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African Journal of Business Management

Full Length Research Paper

Firm performance and economic crisis: Family versus non-family businesses in Italy

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This study investigates the performance of medium-sized family businesses – hereafter MSFBs – during the economic recession by comparing family and non-family firms, and correlating the organisational performance to the family ownership and firms' solvency. An empirical research study was carried out on a sample of 128 Italian medium-sized businesses – hereafter MSBs - (76 family and 52 non-family businesses). We used the AIDA – Bureau van Dijk database to collect data referring to three years 2007, 2009 and 2014, respectively corresponding to the pre-crisis phase – 2007, the great recession – 2009, and the post-crisis phase – 2014. STATA software was used for analysing data and the analysis was organised into three steps. First, we collected the descriptive statistics. Then, we used a t-test to determine if businesses' performance and solvency significantly differ in family and non-family businesses subgroups. In the last step, we performed a regression analysis to examine the relationship between firms' profitability (dependent variable) and family ownership and solvency (independent variables). Contrary to previous research, we found that MSFBs performed worse at each stage of the crisis, especially during the harshest phase of the crisis. Results also show that family ownership negatively affected businesses' profitability. On the contrary, solvency positively affected firms' profitability at each stage of the crisis. Finally, we analysed and discussed a model case study, to better understand financial and economic dynamics of family firms during the analysed period. Although family firms' performance during the recession period has been widely studied, they generally referred to large companies. Analyses haven't considered MSBs, even if in recent years they have played an important role in several economic systems and show some distinctive features that can significantly differentiate them from large companies. The main contribution this study brings to the literature is investigating family business performance during a downturn, paying attention to MSBs.

Key words: Family business, medium-sized enterprises, performance, solvency, economic crisis.

INTRODUCTION

Family firms play a significant role in several economic systems, in both industrialised and developing countries. According to one of the most acknowledged definitions, a family firm is a "business governed and/or managed with

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the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families" (Chrisman et al., 1999).

However, this definition cannot be used to determine the exact number of existing family businesses, or to carry out comparative studies between different countries. In fact, several analyses on the presence of family businesses in different countries, as well as numerous empirical studies on this topic, use different variables to operationalise the definition of family business and to measure the number of such companies (Astrachan et al., 2002; Klein et al., 2005).

Despite these difficulties, the available data clearly shows the presence, in Italy, of a very high percentage of family businesses. One of the most recent statistics shows that, in Italy, more than 75% of enterprises are family businesses, and this figure is not very different from that of leading countries in Europe (Germany 75%; France 75%, UK 65%; Spain 85%) (according to the estimations of the European Family Businesses Federation).

Consequently, in business research, knowing the performance of these enterprises and their motivations is of great concern, in order to understand how and if firms' performance is affected by family's involvement in firms' ownership and governance (Gallo et al., 2004; Allouche et al., 2008; Amann and Jaussaud, 2012; Basco, 2013; Minichilli, et al., 2015).

Indeed, in studies on family businesses, the influence of family ownership and control on business performance is one of the most debated issues in recent years (Mazzi, 2012; Basco, 2013; Minichilli et al., 2015). Several scholars conducted research on this subject, adopting diverse theoretical perspectives. The agency theory, the stewardship theory, the resource based view and the socioemotional wealth were primary positions taken. Nevertheless, these studies do not offer unambiguous results (Enriques and Volpin, 2007; O'Boyle et al., 2012).

Some authors, following the agency theory framework, claim that family firms are more efficient than non-family firms (Fama and Jensen, 1983). When family members are involved in business ownership and management, risks of opportunistic behaviours (by managers) are reduced. So agency problems are absent thanks to the alignment of interests and objectives (Villalonga and Amit, 2006).

In contrast with this traditional point of view, other scholars have found that owner-manager and owner-owner complications (Villalonga and Amit, 2006) exist, because of possible negative relationships between family ownership and company performance. The main obstacles that can occur in family businesses include pursuing private benefits (Gómez-Mejía et al., 2001), entrenchment (Shleifer and Vishny, 1997), adverse selection (Lubatkin et al., 2005), nepotism and taking advantage of unearned benefits (Schulze et al., 2001).

In the last years some scholars have examined the connection between the family nature of a firm and its performance during a period of economic downturn. Their analyses proved that family businesses enjoy better performance than non-family businesses in various countries (Allouche et al., 2008; Amann and Jaussaud, 2012; Wu et al., 2012; Crespí and Martín-Oliver, 2015), given that they have a sounder financial situation (Amann and Jaussaud, 2012; Crespí and Martín-Oliver, 2015). In Italy other scholars have found similar results (Minichilli et al., 2015; Macciocchi and Tiscini, 2016).

Most research focused on large firms; studies on Italian Medium-Sized Businesses (hereafter MSBs) during the latest economic recession are nonexistent. Nonetheless, in Italy MSBs typify an important class of firms and have been playing an increasingly role in the economic system. This is why the aim of this paper is contribute to the development of this research field by concentrating on Italian MSBs. In particular, our aim is to compare Italian medium-sized family and non-family businesses, investigating whether or not family firms have presented higher solvency and profitability ratios during the recent economic downturn. In this paper, the results of our empirical research are presented.

LITERATURE REVIEW

Family ownership and control and firms' performance

The agency theory framework has been widely used to investigate the relation between corporate governance and firms' performance and additionally to contrast family and non-family businesses (Erbetta et al., 2013). Such studies have not produced unequivocal results (Enriquez and Volpin, 2007).

It has been claimed by some researchers that family firms typify a more efficient governance structure than non-family firms (Morck, 1988), owing to the fact that the concentration of ownership is in the hands of a small number of shareholders and the co-occurrence between ownership and control (Jensen and Meckling, 1976; Shleifer and Vishny, 1997).

The deep involvement of family members in ownership, management and control reduces the threat of opportunistic conduct and decreases possible problems emerging from the deviation of interests between principal and agent (Jensen and Meckling, 1976). As a result, conflicts are less frequent and business owners don't need to monitor managers and directors to promote alignment between managers, family and business objectives as often (Chrisman et al., 2004; Fama and Jensen 1983; Jensen and Meckling, 1976).

Furthermore, the number of shareholders in family

firms is typically low, which favours the formation of a single, shared view of the company. For the same reason decisions are usually quicker and the chance of managers compromising shareholders' interests and jeopardising firm performance is lower (Shleifer and Vishny, 1997).

In conclusion, according to the agency theory, family firms can achieve better results than non-family firms. According to Carney (2005), this result also stems from the fact that the coincidence between ownership and control produces three dominant behaviours: thrift, personality and particularism, causing family businesses to differ from other companies and allow reductions in agency costs, with positive consequences on business performance.

Other scholars have adopted the stewardship theory and affirm that family firms are characterized by long-run objectives and perspective, in view of the fact that their main concern is to establish the longevity of their firms (Breton-Miller and Miller, 2009).

Therefore, family businesses endure less managerial myopia (Stein, 1988, 1989), given that investment policies are more efficient (James and Harvey, 1999) and are effect to lesser degree by short-term economic conditions (Allouche et al., 2008). According to this view, the attitude of the stewards is a source of competitive advantage that positively affects the performance of family businesses (Eddleston and Kellermanns, 2007; Miller et al., 2008).

The concept "altruism" has been used by some scholars to characterise the posture of family firms, motivated by the shared well-being, mutual support and uniqueness of vision among family members. As a result, altruism contributes to lowering the likelyhood of opportunistic behaviour and helps to reduce agency costs (Parsons, 1986; Eisenhardt, 1989a; Schulze et al., 2001; Corbetta and Salvato, 2004).

Conversely, different researchers have claimed that altruism can be quite asymmetric in family firms and can jeopardise firms' performance and shareholder value (Schulze et al., 2001). Family members may show preference for their private interests, risking the longevity of the business (free riding, opportunistic behaviours, shirking).

Furthermore, family ownership may also exclude family firms from external control mechanism. In family companies, top managers often have low professional expertise, as they are very often selected among family members. On the contrary public companies use the market to select managers with qualified skills and consistent with the needs of the company (Lauterbach and Vaninsky, 1999; Lane et al., 2006).

These last reflections are in stark contrast to what is claimed by agency theory perspective. In line with this reasoning, family businesses could show high agency costs and this cause us to question family firms as a more efficient governance model.

The "resource-based view" (hereafter RBV) is another perspective of analysis, which believes that resources are the foundation of a firm's performance. If resources are unparalleled, adaptable to environment and rooted steadfastly in the business, they become a prospective source of competitive advantage (Penrose, 1959; Wernerfelt, 1984).

According to Habbershon and Williams (1999), "familiness" is the heart of resources and proficiencies assembled by family businesses. Familiness stems from the intercommunication of family business's subsystems: family, family members and business. Determined factors–coined as "family factors"–are the outcome of this interaction. They make resources and capabilities unique and affect the performance of a family firm.

From this point of view, family firms can be regarded as a dynamic system, able to give rise to unique competences (distinctive familiness) or impede them from occurring (constrictive familiness), therefore affecting wealth creation. As a consequence, family businesses can be sharp stewards of their resources, because of their longtime perspective (Arregle et al., 2007).

At the same time, however, family's will to control the company can limit financing options. Moreover, nepotism and entrenchment can prevent family firms from hiring qualified and competent managers (Bloom and Van Reenen, 2007; Mehrotra et al., 2011).

