (diag (v_b-v_B)
Variables	**Fe.**	**Re.**	**Difference**	**S.E.**
TURN	0.0358	0.0397	-0.0038	0.0035
MB	0.1404	0.1311	-0.0092	0.0076
EPS	-0.0954	-0.0946	-0.0008	0.0260
SIZE	-0.0658	-0.0456	-0.0202	0.0170
LEV	-0.1847	-0.2065	0.0218	0.0421
ROA	1.009	0.9700	0.0399	0.0813
IR	0.0036	-0.0110	0.0147	0.0121
INF	1.132	1.183	-0.0510	0.1024
GDP	-4.750	-4.807	0.0569	0.2428
M1	0.2499	0.2522	-0.0023	0.0282
EMR	0.6886	0.7029	-0.0143	0.0265
DY	2.900	2.561	0.3387	0.1855

b = Consistent under Ho and Ha; obtained from xtreg
B = Inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
$chi2\ (12) = 7.550$
$prob > chi2 = 0.8191$
This table shows the results of Hausman test. The first column presents the independent variables. The two columns labeled Fe., Re. indicate the coefficient for each independent variable by using fixed effect model and random effect model, respectively. The column labeled difference indicates the difference between the coefficient of each variable by using fixed effect model and random effect model, respectively. The last column refers the standard error for each independent variable.

Regression Results

Table (6) presents the regression estimates of the equation:

$$ERi,t = \beta 0 + \beta 1TURNi,t + \beta 2MBi,t + \beta 3EPSi,t + \beta 4SIZEi,t + \beta 5LEVi,t + \beta 6ROAi,t + \beta 7IRt$$
$$+\beta 8INFt + \beta 9GDPt + \beta 10M1t + \beta 11EMRt + \beta 12DYi,t + Ei,t$$

Table 6: Regression Coefficients

ER	Coef.	Std. Err.	Z	$P > \|Z\|$	[95% Conf. Interval]	
Constant	0.2738	0.8645	0.3200	0.7510	-1.420	1.968
TURN	0.0397***	0.0072	5.450	0.0000	0.0254	0.0540
MB	0.1311***	0.0159	8.200	0.0000	0.0998	0.1625
EPS	-0.0946*	0.0555	-1.700	0.0890	-0.2035	0.0143
SIZE	-0.0456	0.0317	-1.440	0.1510	-0.1079	0.0166
LEV	-0.2065***	0.0767	-2.690	0.0070	-0.3570	-0.0560
ROA	0.9700***	0.1999	4.850	0.0000	0.5780	1.361
IR	0.0110-	0.0966	-0.1100	0.9090	-0.2003	0.1782
INF	1.183	0.7866	1.500	0.1320	-0.3583	2.725
GDP	-4.807**	1.994	-2.410	0.0160	-8.717	-0.8977
M1	0.2522	0.3378	0.7500	0.4550	-0.4099	0.9145
EMR	0.7029***	0.1646	4.270	0.0000	0.3802	1.025
DY	2.561***	0.3991	6.420	0.0000	1.420	3.343

*This table reports the regression estimates based on equation 13. The first column presents the variables to be included in the analysis. The second column reports the regression coefficient for each independent variable and the constant as well. The column headed Std. Err. Indicates the standard error for each independent variable and constant as well. The fourth column refers to the Z-score for constant and all independents. The fifth column reports the significance for each independent variable and the constant as well. The last column shows the confidence level for each independent variable and the constant as well. ***,**,* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table (6) shows that excess stock return is highly significantly positively affected by turnover ratio with a coefficient of 0.039, implying that a 1 unit increase in turnover ratio (TURN) would have an increase about 0.039 percent in excess stock return, other things being equal. That is, the lower the turnover ratio, the lower the excess stock returns. This relationship is explained by investors who hold highly liquid stocks require higher returns because their stocks are easily to trade. This result is similar to the results of the study of (Zaremba and Konieczka, 2014), while inconsistent with the results of the study of (Baradarannia and Peat, 2013, Akram, 2014, Gharaibeh, 2014, Chiang and Zheng, 2015).

Excess stock return is highly significantly positively affected by the ratio of the market value per share to the book value per share with a coefficient of 0.131, implying that a 1 unit increase in market to book ratio would have an increase about 0.131 percent in excess stock return, other things being equal. That is, the higher the market to book ratio, the higher the excess stock returns. Firms borrowing to expand their operations can cause an increasing of debt in their capital structure that in turn leads to increase risk and as a result increasing stock return. This result is similar to results of the study of (Bergrren *et al*., 2014).

There is an insignificant negative relationship between earnings per share and excess stock return with a coefficient of -0.095. This result is in contrast with the results of the study of (Chambers *et al*., 2013) who finds a positive relationship between earnings per share and stock return.

There is an insignificant negative relationship between the size of the firm and excess stock return with a coefficient of -0.0456. This result is in contrast with the results of the study of (Ben-Zion and Shalit, 1975, Banz, 1981, Keim, 1983, 1985, Chan *et al.,* 1991, Fama and French, 1992, Rao *et al.*, 1992, Morgan and Thomas, 1998, McManus *et al.,* 2004, AL–Qudah, 2012, Gunarathna, 2014), who find a negative relationship between stock return and the size of the firm.

Excess stock return is highly significantly negatively affected by financial leverage with a coefficient of -0.21, implying that a 1 unit increase in financial leverage would have a decrease about 0.21 percent in excess stock return, other things being equal. The higher the financial leverage, the lower the excess stock return. This relationship depends on signaling theory, where investors in firms that borrow to invest in profitable projects receive a positive signal that this firm will obtain profits in the future. This in turn leads to decreases in default risk and in turn a lower required rate of return. This result is inconsistent with the results of the study of (Fama and MacBeth, 1973, Ben-Zion and Shalit, 1975, Basu, 1983, Bhandari, 1988, Fama and French, 1992, Korteweg, 2004, Adami *et al*., 2010).

Excess stock return is highly significant positively affected by return on assets with a coefficient of 0.97, implying that a one-unit increase in return on assets would have an increase about 0.97 percent in excess stock return, other things being equal. That is, the higher return on assets, the higher the excess stock returns. Firms borrow to expand their operations which cause an increase of debt in their capital structure which in turn leads to increase risk and increasing stock return. This result is similar to results of the study of (Gharaibeh *et al*., 2007, Alnajjar, 2014) while inconsistent with results of (Bergrren *et al*., 2014).

There is an insignificant negative relationship between interest rate and excess return with a coefficient of -0.011. This result is consistent with the results of the study of (Bae and Duvall,1996, Sun, 2008, Butt *et al.*, 2010, Quadir, 2012, Kirui *et al.*, 2014, Ouma and Muriu, 2014). However, this result is in contrast with the results of the study of (Maysami and Koh, 2000, Alam and Rashid, 2014, Ramadan, 2016) who find a negative relationship between the two variables. This relationship is due to increasing the cost of investment in the stock market as well as the increasing of the cost of borrowing from banks.

There is an insignificant positive relationship between inflation rate and excess stock return with a coefficient of 1.18. This result is consistent with the results of the study of (Bae and Duvall,1996, Rapach, 2002, Sun , 2008, Butt *et al.*, 2010, Kirui *et al.*, 2014, Alam and Rashid, 2014). However, this result contrasts with results of the study of (Apergis *et al.,* 2011, Ouma and Muriu, 2014) who find a positive relationship between inflation rate and stock return. Insufficiency of the hedging role of stocks against inflation clarifies this result. Further, this result is inconsistent with the results of the study of (El-Nader and Alraimony, 2012, Ramadan, 2016) who find a negative relationship between inflation rate and stock return. The increasing of inflation rate, in general, tightens future economic policies and the whole economy is expected to be inversely affected (Maysami and Koh, 2000).

Excess stock return is highly significant negatively affected by gross domestic product (GDP) with a coefficient of -4.80, implying that a one-unit increase in gross domestic product (GDP) implies a decrease about 4.80 percent in excess stock return, other things being equal. That is, the higher the gross domestic product (GDP), the lower the excess stock returns. This result is inconsistent with the results of (Hassapis and Kalyvitis, 2002, Singh, 2011, El-Nader and Alraimony, 2012, Ramadan, 2016) who find a positive relationship between stock return and gross domestic product. This relationship is due to the response of participants in the stock market to macroeconomic factors tightening to increasing (decreasing) production. For example, increasing (decreasing) employment, positively affects earnings and future business conditions. In addition, this relation is may be due to the relationship between expected economic growth and the cost of capital (Hassapis and Kalyvitis, 2002).

There is an insignificant positive relationship between money supply, as a proxy of monetary policy, and excess stock return with a coefficient of 0.25. This result is consistent with the results of (Butt *et al.*, 2010, El-Nader and Alraimony, 2012) while in contrast with the results of (Ouma and Muriu, 2014); Alam and Rashid (2014); and Ramadan (2016) who find a positive and significance relationship between money supply and stock return. The movements in money supply affect economic activities positively. Gan *et al.* (2006) show the cost of keeping cash is negatively affected by increasing the interest rate which in turn leads to reduce stock return.

Excess stock return is highly significant and positively affected by market return with a coefficient of 0.70, implying that a one-unit increase in excess market return results in an increase about 0.70 percent in excess stock return, other things being equal. This result is similar to results of the studies of (Fama and MacBeth, 1973, Blume, 1980, Reinganum, 1981, Keim, 1985, 1986, Lakonishok and Shapiro, 1986, Fama and French, 1992, Bae and Duvall, 1996, Morgan and Thomas, 1998, McManus *et al.,* 2004). That is, the higher the market returns, the higher the stock return. Market return leads to increase risk that in turn leads to increase stock return.

Finally, excess stock return is highly significant positively affected by dividend yield with a coefficient of 2.56, implying that a one-unit increase in dividend yield would have an increase about 2.56 percent in excess stock return, other things being equal. That is, the higher the dividend yields, the higher the excess stock return. This result is similar to results of the study of (Fama and French, 1992, Morgan and Thomas, 1998, McManus *et al.,* 2004) who find a positive relationship between excess return and dividend yield. This relationship justified by tax payment where tax rate on capital gains is less than tax rate on cash dividend (Litzerberger and Ramaswamy, 1979, 1982, Blume, 1980, Keim, 1985). This contrasts with results of the study of (Christie and Huang, 1994) who find a negative relationship between dividend yield and stock return.

CONCLUDING COMMENTS

This study concludes that: excess stock return is highly significant positively affected by (turnover ratio, the ratio of the market value per share to the book value per share, return on assets, market return, and dividend yield). Excess return is significantly inversely affected by (financial leverage and gross domestic product). There is an insignificant negative relationship between excess stock return and the following variables (earnings per share, the size of the firm, and interest rate). There is an insignificant positive relationship with inflation rate and money supply. W e recommend the future research to extend the sample by including all sectors, and add more independent variables to the analysis such as: exchange rates, payout ratio. Future studies might also use monthly or quarterly data.

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ENVIRONMENTAL DISCLOSURE, INVESTORS' INVESTMENT DECISIONS AND THEIR PERCEPTIONS OF THE CREDIBILITY OF MANAGEMENT

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ABSTRACT

A majority of studies use archival files to examine the effect of environmental disclosure on the stock markets and may thus lead to inconsistent findings. This paper adopts an experimental method to examine the effects of environmental disclosure on investors' investment decisions and further examines their perceptions of the credibility of management in the setting of Taiwan. Particularly, environmental disclosure with different extent is examined. The results show that environmental disclosure has positive effects on investors' stock purchase decisions and their perceptions of the credibility of management no matter the extent of environmental disclosure is. The findings have essential policy implications for security regulators and encourage firms in emerging countries to implement environmental management well and enhance environmental disclosure transparency.

JEL: G11, M10, M14

KEYWORDS: Environmental Disclosure, Investment Decisions, Credibility

INTRODUCTION

Although technological change brings prosperity day by day, it also brings increasingly negative effect such as the pollutions on ecology environment. In developed countries, people are aware increasing ecology pollutions and thus care about the protection for ecology environment. When people buy products and invest stocks of particular firms, they would often consider whether the firms have environmental protection consciousness. Their major reference source is corporate environmental disclosure.

In developed countries, as everyone is getting more and more interested in the issues on environmental protection and ecology, environmental disclosure becomes important information. Environmental disclosure is vital to firm stakeholders (Deegan and Rankin, 1997). Particularly, environmental disclosure has become a key indicator for investors to select stocks. Many studies have examined the effects of environmental disclosure on the stock markets in developed countries (Halme and Niskanen, 2001; A1-Tuwaijri et al., 2004; Cho and Patten, 2007). The findings are mixed. Some findings indicate that environmental disclosure can increase stock prices (Dasgupta et al., 2001; A1-Tuwaijri et al., 2004) whereas some findings show that environmental disclosure leads to the decline of stock prices (Walley and Whitehead, 1994). Using archival files to examine the above association is likely to be one of major reasons to result in inconsistent results.

Compared to developed countries, Taiwan is a developing country and thus has less rigorous regulations for environmental protection and has lower environmental consciousness. However, considering the benefits of environmental disclosure, it is likely that environmental disclosure still has positive effects on investors' investment decisions in Taiwan. Different from previous environmental disclosure studies using archival files to examine the reactions of environmental disclosure to the stock markets, this paper adopts an experimental method to examine whether environmental disclosure positively affects investors' stock purchase decisions in the context of Taiwan. Furthermore, legitimacy theory is often used to depict why firms are willing to disclose environmental information (Hooghiemstra, 2000; O'Donovan, 2002; Mousa and Hassan, 2015). It is suggested that environmental disclosure can be used as an important way to build firm reputation. Hence, this paper also examines whether environmental disclosure positively affects investor perceptions of the credibility of management.

Environmental disclosure literature suggests that it is important to take the disclosure extent into account when investigating the impact of environmental disclosure (Deegan and Gordon 1996; Cormier and Magnan 2003). In this study, environmental disclosure is examined via investigating qualitative environmental disclosure and complete environmental disclosure (including both qualitative environmental information and quantitative environmental information) to differentiate the extent of environmental disclosure. The findings show that environmental disclosure positively influences investors' stock purchase decisions and their perceptions of the credibility of management no matter whether qualitative environmental information or complete environmental information is reported. This paper contributes to adopt an experimental method to support that investors would purchase the stocks of the firm disclosing environmental information and have high perceptions of the credibility of management. The findings have essential policy implications for security regulators and encourage firms in developing countries to implement environmental management well and strengthen environmental disclosure transparency.

The remainder of this paper is as follows. Section 2 presents the literature review and hypothesis development. Section 3 provides the experimental design and experimental procedure. Section 4 presents the results. Finally, conclusions, research limitations and future research directions are reported in Section 5.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Environmental Disclosure, Investors' Investment Decisions and Their Perceptions of the Credibility of Management

Recently, environmental disclosure has begun to receive more and more concerns in corporate disclosure literature due to increasing environmental consciousness. Some environmental disclosure studies examine the effects of environmental disclosure on economic performance and financial performance (Clarkson et al. 2008; Al-Tuwaijri et al. 2004). Some literature turns the attention toward the examination on the linkage of environmental disclosure to firm legitimacy (Patten, 2002; Cho and Patten, 2007) and corporate governance (Rupley et al. 2012). Environmental disclosure literature examining economic performance and financial performance generally focuses on the impact of environmental disclosure to stock prices. These studies often employ archival files to provide empirical evidence about the effects of environmental disclosure on the stock markets (Halme and Niskanen, 2001; A1-Tuwaijri et al. 2004; Lyon and Shimshack, 2015; Qiu et al. 2016). However, the findings are inconclusive. The mixed results may be mainly attributed to the adoption of archival files to examine the above relationship. On the one hand, prior findings indicate that the stock markets have positive reactions to environmental disclosure (A1-Tuwaijri et al. 2004; Xu et al. 2014). A1-Tuwaijri et al. (2004) examine American firms to investigate the relationship among economic performance, environmental performance, and environmental disclosure. They find that the stock markets have positive reactions to environmental disclosure with good environmental performance. Lyon and Shimshack (2015) adopt the event study methodology to examine whether Newsweek's 2009 ranking of the 500 largest U.S. firms is related to environmental information disclosure. Their findings indicate that firms with high rankings are associated with abnormal stock returns when environmental disclosure is reported, showing that the rankings have significant effects on shareholder value. Conversely, some findings show that environmental disclosure has negative effects on the stock markets (Halme and Niskanen 2001). Halme and Niskanen (2001) use data from the Finnish forest industry to examine share price effects of environmental investments. Their results indicate that the stock market reactions are negative. Xu et al. (2014) adopt web crawler technology to examine the effect of environmental violation on shareholders' wealth by using a perspective from media coverage in China. Their results indicate that the media coverage would affect the market values of firms announcing environmental violation events and the firms receiving much attention from the media would bear more losses in their shareholders' wealth. It is widely recognized that firms can benefit from disclosing environmental information despite that environmental disclosure also can bring cost. For investors, they can know more firm prospects via environmental information disclosure so as to make investment decisions accurately. Based on the above, this paper suggests that environmental disclosure has positive effects on investors' investment decisions. Consequently, this paper proposes H1.

H1: Environmental disclosure is positively related to investors' stock purchase decisions.

Legitimacy theory is often used to illustrate why firms are willing to disclose environmental information. Legitimacy theory asserts that managers disclose environmental information to affect stakeholders' perceptions. Environmental disclosure is an essential way to increase firm legitimacy and represents a response to the expectations from the society and thus can enhance firm reputation (Hooghiemstra, 2000; O'Donovan, 2002; Aldrugi & Abdo, 2014; Mousa and Hassan, 2015). Hooghiemstra (2000) provides the theoretical framework related to firm social reporting. He asserts that legitimacy theory is generally used to explain the reason why firms make environmental disclosure and suggests that environmental disclosure can be adopted as the responses to induce the pressure from the public and increasing attention from the media discussing social events regarding the issues on environmental protection. O' Donovan (2002) adopts the quasi-experimental method accompanying semi-structured interviews with senior personnel in three large Australian public companies. Their findings are consistent with legitimacy theory, which is generally regarded as a major reason of environmental disclosure. Aldrugi and Abdo (2014) explain the motives or reasons that make firms in Libya to report environmental information in the annual report by focusing on the environmental disclosure practices of oil and gas firms in Libya via questionnaire investigation. They collect 115 questionnaires from 43 local and foreign firms in the Libyan oil and gas sector. Their findings suggest the motives of environmental disclosure made by firms include the factors such reputation, legal requirements and the public pressures. Mousa and Hassan (2015) provide a further examination on using the legitimacy theory to explain corporate environmental disclosure. They also assert that firms prefer to disclose environmental information so as to maintain, acquire and strengthen firm legitimacy. According to legitimacy theory (O'Donovan, 2002; Mousa and Hassan, 2015), this paper regards that investors would have high perceptions of the credibility of management when environmental information is reported. Consequently, this paper proposes H2.

H2: Environmental disclosure is positively related to investor perceptions of the credibility of management.

METHODOLOGY

Experimental Process

The experiment includes one control group: non-environmental disclosure (only presenting financial information) and two experimental groups (presenting both financial information and environmental information). One of the experimental groups: qualitative environmental disclosure presents qualitative environmental information and the other experimental group: complete environmental disclosure presents both qualitative environmental information and quantitative environmental information. The control group has 32 persons and each experimental group has 33 persons. In the control group, the experiment only presented financial information, including the backgrounds of the fictitious company and particular financial information: one-year financial indicators for the firm and the industry average, including EPS, ROE and ROA. All financial indicators of the firm are higher than those of the industry average. In the control group, we implement manipulation checks on financial information, including three items related to financial indicators: EPS, ROE and ROA. The manipulation checks on financial information are designed to check whether the subjects understand the presented financial information. The item on EPS is "I regard that EPS of the firm is higher than that of the industry average". The item on ROE is "I regard that ROE of the firm is lower than that of the industry average". The item on ROA is "I regard that ROA of the industry average is higher than that of the firm". Then, we required the subjects to answer the following items: Investment and Credibility. The item on Investment is "I would purchase the stocks of the firm". The item on Credibility is "I regard that the management is credibility". All items adopt a Likert seven-point scale, ranging from 1 = very disagree to 7 = very agree. Finally, we asked the subjects to answer personal profiles.

In the experimental groups, the experiment presented financial information and environmental information with different extent. Initially, the presented financial information and the manipulation checks on financial information are the same with the control group. Next, qualitative environmental information or complete environmental information (including both qualitative environmental information and quantitative environmental information) was presented to different subjects. Qualitative environmental information is environmental information related to qualitative issues (e.g., the firm adopts environmental management systems). Quantitative environmental information is environmental information related to quantitative issues (e.g., environmental expenditure and the amount of pollution release). Further, we implement manipulation checks on environmental information to assure that the subjects understand the presented environmental information, including three items: ENVC1, ENVC2 and ENVC3. The items adopt a Likert seven-point scale, ranging from 1 = very disagree to 7 = very agree. The item on ENVC1 (qualitative environmental information) is "the firm adopts environmental management systems". The other two items on ENVC2 and ENVC3 are quantitative environmental information. The item on ENVC2 is "the firm discloses environmental expenditure" and the item on ENVC3 is "the firm discloses the amount of pollution release". Next, the subjects were required to rate items on Investment and Credibility. Finally, the subjects were asked to answer personal profiles.

Subjects

The experimental process was implemented by randomly assigning questionnaires in a sealed envelope to people who work in Hsinchu Science Park or Tainan Science Park in the experiment in the early of 2016. All of the experimental subjects have investment experience. The questionnaire items include three parts: manipulation checks, hypotheses and personal data. There are three items on manipulations checks for financial indicators: EPS, ROE and ROA and three items on manipulation checks for environmental disclosure: ENVC1, ENVC2 and ENVC3. There are two items on hypotheses: Investment and Credibility. Three items are related to personal profiles, including age, education and sex. There were 99 assigned questionnaires. However, one questionnaire in the controlled group was invalided and was deleted due to several omitted questionnaire items. As all the subjects have the willingness to participate in the experiment, total response rate is high (99%). The total number of investors is 98. Of the subjects, 78.6% were male, and 21.4% were female. About half of them were in the 30–39 age group (38.8 %) and had a bachelor's degree (54.1 %).

RESULTS

Manipulation Checks

The results of manipulation checks on financial information are as follows. The presented financial information shows that financial indicators of the fictitious company are higher than those of the industry average. Hence, as expected, the results show that the average score on EPS is high (4.60) whereas the average scores on ROE (2.05) and ROA (2.28) are low. Our results indicate that the manipulations on financial information are successful. In addition, this paper uses independent-sample t-test to compare the

mean level of each item in the group of qualitative environmental disclosure and that in the group of complete environmental disclosure, shown in Table 1.
The group of qualitative environmental disclosure only reports qualitative environmental information whereas the group of quantitative environmental disclosure reports qualitative environmental information and quantitative environmental information. The item on ENVC1 depicts qualitative environment information. Hence, our results show that the average score on ENVC1 in the group of qualitative environmental disclosure is not significantly different from that in the group of complete environmental disclosure ($T = 1.417$, $p > 0.1$). Besides, the items on ENVC2 and ENVC3 depict quantitative environmental information. Therefore, as expected, the results indicate that the average scores on ENVC2 and ENVC3 in the group of qualitative environmental disclosure are both significantly lower than those in the group of complete environmental disclosure ($T = 7.328$, $p < 0.01$; $T = 2.934$, $p < 0.01$). Our results reveal that the manipulations on environmental information are successful.

Table 1: Manipulations Checks on Environmental Disclosure

Item	Qualitative Environmental Disclosure (N=33)	Complete Environmental Disclosure (N=33)	Differences
	Mean	Mean	Mean (T-value)
ENVC1	5.52	5.61	1.417
ENVC2	2.09	5.24	7.328***
ENVC3	2.52	6.24	2.934***

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All analysis adopts one-tailed testing. This table reports descriptive statistics for the three items: ENVC1, ENVC2 and ENVC3 with using independent-sample t- test. We compare the mean level of each item in the group of qualitative environmental disclosure and that in the group of complete environmental disclosure. The item on ENVC1 is "the firm adopts environmental management systems". The item ENVC2 is "the firm discloses environmental expenditure". The item on ENVC3 is "the firm discloses the amount of pollution release".*

<u>Descriptive Statistics and MANOVA Results</u>

Table 2 provides the descriptive statistics for the items on Investment and Credibility with adopting independent-sample t- test. Panel A of Table 2 reports the mean level of each item in the group of qualitative environmental disclosure and that in the group of non-environmental disclosure. Panel B of Table 2 reports the mean level of each item in the group of complete environmental disclosure and that in the group of non-environmental disclosure. The results show that the average scores on the items: Investment ($F=2.359$; $p < 0.05$) and Credibility ($F=2.779$; $p < 0.01$) in the group of qualitative environmental disclosure are significantly higher than those in the group of non-environmental disclosure. Besides, the results show that the average scores on the items: Investment ($F=6.290$; $p < 0.01$) and Credibility ($F=5.928$; $p < 0.01$) in the group of complete environmental disclosure are also significantly higher than those in the group of non-environmental disclosure. Therefore, hypothesis 1 and hypothesis 2 appear to be supported. Investors are likely to purchase the stocks of the firm disclosing either qualitative environmental information or complete environmental information and regard that the management is credibility.

Next, this paper adopts multivariate analysis of variance (MANOVA) to test the hypotheses. This paper creates two dummy variables: Qualitative and Complete. Qualitative is a dummy variable that equals to 1 if qualitative environmental information is reported and 0 if non-environmental disclosure is reported. Complete is a dummy variable that equals to 1 if complete environmental information is reported and 0 if non-environmental information is reported. On the one hand, panel A of Table 3 reports the MANOVA results for the effects of qualitative environmental disclosure on investors' decisions to purchase stocks and their perceptions of the credibility on management. The findings show that compared to firms not disclosing environmental information, investors tend to purchase more stocks of the firm disclosing qualitative environmental disclosure (F=5.482; $p < 0.05$) and have higher perceptions of the credibility of management (F=7.722; $p < 0.01$).

Table 2: Descriptive Statistics

Panel A			
Items	**Qualitative Environmental Disclosure (N=33) Mean**	**Non-Environmental Disclosure (N=32) Mean**	**Differences Mean (T-value)**
Investment	5.33	4.91	2.359**
Credibility	5.27	4.78	2.779***
Panel B			
Items	**Complete Environmental Disclosure (N=33) Mean**	**Non-Environmental Disclosure (N=32) Mean**	**Differences Mean (T-value)**
Investment	5.76	4.91	6.290***
Credibility	5.64	4.78	5.928***

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All analysis adopts one-tailed testing. This table reports descriptive statistics for the items on Investment and Credibility with using independent-sample t- test to compare means in two groups. In panel A, we compare the mean level of the group of qualitative environmental disclosure and that of the group of non-environmental disclosure in Investment and Credibility, respectively. In panel B, we compare the mean level of the group of complete environmental disclosure and that of the group of non-environmental disclosure in Investment and Credibility, respectively. The item on Investment is "I would purchase the stocks of the firm". The item on Credibility is "I regard that the management is credibility".*

On the other hand, panel B of Table 3 displays the MANOVA results for the effects of complete environmental disclosure on investors' stock purchase decisions and their perceptions of the credibility of management. The findings show that compared to firms not disclosing environmental information, investors tend to purchase more stocks of the firm disclosing complete environmental disclosure (F=39.500; $p < 0.01$) and have higher perceptions of the credibility of management (F=35.461; $p < 0.01$). These results support H1 and H2. The findings show that environmental disclosure has positive effects on investors' stock purchase decisions and their perceptions of the credibility of the management regardless of the extent of environmental disclosure is in the setting of Taiwan. The findings are consistent with prior literature revealing that environmental disclosure has positive effects on stock prices and can enhance firm legitimacy (Cho et al. 2007; A1-Tuwaijri et al. 2004).

Table 3: Environmental Disclosure, Investors' Investment Decisions and Their Perceptions of the Credibility of Management

Panel A				
Qualitative (N=65)				
Variable	**Type III sum of squares**	**Df**	**Mean square**	**F-value**
Investment	2.963	1	2.963	5.482**
Credibility	3.924	1	3.924	7.722***
	Wilk's Lambda = 0.667			4.328**
Panel B				
Complete (N=65)				
Variable	**Type III sum of squares**	**Df**	**Mean square**	**F-value**
Investment	11.774	1	11.774	39.500***
Credibility	11.880	1	11.880	35.461***
	Wilk's Lambda = 0.474			34.410***

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All analysis adopts one-tailed testing. This table adopts multivariate analysis of variance (MANOVA) to test hypotheses. Qualitative is a dummy variable that equals to 1 if qualitative environmental information is reported and 0 if non-environmental information is reported. Complete is a dummy variable that equals to 1 if complete environmental information is reported and 0 if non- environmental information is reported. The item on Investment is "I would purchase the stocks of the firm". The item on Credibility is "I regard that the management is credibility".*

In order to further confirm the hypotheses, this paper examines the hypotheses without distinguishing the extent of environmental disclosure and creates a dummy variable: Environmental. Environmental is a dummy variable that equals to 1 if any environmental information is reported and 0 if non-environmental information is reported. In Table 4, the results of MANOVA indicate that environmental disclosure is significantly positive related to investors' investment decisions (F=17.954; $p < 0.01$) and their perceptions of the credibility of management (F=22.420; $p < 0.01$). Therefore, H1 and H2 receive further support. In sum, the findings are consistent with prior studies that show environmental disclosure is important information to investors (Deegan and Rankin 1997).

Table 4: Further Examinations on Environmental Disclosure, Investors' Investment Decisions and Their Perceptions of the Credibility of Management

Environmental (N=98)				
Variable	**Type III sum of squares**	**df**	**Mean square**	***F*-value**
Investment	8.805	1	8.805	17.954***
Credibility	9.770	1	9.770	22.420***
	Wilk's Lambda = 0.772			14.057***

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All analysis adopts one-tailed testing. This table adopts multivariate analysis of variance (MANOVA) to test hypotheses. Environmental is a dummy variable that equals to 1 if any environmental information (without distinguishing the extent of environmental disclosure) is reported and 0 if no environmental information is reported. The item on Investment is "I would purchase the stocks of the firm". The item on Credibility is"I regard that the management is credibility".*

CONCLUSION

The environmental protection issues have become more and more important all around the world. Investors in developed countries such as America have recognized the importance of environmental disclosure and thus regard that environmental disclosure is an essential indicator when selecting stocks (A1-Tuwaijri et al., 2004; Aerts et al., 2008; Qiu et al., 2016). It is likely that Taiwanese investors would also consider environmental disclosure when making investment decisions. This paper aims to examine investor perceptions of environmental disclosure in the setting of Taiwan, including investors' investment decisions of purchasing stocks and their perceptions of credibility of the management. This paper adopts an experimental method. The experiment was implemented by assigning questionnaires in a sealed envelope to the investors.

The experiment includes one control group and two experimental groups. In both the control group and the experimental groups, the experimental process begins with the presentation of the backgrounds of a fictitious company, including the financial indicators and those of industry average. The subjects were asked to rate the items on their investment decisions and the perceptions of credibility of the management based on the above information. In the experimental groups, environmental information is next presented. Then, the subjects were asked to rate the items on their investment decisions and the perceptions of credibility of the management. Finally, the subjects were asked to rate the items on their personal profiles. Environmental disclosure literature indicates the importance to examine the extent of environmental disclosure (Deegan and Gordon, 1996; Cormier and Magnan, 2003).

Hence, in this paper, environmental disclosure with different extent is considered: quantitative environmental disclosure and complete environmental disclosure (including qualitative environmental disclosure and quantitative environmental disclosure). As the findings of prior literature (Deegan and Gordon, 1996; Cormier and Magnan, 2003), the results show that environmental disclosure positively influences investors' investment decisions and their perceptions of the credibility of management no matter the extent of environmental disclosure is. The research limitation of this paper is as follows. This paper focuses on the perceptions of investors in Taiwan, which is a developing country. Hence, the differences in culture and investment preferences of investors between developing countries and developed countries may lead to different perceptions of the investors. It is likely that the findings in this paper cannot be duplicated to developed countries. Future research can further examine how environmental disclosure affects other perceptions of investors and the perceptions of other stakeholders such as creditors.

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AWARENESS OF HUMAN RESOURCE ACCOUNTING PRACTICES AND COSTING: EVIDENCE FROM THE PHILIPPINES

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ABSTRACT

This study focused on the awareness of the Human Resource Accounting Practices and Costing (HRAC) of companies located in Carmelray Industrial Park 1 (CIP 1), Canlubang, Calamba City. The respondents were 8 human resource managers, 18 human resource supervisors, 8 finance officers, 9 chief accountants, and 5 accounting supervisors of the forty-eight (48) companies of CIP 1. The researchers used a questionnaire to collect the data. The study disclosed that the companies were not aware of the HRAC Cost Based Approach Models. The results also revealed that CIP 1 companies used the traditional or conventional accounting for human resources, where costs incurred for human resources were charged to expenses. The level of awareness and acceptance of the forty-eight companies of CIP 1 is very low. Based on the findings, the researchers recommended an accounting system that the companies might be able to use.

JEL: M40, M41, M48

KEYWORDS: Awareness, Human Resource Accounting

INTRODUCTION

Human resource is the most important asset of an organization. Without human resources, the other resources in production (namely materials, machines, money and methods) will not operate effectively. The efficient and effective utilization of these resources depend largely on the quality, caliber, skills, creative abilities, innovative thinking, intuition, imagination, knowledge, experience and perception of the human resources. Companies, therefore exert efforts to attract and retain employees with unique professional and technical capabilities. Companies invest in training and developing these employees also, offering them attractive compensation package and fringe benefits The traditional concept advocates that all expenditures of human capital formation be treated as expenses charged against the revenue of the period; rather than assets that will provide future benefits. At present, this concept has changed and the costs incurred on any asset (as human resources) are capitalized because they yield benefits measurable in monetary terms.

Human Resource Accounting (HRA) is a new branch in accounting. HRA means accounting for people as organizational resources. It is the measurement of the cost and value of people to organizations. It involves measuring costs incurred by private firms and public sectors to recruit, select, hire, train and develop employees. HRA is the process of accounting people as an organization resource. It tries to place a value on the organizational human resources as assets and not as expenses. The recognition that corporations have valuable human assets led to the development of the field of Human Resource Accounting in the 1960s (Flamholtz, 2002). The concept of HRA, which was established primarily for the service sector, has started gaining so much relevance that at present many companies in developed countries in all sectors have been applying HRA.

Empirical researches on Human Resource Accounting and Costing (HRAC) have justified the need to capitalize human assets and present them properly in the financial statements. Due to the current trends and progress of HRA in developed countries, this study was undertaken to determine if companies in the Philippines were aware of HRA. Awareness was determined using HRAC Cost Based Approach Models, namely: Historical, Replacement, and Opportunity Model. The study focused on the acceptance of the companies to the different costs pertaining to human resources. The respondents were 8 human resource managers, 18 human resource supervisors, 8 finance officers, 9 chief accountants, and 5 accounting supervisors of the forty-eight (48) companies of CIP 1. The researchers used questionnaire to collect data. The survey was conducted in January 2015. This study has important implications to generally accepted accounting principles and concepts. It is the objective of the researchers to recommend an accounting system integrating human resource as part of the financial statements. It advocates changes in the preparation of financial statements. It will add to the literature in the field of accounting. Statistical analysis of data gathered using questionnaires would collaborate the conclusions of the study. The remainder of this study is organized as follows: related studies on HRA, which included the Human Resource Costing-Cost Based Approach Model, methodology, results and discussions, conclusions, and recommendation of an accounting system to be used for human resources.

LITERATURE REVIEW

Unlike developed countries, which are replete with researches on human capital, there are very few studies on HRA in developing countries like the Philippines. The first attempt to value the human beings in monetary terms was made by Sir William Petty in 1691. Petty considered that labor was "the father of wealth" and it must be included in any estimate of national wealth without fail. Further efforts were made by William Far in 1853 and Earnest Engle in 1883. The real work started in the 1960's when behavioral scientists vehemently criticized the conventional accounting practice of not valuing the human resources along with other resources. As a result, accountants and economists realized the fact that an appropriate methodology has to be developed for finding the cost and value of the people to the organization. In this light, a number of experts have worked on it and produced certain models for evaluating human resources. Behavioral scientist (R.Likert 1960) concerned with the management of organizations pointed out that the failure of accountants to value human resources was a serious handicap for effective management. To correct the issue, appropriate methodologies were initiated to find the value of human resources to the organization.

Research during the early stages of development of HRA was conducted at the University of Michigan by a research team including the late organizational psychologist Rensis Likert, faculty member R. Lee Brummet, and then Ph.D. candidates William C. Pyle and Eric Flamholtz. Likert was the founder of the University of Michigan Institute of Social Research and well known for his work on management styles and management theory (Likert, 1961, 1967), The group worked on a series of research projects designed to develop concepts and methods of accounting for human resources. One outcome of this research was a paper representing one of the earliest studies dealing with human resource measurement. In this paper, the term "Human Resource Accounting" was used for the first time (Brummet, Flamholtz & Pyle, 1968). In 1969, Brummet, Flamholtz and Pyle researched on HRA as a tool for increasing managerial effectiveness. The authors' work represented one of the first attempts to develop a system of accounting for a firm's investments and studied the application of HRA to R.G. Barry Company, a public entrepreneurial firm. The study focused on the acquisition, development, allocation, maintenance, and utilization of human resources. Flamholtz et al continued their study in 2002. The authors believed that HRA has three major roles: to provide organizations with objective information about the cost and value of human resources; to provide a framework to guide human resource decision making; and to motivate decision makers to take human resource perspective. The traditional focus of accounting has been on numbers not on people; in practice, this meant that if dollar values cannot be assigned to transactions objectively, then they are of secondary importance.

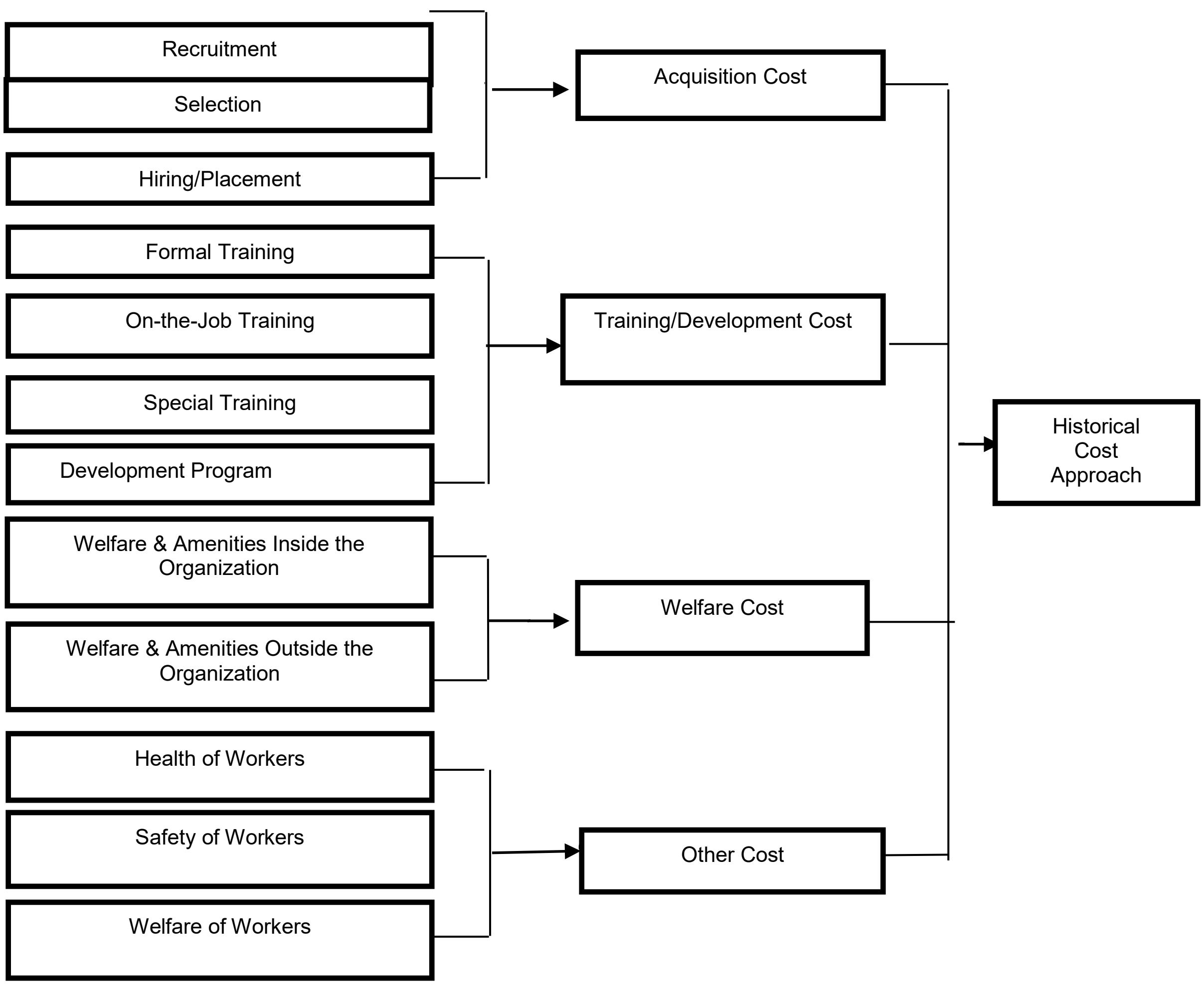
According to Bullen (2007), HRA can play a crucial role in internal managerial decision-making. Bullen strongly believe that measuring HRA can be used to show that investments in a company's human resources may result in long-term profits for the company. He further stressed that when managers go through the process of measuring human resources, they are more likely to focus on the human side of the organization and are more likely to consider human resources as valuable organizational resources. In a deeper perspective, Flamholtz, Bullen and Hua (2003), utilized the HRA measure of expected realizable value, and found that employees' participation in a management development program increased the value of the individuals to the firm. In addition, the authors noted that the HRA measurements provide upper level management with an alternative accounting system to measure the cost and value of people to an organization. Davidove and Schroeder (1992) admitted that too many business leaders have no generally accepted definition or accounting procedure for tracking training investments, and noted that a lower training investment is not automatically better for an overall return on investment. The authors suggested that although many business leaders still view training as an overhead expense, with thorough return-on-investments (ROI) evaluations, businesses could be convinced to view them as part of assets crucial to organizational success.

Lev and Schwartz (2001) and Flamholtz et al. (2002) also noted that the cost and value of human resources are often expensed rather than capitalized, reducing the net income of the company, because of measurement difficulties. These measurement difficulties emanate from the uncertainty of the future benefits from the investment; for example, expenditures for employee training are expensed because the organization does not have a legal claim to the employee's future services. Roslender (1997) noted that little progress has been made into "taking humans into account" and that the major reason for this is that the "worth of employees has hitherto been too closely bound up with the problematic of financial accounting and financial reporting". Moreover, Lev and Schwartz (1971) noted, "this has resulted in the widespread practice of conceptualizing employee worth in terms of the hard accounting numbers normally associated with the discipline". Some value-based models have attempted to resolve this problem of measuring human costs by assigning probabilities of exit together with probabilities of promotion, mortality and future wages.

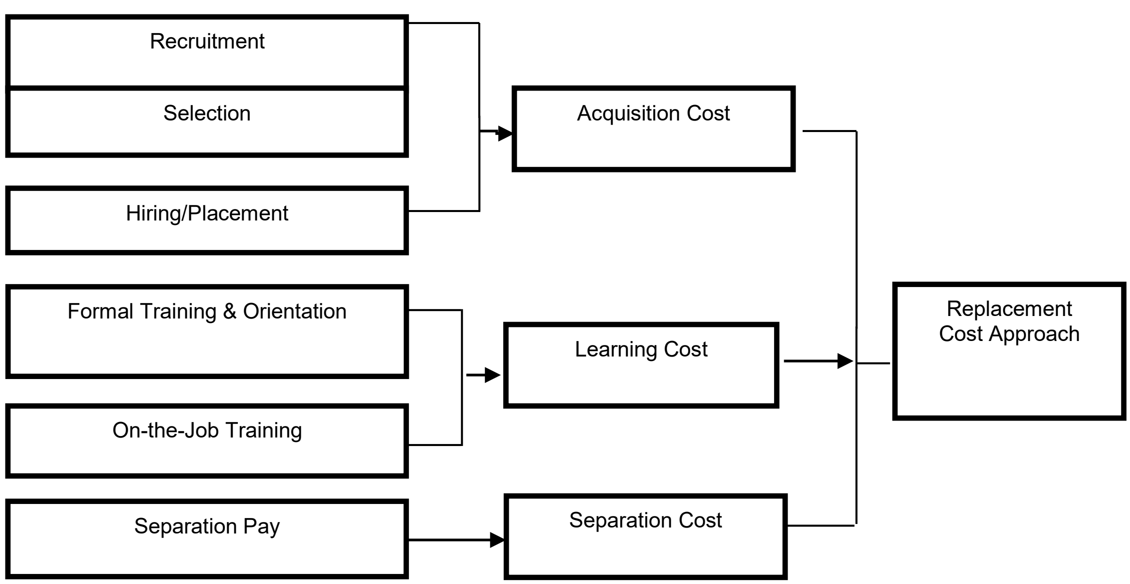
HaiMing Chen and Ku Jun Lin (2004) attested that many companies nowadays derive their competitive advantages mainly from human capital. However, under generally accepted accounting principles, all human-related expenditures are treated as expenses, which are deductions of revenues, thus misleading decision-makers into inappropriate judgments. To covert conflicting issues, Afiouni (2007) recommended integrating human capital resources and organizational capital resources in establishing effective management systems. Human capital resources include "training, experience, judgment, intelligence, relationships, and insight of individual managers and workers in a firm". Capital resources are "the firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations as among groups within a firm and between a firm and those in its environment". Included in this review is the Human Resource Costing-Cost Based Approach Model, which is of special importance in HRA. This model comprises of three sub-models namely: Historical Cost Approach, Replacement Cost Approach, and Opportunity Cost Approach.