A new theoretical framework - "socioemotional wealth" (SEW) (Gómez-Mejía et al., 2007; Berrone et al., 2012) - was recently formulated to research on family firms and it is also adopted in the analysis of the family's influence on a firm's performance (Sciascia et al., 2014). According to this theoretical framework, decisions in family firms are heavily conditioned by their desire to protect SEW and maintain non-economic benefits - "affective endowments". Family-centred, non-economic objectives generate a stock of socioemotional wealth that results in a unique outcome for family businesses.

Recently, Sciascia et al. (2014) focused on the role of family management and its influence on family firms' profitability. Adhering to the SEW perspective, they carried out an empirical research study on a sample of Italian family businesses. Their results prove that family management can contribute to the improvement of a family firm's performance in later generational stages. In fact, authors argue that, in earlier generational stages, family firms are more focused on their socioemotional wealth, while in later phases they are more concerned with financial performance.

Similar results have been obtained from Arrondo-Garcia et al. (2016). They adopted the SEW perspective and analysed the performance of a sample of large Spanish family companies during the recent economic crisis. Their results show that first generation family businesses had worse financial performance (return on equity) compared to older family businesses during the same period (2006-2011). Debicki et al. (2017) offered

some explanations about how pursuing non-economic objectives affects family business financial performance. However, further research are needed on this topic in order to better explain if and how family firms can reach better performance (Daspit et al., 2017)

In conclusion, clear-cut results are still missing and additional analysis on this subject matter is needed. As already highlighted by Mazzi (2012), none of the discussed theories have been able to exhaustively explain what is, if it exists, the link between family firms' performance and family involvement in the business.

Different theoretical perspectives could be adopted to analyse the relationship between business performance and governance model, because each theory generates different hypotheses. That being the case, it's difficult to put forward an explicit hypothesis on this topic. This uncertainty also remains when findings from empirical analyses are considered, as they are often characterised by ambiguous outcomes (O'Boyle et al., 2012).

This is why we have formulated some research questions about the relationship between family ownership and control and firms performance.

Family firms performance and economic downturns

Several researchers in the last years have doubted the ability of family businesses to come up against periods of crisis and have compared performances of family and non-family businesses.

Some authors (Allouche et al., 2008) investigated Japanese family and non-family firms in two separate years – 1998 and 2003 – respectively indicated by the Asian economic crisis and a period of economic recovery. These scholars demonstrated that family firms are able to outperform non-family firms.

Amann and Jaussaud (2012) produced evidence that family businesses are more impervious to crises, are more fast to recover, enjoy better performance and have a more vigorous financial structure, with better solvency ratios and lower leverage ratios. Other authors studied performance of the world's largest companies from 2005 to 2008 and discovered that in periods of recession family companies performed better than non-family companies (Wu et al., 2012).

According to them, family businesses are able to make faster decisions and are more decisive in cutting costs, thanks to shared objectives among owners, managers, employees and executives. Scholars have also insisted that non-family firms perform better than family firms during economic upturn, given that family firms' emphasis on control can reduce risk propensity and diminish the creativity and motivation needed to innovate.

Furthermore, it is clear that companies need qualified management skills in periods of recession, to be better able to tackle the crisis with effective actions. In periods of economic crisis it's not enough for firms to be able to ensure their short-term survival. In fact they should also be able to prepare strategic initiatives that can ensure their long-term competitiveness (Sternad, 2012; Cesaroni and Sentuti, 2016). Family businesses, unfortunately, may not have sufficient managerial skills to execute such initiatives, given that they mainly select managers among family members, rather than turn to the market (Lane et al., 2006).

Other scholars have insisted that periods of recession can highlight owner-owner agency problems – Agency problem II (Villalonga and Amit, 2006). In fact, a crisis may prompt an owner family to take advantage of their position to achieve private benefits rather than up the company's profitability and competitiveness (Gómez-Mejía et al., 2001).

Contrastingly, other scholars have noticed that during economic downturns owner family predominantly make long-term oriented decisions for the survival of the business. Additionally, in order to strengthen the company's financial structures, an owner family would invest increase the share of capital invested in the company and give up dividends (Macciocchi and Tiscini, 2016).

In accordance with this point of view, economic downturns could underline a distinguishing trait of family businesses, often set apart by their low predisposition to debt. As long long-term survival is their primary concern, owner families would be very prudent when making financing choices, so they don't increase their leverage ratio and avoid putting the company's control at risk because of a great dependence on lenders (Allouche et al., 2008; Amman and Jaussaud, 2012).

So far, analyses on relationship between family nature of a firm and its performance have mainly considered large firms. Analyses on MSBs still haven't been performed, even though they play an increasingly important role in many countries, such as in Italy. In Italy MSBs are able to contribute to economic growth employment and innovation (UnionCamere, 2014). As a further matter, they also have some unique traits that can significantly distinguish them from large and listed firms (Palazzi, 2012). This is why we wonder whether findings emerged from previous research on performance and economic crisis–that mainly referred to large family firms–can be generalized to medium-sized ones.

According to O'Boyle et al. (2012) the relationship between the family nature of a firm and its performance is more favourable and potent in larger firms than in smaller firms. They did a meta-analysis to demonstrate this hypothesis but their results did not provide positive feedback.

Therefore, they called for further research to explore the impact of size in the relationship between family nature of a firm and its performance. As a consequence, it is significant to carry out further research and involve companies of all size classes, because so far analyses

have only really taken large companies into consideration. For this reason our goal is to extend the scope of the analysis, considering medium-sized family firms. In particular, we want to understand if during the recent economic downturn:

RQ1: family firms perform better than non-family firms;
RQ2: family firms show a higher equity ratio than non-family firms.

METHODOLOGY

Data collection

In order to answer the study research questions, an empirical research was carried out with the aim to compare the profitability and solvency of Medium-Sized Family Businesses (hereafter MSFBs) and non-family owned businesses during the recent recession. Following the definition given by the European Union Commission Recommendation in 2003, we classify a firm as medium when it has more than 50 employees but less than 250 and generates annual sales between 10 and 50 million euros.

Family businesses were identified considering companies in which a family holds a share of capital that allows it to control the company. We only considered private (non-listed) companies and classified a firm as a family business when an individual or a family (two or more family members) holds more than 50% of equity (Naldi et al., 2013, Minichilli et al., 2010). Since there isn't an official database of Italian family businesses, we adopted a manual procedure to classify companies as family or non-family businesses, conducting an in-depth review of the ownership structure of the selected firms.

The empirical research study was conducted in Italy. This country is particularly interesting when analysing enterprises' experiences during the recession because of the greater impact and duration of the crisis in Italy. Precisely, the research focused on MSBs located in Central Italy. This macro area–including Marche, Lazio, Tuscany and Umbria regions–is an important socio-economic zone with specific features consistent with our research questions: the industry structure and the latest economic trends.

From the point of view of industrial structure, this field exhibits the typical characteristics of an Italian industry, such as industrial dualism and a distinct productive specialisation in traditional sectors. Additionally, there is a very high number of MSBs, made up of 13% of the national total (Mediobanca and UnionCamere, 2015) and 83% of businesses are family owned (UnionCamere, 2014). According to the latest economic trends, the recession that began in 2008 has uniformly not had an effect on Italian regions.

According to the Bank of Italy Reports (Bank of Italy, 2009), the economy of Central Italy was severely affected in all sectors. Evidence of this is the substantial losses in terms of industrial value added from 2007 to 2013, amounting to -20.4%. This percentage is higher than that of Northern Italy where the North-West reported a 15.8% decrease and the North-East, -16.6%. However, in Southern Italy was the loss much more substantial, -29.9% (Bank of Italy, 2014).

In the first step of this research, we selected firms located in the Marche and Umbria regions, a geographical area with an extremely high presence of family businesses (UnionCamere, 2014) as well as a notable number of MSBs (Mediobanca and UnionCamere, 2015). In the next step of our research, the analysis will be broadened to include all medium-sized family and non-family businesses situated in Central Italy.

Data on firm profitability and solvency were collected for three years, characterised by profoundly different economic conditions: 2007, the pre-crisis phase; 2009, the great recession; and 2014, the post-crisis phase. We collected data from the AIDA – Bureau van Dijk database, which includes a wide range of financial and non-financial information on approximately 1 million Italian companies.

Applying the size and geographical area criteria, an ultimate sample of 128 MSBs was selected, representing 33% of the total number of MSBs in Central Italy (based on AIDA database). In 2007, there were 76 family businesses (about 60%) and 52 non-family businesses (40%). In addition, some firms changed their ownership structure from non-family to family ownership during the period of observation. As a result, in 2014, family businesses made up 67% of the database. This data is in alignment with prior studies, which confirm the prevalence of family businesses in the Italian economic system (Macciocchi and Tiscini, 2016; Faccio and Lang, 2002).

Data analysis

The following performance indicators and financial ratios were chosen to evaluate firms' profitability and solvency:

(1) The Ebitda profit margin. It's equal to earnings before interest, tax, depreciation and amortisation (Ebitda) divided by overall turnover and was adopted in order to measure firms profitability.
(2) The equity ratio. This ratio expresses the amount of assets financed by owners' investments, by comparing the total equity in the company to the total assets.