Figure 1: Human Resource Costing-Cost Based Approach Model

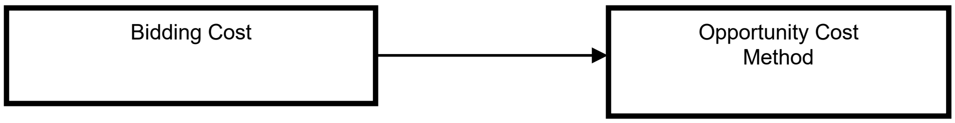
A-Historical Cost Model



B-Replacement Cost Model



C- Opportunity Cost Model



William C. Pyle assisted by R. Lee Brummet and Eric G. Flamholtz and R.G. Barry Corporation, a leisure footwear manufacturer based in Columbus, Ohio (USA) in 1967, developed the Historical Cost model. Replacement Cost approach was first propounded by Rensis Likert, and was developed by Eric C. Flamholtz. Opportunity Cost model was first advocated by Hekimian and Jones (1967). Source: Opportunity Cost, Approach Human Resource Accounting: Advances in Concepts, Methods and Application, Flamholtz (1999 pp.55- 57).

The Cost Based Model Approach involves computation of the cost of human resources to the organization. This method measures the organization's investment in employees using the following parameters: recruiting, acquisition; formal training and, familiarization; informal training, informal familiarization; experience; and development. The costs are capitalized and amortized over the useful life of the asset. An item is capitalized when it is recorded as an asset, rather than an expense. This means that the expenditure will appear in the balance sheet, rather than in the income statement.

A. Historical Cost Approach: William C. Pyle assisted by R. Lee Brummet and Eric G. Flamholtz and R.G. Barry Corporation, a leisure footwear manufacturer based in Columbus, Ohio (USA), developed this model in 1967. In this approach, actual cost incurred on recruiting, hiring, training and developing, welfare cost, and "other cost" of the human resources of the organization are capitalized and amortized over the expected useful life of the human resources. Thus, a proper recording of the expenditures incurred on hiring, selecting, training and developing the employees are maintained and a proportion of it is written off to the income of the next few years during which human resources will provide service. If the human assets are liquidated prematurely, the amount not written off is charged to the income of the year in which such liquidation takes place. If the useful life is recognized to be longer than originally expected, revisions are made in the amortization schedule.

The historical cost of human resources is very similar to the book value of the other physical assets. When an employee is recruited by a firm, he is employed with the obvious expectation that the returns from him will far exceed the cost involved in selecting, developing and training in the same manner as the value of fixed assets is increased by making additions to them. Historical cost of human resources is the investment in human resources, which has expense and asset components. Various cost items representing human resource investment subsystem can be categorized under four groups: Acquisition Cost, Development Cost, Welfare Cost and Other Costs. This method is simple to understand and easy to work out. It meets the traditional accounting concept of matching cost with revenue. It can provide a basis of evaluating a company's return on its investment in human resources.

Acquisition cost refers to the cost incurred in acquiring the right man for the right job at the right time and in right quantity. It includes the expenses incurred on recruitment, selection, hiring and placement; entire costs are taken into consideration including those who are not selected. The following costs are included in the acquisition costs:

Recruitment cost is the cost incurred to identify sources of human resources both from within and outside the organization. Selection cost is the cost incurred to determine who should be offered employment. The cost of selection depends on the position for which a person is being selected. The higher the position, the greater is the selection cost. The major components of selection costs are administrative cost of processing applications, conducting tests, interview, medical examination and the salaries, and consulting fees of the selectors.

Acquisition costs also include hiring and placement cost. These are costs incurred to bring an individual into the organization and place him or her on the job. Hiring and placement cost include moving and travelling allowances and other related costs, such as temporary housing and house hunting costs.

Training (Development) is a learning experience, which seeks permanent change in an individual to improve his ability to perform on the job. It can involve the changing of skills, knowledge attitudes or social behavior. The training techniques can help to improve employees' job performance, gain confidence in their attitude towards their job and their interactions with co-workers and supervisors. Training improves the productivity potential of both the individual and the organization. The costs include formal training, on the job training, special training, and development programs.

Welfare Cost and Other Costs. Employers have an obligation to provide its employees with an atmosphere to perform their work in healthy, congenial climate conducive to good health and high morale. The expenses incurred for this purpose will facilitate the employee to increase the quality of his civic life. It includes welfare and amenities within the organization, welfare outside the organization and other costs. Other costs include expenditure on employee safety, ex-gratia, multi-trade incentives and others.

B. Replacement Cost Approach: This approach was first propounded by Rensis Likert, and was developed by Eric C. Flamholtz based on the concept of replacement cost.

The concept of replacement cost refers to the sacrifice that would have to be incurred today to replace a person occupying a specified position with a substitute capable of rendering equivalent services in the given position. There are three basic elements of positional replacement costs: Acquisition Costs, Learning Costs, and Separation Costs as shown in Figure 1. According to Replacement Cost Approach, acquisition cost refers to the costs incurred in acquiring the right man for the right job at the right time and in right quantity. It includes the expenses incurred on recruitment, selection, hiring and placement; entire cost is taken into consideration including the costs of those who were not selected. Learning Costs refers to training costs. Training costs refers to the cost incurred in conventional training for the orientation of an individual so that he can operate the work. On-the-job training costs are costs incurred to train an employee to do the job efficiently and effectively from which the employee learns while he is on his job. Separation costs are incurred because of a position holder leaving an organization. Another element of separation costs is the cost of lost productivity prior to the separation of an individual from an organization assuming that there is a tendency for performance to decrease at such a time. Relocation also induces separation. Separation requires replacement; immediate cost-effect is on loss of production.

C. Opportunity Cost Approach: Hekimian and Jones (1967) first advocated this method. This method is based on the concept of opportunity costs. Opportunity cost is the value of an asset when there is an alternative use for it. There is no opportunity cost for those employees that are not scarce. As such, only scarce people should comprise the value of human resources. The opportunity cost of an employee in one department is computed based on the offer made by another department. Moreover, the authors of this approach believed that a bidding process is a promising approach towards more optional allocation of personnel and a quantitative base for planning, evaluating and developing human assets of the firm.

METHODOLOGY

This study covered the different companies in Carmelray Industrial Park 1 (CIP 1), Canlubang, Calamba City, Laguna. CIP 1 is the first integrated industrial park outside Metro Manila constructed in 1972 consisting of two hundred thirty (230) hectares, fully integrated industrial estate of international standards. Developed in stages, phases 1 and 2 covering 95 and 135 hectares respectively. Aside from the industrial complexes, the park includes Administrative and Support Service Centers, Commercial District, a park, schools, Carmeltown Residential Communities and the 41-hectare Special Export Processing Zone (SEPZ) where investors enjoy simplified import/export documentation and several tax incentives. It has been given an A-1 ranking by the Philippines Economic Zone Authority.

Questionnaire used by one of the researchers in a previous study, was used to record the perceptions of the respondents. The first part contains questions, pertaining to the demographic profile of the companies, while the second part consists of questions pertaining to human resource costing using the Human Resource Costing-Cost Based Approach Models. Participants' perception on their companies' level of agreement to the questions is tantamount to the company's acceptance and practice on costing human resources. The descriptive ratings are shown in Appendix B. The total population is fifty (50) companies; however, two (2) companies did not participate due to workloads. Each company was given one set of questionnaires. The survey was conducted during the month of January 2015. The total respondents were forty-eight (48) purposely selected by each company. They were 8 human resource managers, 18 human resource supervisors, 8 finance officers, 9 chief accountants, and 5 accounting supervisors of the forty-eight (48) participating companies. Profiles of the participants are shown in Appendix A. Gathered data were encoded on Microsoft Excel and validated using Data Analysis ToolPak.

RESULTS AND DISCUSSIONS

Human Resource Accounting Practices Used by Companies in CIP 1

Human Resource Accounting practices used by companies in CIP 1 are shown in Table 1. These accounting practices were derived from the three HRAC Cost Based Approach Models namely: Historical, Replacement, and Opportunity Model.

Table 1: Human Resource Accounting Practices Used by Companies in CIP 1 (N=48)

Practices	Weighted Mean	Frequency of Practice
A.1 Your company practices capitalizing and amortizing over the expected useful life of human resource the acquisition cost of acquiring human resource	1.87	Rarely Practiced
A.2 Your company practices capitalizing and amortizing over the expected useful life of human resource the training & development cost of your human resource	3.35	Occasionally Practiced
A.3 Your company practices capitalizing and amortizing over the expected useful life of human resource the welfare cost of your human resource	2.00	Rarely Practiced
A.4 Your company practices capitalizing and amortizing over the expected useful life of human resource the " other costs" of your human resource	2.13	Rarely Practiced
B.1 Your company practices capitalizing and amortizing over the expected useful life of human resource acquisition cost to replace human resource presently employed	2.37	Rarely Practiced
B.2 Your company practices capitalizing and amortizing over the expected useful life of human resource learning cost to replace human resource presently employed	3.39	Occasionally Practiced
B.3 Your company practices capitalizing and amortizing over the expected useful life of human resource separation cost to replace human resource presently employed	1.74	Never Practiced
C.3.1 Your company practices capitalizing and amortizing bidding cost of scarce employees within the organization	1.97	Rarely Practiced
AVERAGE	2.35	RarelyPracticed

This table shows the weighted mean (WM) of Human Resource Accounting Practices Used by Companies in CIP 1. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

Companies at Carmelrey Industries Park 1 (CIP 1) rarely practiced human resource accounting. Occasionally companies capitalize and amortize training/development cost and learning cost to replace human resource presently employed over the expected useful life of the human resource. "Occasionally" means they recognize these as costs and record them as expenses. The average indicates that the companies rarely recognized human resource accounting. Companies in CIP 1 practice conventional or traditional accounting of human resource. The expenses related to human resource, such as acquisition cost, training cost, welfare cost, separation cost and bidding cost are charged to expenses. Table 2 below, shows the frequency of human resource costs recognized by companies in CIP 1 as expenses. The costs particularly include acquisition cost, learning/training and development cost, welfare cost, separation cost and bidding cost. These costs are recognized as expenses and are shown in the income statement.

Table 2: Human Resource Costs Recognized by Companies in CIP 1 (N=48)

Costs	Weighted Mean	Verbal Interpretation
A.1.1 Your company utilizes the following acquisition costs		
a. Recruitment	4.10	Frequently
b. Selection	3.98	Frequently
c. Hiring	3.96	Frequently
d. Placement	3.97	Frequently
A.1.2 Your company utilizes the following training and development cost		
a. Formal Training	4.12	Frequently
b. On-the-Job Training	4.03	Frequently
c. Special Training Program	4.08	Frequently
d. Development Training Program	3.74	Frequently
A.1.3 Your company utilizes the following welfare cost		
a. Welfare and amenities within the organization	4.21	Very Frequently
b. Welfare and amenities outside the organization	3.81	Frequently
A.1.4 Your company utilizes the following "other costs"		
a. .Health of Workers	4.14	Frequently
b. Safety of Worker	3.74	Frequently
B.1.2 Your company utilizes separation cost to replace human resource presently employed"	3.35	Occasionally
C.1.1 Your company utilizes bidding cost for scarce human resource within the organization	1.79	Never
AVERAGE	**3.79**	Frequently

This table shows the weighted mean (WM) of Human Resource costs recognized by Companies in CIP 1. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

On the average, participants believe that their companies recognized costs pertaining to acquisition, training and development, and welfare of human resources including other costs such as health and safety of employees. However, separation and bidding cost are never recognized as expenses by the companies.

The results are paralleled with the findings of a study by Logasakthi and Rajagopal (2013), which revealed that employees enjoy not only the satisfaction of their jobs but also various welfare facilities given by the firm. In return, human resources extend their maximum support for the improvement of the company. The personnel department takes care of the total human resources in the company. The management provides all the health safety and welfares to the employees that will help produce better performance in the work and working environment.

Degree of Awareness of Companies in CIP 1 on HRA Cost Based Approach Models

Table 3 presents the degree of awareness of companies in CIP 1 on the three Models on human resource accounting.

Table 3: Degree of Awareness of Companies in CIP 1 on the Three Human Resource Accounting Approach Models (n=48)

Cost	Weighted Mean	Level of Awareness
A. Historical Cost Approach		
A.1 Your company capitalize and amortize over the expected useful life of human resource the acquisition cost of acquiring human resource	1.92	Very Low
B. Replacement Cost Approach		
B.1 Your company practice costing to replace human resource presently employed which includes acquisition cost	3.06	Low
C. Opportunity Cost Approach		
C.1 Your company practice bidding scarce employees within the organization	1.88	Very Low
AVERAGE	2.29	Very Low

This table shows the degree of awareness of Companies in CIP 1 to the Three Human Resource Accounting Approach Models. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

Historical Accounting Cost Based Approach that capitalizes and amortizes over the expected useful life of human resource the cost to acquire human resources got a mean of 1.92 and degree of awareness pertaining to this statement is "Very Low." Awareness of companies pertaining to Replacement Accounting Cost Based Approach that capitalizes and amortizes the cost to replace human resource presently employed is " low". Likewise, awareness to Opportunity Cost Based Approach that bids scare human resource within the company is "very low". This simply implies that companies in CIP1 are not aware of HRA Cost Based Approach Model. In a research journal in Finance and Accounting, Oluwatoyin (2014) stated that the level of awareness and acceptance of HRA is still low because companies have no initiative to make the information available to the shareholder despite the availability of data. Further, many companies do not want to go into the intricacies of finding the value of their human resources because of the need of extensive research that it entails. The result is consistent with the findings of the review by Cherian and Farouq (2013) who clearly stated, "firms particularly lawyers, corporate acquisition specialists, accountants, company management and HR professionals are not willing to execute HRA." Extensive research on developing HRA is complicated since it requires the organization's cooperation to act as research sites and research involves implementation in organization, hence the cost of operation is high.

<u>Acceptance of Human Resource Costs</u>

The following discussions pertain to the level of acceptance of the companies to the different costs involved in accounting for human resources. This will give the researcher a basis for recommending an accounting system those companies in the Philippines might be able to use. The costs that are included under the Historical Cost Based Approach Model in acquisition and costing of human resources are shown in Majority of the participants agree that their companies are aware of acquisition cost, recruitment, selection, hiring and placement costs in acquiring human resource. Although their companies recognize hiring and placement costs, they are not aware that costs include moving allowances, travelling allowance, temporary housing and house hunting costs. The costs that most companies recognize are advertising costs, administrative cost of processing applicants, and medical examinations.

Table 4: The Table Shows the Agreement of Companies in CIP 1 in Using These Recruitment and Selection Costs to Value Their Human Resources. in Human Resource Accounting (N=48)

Acquisition Cost	Weighted Mean	Level of Agreement
1. Your company is aware that acquisition cost should include recruitment cost	4.08	Moderate
2. Your recruitment cost should include the following:		
a. Recruitment material Cost	3.64	Moderate
b. Administrative cost	3.56	Moderate
c. Advertising cost	4.07	Moderate
d. Agency fees	3.45	Moderate
e. Recruitment's salary	3.69	Moderate
3. Your acquisition cost should include selection cost	3.83	Moderate
4. Your selection cost should include the following:		
a. Administrative cost of processing applicants	3.87	Moderate
b. Cost of conducting tests	3.50	Moderate
c. Interview	3.50	Moderate
d. Medical examination	3.82	Moderate
e. Consulting fees of selector	3.03	Low
5. Your acquisition cost should include hiring and placement cost	3.79	Moderate
a. Moving allowance	1.75	No awareness
b. Travel allowance	1.60	No awareness
c. Temporary housing	1.78	No awareness
d. House hunting cost	1.19	No awareness
AVERAGE	3.18	Low

This table shows the weighted mean (WM) and the level of acceptances of the participants to the statements pertaining to Historical Cost Based Approach – Acquisition Cost. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

On the average, participants believe that their companies agree to recognize the six acquisition costs pertaining to recruitment under the Historical Cost Based Approach Model in computing for the values of their human resources. The costs pertaining to Historical Costing Cost Based Approach on training and development are shown in Table 5.

Table 5: Level of Agreement of Companies in CIP1 on HRC Historical Cost Based Approach-Training and Development Cost (N=48)

Cost	Weighted Mean	Level of Awareness
Training & Development		
1. Your company is aware that training/development costs should include formal training	4.11	Moderate
2. Your formal training cost should include the following		
a. Remuneration of training staff	3.56	Moderate
b. Fixed cost of training schools	3.46	Moderate
3. Your training and development costs includes on-the-job training	4.03	Moderate
4. Your on-the-job cost should include supervisory salaries during training	3.63	Moderate
5. Your training/development costs should include special training cost (specific training costs)	4.07	Moderate
6. Your training/development cost should include development program costs	3.76	Moderate
7. Your development program cost should include the following		
a. Local & international conferences and seminars	4.09	Moderate
b. Delegate fees	4.00	Moderate
c. Travel/transportation cost	4.10	Moderate
d. Accommodation	4.10	Moderate
AVERAGE	3.90	Moderate

This table shows the weighted mean (WM) and the level of acceptances of the participants to the statements pertaining to Historical Cost Based Approach – Training and Development cost. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

The participants firmly acknowledged that training and development cost plays a vital role in their company's HRC, as evidenced by the positive responses of the participants to all statements. The participants believe that their companies are aware that training and development costs should include formal and on-the-job training; special and specific training; and development training, which should include local and international conferences and seminars. Formal and on-the-job training top the costs, followed by conferences and seminars. Table 6 presents the level of agreement of companies in CIP 1 on HRC Historical Cost Based Approach Model, specifically on welfare cost.

Table 6: Level of Agreement of Companies in CIP 1 on Using HRC Historical Cost Based Approach – Welfare Cost in Human Resources Accounting (n=48)

Cost	Weighted Mean	Level of Awareness
Welfare Cost		
1. Your company is aware that welfare cost should include amenities within the organization	4.21	High
.2. Your welfare and amenities within the organization should include the following		
a. Rest areas	4.12	Moderate
b. Canteens/cafeterias	4.45	High
c. .Restrooms	4.45	High
d. Washing and bathing facilities	4.21	High
e. Drinking water	4.44	High
f. Occupational safety	4.53	High
3. Your welfare cost should include welfare and amenities outside the organization include the following	3.82	Moderate
a. Insurance measures	4.00	Moderate
b. Maternity benefits	4.20	Moderate
c. Medical facilities	4.18	Moderate
d. Educational facilities	3.03	Low Awareness
e. Housing facilities	2.76	Low Awareness
f. Recreational facilities	3.58	Moderate
AVERAGE	4.00	Moderate

This table shows the weighted mean (WM) and the level of acceptances of the participants to the statements pertaining to Historical Cost Based Approach – welfare cost. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

Occupational Safety pertaining to company's welfare cost and amenities within the organization is regarded as the most important cost under this model. Majority of the participants are aware that their companies recognize occupational safety important role in a manufacturing company. On the other hand, company's agreement on adding welfare and amenities outside the organization is the lowest. On the average, participants believe that their companies are moderately aware of the inclusion of welfare cost in the human resource costing. Table 7 illustrates the level of agreement of companies in CIP 1 on HRC "other cost" under Historical Cost Based Approach Model.

Table 7: Level of Agreement of Companies in CIP 1 on HRC Historical Cost Based Approach- "Other Cost" (N=48)

Other Costs	Weighted Mean	Degree of Agreement
1. Your company is aware that "other cost" of your human resource should include health of workers	3.83	Moderately Agree
2. Health of workers' cost should include		
a. Disposal of waste	4.21	Strongly Agree
b. Ventilation	4.38	Strongly Agree
c. Temperature	4.23	Strongly Agree
d. Overcrowding	4.05	Moderately Agree
e. Lighting	4.33	Strongly Agree
3. "Other cost" of your human resource should include safety of workers' cost	3.85	Moderately Agree
4. Safety of workers' cost should include the following		Moderately Agree
a. Casing of new machines	3.67	Moderately Agree
b. Hoists and lifts/lifting machines	3.67	Moderately Agree
c. Protection of the eyes	3.67	Moderately Agree
d. Precautions against dangerous fumes	3.81	Moderately Agree
AVERAGE	3.97	Moderately Agree

This table shows the weighted mean (WM) and the level of acceptances of the participants to the statements pertaining to Historical Cost Based Approach – welfare cost. The questions were structured using the Likert format. Responses were given weight from 1 to 5 points. Scales are shown in Appendix B.

Companies consider health of workers' as the most important other cost. Although companies include safety of workers as part of other cost, they believe that costs pertaining to safety are less important than health of workers.

CONCLUSIONS

This study was undertaken to determine if companies in the Philippines are aware of HRA. Awareness is determined using HRAC Cost Based Approach Models namely: Historical, Replacement, and Opportunity Model. The study focused on the acceptance of the companies to the different costs pertaining to human resources. The respondents were 8 human resource managers, 18 human resource supervisors, 8 finance officers, 9 chief accountants, and 5 accounting supervisors of the forty-eight (48) manufacturing companies of CIP 1. Gathered data were encoded on Microsoft Excel and validated using Data Analysis ToolPak. Companies at CIP 1 are not aware of HRA. The companies in CIP 1 have very limited knowledge in HRAC Cost Based Approach Models. The degree of awareness of companies in CIP 1 on HRA Cost Based Approach Models namely Historical, Replacement and Opportunity is very low, low, and very low, respectively. The companies recognized as expense most of the human resources costs presented in each model. However, they did not include under hiring and placement costs moving allowance, traveling allowance, temporary housing and house hunting costs. It is evident that the companies practiced the traditional or conventional accounting and costing for human resource. The company's investments in human resource are treated as expenditures reflected in the income statement rather than assets recorded in the balance sheet. This study was limited to the awareness of the companies to human resource accounting. It was further limited by focusing on companies located in one area, Calmelray Industrial Part I in Canlubang. It is an exploratory research on which, further studies will have to be undertaken to determine the impact of HRA to companies' financial status, the extent of its applicability, costing problems and other limitations.

RECOMMENDATION

Human resources accounting is no doubt a developing discipline in the field of accounting. More accurate methods to quantify human capital for financial reporting will be beneficial to internal and external users of companies' financial statements. As society becomes more knowledge-based, more firms are keeping an eye on their human capital, investing in employee recruitment and training. The following accounting for human resource is recommended. Once the human resource is hired by the company, the value of the human resource should be assessed using ratings and ranking based on the following criteria: educational attainment, work experience and skills acquired. The entry salary package of newly hired human resource will depend on the criteria. The amount/percentage corresponding to each criterion will be at the discretion of the company based on the company's policy and standard. This is tantamount to human resource valuation as reflected in the human resource salary package. The following accounting entries will be used: Dr. Salaries and Wages Expense Cr. Cash/Cash in Bank To record salaries of human resource All cost incurred by the human resource associated with training, development and learning costs will be capitalized and amortized over the expected useful life (retirement age) of the human resource. If the human resource leaves the company due to resignation, death or dismissal, the whole amount not written off is charged to the current revenue as impairment loss. The following accounting entries will be used to record training development and learning cost incurred by the human resource, amortization of HR investment and impairment loss.