STATA software was used for data analysis, divided into three phases:

(1) We described the basic features of our sample providing the descriptive statistics for the main variables we used in our analysis: turnover, firm's seniority, employees, industry, Ebitda margin and equity ratio (Table 1).
(2) We employed an independent t-test (Hamilton, 2013) to distinguish similarities and notable differences in profitability and solvency between family and non-family firms in the three years included in our analysis: 2007, 2009, 2014 (Tables 2 and 3).
(3) We employed a regression model for each year of analysis to assess if and how firms' performance is affected by ownership structure and solvency, (Table 4). The Ebitda margin was used as the dependent variable. As independent variables we applied:

(1) A dummy variable (FAM), which equals one when the firm is a family-owned business and zero in any other way.
(2) The equity ratio (EQUITY).
(3) An interaction variable acquired by multiplying the variables FAM and EQUITY, in order to determine the combined effect of the previously mentioned variables on firm's profitability. The variable EQUITY was converted into a dummy, taking 0.30 (approximately correlating with the distribution median) as the threshold value. Therefore, we coded 1, if a firm shows a value equal to or above 0.30, and 0 in any other way.

In accordance with prior studies on family firms' performance (Claessens et al., 2002; Colombo et al., 2014), we examined some control variables: company size, industry, company seniority. Company size (TURNOVER) is measured by overall turnover per year. Company seniority (SENIORITY) is calculated by the number of years the firm has been in business. Both variables are altered by the natural logarithm. Lastly, we checked the industry (INDUSTRY) by using dummy variables based on the Italian industrial sectors (ATECO, 2007): code 1 for manufacturing firms; 0, otherwise.

Table 1. Descriptive statistics for family and non-family business.

Variable		2007			2009			2014		
		Family	Non-family	All	Family	Non-family	All	Family	Non-family	All
Sample	N	76	52	128	81	47	128	87	41	128
Turnover (1)	Mean	22228.46	20689.56	21603.28	19730.78	17507.83	18914.54	23762.31	20297.29	22652.42
	Std	7202.99	7554.19	7357.42	7860.52	4887.52	6980.66	905031	7315.29	8657.63
Seniority	Mean	25.55	22.28	24.23	27.46	24.11	26.23	31.73	30.15	31.23
	Std	12.63	14.44	13.43	12.41	14.94	13.43	12.55	15.26	13.43
Employees	Mean	96.08	112.04	112.04	97.96	113.45	103.65	102.49	116.88	107.1
	Std	35.74	42.96	42.96	31.79	43.20	36.99	32.37	45.76	37.61
Industry	Manufacturing	64	35	99	69	30	99	74	25	99
	Non-manufacturing	12	17	29	12	17	29	13	16	29
EBITDA/Sales	Mean	9.24	10.17	9.62	8.43	10.34	9.13	8.08	9.75	8.61
	Std	4.99	5.28	5.11	5.08	7.42	6.09	6.16	7.37	6.59
Equity	Mean	28.16	23.82	26.39	36.19	29.31	33.66	38.47	33.40	36.8
	Std	17.42	17.84	17.66	19.59	18.91	19.55	21.14	20.12	20.88

(1) Turnover is given in 1000€.

Case study

According to Eisenhardt (1989b), the combination of quantitative data with qualitative evidence can be highly synergistic. Qualitative method can bolster quantitative findings and better underline relationships revealed in the quantitative analysis.

In this perspective, data analysis was followed by a case study, involving a MSFB that greatly improved its solvency and managed to keep its economic performance despite the economic recession. For these reasons, the selected company represents an exemplary case study. It's useful to better understand financial and economic dynamics of a prosperous family firm during the analysed period. The case analysed was selected within the sub-sample of family business.

Data collected from AIDA BvD database was combined with key data gathered by two in-depth, semi-structured, face-to-face interviews. Guided by a checklist, interviews were carried out in the company and involved the founder and his daughter (the future successor to the firm). Questions were aimed to collect information regarding the founder, company's ownership, the successor, the impact of the crisis and the actions taken to deal with it. Interviews were recorded and transcribed verbatim. Data and information were analysed and results are presented and shortly discussed in the section devoted to the case study..

FINDINGS AND DISCUSSION

Table 1 shows the descriptive statistics from two sub-samples with regard to the period of three years considered. During the crisis period, all the selected companies decreased their sales (from about 21.6 mln € in 2007 to about 18.9 mln € in 2009). Turnover began to increase during the post-crisis phase and in 2014 it attained a level higher than in the pre-crisis period (about 22.6 mln €). Family firms' turnover was higher than non-family firms' turnover throughout the three years period.

In line with previous research (Corbetta et al., 2015), family-owned businesses have a longer life than non-family businesses. Family firms are also smaller than non-family firms. Manufacturing firms are more numerous both in the entire sample and in the sub-samples. This data situation is congruous with the economic structure of the geographical area analysed, distinguished by an high proportion of manufacturing companies (Istat, 2015).

Ebitda margin reveals that the entire sample endured a slow but steady decline during the analysed period. However, the profitability of non-family firms is without fail higher than that of family firms: 10.17 versus 9.24 in 2007, 10.34 versus 8.43 in 2009 and 9.75 versus 8.08 in 2014. Moreover, we found that while the profitability of family businesses declined in 2009, non-family firms reported a somewhat of an increase as compared to 2007. These findings are preliminary proof that, regardless of the economic situation, medium-sized non-family firms performed always better than MSFBs, particularly in 2009, characterized by a particularly harsh crisis.

Overall, sample companies improved their solvency level during the analysed period, passing from 26.39% in

Table 2. Comparative profitability family versus non-family business.

Variable	Family				Non-family			p
	N	Sample	Mean	Std	Sample	Mean	Std	
EBITDA/SALES_07	128	76	9.24	5.28	52	10.17	5.28	0.32
EBITDA/SALES_09	128	81	8.43	5.08	47	10.34	7.42	0.08*
EBITDA/SALES_14	128	87	8.08	6.16	41	9.75	7.37	0.18

Significance level: *p(10%); ***p (5%); ***p (1%).

Tables 3. Comparative equity ratio: Family versus non-family business.

Variable	Family				Non-family			p
	N	Sample	Mean	Std	Sample	Mean	Std	
Equity_07	128	76	28.16	17.42	52	23.81	17.84	0.17
Equity_09	128	81	36.18	19.59	47	29.31	18.90	0.05**
Equity_14	128	84	38.47	21.14	41	33.40	20.12	0.20

Significance level: *p(10%); ***p (3%); ***p (1%).

2007 to 33.66% in 2009 and reaching 36.80% in 2014. In this span of time family firms experienced greater improvements in their solvency level and displayed a higher equity ratio than non-family firms did: 28.16% vs 23.82% in 2007, 36.17% vs 29.30% in 2009 and 38.47% vs 33.40 in 2014. To assess whether family and non-family firms' profitability and equity ratio are statistically different from each other we used the t-test (Tables 2 and 3).

Evidence displays that non-family businesses performed considerable better than family firms at 10% (p = 0.08) in the year of recession (2009). The same result is corroborated for 2007 and 2014, however, throughout these years the differences between family and non-family firms aren't at exceptional levels (respectively p = 0.32 and p = 0.18).

On the contrary, regarding financial structure, results show that in 2009 family businesses encountered a level of equity ratio significantly higher than that of non-family firms at 5% (p = 0.05) during the economic recession. This tendency is confirmed both for 2007 and 2014, but the differences between the two sub-samples aren't important (respectively p = 0.17 and p = 0.20). Lastly, the regression model permitted us to assess if and how family ownership and equity ratio had an effect on firms' profitability (Table 4).

Results reveal that family ownership (FAM) is always negatively and statistically related to company profitability in any type of economic condition (p = 0.04 in 2007; p = 0.08 in 2009; p = 0.10 in 2014). Simultaneously, the level of equity ratio (EQUITY) is always positively and statistically important at 1% when related to company profitability in diverse economic conditions, for all three years.

Moreover, we evaluated the combination effect of family ownership and equity ratio (EQUITY*FAM) on profitability. Results reveal that the interaction variable is positively associated to the profitability of the business during the pre-crisis period (2007) and negatively associated during the period of crisis (2009) and the recovery period (2014). Even if the correlation between ownership and solvency never becomes significant over the time, the tendency is clear. This means that family businesses' solvency, during economic downturn and upturn, cannot counterbalance the negative influence of family ownership on firms' profitability

In the last phase, we examined the control variable, and the industry variable (INDUSTRY) reveals a positive outcome for profitability over the time, except in 2007, which is negative. However, this impact is not significant during the three years. The firm seniority variable (SENIORITY) displays a negative impact on profitability during the crisis (2009) and post-crisis period (2014), not counting the pre-crisis time (2007). Nevertheless, the impact is always statistically beside the point. The turnover variable (TURNOVER) reveals a positive influence on margin Ebitda during the analysed period. However, one should observe that there is a positive and significance influence on recovery time (2014).

With this analysis, we answered the study RQs. The first RQ from this study inquired about Italian MSFBs and if they performed better than non-family firms during the recent economic recession. We discovered that family and non-family businesses underwent different levels of performance. However, without warning, family businesses achieved worse economic performance than non-family firms in every type of economic situation, especially in periods of recession. This result conflicts

Table 4. Regression analyses.

Independent variable	2007			2009			2014		
	Coef.	Std. Err	P> (t)	Coef.	Std. Err	P> (t)	Coef.	Std. Err	P> (t)
FAM	-1.971	0.979	0.04**	-2.366	1.359	0.08*	-2.450	1.498	0.10*
EQUITY	0.090	0.032	0.00***	0.090	0.036	0.01***	0.111	0.036	0.00***
EQUITY* FAM	2.378	1.500	0.11	-1.0449	1.716	0.54	-1.189	1.828	0.51
INDUSTRY	-0.322	1.034	0.75	0.740	1.317	0.57	1.044	1.365	0.44
Ln (SENIORITY)	0.010	0.632	0.98	-0.155	0.904	0.86	-0.285	1.197	0.81
Ln (TURNOVER)	0.508	1.284	0.69	3.258	1.589	0.43	4.334	1.571	0.00***
Number of firms		127			128			128	
F		5.04***			2.75***			4.25***	
R-squared		0.201			0.120			0.174	
Hetetroskedasticity test		Chi^2 (1)=2.41			Chi^2 (1)=2.23			Chi^2 (1)=0.08	

Significance level: *p(10%); ***p (5%); ***p (1%).

with those from previous research (Allouche et al., 2008; Amann and Jaussaud, 2012; Macciocchi and Tiscini, 2016; Wu et al., 2012), which revealed that family firms achieved better profitability level than non-family firms, above all during economic recession. However, these studies focused their attention on large companies, while our analysis only examines MSBs.

The second RQ questioned the level of equity ratio of Italian MSFBs, and if it was higher than non-family firms during the recent crisis. Our findings display that the equity ratio augmented for both the sub-samples from the pre-crisis to the upturn period. Nevertheless, family businesses presented a higher ratio as compared to non-family firms for each year. This result is congruous with Macciocchi and Tiscini (2016), who demonstrated that family firms encountered much more financial support from their shareholders during the economic downturn. So, a higher equity ratio may reveal family businesses owners' stance on maintaining control of the business during the economic crisis and to affirm the required financial resources in economic upturn.

These findings are somewhat unexpected. In fact, the study analysis reveals that family firms had higher equity ratio than non-family firms but lower profitability. However, if a firm has a sounder financial structure as it is less leveraged, it should be more capable to deal with period of crisis and to achieve higher profitability level. In order to better comprehend how family ownership and equity ratio have had an impact on performance, a regression model was carried out the interaction variable was incorporated.

Results demonstrate that family ownership had a negative effect on economic performance, while solvency positively influenced profitability. The first proof is in contrast with the traditional view corroborated by the agency theory and proposes that MSFBs present a more efficient governance structure that of non-family ones. On the contrary, solvency appears to take on a pivotal role in each economic condition in order to maintain business profitability. In conclusion, regardless of the economic conditions, both family and non-family businesses should be less leveraged and should augment their equity ratio. Analysing the combination effect of family ownership and solvency level on profitability, however, we discovered that the favourable influence of a high solvency level is not sufficient to ensure higher profitability during the economic downturn and upturn, because the negative effect of family ownership always proves superior.

Unfortunately, we couldn't obtain data on firms' governance and managerialization, and so we cannot give an explanation for the reason for such results. However, we can hypothesise that some problems may become apparent from these aspects. In fact, even if MSFBs are more often than not characterised by a significant level of professionalisation (Palazzi, 2012), managers involved are often appointed among family members and frequently have less skills than those in public companies (Lauterbach and Vanisky, 1999; Lane et al. 2006). Prior research underlined that non-family professional managers may have a pertinent role in family firms (Songini and Vola, 2015), and according to Lane et al. (2006), companies should turn to the market for talented people. This is primarily true in a period of economic crisis, when high-level managerial skills are crucial for the selection and implementation of effective strategies, which can be used to confront the crisis without undermining the business' competitiveness (Sternard, 2012). Thus, a lack of suitable managerial skills could undermine the competitiveness of the business and reduce its economic performance. In this perspective, results are consistent with the perspective of "familiness", considered by the RBV as a factor that may prevent the development of the business and affect their performance (Bloom and Van Reenen, 2007; Mehrotra

et al., 2011).

At the same time, a second explanation could be related to the cost structure of the business. D'Aurizio and Romano (2013) analysed how Italian family businesses reacted to the economic crisis in terms of workforce level adjustment. These authors provided empirical evidence that Italian family and non-family firms adopted divergent paths in their employment policies. In particular, during the recent recession, family firms safeguarded workplaces more than non-family businesses did. According to the authors, this choice is due to the crucial role of the non-pecuniary benefits of the family business owners and is based on the psychological relation that ties them to their community of reference. Thus, the poor economic performance of family businesses could be due to fixed labour costs, which remained stable even if the economic performance declined. This approach could further worsen the family firms' efficiency and performance. In this perspective, SEW arguments–the non-economic and socioemotional goals prevail over the financial and economic goals (Berrone et al., 2012) are particularly consistent with our results.

An exemplary case study

After the statistical analysis of the data, in this session we briefly present and discuss a case study, involving a family firm included in our sample. The selected company – River Valley – can be considered an exemplary case, as during the period under observation – 2007-2014 – greatly improved its solvency and managed to keep its economic performance, despite the economic recession.

River Valley Ltd. was founded in 1999 by Matt Whales[1] . Matt and his family hold the majority share of the company, while a Polish partner holds the minority share. The company designs and manufactures heat exchangers. The company has experienced rapid growth in the last years. Today it's one of the most important producers worldwide of aluminum and copper heat exchangers for domestic gas boilers. It's also entering the market of aluminum parallel flow condensers for the refrigeration and climatization industry. River Valley strategic guidelines are innovation and quality. In fact it has always invested in design and manufacturing innovation, technical competitiveness, product quality, full cooperation with their clients to develop new projects.

The company has not given up this policy in spite of the economic and financial crisis that started in the late 2008. In fact, River Valley continued to invest heavily in research and development, new equipment, machinery and human resources. The new investments enabled it to improve efficiency in production processes and to gain new markets, especially abroad, thanks to its high quality products. Consequently, although in 2009 the company's economic performance worsened (Table 5), in 2014 its financial statements shows strong signs of improvement.

This investment policy was made possible thanks to the decision to continually reinvest profits to self-finance the company. In fact more than 12% of investments were self-financed. This attitude proved successful and enabled the company to improve its profitability and to strengthen its financial position. In the period 2007 to 20114, in fact, the debt / equity ratio more than halved and the solvency ratio greatly increased.

From this point of view, the experience of this company clearly confirms previous analyses (Macciocchi and Tiscini, 2016) showing family firms' low predisposition to indebtedness and the availability of the owner family to give up dividends in order to strengthen the company's financial structures. Behind this attitude of prudence in financing decisions is the desire of the owner family not to put at risk the long-term survival of the company and to maintain the company's control in the long run.

At the same time, this case demonstrates the importance of innovation to maintain the company's long-term competitiveness. Thanks to a solid financial structure, the company has been able to pursue a constant policy of technological innovation and investment in R&D. The latter played a key role in enabling the company to improve the company's competitiveness and overcome the crisis with improved economic performance.

CONCLUSIONS

Starting with the analysis of different theories addressing the binomial family business and performance, this article compares family and non-family firms during the recent recession. Contrary to previous research, which mainly focused on large firms and listed companies (Allouche et al., 2008; Amann and Jaussaud, 2012; Wu et al., 2012; Macciocchi and Tiscini, 2016), we only considered private MSBs. The study findings show that MSFBs underperformed compared to non-family firms during the period of recession. Moreover we highlight that solvency level played a crucial role in positively influencing business profitability.

The study extends previous research about family businesses' performance during the recent economic crisis (Amann and Jaussaud, 2012; Minichilli et al., 2015 Macciocchi and Tiscini, 2016) by exploring the influence of family control in private MSBs. In contrast to other research, always carried out in Italy, but referring to large companies (Macciocchi and Tiscini, 2016), we have found that the family nature of a firm can have a negative influence on its profitability.

Moreover, according to the study findings, a higher level of solvency cannot offset this negative effect. Based on previous research (Lauterbach and Vanisky, 1999; Lane et al., 2006; Romano and D'Aurizio, 2013), we

[1] Proper names have been altered for privacy reasons.

Table 5. River valley Ltd. Financial performance (1).

Variable	Turnover	Ebitda	ROA	ROE	Ebitda/Sales	Debt/Equity	Solvency
2007	24.033	2.367	7.4	10.1	9.6	2.1	16.8
2009	18.950	1.914	4.4	6	10	1.8	20.3
2014	47.532	4.562	8.4	19.1	9.5	1	23.9

(1)Turnover and Ebitda are given in 1000€.

suppose that the reason for this difference can be twofold. On one hand, according to the concept of “constrictive familiness” considered by RBV, the lowest performance of family businesses compared to non-family firms could be due to the nepotism phenomenon, which can undermine the managerialisation and professionalisation of the business. In fact, due to nepotism, managerial skills–especially crucial during economic crisis–are restricted to those possessed by family members. On the other hand, consistent with SEW assumptions, poor performance of family businesses could be due to their desire to safeguard workplaces–more than non-family businesses have done–in order to preserve their relationship with their community and possible even their imagine. In other words, even during economic crisis, MSFBs confirmed that non-economic purposes prevail over the financial and economic goals. So future research should be designed to further investigates the characteristics of MSFBs - management level and governance system first of all. The aim should be to understand how these features can affect the performance of these businesses.

This study has several limitations that may extend opportunities for future research. First, we consider a specific and restricted geographical area, and this has influenced our results and limited their generalisation. A wider national study and a multi-country empirical research comparing family and non-family firms' performance during economic crisis across different nations are suggested. Second, the relationship between family ownership and profitability has been analysed overlooking other variables related to ownership (presence of family or non-family shareholders), governance model (board composition and managerialisation level) and generation in control (first, second, etc.). Indeed these variables could affect company performance. We also didn't take into consideration that different types of family businesses exist based on a diverse level of family control and/or diverse involvement of family members in business ownership and governance. Future research should consider these variables, maintaining the focus on MSBs. Third, we only used the Ebitda profit margin as a performance indicator. Other performance indicators (*in primis*, Return on Assets-ROA and Return on Equity-ROE) should be applied in future research.