Dr. Human Resource Investment Cr. Cash/Cash in Bank To record training and development, learning cost of human resource

Dr. Amortization of Human Resource Investment Cr. Human Resource Investment To record yearly amortization of human resource investment

Dr. Impairment Loss Cr. Human Resource Investment To record amount written off due to resignation, death or dismissal

The job design (job description, specification and qualification), Awards and Recognition received by the human resource from various Professional affiliations/social and civic organizations will be used to value the human resource. The company can give incentive bonus or fringe benefits to the human resource. The accounting entries to be used:

Dr. Human Resource Investment Cr. Cash/Cash in bank To record human resource investment (job design, awards and recognition).

Performance and productivity rating resulting from the performance and productivity evaluation of the human resource immediate supervisor will be the basis for the performance/productivity bonus of the human resource. The accounting entries to be used:

Dr. Human Resource Investment Cr. Cash/Cash in bank To record human resource investment (performance/productivity bonus)

All expenses are shown in the income statement. The account Human Resource Investment will be shown in the balance sheet under assets, and classified as "Other Investments".

APPENDIX

Appendix A: Profile of Participants

Profiling Variable	Category	Frequency	Percent
(N=48)			
Type of Business as to Ownership	Corporation	48	100%
Type of Company as to Nationality	Purely Domestic	23	48%
	Semi-Domestic	25	52%
Country of Foreign Ownership	Britain	2	8%
	Japan	10	40%
	Malaysia	4	16%
	Singapore	3	12%
	Switzerland	1	4%
	Taiwan	5	20%
Percentage of Foreign Ownership	10-20%	3	12%
	more than 40%	22	88%
Type of Business as to Activity/Operation	Service	4	8%
	Manufacturing	44	92%
Capitalization	More than 25M	48	100%
Years of Operation	1-5	2	4%
	6-10	4	8%
	11-15	4	8%
	16-20	18	38%
	More than 20 years	20	42%
Number of Employees	10-50	4	8%
	51-100	5	10%
	51-300	4	8%
	351-400	20	43%
	More than 400	15	31%

Profile of 48 companies in CIP 1, Canlubang Calamba City that participated in the survey conducted during the month of January 2015.

Appendix B: Range of Values, Interpretations

Range of Values		Level of Agreement	Verbal Interpretations	
			Level of Awareness	Level of Practice
4.21	5.00	Strongly Agree	High	Always Practiced
3.41	4.20	Moderately Agree	Moderate	Frequently Practiced
2.61	3.40	Agree	Low	Occasionally Practiced
1.81	2.60	Uncertain	Very Low	Uncertain
1.00	1.80	Disagree	No Awareness	Do not Practice

Likert type Scale used in interpreting the weighted mean.

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HOW DO CUSTOMERS DIGEST PICTORIAL ADS FROM A PSYCHOLOGICAL PERSPECTIVE?

Tareq N. Hashem, Isra University, Amman, Jordan

ABSTRACT

The current research aims at identifying the degree of understanding that customers may hold for non-verbal advertisement based on the picture that the ad represents. The variables of the study consisted of non-verbal skills which are observational skills, attending behavior, empathy, and body language. A mixed approach between qualitative (open ended questions) and quantitative (questionnaire) was distributed to a convenience sample of 56 individuals. The author retrieved 56 properly filled questionnaires. The results of the study showed a positive influence of the four variables on the degree of understanding non- verbal advertisements among participants. In the quantitative part, the most influential variable was the attending behavior followed by empathy. In the qualitative element it appeared that observational skill was more apparent in the answers of respondents. This finding can be attributed to the visual rhetoric scheme that might have taken place within the pictures presented.

JEL: M3

KEYWORDS: Non-Verbal Ads, Communication, Marketing, Pictorial

INTRODUCTION

Communication is a process of transferring thoughts, ideas, words, meanings, and suggestions through various means. It is an informative process that aims to deliver a certain idea to another party in a suitable, understandable, and vivid way (Losee, 1999). Since the very first ages of humanity, humans have used various ways to communicate and establish mutual thoughts and ideas between each other (Cambridge, 2002). Generally speaking, scientists state that communication among humans have gone through many stages which have helped in delivering the communication process in its recent method. These phases included signs and signals, speech, writing, print and electronic communication methods (Lowery & Defleur, 1988).

According to Kilyeni (2009), communication is a means of marketing. Nowadays, people are more reliant on the idea of marketing and advertising to get to know a certain idea or be convinced to take a certain type of action and attitude. Recent communication and marketing trends have appeared more reliant on the concept of non-verbal (no text) advertisements. This type of advertisement doesn't have any text and totally depends on pictures and images to deliver a notion to the customer. Kress and van Leeuwen (1996) tackled the issue of non-text communication through marketing in which the delivering party depends on visual skills rather than using words and phrases to deliver the message. Cook (1992), from another perspective, sees the concept of not using text in advertisement as a paralanguage scheme that helps one way or another to deliver an idea that is not written but rather visualized. In this current study we aim at understanding the level of digesting that customers show in a group of non-text advertisements from certain aspects: body language, attending, observation and empathy. Data from previous literature will appear in the following section, after that the analysis of the application process will take place highlighting the most influential results, after that the concluding comments of the author will appear.

LITERATURE REVIEW

Non-Verbal Communication

Sometimes, one might not be in the mood of talking, so they nod, smile, answer with a gesture, or even frown. This is actually considered a form of communication. When you smile, not or frown at someone, you are actually communicating with them (non-Verbally) or without using words. Non-verbal communication was defined by DeVito (2002) as a form of communication that is based on not using words and verbal means. It is founded on many other actions that are based on using everything available other than words like facial gestures, wearing jewelries, and manipulating the vocal volume. DeVito argues that non-verbal communication does the same job as verbal communication and can easily deliver the message meant to be delivered which gives values to the body language and its role in non-verbal communication in general. From a human perspective, Knapp & Hall (2002) see that the human non-verbal communication appears in many forms including personal space, facial expressions, postures, eye contact, and vocals.

Skills of Non-Verbal Communication

Ambady & Rosenthal (1998) defined non-verbal communication as a form of interpreting a piece of information through many means beside language. The non-verbal communication for them is more of a behavioral scheme or an expressive attachment, meant to form a communicative area of interest. The authors present some skills attached to non-verbal communication. Those skills are leading factors in delivering the notion that needs to be delivered non-verbally. Ambady & Rosenthal list the skills of non-verbal communication as follows: 1.) Channel which refers to a certain source of non-verbal behavior, 2.) Decoding which refers to the state of the apparent feelings, expressions and meaning behind the non-verbal communication, 3.) Empathy, which refers to the state of understanding what is meant behind that non verbal communication, 4.) Encoding, which refers to the response to the non-verbal communication in the same tool, 5.) Leakage, which refers to the unintended non-verbal communications. 6.) Rapport, which refers to the relationship that built up between two individuals who are exchanging non-verbal communication, and 7.) Synchrony, which refers to the state of coordination between two individuals are interacting non-verbally However, the basics of the non-verbal communication are the face, body, gestures, eyes and voice.

The Social Influence of Non-Verbal Communication

In every society, what people do, think, use and operate influence their community in various ways. The behavior of one person influences other persons in a society. This is called the social influence. The use of non-verbal communication in a society effects the interpersonal expectation of individuals either from one another or from the factors that are found within their society. It manipulates the power distribution, the interaction between humans, and the way people see results and feedback. It even reaches the state of manipulating peoples' minds in terms of convincing them to adopt an idea, an item or even join a certain cult. Building a brand is not something that is as easy as it sounds. When an organization wants to make a promise to its clients that the brand its manufacturing is all promising and trustworthy there have to be numerous procedures, activities, processes and campaigns that an organization has to go through to reach the status of trust and belief. This can take place through marketing, which is the process of promoting for a service or a product for the sake of selling and reaching the largest potential customers' pool available (OECD, 2012). Marketing is the communication tool along with customers in the market where the organization is seeking to reach to promote its service or product.

According to Dogan (2012), marketing is a communication tool with customers, or it is the communication tool in the retail marketing. A definition by the Direct Marketing Association (DMA) presented the marketing process as a form of communication with an individual or group of customers which takes place through the direct order or the direct request from the pool of the potential customers. They add that what makes marketing a communication tool is the fact that it uses communication means like telephones, TVs, radio, printing, and direct marketing like the door-to-door marketing processes. From that point, we trustfully define marketing as a form of communication that takes place within a certain set of behavior and in accordance with a specific aim that the organization needs to fulfill.

Pictorial Marketing

Forceville (1996) refers to the process of communicating non-verbally as a form of metaphor; the idea is basically roaming around delivering a certain notion with the least amount of words, or without using words at all. This idea has been around for a while. It appeared in poems as a mean of portraying a certain scene that a reader can digest with the least number of words. The idea of pictorial marketing refers to the process of presenting a certain advertisement without using text, words or phrases, it mainly depends on pictures, and visual cues that are expected to deliver the message to the customer without the use of communicative and marketing phrases (Chuchu & Mahali, 2014). This form of advertisement appeared to reduce the space that some advertisements take through the process of marketing. The importance of such a form of marketing increased specifically through the last decade in which companies opt for a chance for pictures to deliver a certain message to the customer. Brierley (2002) sees that people usually spend as much as 1.5 seconds understanding a certain advertisement. Using a picture will increase the time spent on the ad and give it a chance to be established in the mind of the customer. Kress and van Leeuwen (1996) noticed that using pictures in marketing has a deeper influence on the customer after removing the burden of reading and it can increase the level of interest in a customer through the time in which the customer will be trying to understand the picture and analyze its relation to the ad and the message that it is trying to deliver. This process will somehow form a type of illustration to the idea being presented which seen to be easier on the customer and more effective to the company from a financial perspective.

Yilmaz and Taskiran (2006) pointed out that pictorial advertisement can be seen in the field of marketing as a form of “aestheticization” of the brand, meaning that pictures shown in the ad are supposed to appear pleasing, appealing, attractive or funny to the customer. This helps in turning the focus of the customer from reading a text into trying to establish a connection between the picture and the idea that it is trying to deliver. Yilmaz and Taskiran adds to the point of aestheticization in marketing, referring to it as a process based on establishing a connection between some elements seen to be influential to a certain brand. This means that, when including a aestheticization effect on a pictorial advertisement there should be a connection established between some elements seen to be in relation to the idea of the product. For example, when designing an ad for a hair shampoo and in order to give a sense of aestheticization, some elements should be found in the ad that rhymes with the idea of "shampoo" like nice scent, cleanliness, softness, beautiful hair, beautiful woman, and long silky hair. In this way a pleasing influence will be marked in the customers' mind about the product and the marketers managed to portrait the advertisement as a pleasing and pleasant one. Another example of giving a sense of aestheticization to an ad is when talking about cars. Elements that should appear in a non-text ad include speed, elegance, attention, safety, and reliance.

Dyer (1992) refers to the idea of non-text ads as a successful approach in delivering a marketing notion to a certain audience without the burden of creating a verbal (words) connection. He defines this kind of ad as a form of using objects to highlight a certain idea or refer to a certain product. Women present 90% of the non-text ads. Most beauty products, cosmetics, household products, personal needs and comfortable items are presented by women, so one of the negativities that might appear in this type of ads is the intensive exploitation of the women's body to form the needed connection. Kilyeni (2009) sees that non-text ads can be considered a form of a de-marketing technique, having a woman posing in a big white billboard with her face all bruised, blooded and cut is portrayed as an add to reject violence and work its way to the minds of people using the elements of violence, empathy, rejection and social repudiation.

Plese and Dlacic (2015) pointed out the influence of non-text advertisement is as powerful as normal ads and sometime can go beyond that. This kind of advertisement can work on a multilevel of the human psychological scheme trying to motivate aspects that might not be motivated through the traditional approach of marketing. Through the literature, and based on the examples given earlier, it was concluded that the communicative scheme is meant to be built between the customer and the company. It can be built easily and more effectively through the non-verbal ads. It can be highly motivated through body language, the expressions that a customer show, through the facial and vocal reactions made through the process of understanding.

DATA AND METHODOLOGY

In this paper, the methodology is a mixed approach utilizing qualitative (interviews) and quantitative (questionnaire) tools. The questionnaire will examine to what extent regular customers absorb and comprehend the concept behind advertisement that has no vivid verbal communicative words. The interviews will be Semi-structured based on grounded theory. This implies the interviews represent a qualitative method of inquiry that combines a pre-determined set of open questions (prompt discussion) with the opportunity for the interviewer to explore particular themes or responses further. The study takes place in Jordan/Amman during 2015. The author meets individuals and ask them to fill the questionnaire and answer its questions in their own comfort. The theory behind the research is grounded theory which is inductive in its nature, sometimes refers to as a qualitative approach. A general theory aims to understand a certain tendency in a set of research procedures which aims at leading to a conceptual research answers. Grounded theory was defined by Galser and Strauss (1967) as "The discovery of theory from data systematically obtained from social research". It is widely known that the grounded theory is desired for social research which helps in understanding the nature of groups and their behavior in reference to a certain set of influences and motivators (Crooks,2001). Glaser (1978) sees grounded theory as the ability to tell you exactly what is going on through a set of processes that can be applied on a certain social set. According to Charmaz (1995, 2000) there are many characteristics for grounded theory among them: 1.) the collection and analysis of data can be done simultaneously, 2.) there can be a developing of codes and categories derived from the data, 3.) the data can prevail some social processes of thinking, and 4.) it is inductive in its nature. The current research study is developed in order to examine the following hypotheses:

There is a statistically significant influence in understanding non-verbal ads attributed to body language.

There is a statistically significant influence in understanding non-verbal ads attributed to observational skills

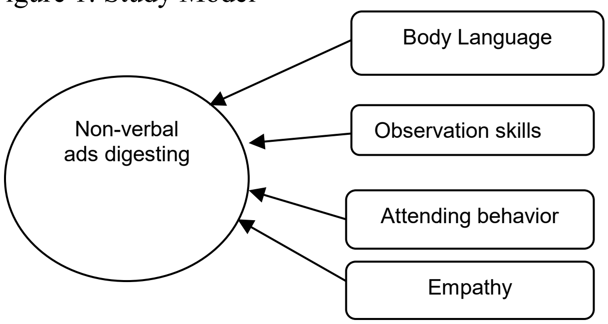
There is a statistically significant influence in understanding non-verbal ads attributed to attending behavior

There is a statistically significant influence in understanding non-verbal ads attributed to empathy.

The research took place during the last quarter of 2015. The author developed the tool of the study based on given variables. The author followed the BERA (2011) ethical approach in dealing with the sample of the study. Participants were free to participate in the study or to withdraw and every person was aware of the topic which being examined in the study. The sample was convenient from universities, malls, and commercial complexes. Some 80 questionnaires were distributed, and 56 questionnaires retrieved were fully and properly filled. After classifying the questionnaires, the author entered the data into SPSS and completed the needed statistical processes. These statistical processes were meant to present numerical data and process these numbers into words which had the ability to achieve the study's hypotheses.

Based on the previously mentioned aspects of non-verbal communication in all its forms, and as a trial to connect between the non-verbal communication skills and the use of the non-verbal communication in marketing, the current research seeks to understand the extent of individuals' understanding of the non-verbal ads through a group of chosen skills. These skills are: Body Language, Observation skills, Attending behavior and Empathy. This research aims to understand and examine how customers employ these skills in understanding non-verbal advertisements. The model in Figure 1 was developed to from the overall connection between the variables of the study.

Figure 1: Study Model



From the model, it appears that four variables have an influence on the degree of people understanding and digesting the notion behind the non-verbal ads used recently as a marketing approach. The tool of the study was a mixing between questionnaire and open ended questions that are to be answered in reference to a certain type of ads attached to the interview. The interviewer was not to help the interviewee in answering any of the open ended questions. The questionnaire was statistically processed while the open ended questions will be analyzed qualitatively based on the given variables: body language, attending behavior, observation and empathy._The study depended on a convenience sample of individual from universities, malls, and office complexes._A total of 80 questionnaires were distributed and 80 interviews were held. Some 56 of them were retrieved and the analysis was done based on 56 individuals.

RESULTS

An analysis of the questionnaire and the interview will be presented in two sections. The first section presented the statistical results of the questionnaire. The second section presented the analysis of interviews attached to the ad under examination. The questionnaire consisted of two parts. The first part was paragraphs divided in accordance with the study variables. The answer was built on a Likert (5) scale. A Cronbach Alpha test was used to ensure the instrument's reliability. The value was = 0.803 for the questionnaire. All values are accepted since they are more than 0.60 (Sekaran, 2003).

Frequency and percentages were computed for the sample's characteristics. The first results are presented in Table 1. Table 1 shows that 57.1% of the participants were females compared to 42.9% who were males which highlights that females were more interested in participating in the study.

Table 1: Frequency and Percentages of the Sample According to Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	24	42.9	42.9	42.9
Female	32	57.1	57.1	100.0
Total	56	100.0	100.0	

This table shows summary statistics of the gender of study participants.

Table 2 shows that 42.9% of the sample which participated in the study were from the age group 17-22 years and 33.9% for the age group of more than 29 years.

Table 2: Frequency and Percentages of the Sample According to Age

	Frequency	Percent	Valid Percent	Cumulative Percent
17 – 22y	24	42.9	42.9	42.9
23-28y	13	23.2	23.2	66.1
More than 29y	19	33.9	33.9	100.0
Total	56	100.0	100.0	

This table shows age distribution of study participants.

Table 3 shows the educational level of participants. The table shows that 76.8% of the sample was held a bachelors degree holders followed by a low percentage of 12.5% of diploma.

Table 3: Frequency and Percentages of the Sample According to Educational Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma or less	7	12.5	12.5	12.5
Bachelor	43	76.8	76.8	89.3
High studies	6	10.7	10.7	100.0
Total	56	100.0	100.0	

This table shows the education level of study participants.

Hypotheses Testing

In testing the hypotheses of the study the following results were found. There is a statistically significant influence in understanding non-verbal ads attributed to body language. Simple regression is used to test above hypothesis. We found that a calculated (F) value is significant at the (0.05) level. This means the null hypothesis is rejected. This in turn means that there is a statistically significant influence in understanding non-verbal ads attributed to body language with moderate Pearson correlation 0.407.

There is a statistically significant influence in understanding non-verbal ads attributed to observational skills. Regression results show a calculated (F) value is significant at the (0.05) level. This means the null is rejected. This in turn means that there is a statistically significant influence in understanding non-verbal ads attributed to observational skills with moderate Pearson correlation 0.30

There is a statistically significant influence in understanding non-verbal ads attributed to attending behavior Our regression results show a calculated (F) value which is not significant at the (0.05) level. This means the null hypothesis is accepted. This in turn means there is no statistically significant influence in understanding non-verbal ads attributed to attending behavior with low Pearson correlation 0.14.

There is a statistically significant influence in understanding non-verbal ads attributed to empathy. Simple regression shows a calculated (F) value of significant at the (0.05) level. This means the null is rejected, which means that here is a statistically significant influence in understanding non-verbal ads attributed to empathy with low Pearson correlation 0.281.

Descriptive Analysis

The study consisted of four main variables (body language, observation skills, attending skills and empathy). Through the analysis of these variables it appeared that the most influential is (attending behavior) which refers to the fact that people actually have given time to the ads which were exposed to them and spent time trying to connect the pictures in the ads with the meaning hidden behind them. This can be seen as an indicator of the influence of non-text ads on the attending behavior of respondents. Some respondents were able to figure out the brand behind the ad exposed to them, sometimes the idea itself or the promoting notion that is meant to be employed in the advertisement. There also appeared some the attending behavior elements like eye contact, posture of respondents, vocal expressions which rhymed with their attitude towards the ad, facial expressions. The posture of the respondents also played a role in increasing the level of the attending behavior through the application.

Following attending behavior, empathy which revolves around understanding and sharing the feeling that is being developed by the ad, was apparent in the process of application but lesser than attending behavior. Not all respondents shared their feelings and attitudes with others. Many kept their feelings to themselves, or expressed their feeling in ways not strictly understandable for others. For example, some people who held a negative attitude regarding the product chose not to spend time understanding the ads. Others answers were negative while some people took the liberty to share and clear out what they see and feel.

The nature of analysis of the open questions was psychoanalytical in its approach. The main aim was to understand customer orientation in understanding the way they see ads without any verbal use. The idea of psychoanalysis is an arrangement of mental and psychotherapeutic hypotheses and related strategies, made by Austrian doctor Sigmund Freud, stemming mostly from the clinical work of Josef Breuer and others. The hypothesis of identity association and the flow of identity advancement aides analysis through a clinical technique for treating psychopathology. Sigmund Freud's, late nineteenth century, psychoanalytic hypothesis has experienced numerous refinements since his work.

Section 2 (Qualitative Analysis)

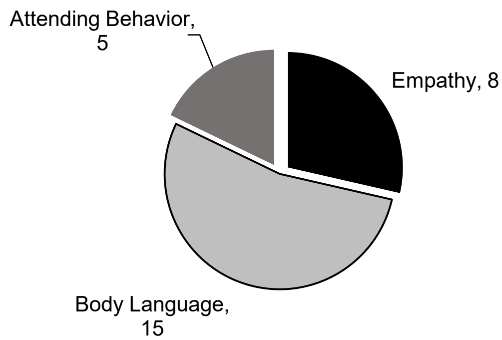
Respondents were exposed to a group of ads which were non-verbal. They were asked questions based on their observation of the advertisements. The current section will be divided into 5 parts as per the advertisements which the respondents were asked about. Each part will highlight questions which were asked regarding the ad and the classification of the respondents' answers in reference to the four given variables of the study: body language, observation, attending behavior and empathy. For each ad, the respondents were asked the following questions: 1.) The ad is about … (attending behavior + body language), 2.) The idea behind the ad is …… (observation + empathy), 3.) The connection between the ad and the product is … (attending behavior + empathy) and 4.) Some other related questions were added in accordance with the nature of the advertisement that is being presented.

It is intended, through these advertisements, to understand how people dealt with the ads even though there were no words involved. Any reference or brand logo that might uncover the idea was removed to understand how respondents processed it in their minds.