This study also has some implications for practice. First, evidence shows that in every type of economic condition, solvency level plays a crucial role in order to preserve a business' profitability. In other words, regardless of the economic situation, both family and non-family businesses should increase their solvency level in order to enhance the performance of the firm. Second, some considerations arise about the professionalisation and managerialisation of MSFBs. In line with Sciascia et al. (2014), we don't affirm that family firms must necessarily be managed by non-family members. However, as the authors suggest, family firms may improve their performance thanks to “the introduction of adequate governance mechanisms (for example, a board of directors, including independent directors) and the use of an incentive system oriented to focus family managers' attention on financial goals.” We think this is particularly true for MSFBs in which managers assume a key role in maintaining the competitiveness of the business, especially during recession. However, further analysis on the relation between family nature of MSBs and firm performance is needed, in order to offer family businesses behavioural guidelines that are suitable for their specific features.

CONFLICTS OF INTERESTS

The authors have not declared any conflicts of interest.

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The impact of corporate diversification on firm value in Kenya

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This study investigates the impact of corporate diversification on the value of firms listed at the Nairobi Securities Exchange (NSE). Panel regression techniques were used as the estimation methods. The overall findings of the study where somewhat mixed. The study finds that industrial diversification reduces firm value, but geographical diversification does not have a significant impact on firm value. When examining each industry individually, the study established that industrial diversification enhanced firm value in the agricultural industry but did not significantly influence firm value in the other industries.

Key words: Industrial diversification, geographical diversification, firm value, ownership structure, frontier markets.

INTRODUCTION

Corporate diversification has been one of the central themes for research studies in disciplines such as finance, strategic management and industrial organization. Most researchers have sought to understand the effect of corporate diversification on firm value since the revelation by Berger and Ofek (1995) and, Lang and Stulz (1994), that diversified firms trade at a discount of about 13 to 15% as compared to focused firms.

Despite the findings negatively linking diversification to firm value, a large number of companies across the globe continue to engage in diversification activities mainly through mergers, acquisitions, development of new product lines or opening of new businesses across international borders (Martin and Sayrak, 2003). This global diversification has been spurred by various factors such as saturated domestic markets and a quest to secure bigger market shares globally. International diversification has become an important business growth strategy (Denis et al., 2002; Lee, 2013).

More recently, some newer studies have challenged the negative relationship between diversification and firm value. These studies question the interpretation of previous studies and their validity as a whole. For instance, Kuppuswamy and Villalonga (2010) and Elif (2015) found that diversified firms are valued at a premium compared to focused firms.

There are other researchers (Campa and Kedia, 2002),

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who show that diversification, whether industrial or international has costs and benefits, and the whether the value of the firm is increased or reduced depends on these costs and benefits.

These recent findings clearly highlight the divergent views that exist regarding corporate diversification and its relationship with firm value. To date, no consensus has been reached as to whether diversification creates or destroys firm value. This has made diversification one of the most controversial strategic decisions that firms have had to make as they work towards maximizing their shareholders value.

It should be noted that majority of the available literature is focused on the U.S. and European markets. A few studies have also been done on Asian markets for example the study of Denis et al. (2002) and Markus and Ingo (2008). In emerging markets such as India, Hong Kong, Indonesia, Malaysia and South Korea the few studies that have been undertaken have yielded the same puzzling results as those in developed countries (Lins and Servaes, 2002). However, there is not much research on diversification in frontier markets such as Kenya.

In recent times, Kenya has witnessed an influx of foreign investors and as a result, this has raised competition among local firms. This surge of investors has mainly been attributed to the performance and growth of the Nairobi Security Exchange (NSE) as well as changes in economic policies (Satchu, 2007). As a result, Kenyan firms have embraced geographical and industrial diversification as vital business growth strategies. Recent statistics support this view as evidenced by Kenya's foreign direct investments outflows increasing by 26.8% from 27,992 million shillings in 2007 to 38,799 million shillings, in 2008 (Kenya National Bureau of Statistics, 2013). This increase in foreign investments is indicative of Kenya's growing contribution to global trade as well as her desire to secure new markets beyond her borders.

With most of the literature on corporate diversification focused on developed markets, any conclusions made in previous studies cannot be easily applied to frontier markets like Kenya. As Lee and Hooy (2012) discuss, this is mainly because economic conditions, capital markets and ownership structures of firms in frontier markets are remarkably different, making the costs and benefits the firms encounter different. Given the dearth in corporate diversification literature focusing on frontier markets, this paper sought to establish the impact of corporate diversification on the value of firms listed at the NSE to help plug the gap.

The objectives of this study were: firstly, to determine if geographical and industrial diversification affect the value of firms listed at the NSE. Secondly, to investigate whether geographical and industrial diversification affected different industries in Kenya based on the domestic classification of industries by the NSE. The motivation behind this was inspired by Lee and Hooy (2012) who argue that different industries within the same country face varied levels of competition and legal environments. As such, the industries are bound to respond differently to diversification. The third objective, was to establish the nature of the relationship between diversification and the value of firms listed at the NSE.

Given the various costs and benefits associated with diversification in the available literature, some studies (Capar and Kotabe, 2003; Gomes and Ramaswamy, 1999; Palich et al., 2000), found out that there is a curvilinear relationship between diversification and firm value.

LITERATURE REVIEW

Jensen (1986) posits that diversification into different industries is more likely to result in losses unlike other strategies such as takeovers or expansion into the same line of business. Coincidentally, many studies carried out have shown that corporate diversification indeed destroys value. Some of the renowned studies that indicate a negative relationship between diversification and firm value include Berger and Ofek (1995), Lang and Stulz (1994), and Servaes (1996).

These studies show that diversified firms trade at a discount of about 13 to 15% compared to focused firms. Even so, recent business growth strategies, specifically diversifying mergers and acquisitions reached record breaking levels with the total dollar value of global mergers hitting the US$ 2.3 trillion mark in 1999 (Martin and Sayrak, 2003).

If indeed past studies show that diversification destroys value, why have firms continued to engage in it? Presumably, there are many benefits a firm can achieve if it decides to diversify. For instance, Lee (2013) notes that many organizations from around the world are venturing into international markets in the current globalization era so as to access large and growing non-local markets due to the maturity, saturation and intense competition in local markets.

Villalonga (2000) also asserts that firms usually diversify in order to acquire market power and undertake reciprocal buying with other big companies so as to drive smaller firms out of business. Diversified firms also have the option of using extra funds generated by a profitable business unit to support aggressive pricing strategies in the other divisions. In addition, firms can also create internal capital markets through diversification which offer a cheaper source of funds than external sources because the company does not have to bear transaction costs such as those that are linked to the sale of securities to the general public (Martin and Sayrak, 2003).

Conversely, diversification is also linked to negative consequences such as agency costs. Agency problems can come about when managers entrench themselves in the organization by adopting diversification strategies that

overlap with their skill (Garcia et al., 2013).

Inefficient operation of internal capital markets are another drawback of diversification. As Berger and Ofek (1995) point out, inefficient cross-subsidization and over-investment among the divisions are issues that diversified firms encounter. This happens when poorly performing divisions are funded using profits from well performing divisions or when excess funds are allocated to a particular segment while the rest are ignored. Information asymmetries are yet another cost of diversification. As Hoskisson and Hitt (1988) note, executives might not be able to evaluate all information provided by strategically different divisions and as such, this may lead to a reduced understanding of the divisions.

Theoretical framework on diversification

The three most discussed theories on why firms choose to diversify and why diversification destroys value are, agency theory, internal capital markets theory and resource-based theory. According to Namazi (2013), agency problems occur within the modern corporation in which share ownership is spread out and managerial action often departs from the wishes of the stockholders. Consequently, managers undertake diversification strategies even though they might significantly decrease shareholder wealth.

In the same way, Oijen and Hendrikse (2002) note that managers tend to withhold free cash flows from the shareholders opting to instead spend the funds on various diversification projects so as to build empires, get pay raises and reduce personal unemployment risk.

Though internal capital markets are a source of cheap funds, inefficient internal capital markets have been credited to be the cause of the diversification discount. For instance, Scharfstein and Stein (2000) point out that inefficient cross subsidization could occur when an excess amount of resources are allocated to one division while less than required is provided to another. In a similar fashion, Lamont and Polk (2002) indicate that diversified firms could invest inefficiently by spending excess funds on poorly performing divisions and little on good divisions.

The resource-based theory provides a basis for understanding how organizations develop scarce, valuable, difficult-to-imitate, and non-substitutable resources that may allow them to earn economic rents and provide resource barriers to competition (Mills et al., 2003).

According to Garcia et al. (2013), firms will engage in diversification if they have an abundance of resources that can easily be assigned to the various business lines and for which market imperfections exist. The resources must however be scarce, valuable and inimitable. Nonetheless, diversification can become inefficient if the resources utilized by one division of the firm are of little or no use in the other business lines that the firm operates.

Diversification and the curvilinear model

Studies undertaken to investigate the relationship between industrial diversification and firm value have argued that a curvilinear relationship exists between the two. As such, these findings postulate that firms that undertake a small amount of diversification will perform better than those that remain focused (Palich et al., 2000).

In a similar way, it has been shown that geographical diversification exhibits a curvilinear relationship with the firm value. Some of the studies that proffer this connection (Lu and Beamish, 2001) argue that the connection between geographical diversification and firm value is captured by an inverted U-shape. The U-shape implies that an increase in geographical diversification enhances performance up to a certain breakpoint after which the negative effects of geographical diversification such as different cultures, trade laws, currency fluctuations or agency costs outweigh the benefits and the firm's performance and value drops.

Supporting the U-shape relationship, Capar and Kotabe (2003) and Ruigrok and Wagner (20030 state that initially, geographical diversification is linked to declining value because firms lack the experience and skills to successfully operate when they first venture into new foreign markets. With time though, the firms can learn how to successfully navigate in the new markets and therefore profitably increase performance.

Developing the U-shaped model further, Lu and Beamish (2004) posit that firm performance declines once again at high levels of geographical diversification due to an increase in governance and coordination costs resulting in a horizontal S-curve.

METHODOLOGY

Tobin's Q

Since the study carried out by Lang and Stulz (1994), Tobin's Q has been the most popular measure of firm performance and value. It is expressed as the ratio between the present value of future cash flows and the replacement costs of the physical assets. Later studies, however, employed surrogate measures of Tobin's Q in order to adapt to the available data in emerging economies such as the studies by Priya and Shanmughan (2011) that analysed firms in India, and Ongore (2011) that studied firms in Kenya.

In this study, the techniques developed by Khanna and Palepu (2000) and Zhang (2011) to calculate Tobin's Q (TQ) was used. The simplified version of TQ was calculated as the sum of the market value of equity plus the book value of total debt plus preference shares and this was divided by the value of total assets.

The sample chosen for this study was companies that were listed at the NSE for the period 2006 to 2011, excluding all companies that operate in the finance, real estate and insurance industries. This elimination process was consistent with previous studies and is recommended because the calculation of some control variables entails using sales figures which are ambiguous for firms in these industries.

In addition, firms with more than two years of missing data were eliminated (Priya and Shanmughan, 2011). This resulted in a final

list of 38 firms, divided into various industry segments. The study used data from the financial statements that listed companies submit to the NSE annually.

Baseline model

To test for the effects of diversification on the value of firms, determinants that could potentially affect a company's TQ, were all considered. These control variables which included leverage, firm size, profitability, and growth opportunities have been utilized extensively in previous research on corporate diversification, such as Zhang (2011), Nazarova (2015), and Volkov and Smith (2015). The model aforementioned was empirically estimated by running the following regression:

$$TQ_{it} = \alpha + \beta_1 LnTA_{it} + \beta_2 EbitSales_{it} + \beta_3 CapexSales_{it} + \beta_4 Lev_{it} + \beta_5 D_{Geographical,\ it} + \beta_6 D_{Industrial,\ it} + \varepsilon_{it} \quad (1)$$

Where:

i and t are the firm and time dimensions of the data,
α and β are coefficients and ε is the error term,
LnTA is the log of total assets used to represent firm size,
EbitSales is the Earnings before interest and taxes-sales ratio, used as a proxy for firm profitability,
CapexSales is the capital expenditure-sales ratio used to measure growth opportunities,
Lev is the ratio of total debt to total assets used to represent firm leverage,
$D_{Geographical}$ is the geographical diversification dummy, set to 1 if the firm is geographically diversified, and 0 otherwise.
$D_{Industrial}$ is the industrial diversification dummy, set to 1 if the firm is industrially diversified, and 0 otherwise.

Robustness check

Building on this baseline model, ownership structure variables were included as independent variables to perform robustness checks. This is in line with studies such as Fauver, et al. (2004), and Nazarova (2015). Three dummy variables were also included to indicate the extent of ownership concentration by local banks, individuals and foreign entities (both individuals and companies). The dummy variables were added to the baseline model to yield equation (2) as follows:

$$TQ_{it} = \alpha + \beta_1 LnTA_{it} + \beta_2 EbitSales_{it} + \beta_3 CapexSales_{it} + \beta_4 Lev_{it} + \beta_5 D_{Geographical,\ it} + \beta_6 D_{Industrial,\ it} + \beta_7 D_{Banks,\ it} + \beta_8 D_{Individuals,\ it} + \beta_9 D_{Foreign,\ it} + \varepsilon_{it} \quad (2)$$

The dummy variable 'banks' is set to 1 if a bank held at least 5% of a firm's shares, and set to 0 otherwise. The dummy variable 'individuals' is set to 1 if an individual held at least 5% of a firm's shares and is set to 0 otherwise and in a similar way, the dummy variable 'foreign' is set to 1 if a foreign entity owned at least 5% of the shares and is set to zero otherwise.

To investigate whether geographical and industrial diversification affected different industries in Kenya based on the domestic classification, the following regression model was tested:

$$TQ_{it} = \alpha + \beta_1 LnTA_{it} + \beta_2 EbitSales_{it} + \beta_3 CapexSales_{it} + \beta_4 Lev_{it} + \beta_5 Industries_{it} + \beta_6 Geographies_{it} + \varepsilon_{it} \quad (3)$$

Where:
All variables are as explained earlier and
Industries is the number count of business units that the firm operated in,
Geographies is number count of countries that the firm operated in.

To investigate the study third objective, we ran the following regression:

$$TQ_{it} = \alpha + \beta_1 LnTA_{it} + \beta_2 EbitSales_{it} + \beta_3 CapexSales_{it} + \beta_4 Lev_{it} + \beta_5 Industries_{it} + \beta_6 Geographies_{it} + \beta_7 Industries^2_{it} + \beta_8 Geographies^2_{it} + \varepsilon_{it} \quad (4)$$

Where:

All variables are as explained above and
$Industries^2$ is the square of industries,
$Geographies^2$ is the square of geographies.

RESULTS AND DISCUSSION

Summary of descriptive statistics

It is worth noting that the sample size of 38 firms that we used was remarkably smaller compared to other studies carried out in developed as well as in emerging markets. For instance, Lee (2013) focused on Malaysia, and had 267 firms while Khanna and Palepu (2000) used 1309 firms in India. Using firm data from 2006 to 2011, the study sample yielded an unbalanced panel with 221 firm-years. The mean and standard deviation of various variables from the total sample are shown in Table 1.

Following previous studies such as Lee (2013), the companies were categorized into four groups based on industrial and geographical diversification. For this study, geographical diversification was taken as the degree to which companies possessed or controlled product-related activities in different countries as put forward by Kreye (2007). Firms that purely exported products were not regarded as geographically diversified since they did not own foreign assets. Industrial diversification was taken as the degree to which companies were concurrently active in a variety of different business units (Jang et al., 2005).

Table 2 summarises the sample of 38 firms according to the four categories which were: single- industry/domestic,

Table 1. Descriptive statistics of firms at the NSE.

Variable	Observations	Mean	St.Dev
TQ	221	0.259	0.973
Capital (Kshs “m”)	221	7.277	13.511
Sales (Kshs “m”)	221	13.905	26.303
Market Capitalization (Kshs “m”)	221	14.827	31.800
Total Assets (Kshs “m”)	221	17.977	50.663
LnAssets	221	22.175	1.777
Ebit to sales	221	0.135	0.209
Capex to sales	221	0.102	0.172
Leverage	221	0.188	0.200
Industries	221	2.235	1.378
Geography	221	2.145	1.791

Table 2. Descriptive statistics of diversified and single industry firms.

Variable	Single industry firms				Multi-industry firms			
	Domestic		Geographical		Domestic		Geographical	
	Mean	St.Dev	Mean	St.Dev	Mean	St.Dev	Mean	St.Dev
TQ	0.409	0.65	0.23	1.102	-0.138	0.7114	0.426	1.045
Capital (Kshs “m”)	10.524	18.773	5.214	3.904	7.063	14.211	5.079	7.033
Sales (Kshs “m”)	13.093	20.246	38.796	61.911	13.332	26.418	9.288	9.948
MktCap (Kshs “m”)	12.441	22.670	8.104	3.452	13.599	38.491	19.358	36.392
Total Assets (Kshs “m”)	30.951	84.811	12.943	12.556	16.485	30.607	8.918	10.925
EbitSales	0.119	0.230	0.124	0.078	0.157	0.304	0.136	0.101
CapexSales	0.143	0.257	0.080	0.099	0.106	0.108	0.070	0.118
Leverage	0.229	0.223	0.255	0.135	0.152	0.161	0.163	0.210
Industries	1	0	1	0	3.421	1.625	2.731	0.715
Geography	1	0	5.778	1.478	1	0	3.141	1.569

Capital, sales, MktCap and total assets in Kenya shillings.

single-industry/geographical, multi-industry/domestic, multi-industry/geographical. The results show that single-industry/domestic firms have the highest mean Tobin’s Q ($\bar{x}$ = 0.65). This figure is, however, smaller than what other studies have reported.

For instance, Khanna and Palepu (2000) and Zhang (2011) both reported TQ’s greater than 1. Multi-industry/domestic firms reported the lowest mean Tobin’s Q ($\bar{x}$ = -0.138) showing that industrially diversified firms that were focused on the Kenyan market were generally valued lower than firms in the other categories. This finding was different from the study done by Lee (2013) which discovered that multi-industry/domestic firms were the most valued companies in Malaysia. Interestingly, multi-industry/geographical firms posted the lowest mean values of capital, sales and total assets.

Regression results

The standard panel regression techniques were used as the estimation method. In all the regression model, unobservable fixed firm-specific and firm-invariant time-specific effects were accounted for. Table 3 presents the regression results of a few restricted variations of model (1). The results are reported based on robust standard errors that control for heteroscedasticity and serial correlation.