Part 1: Hair Coloring Ad

A hair coloring product was presented for respondents. The ad contained no verbal promotion of any kind. It was a transparent shape of a woman's hair. The hair color changes in accordance with change of the time of the day from bright yellow during the day to dark black in the night. On answering the first general questions regarding the concept and the idea behind the ad we found that 84% of respondents were able to identify that the ad has to do with women hair, or had something to do with the importance of women's hair. However, only 14% were able to understand it was a hair coloring ad. Some 86% failed to comprehend the idea behind the clear space of the ad representing the change in hair color. We conclude that 84% of the respondents failed in the empathy test which resembles the state of understanding what is meant behind the clear part of the model's hair. But the managed to resemble clearly the body language read through the connection between the model on the ad and the repetitiveness of the words (beauty, beautiful). In classifying the ad in accordance with the variables of the study the reading will appear as shown in Figure 2.

Figure 2: Classification the Hair Coloring Ad

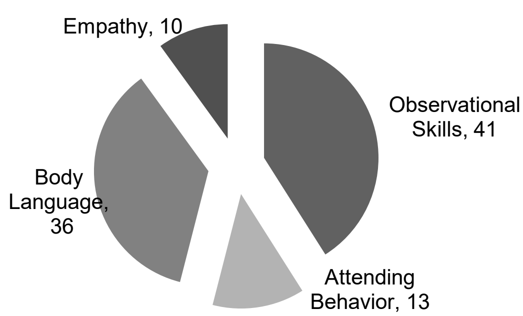


This figure shows classification of the study variables for the hair color ad.

Part 2: Clorets Gum Ad

This ad was highly rejected among respondents due to its repulsive nature. The ad represents a tongue stuck out of a mouth. The tongue appears as a fish referring to the bad smell. The idea behind the ad represents that gum in the ad can refresh your bad breath. Anybody with a bad breath is implied to have a fish like breath. The ad was found repulsive among the respondents. Here, body language took over whenever the respondent sees the ad. The repulsive nature of the ad managed to deter the respondent from giving the right answer as they didn't spend much time trying to understand the ad and the idea behind it. Some 6 percent did not answer the ad. Another 65% of respondents saw the ad as a motivation to eat fish and the benefits that the body can get from eating fish. None of the respondents managed to understand what the point behind the ad was. Not one of them mentioned that is might be related to a breath re-freshener or anything even near that. The basic idea of fish smell, stinking smell, and bad breath was reached among respondents to a certain degree. But understanding the main and right idea was unreachable for them. In this ad, observational skills in addition to body language were more apparent in reading the nature of the ads. The distribution of the answers in accordance with the variables will be as shown in Figure 3.

Figure 3: Classification the Clorets Gum Ad

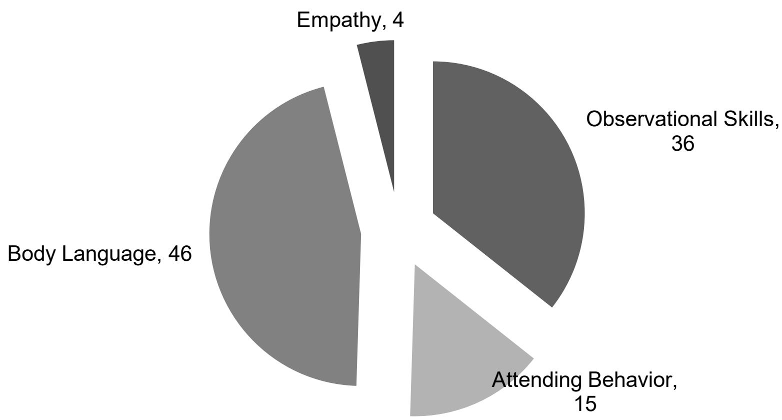


This figure shows classification of the Clorets Gum ad.

Part 3: Safety Seat Belt

In the 3rd test, respondents were exposed to an ad that represents a person seated on a car backseat and attached to rubber flyers. The ad represents the importance of the seat belt in preserving lives. The ad focused on the idea that being at the backseat of a car doesn't mean not to buckle up. The backseat is also not safe without a seat belt. Answers to the question were based on the observational skills with a little help from the body language. Responses were divided into three categories. The first category, 23 percent of the sample, saw a commercial towards a furniture company which represented 23% percent. Another 39% saw a commercial for a cruise or travel agency. The last 38% saw a deterring idea about speeding and the dangers of speed. It might be that the last idea might take a place. But, still it didn't manage to build up the whole idea behind the ad which is not related to speed. The distribution of answers in accordance with the variables occurred as shown in Figure 4.

Figure 4: Classification the Seatbelt Ad



This figure shows classification of the seatbelt ad.

Part 4: Pasta Ad

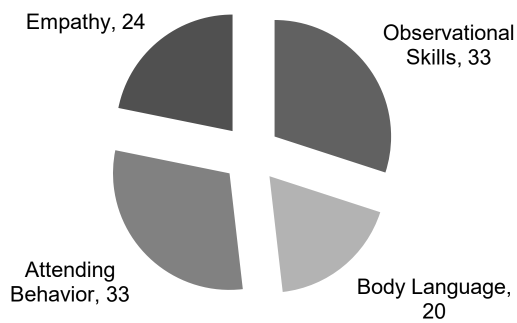
The 4th ad provides an image of an anchor rope that holds a ship still in the sea. The rope of the anchor appeared as an ad to a pasta brand which was represented through images of people eating pasta. The rope here refers to the pasta and it gathers between how good this brand of pasta is and how important the anchor rope is the ship. Or, it might simply represent strength, fun, consistency and solidness of the pasta when eating it. Surprisingly, only 22% of respondents managed to connect between the anchor ropes in the picture and pasta or spaghetti. None of them understood the that the ad might be for a brand of pasta, they only managed to spot the connection. This is the first ad that showed a high attending behavior. The idea of the ad reminded the respondent of something that they find fun, connected to childhood and reasonable. One respondent said the ad reminded her or her childhood while another respondent said the idea of the ad is very specifically that they managed to show the two faces on the ship appear as if they are eating pasta. But, none mentioned anything related to an ad. The distribution of the answers in accordance with the variables will be as shown in Figure 5.

As it appears from Figure 5, there is a kind of equal distribution between the study variables. All respondents have involved the variables in judging the nature and reason behind the ad, but none managed to name the product behind it. In another meaning, the idea was clear to them, but connecting it to a certain product was rather challenging.

Part 5: Toyo Tires Ad

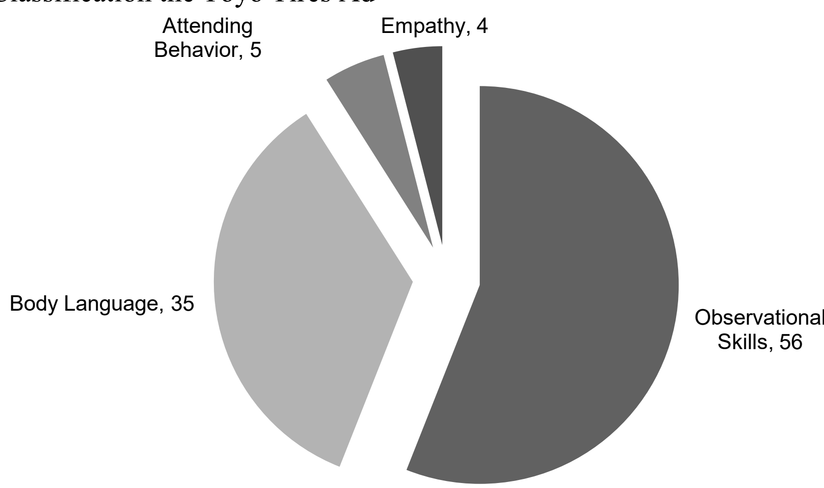
In the 5th advertisement, the product and the idea are crystal clear. There might not be any hidden message, as the idea was successful in delivering the idea with no deep thinking. It appeared as an octopus' legs. The tips of the octopus were changed to look like tires of a car. Some 88% of respondents managed to assign the ad to a certain product while 12% of them assign the nature of the ad as a reference to the speed of the octopus. Attending behavior was rather low among respondents as they didn't need a lot of time to figure it out. Observational skills and the body language were quite high. Figure 6 highlights the distribution.

Figure 5: Classification the Pasta Ad



This figure shows classification of the Pasta Ad

Figure 6: Classification the Toyo Tires Ad



This figure shows classifications for the Toyo Tires ad.

CONCLUDING COMMENTS

From the analysis of qualitative and quantitative data we find that people's orientation was more in favor of attending behavior followed by empathy in the quantitative approach. Observation skills were most apparent in the qualitative part of the methodology. Results show that attending behavior and empathy were more apparent in the quantitative part because it wasn't based on visual skills. Rather, it depended more on personal traits that the participant had. On the other hand, observational skills appeared more in the qualitative approach because it depended on visual skills through the pictures of the ads which were presented. On that idea, Yang (2015) focused on the influence of visual skills and its role on advertising credibility. Koskal (2013) came up with the concept of visual rhetoric and its role in advertising. He states that visual skills and arts, when used in advertising, can be seen as persuasive tools that are delivered to potential customers. Through these tools, customers will be able to sense the vibes of the product through the visual skills and be convinced to take part in using the product/service. Szmigin (2006) noted that attending behavior is one of the first tools that people use when trying to figure out an idea within an ad.

Attending behavior is the most apparent element when it comes to the concept of non-text advertisement. Looking at the current research, the authors focused on understanding the nature of digestion that participants had for the advertisement that held no verbal communications. On the same track, Mzoughi and Abdelhak (2011) examined understanding the difference and impact of both verbal and visual rhetoric skills in understanding advertisements based on mental imagery. They found the difference goes for the visual rhetoric. These results match the results of the current study which came out in favor of visual skills (observational skills) more than verbal skills.

Mcquarrie and Mick (1999) came up with the same results that visual skills are more helping in understanding advertisement than verbal skills bearing in mind that the visual skill helps in the process of recalling and remembering compared. In an overall estimation, the idea of asking someone about a certain idea without a visual access differs greatly from asking them about the same idea along with a visual access. The difference appears through the visual rhetoric that participants managed to operate on the picture of the advertisement. Paragraphs of the questionnaire which contained no picture came out in favor of empathy and attending behavior as both skills don't need a visual source to maneuver them.

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THE SOCIAL REWARDS FOR MISSION-DRIVEN BUSINESS: AN INTEGRATIVE APPROACH

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ABSTRACT

Many companies, considered successful models worldwide, are mission-driven business whose purpose is both profit generation and producing an impact on different aspects of human life. In this paper, we analyze the relationship between companies that include a social mission in their strategy, and act consistently with it, to create a sustainable competitive advantage. This advantage is expressed directly and indirectly in benefits for the company. In general, the relationship between mission and financial objectives of mission-driven businesses provides them the opportunity for better economic performance because they can leverage relational intangibles generated. This conclusion relies on three propositions made based on an integrative theoretical analysis.

JEL: L21, M19

KEYWORDS: Mission-Driven Business, Social Reward, Resource-Based View

INTRODUCTION

In strategic management, one of the most accepted explanations about the origin of success in firms is the possession of strategic resources and suited capabilities. They manage these resources and capabilities to produce a sustainable competitive advantage (Barney, 1991; Barney, 2001; Fong, 2005; Hall, 1993; Ray, Barney, & Muhanna, 2004). In the business world, success can be measured in a financial way like income generation, return of investment or the maximization of the shareholders' value (Sawhill & Williamson, 2001, p. 371). However, in recent times, many companies considered successful worldwide such as Charge.org, Google, Facebook or even Starbucks, add to their mission making an impact in different areas of human life (Bartkus and Glassman, 2008; Choi & Gray, 1998; Sawhill & Williamson, 2001; Wang, 2011).

Working for a mission generates different impacts on diverse stakeholders that surround the organization (Bartkus & Glassman, 2008; Brickson, 2007). These impacts include external sources of intangible assets with the potential to lead to a sustainable competitive advantage (J. Barney, 1991; Brickson, 2007; Dowling & Moran, 2012; Hall, 1993; Rindova, Williamson, Petkova & Sever, 2005). The resource based view offers important contributions to understanding the mechanisms through which stakeholder management translates into positive impacts on financial performance (Branco & Rodrigues, 2006, p. 128). Therefore, the following question arises: What is the link between financial success of mission-driven business and the extent of their impact generated in society as seen by a set of stakeholders?

This paper provides an integrative theoretical explanation based on a resource based view intertwined with the perspective of stakeholders about the source of competitive advantage for mission-driven business. At a practical level the analysis serves to support the idea that including a social mission to guide company activities represents a powerful win-win strategy.

In the following section, we present the theoretical frame of this work, which includes a brief description of mission-driven business, the resource-based view of the firm (RBV) and the social reward. Later, we will discuss the reached results. The paper closes with some concluding comments.

LITERATURE REVIEW

Mission-Driven Organizations and Mission-Driven Business

As its name implies, mission-driven organizations have a strong statement about its reason for existence. This reason drives their activities to achieve what they have declared. Meeting these two requirements is important because, following the recognition of the importance of strategic planning, having a mission statement became popular. Neverthelessm having a mission does not necessarily imply congruent behavior (Bartkus and Glassman, 2008; Wang, 2011).

A mission can be understood as the creation of an organizational identity characterized by pursuit of a collective well-being and not merely obtaining profits (Besley & Ghatak, 2005; Brickson, 2007; Grant & Sumanth, 2009). In this sense, the organizational mission is above economic objectives, if they exist. Its function is to focus the activities towards more transcendent purposes, such as to help reduce any social problem, working for environmental causes, or even generating greater value for consumers through a transcendent impact on their lives.

The mission is the core element of organizational philosophy. For some years it has become a relevant tool for organizations to manage relations with different stakeholders. Mission is the means by which they disclose their identity (Bartkus & Glassman, 2008; Brickson, 2007; Wang, 2011). Organizational identity is the shared understanding of the role of the organization with respect to its stakeholders, which has potential to create social value (Brickson, 2007, p. 881).

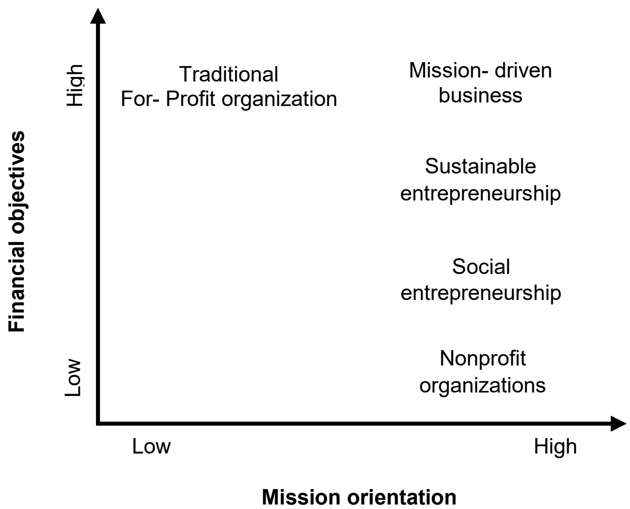
The idea that organizations have stakeholders is widely accepted within the field of administration. In his seminal work, Freeman (1984) defines stakeholders as those who may affect or be affected by the activities that organizations carry out to achieve its purposes. This perspective has evolved to focus on how companies identify their stakeholders. In this regard Donaldson & Preston (1995) argue that stakeholders are those who have a legitimate interest in the various aspects of corporate activity and for which the corporations has a corresponding functional interest characterized as having intrinsic value.

Mission-driven organizations have more impact than those that focus only profit because its activity involves a larger number of stakeholders (Bartkus & Glassman, 2008; Brickson, 2007). In this sense, impact means to affect others directly or indirectly through the activities of the organization. The greatest impact is inherent to mission-driven organizations and is independent of the particular content of the mission, or its possible production of collective goods (Besley & Ghatak, 2003, p. 28).

In the extant literature, different terms are used in an indiscriminate way to refer to mission-driven organizations. Among these terms are sustainable entrepreneurship, social entrepreneurship, social enterprise, nongovernmental organization etc. However, among these listed organizations there are differences, mainly in the level of relationship between the mission and parallel pursuit of economic or earnings objectives (Beckmann, Zeyen, & Krzeminska, 2014). Figure 1 shows that each type of organization implies a different extent of relations between financial objectives and mission orientation. Therefore, in each case, the impact to stakeholders has a different breadth and depth. For example, the traditional for-profit organization works only for the pursuit of self-interest and maximizes business value. So they are obviously not working for the pursuit of the interests of others. Nevertheless, they can indirectly impact positively its stakeholders.

The above approach is supported by reviewing the concepts of two classic mission-driven organizations, social entrepreneurship and sustainable entrepreneurship. Beckmann (2012) argues that social entrepreneurship is the establishment of new models of value creation that have a transformational impact on society, both static and dynamic. However, according to Choi & Gray (1998) sustainable entrepreneurship is a lucrative business that also pursues a social or environmental interest. A more recent proposal is by Schaltegger & Wagner (2010) define it as the realization of sustainability innovations that produce benefits for a larger part of society and often address the demands of a larger number of stakeholders. In the concepts described here, although there is coincidence in that both cases the social benefit is desired, the first definition notes the intention is to achieve a transformational impact while in the second, the innovations produce benefits but not to the general society.

Figure 1: Relationship between the Pursuit of Financial Objectives and Orientation Mission, in Different Types of Organizations Guided by Its Mission



Source: Own elaboration based on Beckmann, 2012; Choi & Gray, 1998; George & Van de Ven, 2001; Nee,2014. Figure 1 shows the relationship between the pursuit of financial objectives and orientation mission, in different types of organizations guided by its mission.

Mission driven business as sustainable enterprises are lucrative and share a particularity with other mission-driven organizations. They incorporate into ithe strategy a social mission that guides their activities (Nee, 2014). These types of companies as stated by George & Van de Ven (2001) are based on a series of shared values towards quality, respect for employees, sustainable practices and social commitment. Thus, they generate a wider positive impact to its stakeholders than the traditional for-profit organization.

The concept of Mission-driven business can be equated to social business. Beckmann, Zeyen, & Krzeminska (2014) defines social business as those which seek primarily a social mission and have a specific financial approach through self-generated income which does not require a high level of innovation. Perhaps the only difference between the two types of companies is the possibility of distributing profits to shareholders as dividends (Beckmann et al., 2014, p. 18). In this regard, apparently in mission-driven business there is not a specific impediment to distribute dividends.

As it is shown in Figure 1, mission-driven business has a special level of relationship between financial objectives and mission orientation (High - High), this comes from the combination of lucrative objectives and other social ends. Hence its social impact is higher than for-profit businesses, but less than other kind of mission-driven organizations like nonprofit organizations where all activities are oriented toward social ends.

Stakeholders as a Source of Reputation and Social Capital

The stakeholder model proposed by Donaldson & Preston (1995) implies that links between the organization and its stakeholders run in both directions. Hence, when these groups receive a positive impact like input it requires an output directed toward organization which may be reputation and social capital. Reputation is a social construct. According to Dowling & Moran (2012) for stakeholders, that construct represent what managers regard as acceptable behavior for the organization they lead. Reputation has also been defined as the perception that stakeholders have about the skills of the organization to create value with respect to competition (Boyd, Bergh, & Ketchen, 2010; Hall, 1992; Rindova et al, 2005). In essence, following Ferguson, Deephouse, & Ferguson (2000), reputation reflects what stakeholders think and feel about the organization.

According Bartkus & Glassman (2008) stakeholders expect the mission statement to be a congruent representation of what the organization is and where its activities are geared. According to the authors, an incongruous mission can be devastating to the reputation of the organization. This occurs because reputation is based on credibility and the latter in turn has a direct link with congruence. If the mission is a consistent representation, the organization will achieve a good reputation from its stakeholders.

Social capital, as well as reputation, has an external source connected to stakeholders seen from an aggregate form often called "general society". Julien (2006) proposed that social capital is the intersection between the behavior of companies and society in general. Bourdieu (2011) includes in its definition that social capital is based on the possession of a durable network of relationships of mutual recognition. The fact that social capital requires mutual recognition is linked with the element of mutual functional interest, proposed like requirements to identify the stakeholders of the corporation (Donaldson & Preston, 1995). Through the proposed link, we understand that stakeholders are generators of social capital, because they are the basis of the relational networks of the company.

Networks of relationships in which ideas of social capital are based, represent a valuable resource for their owner. They provide to members of one group access to the benefits generated by that membership, such as obligations derived of gratitude, respect or friendship (Bourdieu, 2011, p. 88). The author also asserts that existence of these networks of relationships is not a given fact of nature. Rather, they represent the product of strategies to create or produce useful social relations, both the short and the long term (Bourdieu, 2011, p. 89).

Both reputation and social capital are important constructs for organizations. On the one hand there is the solid idea that companies with a good reputation have better perform than competitors (Dowling & Moran, 2012; Hall, 1992). On the other hand, the previous idea can be extended to social capital as it is recognized as a source of intellectual capital and organizational knowledge (Nahapiet, 1998, p-260), as well as a facilitator for mobility of resources (Julien, 2006).

Reputation and Social Capital as Intangible Resources

The resource based view represents a different perspective to the analysis of organizations. Wernerfelt (1984) argues the company can be viewed as a set of tangible and intangible resources that represent its strengths and weaknesses. Barney (1991) added that differences in performance between companies come from strategic exploitation of a sustainable competitive advantage, which in turn stems from possession of various strategic resources. The sustainable competitive advantage is the implementation of a strategy of creating value not simultaneously with any current or potential competitor, and when those other companies are unable to duplicate the benefits of such strategy (Barney, 1991, p. 102).

Barney (1991) argues that to generate a sustainable competitive advantage, resources should be a source of value. They should not be in possession of competitors either current or potential. They must represent a high difficulty of imitation and, there must be no other resources that are strategically equivalent. Intangible resources can easily meet these requirements from their immaterial nature, especially because have a high degree of causal ambiguity and organizational complexity. Given this, intangibles have a greater potential to generate sustainable competitive advantage and are the basis of superior performance relative to competitors (JB Barney, 2001; J. Barney, 1991; Hall, 1992).

Reputation and social capital are among the most important intangible resources. Hall (1992) explains that reputation represents knowledge and emotions that individuals have about the company and its products. The author asserts that reputation is the intangible resource most linked to success of the company. Hall (1993) argues that reputation can be an important factor in gaining competitive advantage through differentiation. On one hand is the result of years of demonstrated superior competence and on the other it cannot be bought because there is no visible market where it is traded.

In the same line, Bourdieu (2011) defines social capital as the sum of current or potential resources, both linked to the possession of a stable network of quasi-institutionalized relations. Julien (2006) adds that in the presence of social capital, interpersonal relationships become less rigid. They are mainly derived from trust between different actors linked to organizations, which makes resource mobilization easier for the top management of the enterprise. Nahapiet & Ghoshal (1998) state that social capital can be linked to the generation of intellectual capital and organizational knowledge. These authors identified some aspects of social capital that lead to decrease transaction costs through reduction of information cost. This information is shared with low cost by the members of a given group, which is derived in an organizational advantage.

Hall (1992) argues that reputation is a fragile resource and a product of many years of activity. Reputation should be constantly monitored by management. Both reputation and social capital are fragile resources that are difficult to accumulate, because the come from perceptions, feelings and ideas of stakeholders about the organization.