Starting with model 1A, only four control variables were included in the regression. The results showed that the only variable that was statistically significant was ‘LnAssets’ which was used as a proxy for firm size. The R^2 of the model was 0.7619. Next, the industrial dummy variable was added and this yielded the results shown in model 1B. Finally, both the industrial and geographical dummy variables were included in the regression and this yielded the results shown in model 1C. Just as before, the only statistically significant variable was ‘LnAssets’. Even so, it was noteworthy that the industrial and geographical diversification dummy variables in model 1C were both negative which implies that diversification and firm value are inversely related. This is in line with

Table 3. Estimated regression results for model 1.

Independent variables	Model 1A	Model 1B	Model 1C
Intercept	20.664* (4.519)	20.517* (4.504)	20.537* (4.498)
LnAssets	-0.929* (0.205)	-0.910* (0.207)	-0.908* (0.208)
EbitSales	0.443 (0.295)	0.419 (0.295)	0.415 (0.298)
CapexSales	0.182 (0.438)	0.170 (0.436)	0.166 (0.437)
Leverage	0.667 (0.529)	0.695 (0.531)	0.697 (0.533)
Dummy-Ind	-	-0.424 (0.224)	-0.426 (0.225)
Dummy-Geo	-	-	-0.141 (0.096)
Observations	221	221	221
R^2	0.275	0.281	0.281
F-Statistic	16.97*	13.9*	11.53*

Figures in parenthesis are robust standard errors *(p<0.05).

Table 4. Estimated regression results for model 2.

Independent variables	Model (2A)	Model (2B)	Model (2C)
Intercept	19.745* (4.585)	19.933* (4.909)	20.396* (5.326)
LnAssets	-0.871* (0.213)	-0.880* (0.229)	-0.902* (0.249)
EbitSales	0.405 (0.293)	0.395 (0.277)	0.428 (0.310)
CapexSales	0.252 (0.417)	0.248 (0.421)	0.274 (0.435)
Leverage	0.336 (0.850)	0.354 (0.867)	0.263 (0.911)
Individuals	0.0420 (0.113)	0.047 (0.104)	0.050 (0.103)
Dummy-Ind	-0.417 (0.216)	-0.401 (0.204)	-0.425* (0.169)
Dummy-Geo	-0.135 (0.095)	-0.134 (0.096)	-0.120 (0.109)
Bank	-	0.063 (0.2751)	0.075 (0.3013)
Foreign	-	-	0.127 (0.299)
Observations	221	221	221
R^2	0.245	0.250	0.252
F-Statistic	8.14*	7.09*	6.26*

Figures in parenthesis are robust standard errors *(p<0.05).

previous studies such as Bernado et al. (2000) and Graham et al. (2002), which found a negative relationship between diversification and firm value.

Table 4 reports the results for model (2) in which we control for ownership structure of the firms. Starting with model (2A), only the 'individuals' dummy variable was included. Once again, only 'LnAssets' was statistically significant. Moving to model (2B), 'banks' dummy variable was included in the regression and finally the 'foreign' dummy variable in model (2C). Interestingly, the industrial diversification dummy (coefficient -0.4254) is now significant at the .05 level, showing that firm value would decrease by -0.4254 units for every additional industry that a firm diversified into. This finding was similar to numerous others studies such as Lee (2013) who found that industrial diversification lowered the value of firms.

In Table 5, the results for the six industries classified by the NSE, are presented. In this study, any industry that had less than three companies was re-assigned to the closest related industry group following the technique employed by Kreye (2007) who analyzed German firms. As such, the Telecommunications and Technology industry only had two companies and these were re-assigned to the Commercial and Services industry. Given the study small sample, the number of observations in each industry ranged from 24 to 51 firm years.

The results show that the industrial diversification variable is statistically significant at the 0.05 level in the agricultural industry. This means the value of companies in the agricultural industry increases by 0.1685 units for every additional industry that they diversified into. Neither the geographical nor industrial diversification variables is significant in the other industries. The results also indicate that company size is significantly negative with firm value in the agricultural, commercial, construction and energy industries; implying that firms in these

Table 5. Estimated regression results for listed Kenyan firms based on domestic industry classification.

Independent variables	Agriculture	Automobile	Commercial	Construction	Energy	Manufacturing
Intercept	16.688* (1.578)	-2.036* (1.844)	41.643* (11.313)	3.818* (17.259)	3.529* (0.613)	-0.971 (4.450)
LnAssets	-0.817* (0.082)	0.089 (0.095)	-1.868* (0.526)	-1.541* (0.721)	-0.150*(0.022)	0.0452 (0.220)
EbitSales	0.405 (0.330)	0.250 (0.328)	1.889* (0.750)	-0.115 (2.157)	0.250 (0.254)	1.108 (0.679)
CapexSales	-0.369 (2.046)	2.319* (0.923)	0.648 (0.434)	2.271 (1.631)	0.139 (0.750)	1.189 (1.480)
Leverage	-0.563 (1.352)	-0.043 (0.592)	-0.027 (0.612)	0.805 (3.313)	0.175 (0.349)	0.261 (1.012)
Industries	0.169* (0.061)	-0.056 (0.207)	-0.076 (0.179)	-0.442 (0.336)	-**	-0.149 (0.291)
Geographies	0.324 (0.294)	-0.062 (0.060)	0.197 (0.118)	-0.834 (0.489)	0.006 (0.015)	0.193 (0.362)
Observations	41	24	51	30	24	51
R^2	0.292	0.496	0.663	0.658	0.480	0.0461
F-Statistic	167.07*	3.79*	18.22*	8.902*	7.95*	0.84

Figures in parenthesis are robust standard errors; *(p<0.05); ** Firms in the energy industry did not undertake industrial diversification.

Table 6. Estimated regression results for Model 4.

Independent variables	Model 4A	Model 4B	Model 4C
Intercept	18.919* (4.574)	18.809* (4.511)	18.398* (4.342)
LnAssets	-0.816* (0.213)	-0.817* (0.215)	-0.757* (0.205)
EbitSales	0.252 (0.250)	0.250 (0.249)	0.207 (0.226)
CapexSales	0.144 (0.423)	0.145 (0.425)	0.175 (0.416)
Leverage	0.786 (0.479)	0.785 (0.482)	0.671 (0.463)
Industries	-0.261 (0.174)	-0.103 (0.723)	-0.145 (0.731)
Geographies	-0.0490 (0.119)	-0.048 (0.120)	-0.589 (0.491)
Individual	0.069 (0.114)	0.069 (0.114)	0.133 (0.137)
Bank	0.194 (0.317)	0.200 (0.316)	-0.146 (0.311)
Foreign	-0.336 (0.418)	-0.347 (0.431)	-0.353 (0.430)
$Industries^2$	-	-0.032 (0.135)	-0.028 (0.136)
$Geographies^2$	-	-	-0.039 (0.030)
Observations	221	221	221
R^2	0.295	0.295	0.317
F-Statistic	5.4*	5.10*	5.94*

Figures in parenthesis are Robust Standard Errors *(p<0.05).

industries might trade a discount as the firms become bigger. This result is contrary to our expectations that firms with greater growth opportunities would lead to higher value.

Next, Table 6 presents the results for model (4) that establishes the nature of the relationship between diversification and firm value. The results indicate that firm size is significantly negative with firm value in all three variations of model (3). This finding is similar to what was reported in model (2). The geographical and industrial diversification variables were, however, not statistically significant at the 0.05 level, meaning that the nature of the relationship between firm value and both geographical and industrial diversification is best captured in a linear format.

Summary of key findings

(1) Firm ownership structure has an effect on the value of firms. By including different ownership structures into the various regression models, F-statistic values were statistically significant which meant that all the variables combined significantly predicted the value of the firms.
(2) Tobin's Q is negatively correlated with the total number of assets that firms have. The correlation coefficient between Tobin's Q and 'LnAssets' was found to be -0.1312. Furthermore, the coefficient of the 'LnAssets' in Model 1A, B and C was negative and statistically significant at the .05 level.
(3) Geographical diversification has an effect on the value of firms. Though not statistically significant in any of the

models, the regressions yielded significant F-statistics which implied that all variables combined significantly predicted the value of firms.

(4) The value of firms in the agricultural industry is significantly affected by industrial diversification. The coefficient of industrial diversification was 0.1685 with a p-value of 0.005 which means that the value of the firms increase by 0.1685 percentage points for every additional industry that the firms diversify into.

(5) Among the automobile; commercial, services and telecommunication; construction; energy; and manufacturing industries, the geographical and industrial diversification variables were not statistically significant.

(6) The nature of the relationship between the value of firms at the NSE and industrial diversification does not show a curvilinear relationship. The 'industries^2' variable included in the model to capture the nature of the relationship was not statistically significant.

(7) The nature of the relationship between geographical diversification and firm value does not exhibit a curvilinear relationship. This is due to the fact that the 'geographies^2' variable included in the model to test the non-linear relationship is not statistically significant.

Conclusion

This study investigated whether geographical and industrial diversification affected the value of firms in Kenya. The results suggest that industrial diversification lowers firm value; that is, a firm's value will diminish as it pursues industrial diversification. This finding agrees with Denis et al. (2002).

This finding implies that industrial diversification is not a successful path to better performance for firms at the NSE. When considering the effects diversification has on the different industries according to the domestic classification, the results show that the value of firms in the agricultural sector is enhanced by industrial diversification. The study finding surmises that the relationship rests on the fact that agriculture is a core industry in Kenya. The finding that diversification affects firm's value differently in different markets agrees with stipulations by Santalo and Becerra (2008).