Ray, Barney & Muhanna (2004) extend the resource based view by noting the company represents a particular set of resources and capabilities developed over time and through relationships with its stakeholders. In the same sense Branco & Rodrigues, (2006) explained that intangible resources and organizational capabilities have, in the relationships with stakeholders, their source of strengthening or weakening firms wealth.

RESULTS

The Social Reward

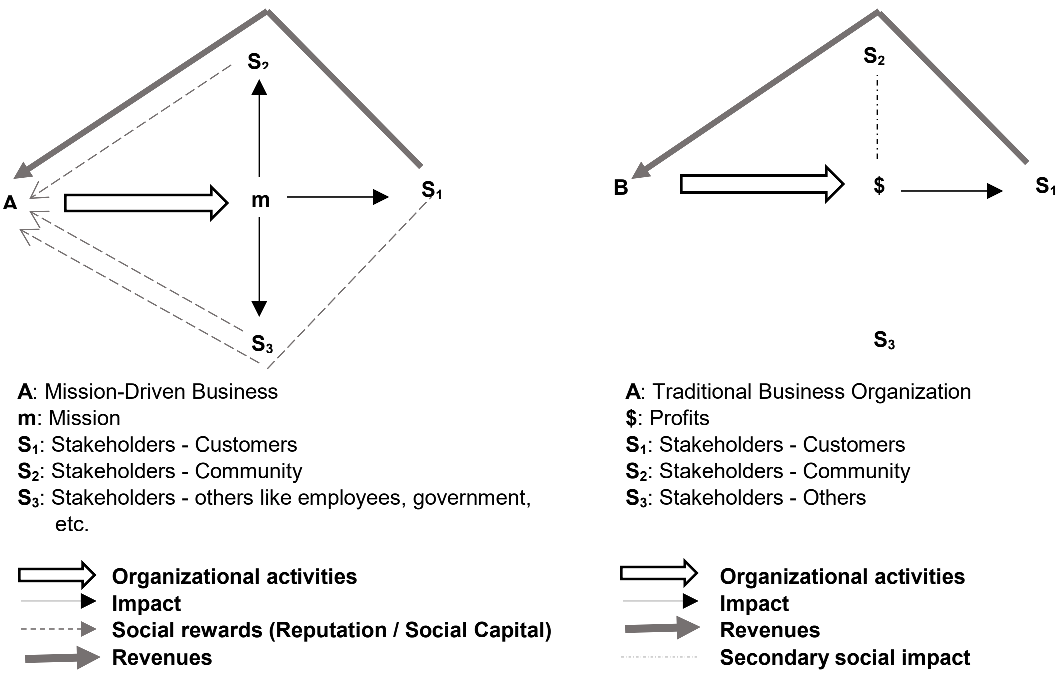
From the potential for stakeholders to be a source of intangible resources, the following propositions emerge:

P$_1$: When organizations have a mission statement and act congruently with it, their actions have a wider and deeper impact on its stakeholders. If these groups are affected positively, they respond motivated by the relationship of mutual interest with a social reward, which is an increase of their reputation and social capital (Figure 2).

P$_2$: Mission-driven business, being a specific type of mission-driven organization, have more potential to receive a social rewards compared to traditional for-profit businesses (Figure 2).

As shown in the Figure 2 the broader impact of company A does not mean that company B has no social impact, this is in concordance with Beckmann et al., (2014). It is assumed that from an economic perspective for-profit organizations provide benefits to society through aspects such as job creation, payment of taxes or simply by the indirect satisfaction to stakeholders. In the Figure-2 this was labeled a secondary impact because in for-profit organizations the primary intention is to achieve revenues. For mission-driven businesses the first intention is working for a mission with a social impact.

Figure 2: Response of the Stakeholders to the Activities of Enterprises



Source: Own elaboration. Figure 2 shows the different responses of stakeholders to the activities of enterprises, comparing between a traditional business and mission-driven business.

The social reward can be understood conceptually as the positive response from stakeholders, seen as elements of society, to stimuli generated by the impact of organizational activities. Likewise, the social reward is also an increase of relational intangible assets. Reputation or social capital seen from an accounting perspective occurs from two results. It occurs both as a result of the work of the organization aimed to benefit a greater number of stakeholders and based on the requirement of mutual interest proposed by Donaldson & Preston (1995). The logic is whether the relationship between the company and its stakeholders is functionally relevant. For relevance, the benefits that go from one side of the relationship to the other would have to be correspondingly responded by the beneficiary side.

Based on the integrated analysis of the perspectives raised, the following proposition emerges:

P3: For mission-driven businesses, the social reward received, as response to their broader and deeper impact to various stakeholders, is manifested in increasing their endowment of strategic intangible resources, in particular reputation and social capital.

<u>The Competitive Advantage in Mission-Driven Business</u>

The sustainable competitive advantage that comes from the possession of strategic resources, derives in extraordinary long-term economic benefits for the company. Usually, the persistence of such economic benefits is seen as better performance compared to competitors, which ultimately determines that some companies are more successful than others (Fong 2005).

For mission-driven organizations, the first strategic resource is precisely "the mission" because it meets the definition of Wernerfelt (1984) and with the characteristics indicated by Barney (1991). From this resource, the organizations built their identity and then develop other resources such as reputation and social capital, which depending on the particular strategies are the basis for sustainable competitive advantage. Mission-driven businesses represent a special case. The extent of their relationships between mission and financial objectives, as shown in Figure 1, give them the opportunity to leverage relational intangibles generated as a result of their work for a mission. They achieve better economic performance through an almost automatic transfer of benefits that arise when working with a mission toward increasing income or decreasing costs.

The competitive advantage in mission-driven business can manifest itself directly or indirectly from exploiting reputation and social capital. The exploitation of these resources can be translated into an increase of revenues by sales or services, to a lesser requirement of investment in advertising, or in lower transaction costs when business relationships are based on a high level of confidence and a low hazard of opportunism. These intangible assets can be the basis for developing other strategic resources such as highly motivated human resources (Besley & Ghatak, 2005, p 616; George & Van de Ven, 2001, p 42; Grant & Sumanth, 2009), intellectual capital and organizational knowledge (Nahapiet & Ghoshal, 1998); as well as help to build a strong organizational culture and achieve strategic alliances with less investment of time and capital.

Competitive advantage is the driver of success in business. Nevertheless, in the case of Mission-driven organizations, measurement of success is complicated and confusing (Sawhill and Williamson, 2001, p. 371). Paradoxically if we define success as achievement of the mission, or in other words, solve the problem in which it is based, the life of the organization would end with this success. From a strategic point of view in this case, success could be defined as achieving intermediate objectives aligned with the general mission and a corresponding reflection in good financial results.

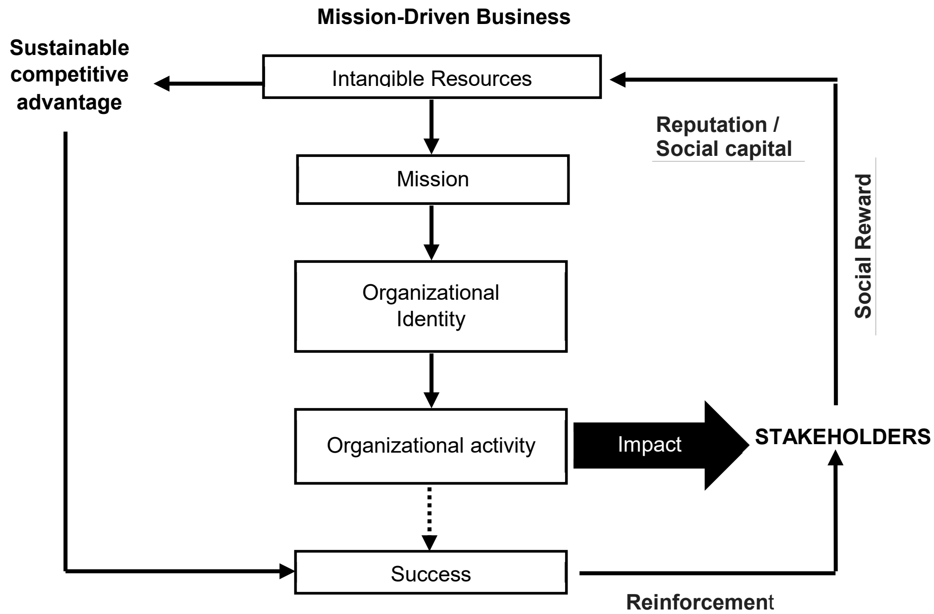
CONCLUSION

In response to the question posed at the beginning of this paper, and based on the integrative theoretical analysis, we conclude that if companies incorporate a social mission into its strategy and create an organizational identity based on that mission, they could obtain a positive effect for stakeholders for their activities and a social reward defined as an increase in their reputation and social capital. These two constructs as strategic resources, with a proper management, can in turn generate a sustainable competitive advantage which is manifested both directly and indirectly in benefits for the company. The conclusion about the link between mission-driven business success and the extent of their impact generated in society seen as a set of stakeholders is illustrated in Figure 3.

Limitations and Recommendations

Although we suggest there are theoretical ties that support the idea that social impact can generate a response from stakeholders, there are also certain limitations that prevent this. In all cases Mission-Driven business are success organizations. Both social capital and reputation are complex social constructs whose operation seems simple, but embody a measurement difficulty. The results are even more relevant for social capital, which is not generally applied in the field of business. Rather, common use is in the study of communities from a sociological point of view (Nahapiet & Ghoshal, 1998, p. 243). However, this does not diminish the value of the arguments used in this work. The very nature of reputation and social capital as an intangible resources presupposes some ambiguity and difficulty of measurement. Paradoxically these characteristics are their source of strategic potential.

Figure 3: Relationship between mission, social rewards and sustainable competitive advantage



Source: Own elaboration based on conclusions of this paper. Figure 3 shows the relationship between mission, social rewards and sustainable competitive advantage based on mutual interest relationships between mission-driven business and their stakeholders.

Another limitation is difficulty in knowing if the net value of the social reward is positive or negative. For practical purposes it has been suggested that it is positive. However, this would require determining the value of the responses to both positive and negative impact from stakeholders, who faced with same impact may have contrary perceptions.

Finally, as noted earlier, success in some types of mission-driven organizations is more difficult to conceptualize than others (Sawhill and Williamson, 2001, p. 371). Success is strongly influenced by its parallel orientation to financial objectives. In the case of mission-driven business, for practical purposes that success is to achieve intermediate objectives aligned with the general mission with a respective impact on the financial results of the company. A more precise definition is beyond the scope of this paper.

As a general recommendation for future research, we propose empirical testing of the relationship between impact of the mission on diverse stakeholders and the generation of intangible assets. The work is complicated by the measurement of the impact on the one hand and the value of intangibles on the other. But, it could be based on an extension of the methodology implemented by Bartkus and Glassman (2008). One might use any of the various methods for measuring intangible assets, for example an indirect determination through the return of assets (ROA).

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THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY PERFORMANCE ON CUSTOMER LOYALTY: EVIDENCE FROM GHANA

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ABSTRACT

This study investigates the impact of corporate social responsibility performance on customer loyalty in Ghana's telecommunication in industry. Analysis of survey data collected from 588 customers revealed that there has been a surge in corporate social responsibility activities by telecom firms in Ghana in recent years. The results show that corporate social responsibility initiatives of the telecom firms are associated with community development and support through the provision of clean borehole water, education, and health services. Environmental issues, on the other hand, receive minimal attention from the telecom companies despite the fact that most of these companies are known to have sited telecom masts close to residential communities with severe health implications for residents. Also, poor quality of service provided by all networks casts doubts upon the genuineness of their philanthropic gestures. The paper includes recommendations for government to institute stringent measures to ensure telecom firms improve their services and provide value for money as part of their corporate citizenship. In addition, corporate social responsibility activities should be regulated to ensure firms engage in projects that have real impact on people's lives rather than those meant for mere publicity.

JEL: M140, M160

KEYWORDS: Corporate Social Responsibility, Customer Loyalty, Telecommunication, Ghana

INTRODUCTION

The idea of social responsibility requires the individual or business to consider their acts in terms of a whole social system which holds them responsible for the effects of their acts anywhere in that system. Corporate social responsibility (CSR) implies a corporate entity should be held accountable for any of its actions that affect people, their communities, and the environment. CSR is perceived in terms of the relationship of corporations with society as a whole, and the need for corporations to support their values with societal expectations (Atuguba and Dowuona-Hammond, 2006). Fundamentally, it is a set of standards by which organizations can impact their environment with the potential of creating sustainable development (Helg, 2007). CSR can also be viewed as a localized and socially embedded concept in that the prevailing ideas, perceptions, issues addressed, and modes of practicing CSR are expressions of organizations' responses to their socio-economic environment (Amaeshi, Adi, Ogbechie, and Amao, 2006). Carroll (1979) identified four main aspects of corporate social responsibility namely economic, legal, ethical and philanthropic. Thus, a socially responsible corporate entity ensures efficiency and profitability and generates adequate returns for its shareholders; operates within relevant legal frameworks; takes cognizance of the impact of its actions on its communities, stakeholders and the environment when formulating its corporate objectives; and undertakes charitable activities that aim at solving pressing social problems within the communities it operates in. According to Crowther and Seifi (2013), a socially responsible corporate entity strives at all times to either minimise or totally remove the adverse effects of its activities on the environment, employees, business contacts group, suppliers of funds and credits, governments, and other affected members of society.

Although CSR has become an important element in the business strategy of a growing number of companies worldwide (Runhaar and Lafferty, 2008), researchers have differentiate between CSR activities in developed and developing countries. These researchers found that CSR initiatives are more pronounced in developing countries than developed ones as there are gaps in social provision and governance in the former (Baughn, Bodie, and McIntosh, 2007). In addition, other scholars maintain that CSR research originating from western country contexts is inapplicable for developing country contexts (Dobers and Halme, 2009; Prieto-Carrón, Lund-Thomsen, Chan, Muro, and Bhusan, 2006). Thus, CSR is said to be context dependent so contextual factors and different institutional environments influence norms and practices of CSR in both developed and developing countries with varying effects (Adams and Ghaly, 2006; Birkin, Cashman, Koh, and Liu, 2009; Gjølberg, 2009; Ofori and Hinson, 2007). Meanwhile, the theories, concepts and ideas of CSR primarily originate from market economy countries with relatively strong institutional environments in which regulation is effective and fairly enforced. Yet in a number of emerging economies and developing countries with weak institutional environments underlined by arbitrary enforcement of law, bureaucratic inconsistencies, insecurity of property rights and corruption, CSR may turn out to have a very different focus and impact (Jamali and Mirshak, 2007; Kuznetsov, Kuznetsova, and Warren, 2009). It is therefore, not surprising for Dobers and Halme (2009, p. 9) to assert that "in weak institutional environments, where non-compliance, tax evasion and fraud are a norm rather than an exception, abiding by the rules and regulations may well be manifestations of a responsible corporation". Therefore, in developing countries, a range of economic and legal factors must be considered in the pursuit of CSR.

Due to increased competition, organizations must identify new ways to survive. However, in this modern day, it is becoming increasingly impossible to achieve organizational goals without taking into consideration other social issues which may not appear to have a direct bearing on the operations of the organization. As such, organizations have more extensive duties to key stakeholder groups like employees, communities, customers, suppliers, and society as a whole. Amoako, Agbola, Sokro and Dzogbenuku (2011) contend that the stiff competitive environment within which mobile telecommunication companies operate in Ghana has place enormous demand on these companies to act responsibly towards their stakeholders and the environment in which they operate. Accordingly, there have been increasing demands on multinational corporations (MNC) to provide community development programs and assistance to the communities where they operate, particularly in developing countries by meeting locally defined social and economic goals (Eweje, 2006).

Runhaar and Lafferty (2009) in their study of three multinational telecommunication corporations (MNTC) found that CSR was mainly employed as a defensive strategy for safeguarding reputation and satisfying employees and other stakeholders while some CSR projects often also involve financial benefits to the companies. Eweje (2006) identified four main areas of multinational corporations' (MNC) CSR focus in developing countries, namely: education, social welfare, infrastructure and small business programs. For example, MNCs "provide education, scholarships, and build roads in Nigeria; build clinics and provide drugs for HIV/AIDS patients in South Africa; and also provide medication and vaccination for malaria in Zambia" (Eweje, 2006, p. 12). In Ghana, MNCs provide boreholes, classroom blocks, clinics, libraries and offer healthcare assistance and advice (Amoako *et al.*, 2011; Amponsah-Tawiah and Dartey-Baah, 2011; Ofori and Hinson, 2007). Eweje's study demonstrated that community development initiatives and investment are vital for the establishment of a cordial relationship between MNC and their host communities. Despite such efforts, MNCs are frequently accused of doing too little for their communities in developing countries. A major source of conflict between MNCs and the host community is the issue of community expectations (Runhaar & Lafferty, 2009). While the communities want social development projects that provide hope of a stable and prosperous future, the MNCs on the other hand, have embraced development initiatives primarily to demonstrate that they are socially responsible. Consequently, Dobers and Halme (2009), suggest that international research and political communities should pay attention and evaluate the CSR initiatives and efforts of companies mainly on the basis of their ability to contribute to structural and institutional development rather than on the basis of single visible activities such as building hospitals or roads and the like.

The majority of the telecom firms in Ghana are gradually incorporating CSR into their corporate strategy to meet the needs of communities they operate in and public expectations of them. However, in spite of their seemingly impressive CSR initiatives, questions have been raised about the true motivation for these so called philanthropic deeds. Previous study revealed that while most of the telecom firms purport to be socially responsible by engaging in charitable deeds and thereby polishing their corporate image and creating brand awareness for their services and products, they continue to engage in unethical business practices such as poor services, exorbitant prices, erecting telecom masts near residential areas as well as mass retrenchment that renders large numbers of their employees jobless (Amoako *et al.*, 2011). Following several complaints about poor services from customers across Ghana, the National Communications Authority (NCA) in August 2011, imposed a €400,000.00 fine on the five established mobile telecommunication companies doing business in Ghana.

There is evidence suggesting that significant CSR efforts enhances corporate image leading to customer loyalty (Argenti and Druckenmiller, 2004). The question worth examining is whether CSR practices perceived by customers significantly informed their purchasing decisions and loyalty, and to what extent does quality of service play a mediating role? Consumer perception is important to businesses since it can influence consumer behaviour, which ultimately affects the profitability of a business. According to Donner (2012), perception is one of the key psychological factors that influence consumer behaviour. Perception of price and quality for example, have been found to play a crucial role in a customer's decision to buy (Heffetz, 2012), post-purchase satisfaction and intention to return a product (Jarvenpaa and Todd, 1997; Liu and Arnett, 2000). Thus by understanding how their services are perceived by their customers, telecom companies can devise strategies to better meet the expectations of their cherished customers and secure their loyalty. There are currently six main telecom firms operating in Ghana: MTN, Vodafone, Tigo, Airtel, Espresso, and Glo Mobile Ghana. Most of these firms have in recent years vigorously pursued CSR as an agenda for market penetration, polishing brand image as well as helping the needy and deprived communities. This study focuses mainly on the community development projects (CDP) that are undertaken by the multinational telecommunications corporations (MNTC) in Ghana, specifically, MTN, Vodafone, Airtel, and Tigo as part of their corporate social responsibility to the communities they operate in.

MTN, the largest mobile operator and the market leader in Africa conducts its CSR activities through its MTN Foundation which focuses on education, health, and community development. The MTN Ghana Foundation was established in 2007 as a conduit for all MTN's CSR initiatives in the country. The Foundation aims at having a broad community impact and supporting national and international development priorities by improving the quality of people's lives through appropriate and sustainable social intervention (MTN Ghana Foundation, 2007). As part of the MTN policy that the local company spends at least one percent of its profit after tax on CSR, MTN Ghana Foundation spent a reported €0.976 million on CSR initiatives in 2008, constituting one percent of its €97.6 million operating profit. For Vodafone Ghana, CSR simply means 'approaching our business aims responsibly with an awareness of our surrounding environment, in order to reduce the environmental impact on business and to meet the needs of our stakeholders, whilst maintaining a successful financial bottom line'. In this regard, Vodafone Ghana has been involved in a number of philanthropic deeds including providing certain needed services to rural communities across the country, and most importantly paying for the health care needs of the disadvantaged in society through its Vodafone Health Line TV programme. Tigo's CSR focuses on understanding and considering the expectations of all our stakeholders; be they customers, governments, regulators, suppliers, employees, investors, or communities. Consequently, Tigo has, over the years, embarked upon a number of CSR initiatives including constructing a new Reproductive and Child Care Unit at the Atwima Mponua

Hospital, as part of its "Fraternity for Humanity" initiative to provide support to communities in education, health and environment. Central to Airtel Ghana's CSR initiatives has been its attention to education in deprived communities and to underprivileged students implemented under its "School Adoption Programme" that aims at adopting, refurbishing and retooling abandoned schools as a way of contributing to the UN Millennium Development Goals of universal primary education. Airtel has, since 2010, renovated ten dilapidated classroom blocks in various schools across the country.

This paper explores telephone subscribers' perceptions of CDP undertaken by the MNTC and how these impact on their loyalty to their service providers. It also examines the nature of CDP undertaken by the telecom firms and compares their CDP with subscribers' perceptions of usefulness, quality of service, price and buying behavior in order to determine subscribers' loyalty to their service providers. Our intention is to increase understanding of how communities perceive CDP of businesses and how that influences their buying behavior and loyalty to their benefactors. Our propositions are that (a) telecom subscribers whose communities benefit from CDP of MNTC will be more loyal to their service providers than those from non-beneficiary communities; (b) CDP beneficiary community members who perceive the CDP of the MNTC to be useful and beneficial to them will be more likely to subscribe to their services than those who do not. This paper is organized as follows. We first present a review of literature related to the theoretical stance underpinning the concept of CSR and firm performance. Next, we describe method and study sample before proceeding with the reporting of key findings of the statistical analysis. Finally, we conclude with discussing the implications of the findings for businesses and suggest directions for future research.

LITERATURE REVIEW

Contemporary organizations around the world have come to the realization that success can be achieved when they are perceived by their stakeholders as being socially responsible. These stakeholders want to understand what the organizations do or stand for, which accordingly makes a big difference in terms of achieving or not achieving their strategic objectives (Aras and Crowther, 2015). While there are various definitions of the concept of corporate social responsibility, majority of the definitions characterize CSR as the activities firms engage in, that appear to advance a social agenda beyond that which is required by law (Siegel and Vitaliano, 2007). Accordingly, the crux of CSR is the provision of public benefits (Baron, 2001). The business activities provide the goods and services that society requires and the society provides the value that the businesses need to survive. CSR is a commitment to improving community well-being through discrete business practices and contributions of corporate resources (Kotler and Lee, 2006). It is considered as the broader responsibilities that results from the relationship that a company develops with both the environment and society in an effort to jointly achieve an integrated environment management system and satisfy social objectives. We contend that the resource-based view is useful to understanding why global corporations engage in CSR projects that speak to the needs of the local communities in which they operate especially in developing countries.

The resource-based view (RBV) of the firm is one of the approaches that provide an explanation for why firms engage in CSR activities. The resource-based view argues that the firm's internal environment drives competitive advantage. This view provides an explanation for firm effects on CSR outcomes within the same industry (Barney, Wright, and Ketchen, 2001). McWilliams, Siegel and Wright (2006) assert that engaging in social responsibility activities when these are expected to benefit the firm is a behavior that can be scrutinized through the RBV lens. Wernerfelt (1984) proposed that a resource can be anything that represents a strength or weakness of a firm; they are more specific, focusing on a wide array of tangible and intangible resources and capabilities such as skilled employees, goodwill with customers, distribution channels, technical knowledge, trade contracts, equipment, efficiency, capital, brands, and positive reputation. The unique combination of these resources can provide some assistance in identifying the potential of the organization to focus on and achieve its objectives (Barney et al., 2001). Consequently, firms generate sustainable competitive advantage by effectively controlling and manipulating these resources and capabilities that are valuable, rare, difficult to duplicate, and for which no substitute is available (Barney, 1991). Organizations therefore achieve their objectives by structuring their internal capabilities to match the conditions of the external environment. Prahalad and Hamel (1994) suggest that a firm's success is not wholly determined by external factors but also by its internal characteristics. Based on these criteria, resources that may lead to a competitive advantage include socially complex and causally ambiguous resources such as reputation, knowledge assets, long-term relationships with suppliers and customers, and corporate culture. The implication is that the right mix of resources needs to be developed, examined and managed for enhanced organizational performance.

The resource-based view suggests further that an organization can gain and sustain competitive advantage by developing valuable resources and capabilities that are relatively inelastic in supply (Ray, Barney, and Muhanna, 2004). Hart (1995) argues that for certain types of firms, environmental social responsibility can constitute a resource or capability that leads to a sustained competitive advantage. The social performance of firms, especially environmental performance can be a source of competitive advantage particularly in the same industry (Russo and Fouts, 1997). These resources need to be strategically deployed to allow a firm to stand clear of competition overtime. Engaging in CSR can help firms to create some of these resources and capabilities that promote a progressive creation of a unique reputation for the organization in the minds of all categories of stakeholders. Socially-complex resources are created from the coordinated action of a large number of people, such as a dynamic corporate culture or a highly-regarded corporate reputation (Dierickx and Cool, 1989). These types of socially-based resources that can give an organization a competitive advantage could be categorized in a similar way to the relationships an organization might hold with its stakeholders. These resources are particularly valuable due to the degree of sustainability of a firm's competitive advantage (Barney, 1991)

Extant literature suggests that a corporation's socially responsible behavior can positively affect consumers' perceptions and attitudes toward the corporation. For example, Lichtenstein and Drumwright (2004) provide evidence suggesting CSR affects not only customer purchase behavior through customer-corporate identification, but also customer donations to corporate-supported non-profit organizations. Luan and Ailawadi's (2011) study of four dimensions of CSR performance – environmental friendliness, treating employees fairly, community support, and sourcing from local growers and suppliers found a positive influence of all dimensions of CSR on consumers' attitudes toward a retailer. However consumers seem to modify their purchase behavior only when the CSR domain directly affects their actual experience with the company or brand. While broad initiatives like environmental friendliness and community support build only goodwill, only actions related directly to the products and people that consumers face bring both goodwill and a higher share of the wallet from consumers.

In addition, meaningful CSR efforts can result in improved reputation, enhanced corporate image, motivated employees, as well as promote customer loyalty (Lii and Lee, 2012). A stronger customer loyalty could increase levels of repeat purchasing (Senthikumar, Ananth, and Arulraj, 2011). Also, Mandhachitara and Poolthong's (2011) study demonstrates that CSR has a significantly strong and positive association with attitudinal loyalty; however, perceived service quality mediated the relationship between CSR and behavioural loyalty, especially repeat patronage intentions. The development and sustainability of customer relationships becomes increasingly important in the telecommunications industry, principally because of the homogeneity of service offerings. Due to the lack of significant differentiation, customers are willing to switch between service providers for any reason. However, "the success of a brand in the long term is not based on the number of consumers that buy it once, but on the number of consumers who become regular buyers of the brand" (Jacoby and Chestnut, 1978, p. 1).

DATA AND METHODOLOGY

This research explores customers' perceptions of CSR performance and its influence on customer loyalty in the telecommunication industry in Ghana. The study employs a mail survey to collect data between February and May, 2012. The study was conducted in two main regions in Ghana, namely Greater Accra and Ashanti regions. These two regions were selected because they are the two principal regions and the hub of Ghana's urbanisation (Ghana Statistical Service, 2010). In all, 700 questionnaires were administered to subscribers of the four major telecom networks. The respondents were selected using systematic sampling from a sample frame of 10,059 from five communities within the two regions where CDP have been undertaken by the MNTC. According to Krejcie and Morgan (1970), a sample size of 370 is an adequate representative sample for a sampling frame of 10,000. Such a sample size should produce less than 5% error rate. Out of the 700 questionnaire administered, 468 were retrieved and seven questionnaires were not properly answered hence omitted from the analysis, representing a response rate of 66.9%. A control group consisting of three communities which have not benefited from any CSR projects from any of the telecom firms was also selected for comparison in order to assess the true impact of CSR on customer loyalty. 250 questionnaires were distributed to the telephone subscribers in the selected communities, out of which 120 were retrieved constituting a response rate of 48%. Data was analysed using both descriptive and inferential statistics.

RESULTS

The research findings revealed that 53.6% of the respondents were males and 46.4% were females. The findings also indicate that majority of the respondents (49.1%) had tertiary education, 11.5% were professionals, 12.2% had technical and vocational education, 16.2% were junior and senior high school graduates, while 10.9% had Ordinary & Advanced level certificates. These results generally indicate that, most of the respondents have attained considerably high levels of education and therefore understand the concept of CSR and the issues under discussion.

Table 1: Network Used by Respondents

Telecom Networks	Beneficiary Communities (BC)		Non-Beneficiary Communities (NBC)	
	Frequency	Percentage	Frequency	Percentage
MTN	139	29.7	45	37.5
VODAFONE	105	22.4	26	21.6
AIRTEL	59	12.6	15	12.5
TIGO	82	17.5	8	6.6
MTN & VODAFONE	38	8.1	13	10.8
MTN, VODAFONE & AIRTEL	21	4.5	8	6.6
ALL THE FOUR NETWORKS	24	5.1	5	4.1
Total	468	100.0	120	100.0

This table shows the telecom networks used by subscribers from both beneficiary communities (BC) and non-beneficiary communities (NBC). The first column shows the various networks. The second column shows results of customers from beneficiary communities and the third column shows results of customers from non-beneficiary communities.

Table 1 shows that a larger percentage of respondents use MTN in both communities that have benefited from CSR projects and those that have not. However, the percentage of customers who use MTN in communities without CSR projects (37.5%) far exceeds the percentage of MTN users in communities with CSR projects. While price, quality of service and other related factors could be responsible for the results of our study, the strong presence of other MNTC through their CDP in these communities also offer explanatory value for why communities with MNTC's CDP patronise other networks whereas communities without MNTC's CDP follow the national pattern preferring MTN network for other reasons. The data also shows that 21.5% of respondents in NBC subscribe to more than one network whereas only 17.7% in BC do. This further shows that in communities where network users do not derive any direct community based benefit from the phone companies, subscribers are more open to patronise other networks. Given the mobile number portability law recently enforced in Ghana, it is most probable that without visible community based projects to capture the hearts and minds of people, more and more telephone users will willingly switch or float between networks.

To assess respondents' perceptions of CDP of the MNTC, the researchers investigated a number of variables including: awareness of CDP, types of projects undertaken, usefulness of the projects, the telecom firm with the most CDP initiatives; quality of service and customer satisfaction. Awareness of CSR activities by companies is important in creating brand awareness, influencing buyer behaviour and creating loyal customers. As McWilliams and Siegel (2006) pointed out, if CSR is to act as a point of differentiation that influences buyer behaviour, awareness of a firm's CSR activities is crucial. The researchers therefore investigated respondents' awareness of CDP initiatives undertaken by their respective networks. Respondents in both communities were asked whether they knew of any CDP initiative undertaken by their network either within their own communities or elsewhere. The results in Table 2 indicate that while majority of respondents (83.1%) in BC were aware of their network's involvement in community based or philanthropic projects, only 48.3% of those in NBC were aware of these initiatives.

Table 2: Awareness of Community Development Projects

	Beneficiary Communities (BC)		Non-Beneficiary Communities (NBC)	
	Frequency	Percentage	Frequency	Percent
Yes	389	83.1	58	48.3
No	79	16.9	62	51.6
Total	468	100.0	120	100

This table shows the responses of respondents in relation to their awareness of CDP in both beneficiary and non-beneficiary communities. Customers are asked to indicate either Yes or No if awareness of community development projects by the telecom firms in their community influenced their decisions to use a particular network.

The MNTC most often publicise the various CDP they engage in and their generosity to the public through direct advertising or press conferences when commissioning a CDP to create brand awareness. It is important to note that the CDP projects are in themselves great advertisements of the network's brand. Surprisingly, when asked whether awareness of the telecom firm's CDP activities influenced their decision to subscribe to the network, nearly 87% of all respondents from both communities answered "No". The implication here is that brand awareness alone does not necessarily translate into positive buyer behavior. Other factors like type and usefulness of the CDP project, quality of service and customer satisfaction mediate any positive effects of brand awareness. This study also investigated the types of projects that are undertaken by telecom firms in Ghana so as to appreciate their usefulness to the recipient communities. Consequently, respondents in BC were asked to name the various types of CDP undertaken by telecom firms in their respective communities. The results reveal that the key areas targeted by telecom firms for development and support are the provision of clean borehole water, education and health services. This supports Visser (2006) assertion that in developing countries, CSR is most commonly associated with philanthropy or charity through corporate social investment in education, health, sports, development, the environment and other community services. Vodafone, for example, constructed 20 hand pump boreholes in 2011 in observance of World Water Day to alleviate the plight of 12 water–deprived communities in the country. Thus, CSR activities of MNTC in Ghana could be described as mainly philanthropic in nature and aspire to resolve challenges faced by communities, which governments cannot fully address. It is therefore not surprising to have majority of respondents (88%) from BC acknowledging that the projects were useful and beneficial to them and their community. This implies, telecom firms in Ghana engage in CDP initiatives that have real impact on people's lives rather than those meant for mere publicity. Similarly, Luan and Ailawadi (2011) found in their study that consumers patronise the company because they see personal benefits from the CSR initiatives and because the initiatives resonate with their own values. Accordingly, Luan and Ailawadi admonish companies to engage in meaningful CSR initiatives that have real meaning to consumers even if they are expensive, because the returns in customer loyalty are substantial enough to more than cover those costs.

Unfortunately, environmental issues receive minimal attention from the telecom companies despite the fact that most of these companies are known to have sited telecom masts close to residential communities with severe health implications for residents (Stewart, Rao, Middleton, Pearmain, and Evans, 2012; Wolf and Wolf, 2004). According to Pinkston and Carroll (1996), ethical responsibilities embody those standards, norms, or expectations that reflect a concern for what consumers, employees, shareholders, and the community regard as fair, just, or in keeping with the respect or protection of stakeholders' moral rights. It embraces those activities and practices that are expected or prohibited by societal members even though they are not codified into law. In the quest to give back to society, firms should consider the three types of morality (immoral, amoral, and moral) with a special emphasis upon moral management. Firms that seek to behave morally should not only conform to accepted professional conduct but exemplify leadership on ethical issues. An example is taking into consideration the health implications of their telephone masts on customers before locating such devices. Monetary donations and aid given to local organizations and impoverished communities in the country is the least favoured CDP activity. This approach is probably disliked by most organizations because it does not help build on the skills of the local people. Perhaps it is a misnomer to call these “responsibilities” because they are guided primarily by business discretion, choice or desire and might be deemed “corporate citizenship” (Pinkston and Carroll, 1996).

The data revealed that in both BC and NBC, Vodafone is adjudged the telecom firm with most community development and support projects. This could partially be due to their highly publicised “Healthline”, a 26-week television and radio health campaign in partnership with medical superintendents in the regional hospitals which identified and catered for the medical bills of patients who were in need of life-saving medical procedures but could not afford them. The medical conditions targeted for the project include fibroid, cervical cancer, maternal mortality, mental health, prostate cancer and impotence. The above results confirm why the “Healthline” was declared the best CSR initiative at the Chartered Institute of Purchasing and Supply (CIPS), UK, awards ceremony in South Africa. Not surprisingly, the results also indicate that while all the respondents in BC were able to identify the telecom firm with the most CSR initiatives, the majority of the respondents in NBC had no idea about the question. This coincides with the level of CDP awareness in these communities.

Moreover, providing quality goods and services that offer value for money for customers is a key element of an organization’s corporate social responsibility (Freeman, 1984). Besides, perceived quality has been found to positively collate with customer buying behaviour, loyalty and retention (Lewis and Soureli, 2006; Mandhachitara & Poolthong, 2011). Unfortunately, the quality of service provided by the telecom firms in Ghana can only be described as abysmal. Our research findings show that all the respondents from both BC and NBC disagree with the statement that the telecommunication firms provide good and reliable services. Consequently, nearly 67% and 71% of respondents from BC and NBC respectively, were either highly dissatisfied or dissatisfied with the services provided by their respective networks. TIGO and Vodafone customers were the most satisfied while MTN customers were the most dissatisfied.

The poor services provided by these firms alarmed the National Communications Authority (NCA). Consequently, the NCA conducted a Quality of Service (QoS) test in 2011, which resulted in most of the telecom firms being slapped with a fine totaling €400,000.00 for what the NCA described as ‘various Quality of Service (QoS) infractions’. The fines include €33,333.00; €66,666.67; €116,666.70 to €150,000.00 for TIGO, Vodafone, Airtel, and MTN respectively. The quality violations comprise call setup delays, call congestion, signal congestion, and poor coverage. The market leader, MTN which is also the largest telecom firm in Ghana, incurred the most penalties for the most violations. This probably explains the telecom giant’s dwindling fortunes in Ghana in recent years. In the NCA’s July 2012 publication of the results of the one year experience with mobile number portability (MNP), MTN became the biggest loser having lost 125,000 more subscribers porting out than porting in. TIGO was the biggest winner followed by Vodafone with a net gain of over 68,000 and 43,000 ports respectively.

Table 3: Telecom Firms in Ghana Provide Good and Reliable Services

	Beneficiary Communities		Non-Beneficiary Communities	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Strongly disagree	459	98.1	103	85.8
Disagree	9	1.9	17	14.2
Neutral	0	0	0	0
Agree	0	0	0	0
Strongly Agree	0	0	0	0
Total	468	100.0	120	100

This table shows results regarding respondents' views on services provided by telecom firms. Respondents from both beneficiary and non-beneficiary communities are asked to rate on likert scale of 1 (strongly disagree) to 5 (strongly agree).

Table 3 indicates that while over 98% of respondents from CSR beneficiary communities strongly disagree with the statement, 85% from non-beneficiary communities did. The implication here is a few philanthropic acts is no substitute for good business ethics. Consequently, nearly all respondents from both communities (97%) agree to the proposition that government should formulate policies to regulate CSR activities of Telecom firms in the country. Communications experts and various civil society groups in Ghana have vehemently called on the government, as a matter of urgency, to set up a National CRS framework and develop appropriate standards for reporting CSR initiatives by all corporate bodies to ensure transparency and proper monitoring. Such frameworks and standards are prevalent in the European Commission for example, where the guidelines contained in its 2001 'Green Paper' "has been accepted as the authorized guideline of what companies should do to meet their social responsibility" (Karima, Oshima, and Yamamoto, 2006, p. 328). A number of studies reveal a positive relationship between CSR and brand loyalty (Lichtenstein, Drumwright, and Braig, 2004; Luan and Ailawadi, 2011; Mandhachitara and Poolthong, 2011). To probe the assertion that CSR builds brand loyalty in a firm's customers, the present study investigates a number of variables regarding attitudinal and behavioural loyalty of telecom customers in both CDP beneficiary and non-beneficiary communities. Based on theoretical and empirical grounds the structure and dimensionality of CSR and customer loyalty constructs were examined using exploratory factor analysis (EFA) with Varimax rotation and reliability test. After examining the pattern matrix of the EFA, all items retained had communalities above 0.5 and loadings greater than 0.5. Cronbach's alpha for the three-item CSR variables was 0.75 and for the three-item customer loyalty (CL) variables was 0.73. EFA results are shown in Table 4.

Table 4: CSR and Customer Loyalty-Exploratory Factor Analysis Results

Coding	Variables and Items	EFA Factor Loadings	
CSR	*Corporate Social Responsibility*	CSR	CL
CSR1	I use only this Network exclusively because of their CDP	0.806	
CSR2	I will stay with my network because of its CDP initiatives	0.757	
CSR3	I will use a network if it undertakes community development projects	0.740	
CL	*Customer Loyalty*		
CL1	I will recommend my network to others because of their commitment to CSR		0.798
CL2	I will switch to a network if it embarks upon a CDP in my community		0.733
CL3	I will switch networks because of price and service charges		0.593

This table shows correlation and reliability analysis.

A key objective of this study is to examine whether or not CDP determines customer loyalty. The analysis revealed a significant positive relationship between CDP and customer loyalty ($p<0.01$). This implies that the more CDP that are undertaken by MNTC, the more loyal customers are likely to be. Correlation and reliability results are shown in Table 5.

Table 5: CSR and Customer Loyalty -Correlation and Reliability Analysis

Key Variables	Mean	S.D	Cronbach's Alpha	1	2
1. Corporate Social Responsibility	3.83	0.97	0.75	1.00	
2. Customer Loyalty	3.99	0.76	0.73	0.38*	1.00

*Note. *significant at 0.01 level*

Another major objective of the study is to assess whether or not customer loyalty levels differ between beneficiary and non-beneficiary communities. The results revealed that customer loyalty levels in BC was significantly higher than those in the NBC ($p<0.01$). Furthermore, respondents in the BC appeared to appreciate, understand, evaluate CDP activities much better than those in NBC ($p<0.01$). Table 6 contains the t-values for the comparison between the communities.

Exclusive purchase is probably the strongest indicator of brand loyalty. The results of our study show that the majority of respondents from BC agree to using specific networks exclusively because of their CDP records. Subscribers of NBC on the other hand, stated that their network's CDP do not inform their decision to use the network. This finding supports Yeldar's (2004) assertion that CSR leads to increased sales and customer loyalty. Customers will be committed to using a telecom network as a result of the latter's commitments to engaging in development projects that are beneficial; and targeted at helping the needy in society. Our findings also support the resource-based view. This is because CSR commitments communicate the nature and direction of the firm's social and environmental activities and also helps people develop affective commitment to the organization and its products and services, hence their loyalty to the network. Regarding stated intention to use a network, the majority of the respondents from both BC and NBC agree that they would use a network if it supports community development projects. This is positive news as it implies that telecom firms have the potential of winning customers if they commit to engaging in CDP activities that benefit the communities they operate in. As government is unable to extend development to all parts of the country especially to remote areas, communities are looking more to the corporate world for assistance in alleviating their plight.

Table 6: CSR and Customer Loyalty- Comparative Analysis

Variables	Community Type	N	Mean	St.Dev	T	P
CDP	BC	468	4.02	0.96	13.68	0.00*
	NBC	120	3.08	0.58		
Customer Loyalty	BC	468	4.11	0.73	7.65	0.00*
	NBC	120	3.53	0.73		

*Note. *significant at 0.01 level*

The result further shows that customers from BC will stay with their respective network because the firm supports the community. Also, a quarter of subscribers from NBC would stay loyal to their networks. The implication is that broader and deeper relationships develop when a firm is concerned with the environmental needs of its community and as such integrates environmental management systems and policies to satisfy the needs of its community. It can be established that the visible presence of CDP in BC play a significant role in developing a loyalty relationship between these communities and the MNTC. The findings also indicate that respondents from BC who agree to stay with their networks will also recommend the network to others. Hence, commitment to CDP will not only help a network retain its customers, but also make BC ambassadors of the firm.

Our findings support the resource-based view that engaging in CSR can help firms to create resources such as brand awareness, unique reputation, and customer loyalty that can be strategically deployed by a firm to stand clear of competition and improve its economic fortunes and sustainability over time. On the contrary, the result shows that bulk of all respondents reject the idea of paying more for services because a network provider is committed to CDP. Similarly, majority of respondents will switch service providers because of price differences regardless of the CSR status of the network. This refutes Luan & Ailawadi’s (2011) suggestion that consumers don't just respond to the price charged; they also respond to how fair they think the price is. High prices are considered fairer if they can be attributed to "good" motives like CSR efforts. However, in Ghana and other developing countries where incomes are relatively low and levels of poverty high, the majority of people are price sensitive, and fairness is hardly ever a prime consideration when making purchasing decisions. Thus, just because a firm spends money on CDP initiatives does not mean the consumer will think it's fair to charge higher prices. Consequently, quality of service and price rather than CSR commitments of a telecom firm is the key reasons for switching networks.

CONCLUDING COMMENTS

The concept of CSR has become a topical issue on the corporate agenda around the world. Companies in Ghana need to integrate CSR into policy decisions and act in a more proactive manner in order to gain a sustainable competitive edge in the global market. The identification of CDP that speak to the needs of the local communities in which companies operates, especially in Ghana and other developing countries, may provide business leaders with more practical perspectives of CSR programme implementation. This study supports the resource-based view that social performance is determined by the internal characteristics of firms since CSR is a strategic tool to gaining a competitive advantage. As noted by Moura-Leite, Padget, and Galan (2012), firms retain considerable self-determinism regarding their CSR trajectories, but the latter also represent a shared strategic asset.

Poor service quality has been identified as the key dent in the CSR performance of all the MNTC in Ghana although most people from BC acknowledge the usefulness of the CDP initiatives in their communities leading to the development of affective, or at least attitudinal loyalty towards their benefactors’ brand. Increasingly, various institutions and civil society groups have cast doubts on the CSR credentials of these MNTC and are mounting pressure on them to improve services as part of their social responsibility. According to Yeboah (2010) the lack of easy blueprints for examining the responsibilities of companies does indeed point to the need for a critical consideration. The time has come for government to act proactively in ensuring that these companies operate within the confines of the laws regulating their operations. The researchers further identified that even though customers consider quality of service and price as the primary factors for choosing and using a particular network, the idea of businesses engaging in charitable CDP can also become a vital consideration when it is well practiced by firms and understood by customers which ultimately will enhance the credibility and the reputation of these companies. Brammer and Pavelin (2006) established that CSR has varying reputation impacts and that these impacts are dependent on each industry. In view of the fact that the reputation of a firm is socially constructed, the actions within its industry may weigh heavily on the attributions stakeholders make regarding a firm’s corporate social performance (Hoffman and Ocasio, 2001).

It is therefore crucial for managers to identify the characteristics and perceptions of customers and other stakeholders and their relationship with the firm, in order to define how to act in accordance with their expectations so far as CSR initiatives are concerned since stakeholder attributes are socially constructed, not objective reality (Mitchell, Agle, and Wood, 1997). In addition, it is necessary for managers to recognize the level of each firm’s social commitments with each identified community to understand its impact on CSR dimensions. As evidenced in this study, firm performance is not solely driven by quality of service or product, but also by CDP outcomes of businesses. Therefore, the exploration of links between CSR and a firm’s reputation should take into consideration the firms CDP initiatives.

The findings of this study are not without limitations. First, the study only investigates the telecommunication sector of the Ghanaian economy. Other sectors could produce different results and therefore needs to be further explored. Besides, the study only includes the philanthropic aspect of CSR. Investigations into the economic, legal and ethical aspects may most likely generate alternative outcomes and should be explored through further study. Again, future research on CSR activities should consider the geographical location of these firms this is because country is a key factor in corporate social responsibility intensity (Doh and Guay, 2006). A comparative study could greatly increase our understanding of the differences in CSR activities between countries, firms and industries.

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DETERMINANT FACTORS FOR SUCCESS IN SELF-SUSTAINING RESEARCH & DEVELOPMENT TECHNOLOGY CENTERS

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ABSTRACT

Technological Research and Development Centers (CTID) play a crucial role along with the State and private sector in technological development policies, innovation and competitiveness. This occurs both in country and for regional development. Their scientific and technological activities are essentially oriented to applied research through technology development projects, training and specialized training of human resources as well as technological services. The aim of this study is to identify and validate the determinant factors for the success and competitiveness of self-sustainable CTID. We use focus groups and exploratory factor analysis with Varimax rotation to gather the CTID determinant factors for success and competitiveness. The inquiry covered a sample of 55 experts from research centers that constitutes 80% of the population able to respond this instrument given its expertise in these subjects. Results show that most valuable key factors in CTID are: Customer Focus, Technology Management Model, Projects Management and Business Culture.

JEL: O32

KEYWORDS: Determinant Factors, Core Competencies, Mexican Research and Development Technology Center, Self-Sustainability, Sustainable Competitive Advantage

INTRODUCTION

The main capabilities of the Technological Research and Development Centers (CTID) are based on organizational technologies, strategic management, continuous improvement, inter-business cooperation, technology management and human resources development, strengthening and complementing procurement processes, assimilation and diffusion of domestic or imported technologies. Optimizing and enhancing existing capabilities and operating costs and risks, guarantee their financial self-sustainability. Mexican experience shows a low historic approach between innovation and technological development (I+DT) and industry. It also shows the existence of centers of technological vocation, which have understanding, contact, and attention to industry needs. These are often oriented to make more efficient manufacturing processes in production plants (Sáenz, 2008). This allows them to be technology producers and to make a brokering role in strengthening the value chain by creating new interactions (Lizardi, Baquero & Hernández, 2008).

Skills and competencies are essential due to their role as components in structuring technological development strategies (Castellanos, 2007; Casanueva, 2001). According to Hlupic (2002), enterprise knowledge in tactical and strategic management takes the form of skills and competencies. The above demonstrates the necessity, in terms of global competitiveness where technology and innovation are key factors, that CTID focus their efforts on managing strategically their technological skills and distinctive capabilities. Therefore, this paper identifies factors for success and competitiveness of Technological Development Research Centers operating in a self-sustaining way (CTDI-AS). This investigation provides a literature review, that describes the foundation in which unemployment is based on in the CTID and CTID-AS. The methodology lays out variables, hypothesis and process techniques of the empirical data investigation instrument. Results based on figures and tables demonstrate the theoretical bases needed to identify the key and determinant factors that feature a CTID-AS including the proposed hypothesis validation.

This document continues with a review of the literature and the state of the art about CTDI. In the methodology section we show how information was captured and processed by exploratory factor analysis and testing of a hypothesis (hypotheses contrast). In the results section the "goal of the paper", "the primary findings", "discussion and limitations" and "directions for future research" are explained.

LITERATURE REVIEW

Merritt, (2007), in a stud about Mexican National Science and Technology Council (CONACYT), from the client's perception indicates that these Centers are distinguished for: excellent service, professionalism, cooperative behavior, and competitiveness. These results come from the quality and value of the services previously mentioned. They demand management of industry secrets and intellectual property. They also consider the possibility of obtaining unexpected ideas for new projects, tangible characteristics of the centers such as easy access and facilities quality, location and distance, the price of the services, and their public character. Mengu, (1999) points out the distinguished role of the CTID in the National System of Innovation, is due to its active participation while providing Research and Experimental Development services, providing specialized technical information, providing services, realizing research work, and training the industrial technician personnel.

We conclude that core competencies align with processes and activities of the value chain to generate a synergetic effect. This allows the development of sustainable competitive advantages based on resources and capacities in an organization (Pinto, 2007). Not all resources are strategic. This implies that not all resources generate competitive advantages. Therefore, the challenge is in determining which resocurces are strategic and create a competitive advantage.

According to Barney (1991) and Álvarez (2003), core competency characteristics include:

1. Valuable. Core competencies are the main source of development in new business and allow access to a great variety of markets. They should constitute a strategy focus in a corporative level and be directed to earn leadership in the product/service generation.

2. Rare. A core competency should be unique. When a competency becomes widely available it ceases to be a competitive advantage.

3. Prices to Imitate. A core competency should be difficult to imitate by the competition. It will only be difficult to copy if it has an absolute harmony between individuals, technology, and technical production. A rival could acquire some of the technology that comprises the core competencies, however it will be difficult and expensive to imitate the global pattern of coordination and internal learning.

4. Not Replaceable. Core competencies are a collective learning in an organization; especially the methods used to coordinate several production techniques and the integration of multiple technological flows.

Leonard (1992), Hamel and Prahalad (1990), Sáez (2000), and Álvarez (2003), provide a general treatment for the definition of core competencies. They also state that suitable definitions cannot be found that could be applied to a Public Research Center (CPI). Thus, there is no guideline to identify core competencies or what each CPI recognizes as such. We then needed to separate the concept associated with the Success Key Factors (FCE), since they form the foundation for the organization to develop their distinctive capabilities and gain competitive advantages.

To identify organization key success factors (FCE), the firm must develop distinctive capabilities and competitive advantages. An organization realizes a competitive advantage only when it has a higher level of performance than competitors in such FCE. They are the company's base elements to compete in the market. These elements should correspond to necessary distinctive capabilities in an organization to be competitive. The degree of relative mastery of the FCE determines the firm's competitive position. When companies are diversified, FCE vary the most, as these differ from one activity to another. However, some FCE may be common to any activity (Thompson & Strickland, 2002). A literature review on strategic management of organizational and technological capabilities reveals some factors considered key to the success of organizations dedicated to technological development, as seen in Table 1.

Table 1: Key Factors Identified in a CTID-AS or Pretended to Be So

No.	Variables	Definition
1	Value proposition.	The value proposition is an integrative strategy of the organization activity, selects and prioritizes the specific elements of a product or service that are most valued by demand, making them affordable and replicable. (Osterwalder & Pigneur, 2010).
2	Organizational culture focused on innovation.	Incorporation of processes innovations or management methods in production systems of organizations to improve their productivity and cost structure, creating conditions and a work environment to make possible new products generation and the acceptance of new technologies and innovations. (Arraut, 2008).
3	Collaborative culture.	Habituating the organization to work using cross departments and interdisciplinary teams for projects execution, understanding that such mixed teams project deliverables are of greater value to the organization and the customer than the sum of individual deliverables. (Peborgh, 2013).
4	Open innovation.	Open innovation means that organizations invite experts outside the organization to participate in innovation exercises, to improve their products innovation and take into account the best market practices to complement the value of their own innovation assets, then improving return on investment. (Solleiro & Terán, 2013).
5	Projects Management System.	Methodology, software and practice of participants for project planning, management and budget control, resources allocation, collaboration, communication, quality management and documentation or systems administration, which are needed to manage the complexity involved in project deliverables generation. (Solleiro & Terán, 2013).
6	Innovation management: Technological watching.	Capture, analysis, dissemination and use of information from news and technology trends that can impact the organization's products due to increased competition for quality, price, market share, etc., becoming useful information for survival and growth of an organization. (Jakobiak, 1992).
7	Innovation Management: Technology Planning.	Process that allows alignment of the Strategic Planning with technological objectives. (Sánchez & Álvarez, 2005).
8	Innovation management: acquisition, assimilation and technological development.	Technology acquisition is a process to meet the technology needs of an organization in two ways: a) the need to improve the capacity of cleaner production, b) the need to strengthen the technological capacity of the organization, planning technology, technology development, product innovation, patents, etc. (Reisman, 2005).
9	Innovation management: Intellectual protection.	A creation of the human intellect, found in almost all knowledge areas, whether in the form of creative works such as books, films, recordings, music, art and software, or physical devices and ordinary objects such as cars, computers, medicines and plant varieties. (Singh, 2011).
10	Innovation Management: Implementation.	The process of defining the organizational structure, the provision of resources for innovation, defining policy and objectives of innovation and methods of evaluation and monitoring system itself to achieve its strategic objectives through innovation. (Corona, Garnica, & Niccolas, 2006).
11	Technology transfer (commercialization)	The transmission or delivery of information technology or a proprietary technology between it and a third party that requires it. This transfer can be done on intellectual assets such as patents, whether they are pending or granted patent. (Solleiro & Terán, 2013).
12	Technology-based companies creation ("spin-off").	"Spin-off" expresses the idea of the creation of new businesses within other companies or existing organizations, whether public or private, acting as incubators and, in this case, are technology-based. Eventually they end up acquiring legal, technical and commercial independence. (Castillo, 2009).
13	Licensing proprietary technology.	The license is a permit, more or less, limited to technology, but that does not alter the ownership of it. You can have different objectives (use, operation, marketing), duration and full or limited application to a geographical area (in one or several countries) or to a particular use exclusivity. On the contrary, the technology transfer involves a change in ownership. (Zurano, 2008).

14	Technological intelligence.	A tool for institution technology management that allows them to be sensible to external scientific and technological developments that may represent opportunities or threats for the company, to act promptly on the development of preventive measures such as plans and relevant technological projects. (Solleiro, 2009).
15	Performance evaluation system.	Set of procedures to collect, analyze and share information collected from and about people at work, with the intention of improving their tasks performance. Usually, it is the basic input to quantify incentives, awards, promotions, etc. (Oltra, 2008).
16	Services portfolio.	It is a document or presentation where a company details the characteristics of its commercial offer. This type of portfolio can target potential customers, business partners, suppliers, etc. (Solleiro & Terán, 2013).
17	Customer relationship management.	A model of customer relationship management is a set of guidelines and policies clearly defined and replicable compulsorily to direct the way in which the often lengthy process of sale and then the customer service is performed. The information is centralized in the organization and accessible to applicable decision makers. (Cabanelas, Cabanelas & Paniagua, 2007).
18	Human capital.	The increase in production capacity of the work achieved with improved capabilities of workers. These enhanced capabilities are acquired through training, education and experience. It refers to an individual practical knowledge and acquired skills and abilities. (Martínez & Cegarra, 2005).
19	Relational capital.	The set of all relationships, market power and cooperation established between organizations, institutions and finally materializes in the day-to-day relations between the people themselves working for these organizations. (Martínez & Cegarra, 2005).
20	Structural capital.	Knowledge the organization "hosts" in their work systems. Knowledge the organization gets explicit, systematic and internalizing and that initially may be latent in people and teams in the organization. A solid structural capital facilitates an improvement in the flow of knowledge and implies an improvement in the efficiency of the organization. (Martínez & Cegarra, 2005).
21	Physical infrastructure.	The sum of the whole set of physical and material elements, such as buildings, laboratories, workshops, vehicles and the facilities that are located in one or more specific areas. The infrastructure is not related to any primary activity, but supports it. (Porter, 1985).
22	Strategic alliances.	It is the association of two or more organizations in a new project in order to take advantage of a common market. (Ariño, 2008).
23	Explicit criteria for prioritization and resources allocation.	Methods, rules and policies that allow expression of preferences and opinions to obtain a group or authorized person decision to allocate priorities and resources. (Panitchpakdi, 2013).
24	Risk management.	Applied in setting strategies across the organization, designed to identify potential events that may affect the entity and to manage identified risks, to provide reasonable safety and integrity regarding objectives achievement. (Lefcovich, 2004).

Prepared from literature review. This table shows some key factors for success in organizations dedicated to technological development. They were obtained thought the literature review about the organizational and technological strategic management capabilities.

From the review shown in Table 1, we can appreciate the concept of core competencies does not come clearly defined due to Public Research Centers (CPI) role in expressing it strategically as to not alert the competition. The same authors of this paper identified key distinctive factors that characterize the studies businesses.

DATA AND METHODOLOGY

To validate the determinant factors for success and competitiveness of Technological Research and Development Centers in a self-sustainable way (CTID-AS), the present research was carried out through different stages (see Figure 1):

The first stage involved a documentary review of the variables identified in the literature and the actual practice of the Technological Research and Development Centers (CTID) and foreign research centers. We looked for those factors considered key to the success of organizations dedicated to technological development. We listed and conceptualized a total of 32 key factor variables.

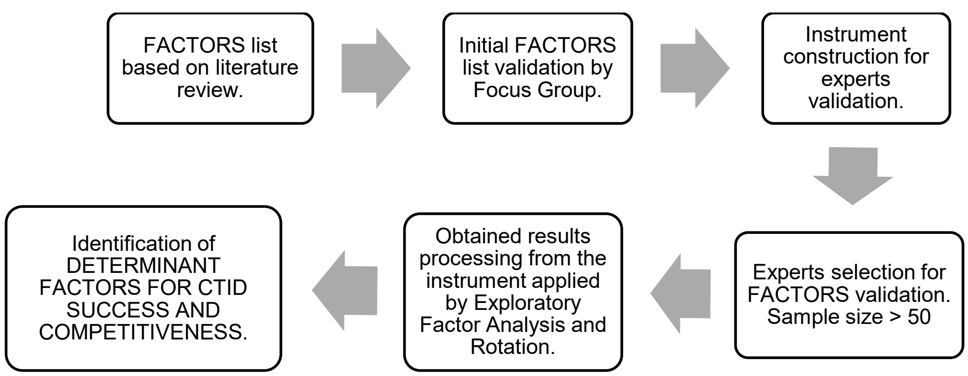
The second stage utilized a focus group method (FG) with 10 people. Participants were asked to analyze and validate conceptual definitions and scales, the relevance level and clarity and accuracy of the formulation presented, as well as the option to propose other items or factors. The FG exercise removed and / or reformulated a group of variables, finally resulting a list of 24 variables, as showed in Table 1.

The third stage applied an instrument for key factors validation. This phase included selection of the sample, considering requirements of the statistical method used. Hair et al. (2004) indicate that one should not perform the analysis with a sample of less than 50 observations. De Winter et al. (2009) indicate that a sample of N = 50 observations is a reasonable minimum. Consultation with 55 experts was conducted over a period of five weeks in March and April 2016, using an Internet questionnaire application, developed with 24 questions using the Likert format five answers in two successive rounds.

In the fourth stage, we reduced the number of factors. The study here is a classic case of many items that must be reduced to a small number of factors, by applying the Exploratory Factorial Analysis (AFE). AFE allows the grouping of variables into homogeneous groups. All these items can be correlated and grouped together into a single factor (Kahn, 2006), but are also relatively independent of the other items to be grouped in other factors. To assess whether the application of the AFE is possible, we calculate the measure of sampling adequacy, Kaiser-Meyer-Olkin (KMO), which consists of comparing the observed correlation coefficients with the magnitude of the partial correlation coefficients. If the calculated KMO value is below 0.6, AFE should not be applied. Another measure is the Bartlett test of sphericity, which makes a contrast of null hypothesis (H0) to assess whether the observed correlation matrix is an identity matrix. If the calculated level of significance is greater than 0.05, there is insufficient evidence to reject H0, in which ace AFE is not suitable to evaluate the data. Another test that validates whether the application of AFE is or is not possible is the value of the anti-image matrix. This test requires that values of the diagonal of the correlation anti-image matrix are high. The other needed condition is that there must be high correlations between the 24 variables.

In the fifth stage, we identify key factors for success and competitiveness of CTID-AS. The AFE method comprises of applying rotation to find factors with high correlations with a small number of variables and zero correlations in the remainder variables. It involves redistributed the factors variance. These high correlations factors are called principal components, which are then associated with the Determinants of Success Factors (Kaiser, 1958).

Figure 1: Steps in the Research Process First List, Focus Group, Corrections to the List and Expert Consultation



Own elaboration. The research has been developed in different stages with the objective of validate the determinant factors for success and competitiveness of the CTID-AS.

From these factors, there is the possibility of generating a Hypothesis (H1) such as: There exists a limited number of variables that identify determinant success factors for competitiveness of the CTID-AS.

RESULTS AND DISCUSSION

As a result of this investigation, we present the AFE processing based on the instrument applied and determinant factors obtained. First, we demonstrate that all requirements to apply the AFE are met. The suitable measure of sampling adequacy (KMO) has a value of 0.848; Bartlett test value is 0.00 and the Cronbach's Alpha is 0.90. Anti-image matrix diagonal values are greater than 0.75 with an average value of 0.86. Similarly, high correlations between the 24 variables are observed when the Pearson correlation is applied. The sample size is 55 experts (> 50), therefore we accept the sample as a valid number of surveyed experts. Participants represent 80% of the population able to respond this instrument given their expertise on these issues. Of the available methods in the strategic pack SPSS 19 this one is chosen from the main component. It explains the highest variance like as shown in Table 2.

Table 2: Variance Explained in Different Factorial Analytical Methods

Method	Explained Variance
Main components	69.91 (*)
Least unweighted squares	64.26
Least generalized squares	63.16
Alfa analysis	63.88
Imagen analysis	62.65
Maximum plausibility	64.09
Axis factoring	64.25

(*) Chosen due to the highest variance explained. Own elaboration. Of the available methods in the strategic pack SPSS 19 this one is chosen from the main component shown in this table.

Results shown by the AFE highlight the acceptance of 18 out of 24 analyzed factors. The six factors not included have a factorial load of less than 0.6. This analysis reduces the 18 variables into four components, which explain the 69.91% of variation as shown in Table 3.

Table 3: Result of Factorial Analysis with Four Components

Component	Sums of Square Loadings of Extraction			Sums of Square Loadings Rotation		
	Total	% of The Variance	% Accumulated	Total	% of The Variance	% Accumulated
1	12,966	54,023	54,023	5,332	22,218	22,218
2	1,467	6,112	60,135	5,128	21,367	43,584
3	1,256	5,234	65,369	3,711	15,463	59,048
4	1,091	4,546	69,915	2,608	10,868	69,915

Own elaboration. This analysis can reduce the 18 variables in four components appreciated in this table.

Varimax rotation is applied to achieve a better interpretation of results. Varimax is an orthogonal rotation method of factors that searches the best interpretation of the components or constructors. Factorial rotation aims to select the most interpretable solution. It consists of spinning the four axes of coordinates that represent the factors/components. This goes on until it gets as close as it can to the maximum variables in which (the components) are saturated. Table 4 shows the four main components (CP) that can be identified as determinant factors for success and competitiveness of the Technological and Research Development Centers (CTID) operating in a self-sustainable way. We assign names to these Determinant Factors as follows: No. 1, Client Focus; No. 2, Technological Management; No. 3, Project Administration; and No.4, Business Culture.

Table 4: Rotated Components

Component	Client Focus 1	Technological Management 2	Project Management 3	Business Culture 4
Client Relationship Standard	0.71			
Service Portfolio	0.60			
Value Proposal	0.87			
Technological Proposition		0.66		
Explicit criteria to assign priorities and resources		0.67		
Implantation		0.64		
Acquisition, assimilation and technological development		0.60		
Protection of the organization's patrimony.		0.62		
Administration system for projects			0.62	
Highly qualified Human Resources			0.66	
Infrastructure of I&D laboratories			0.77	
Technological intelligence			0.72	
Risk management			0.61	
Evaluation System for unemployment			0.67	
Cooperative culture				0.60
Technological Merchandising				0.60
Licensing of own technology				0.71
Business creation with technological foundation (spin-off)				0.81

Own elaboration. This figure shows the four main components (CP) that can be identified as the determinant factors for success and competitiveness of the CTID-AS. We assign names to these Determinant Factors as follows: No. 1, Client Focus; No. 2, Technological Management; No. 3, Project Administration; and No.4, Business Culture.

The assigned names have to do with the nature of the variables that make each component. They are chosen in accordance with the bibliographic analysis described in the theoretical framework. Client Focus is interpreted as a client relationship standard and a service portfolio that will find the differentiating value proposition that solves the client's need.

The component Technological Management shows the importance of having technological programming. They must have explicit criteria in assigning priorities and resources that allow their appliance such as acquisition, assimilation and technological development, and the protection of the organization's patrimony. Project Management includes a project administration system suitably structured with highly qualified human resources and lab infrastructure for research and development work. We include the technological intelligence variables, risk management, and unemployment evaluation. The Business Culture component includes all management variables, from the collaborative culture to the merchandising and technological licensing.

CONCLUDING COMMENTS

The objective of this work was to identify and validate determining factors for the success and competitiveness of the self-sustainable CTID. Based on the results shown in previous literature, we use of a methodology involving a focus group of 10 specialists in consultation with 55 experts from research centers, which reduced the initial number of variables identified in the literature from 32 to 24. This process ratified 18 variables and provided data for the use of exploratory factor analysis (AFE). We validate the technique using Kaiser-Meyer-Olkin (KMO) sampling adequacy, Bartlett sphericity test and the anti-image matrix value with Varimax rotation. We thereby group variables into homogeneous groups and identifying the determining factors for the success and competitiveness of the CTID. We identify four determinant factors in the Technological Research and Development Centers operating in a self-sustainable way (CTID-AS). These are: 1) Client Focus; 2) Technological Management; 3) Project Administration; and 4) Business Culture. These four factors group a limited number of 18 variables that identify the determinant factors for success and competitiveness of the CTID-AS proving the hypothesis H_1.

The four determinant factors for CTID success and competitiveness, are associated with the fact that effective management of technology transfer involving several agents requires projects management, internal interactions management, keeping the focus on the market, networking construction, and external interactions management (Braun et al, 2000; OECD, 2003; Cotec, 2003). These are organizational capabilities of Technological Research and Development Centers (CTID), which require research, documentation and best practices. As with all research, this examination has some limitations. The primary limitation lies in the number of experts involved in the study. The number of experts selected is limited because the query criteria can only be taken from a small group of people involved in research centers. Th contribution here is useful for future work in developing a conceptual model that links the variables (key factors) and the determinant factors for success and competitiveness of the CTID-AS.

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