Overall, this study recommends that business managers cautiously pursue industrial diversification as a growth strategy given that it has been shown to reduce firm value. In addition, investors at the NSE need to carefully analyse firms that intend to venture into industrial diversification because the costs of diversification might outweigh the benefits and thus reduce firm value.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

Prospects for sustainability and viability of Nigerian manufacturing organizations through team work approach

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This study on prospects for sustainability and viability of Nigerian manufacturing organizations through team work approach has the overall objective of ascertaining the extent to which teamwork approach to change management holds good prospects for sustenance and viability in Nigerian manufacturing organizations. The study adopted the survey research design, in which ten manufacturing companies in the South-Eastern Nigeria were studied. The population of the study was thirteen thousand, six hundred and twenty three (13,623), and the sample size was calculated to be six hundred and nineteen using the Taro Yamane's formula. The sampling selection was the stratified sampling method. A self-developed structured questionnaire and oral interview guide were the research instruments used for the study. Data collected were presented descriptively using charts, simple frequency and percentage distribution, mean and standard deviation. The hypotheses were tested using the Z-test statistic. The major finding of the study were that teamwork approach to change management in Nigeria manufacturing organizations to a large extent holds good prospects for sustenance and viability (Zcal = 5.76 > Zcritical = 1.96, $p < 0.05$). The study concludes that teamwork has the prospect of making manufacturing organisations very effective, viable and sustainable. Specifically, it has the benefits of improved productivity and product quality, innovativeness and manpower development. Based on the findings, the study recommended among others that, for an improved product design with high quality that will appeal to customers' satisfaction any day, teamwork should be encouraged in Nigerian manufacturing organizations. It is also recommended that team incentives and rewards should be strictly adhered to in order to boost team performance and effectiveness. Team members should be carefully selected so that members with requisite skills are selected to work towards achieving the required objectives.

Key words: Prospects for sustainability and viability of manufacturing organizations and Team work approach.

INTRODUCTION

Team-building is an organizational development strategy that is often used in organization to make work groups more cohesive, committed, satisfied, and productive (Parker, 1990). When interaction among group member is critical to group success, effective team building is always useful. Moorhead and Griffin (1995) see team building as

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members working together in a spirit of cooperation and generally has one or more of the following, goals;

1. To set team goals, priorities, or both
2. To analyze or allocate the way work is performed
3. To examine the way a group is working, that is to examine processes such as norms, decision- making and communications.
4. To examine relationships among the people doing their work.

As organizations have restructured themselves to compete more effectively and efficiently, they have turned to teams as a better way to use employees' talents. Robins and Judge (2007) are of the opinion that teams have the capability to quickly assemble, deploy, refocus and disband.

As a result, management has found that teams are more flexible and responsive to changing events than traditional departments or other forms of permanent groupings. Teams can compete, wrestle, succeed or fail. A good organizational team can be an invaluable asset to the organization. A bad team can break the internal structure of the organization (Nzewi, 2006). Also, Coles (2002) in his own opinion says that it is also important that teams enjoy reasonable autonomy. When teams enjoy autonomy they are empowered (Gibson, 1996). Onodugo and Igwe (2010) maintain that, team building is one of the key imperatives for a successful organization.

Team-building is seen as one aspect of organizational development strategy that makes or helps organizational change to be successfully employed in many manufacturing organizations. Adeyeye (2009) says that, nowadays business environment produce change in the workplace more suddenly and frequently than ever before. Mergers, acquisitions, new technology, restructuring, downsizing and economic meltdown are all factors that contribute to a growing climate of uncertainty. The ability to adapt to changing work conditions is key for individual and organizational survival. Change will be ever present and learning to manage and lead change includes not only understanding human factors, but also skill to manage and lead change effectively (Pettigrew and Whipp, 1991). Change is the only element of human phenomena that is constant.

The greatest nightmare facing organizations and their managers today is the series of rapid and complex changes which they have to contend with on a continuous basis (Muo, 2004). He goes further to clarify that some of these changes are externally propelled by forces which the organization has little control over: International forces like the Gulf war and the Israeli-Palestinian face-off; rapid changes in technology leading to frightening rates of obsolescence, unforeseen changes in the demographic configuration of societies which automatically changes customers tastes and desires and even what constitutes the target market; globalization and internationalization, increasing competitive pressures, regulatory and legal environment and new types of risks after September 2011.

Mckee (2005) suggests that one most significant essential for success during transition is team-building and maintains that leaders that can challenge, motivate, and empower their teams through change are successful. He went further to state that, leaders who can keep their work teams focused during changes will have organization and business which thrive. McAfee and Champagne (1983) assert that forces of change, also known as change drives or change initiators, can either be external or internal. The external change drives are those forces that are outside the control of management, but have made change imperative. These include government policies, political development, technology, competition, changing consumer behavior, industrial practices, external stake holder interests, socio-economic environment, and customer capabilities.

Statement of problem

A major feature of organizational life is team, and it can have significant influence on the successful implementation of change. Most change can disrupt teamwork. Unless people are involved, committed and prepared to adapt and learn; if not, objectives, plans, and future desired state may likely be resisted. The danger of domination of the team by some powerful members, the difficulty in placing responsibility for a bad team decision, the effects of selecting poorly qualified persons as members and team decisions may result from compromise; poses great challenges to team approach to change management.

A major team problem may be that of conformity, which raises its head in a number of cases, ranging from groupthink to social loafing. With the wide use of teams, personal and inter-group conflict may arise. The ability of the leader to persuade and influence his followers, which in turn, depends largely on how much power the leader possesses, will determine how effective team-oriented approach to change management will succeed.

Kola Jamodu president of MAN in his opening address during 2011 40th Annual Report and Accounts recognizes the federal government initiative of vision 20:2020. He however identifies some urgent national issues bordering on; National Security, Power Sector Road Map, Tariff Issues and Government Fiscal Operation. Specifically, there are major challenges facing manufacturing organizations in Nigeria today, existing evidence shows that every economic sector across the country appears to be facing similar challenges and threats. While in other countries, in Africa, major infrastructural facilities, example water, electricity and transportation system work efficiently and taken for granted, Nigerians and indeed manufacturing industry have the problem of basic

necessities of life, poor transportation system, currency devaluation, deregulation, globalization and collapse of the Nigerian stock exchange.

Obviously most of the aforementioned challenges have compounded and escalated the cost of doing business in Nigeria. Today, each manufacturer in this country provides its own water via borehole, transportation needs by having fleet of vehicles, spends heavily outside normal overhead for security at personal and organizational levels, grades the roads leading to factories, buys and runs generators for a dedicated power supply, and so on.

Furthermore, a survey carried out by Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA) has shown that only 6% of industrialist in the country has been able to access the various intervention funds made available by the Central Bank of Nigeria (CBN). Also, Branch Chairman of Imo/Abia branch of MAN, G.C. Ekenma in his address during the branch 25th Annual General Meeting highlighted the following as part of the major issues that confront them; challenging business/operating environment, imposition of a fixed charge for energy by National Electricity Regulatory Commission (NERC), collapse of public infrastructure, local patronage, scarcity of gas and security of lives and property. Another survey conducted by MAN revealed that out of about 2.500 member-companies of MAN, 30% of them had closed down, 60% are ailing and only 10% are operating at sustainable level. The cost of manufacturing in Nigeria therefore is nine times that of China, four times that of Europe, four times above the figure in South African and twice the figure in Ghana.

Therefore, it would be important to study the Prospects for Sustenability and Viability of Nigerian Manufacturing Organizations through Team work approach, because it brings about innovation in the design of products and quality.

Objectives of the study

The study aims to ascertain the extent to which teamwork approach to change management holds good prospects for sustenance and viability in Nigerian Manufacturing organizations.

LITERATURE REVIEW

Reasons for the formation of teams

Team work originates with and builds relationships among a group of people who share a common interest or purpose. By allocating the proper resources and support, human resource managers can ensure that the development of effective work teams increases group performance and help an organization to thrive in the most competitive markets (Khan, 2007). A well functional team can bring out the best in its members through mutual support that increases morale. According to Efi (2010) work team encourages free expression of ideas in a manner that engages each member of the team. A team therefore, brings together individuals with similar interests and objectives.

According to Lantz (2010), teamwork can benefit the innovation process and give a return on the investment that it takes, provided the groups have a complex task, considerable freedom, and group processes that are characterized by reflectivity. A good argument for investing in teamwork is that it can promote self-organization. Reflectivity is defined as “the extent to which team members collectively reflect upon the team’s objectives, strategies, and processes as well as their wider objectives” (West et al., 2004). Meanwhile Alderfer (1977) opines that one important thing to note is that teams are formed to meet objectives that can best be met collectively, thus teams help organizations to overcome the limitations of individuals.

According to Efi (2010), Mullins (2010) and Weighrich and Koontz (2005), there are number of reasons why individuals are grouped into work teams. These reasons include the following:

1. To keep employees and reduce costs related to employee turnover (severance costs, living, training expenses).
2. To hold on to valuable organizational knowledge that comes with the continuity of staff and sharing of information.
3. To enhance the power and feeling of satisfaction of individuals working on the team.
4. To build organizational competence and stability.
5. To enhance trust relationships that lead to better sharing of knowledge and understanding.
6. To achieve objectives, because individuals are working together.
7. To reduce too much authority in a single person, for wider spread of authority within the work team leaders.
8. To enhance group deliberation and judgment because two good heads are better than one.
9. To increases motivation through participation, people who take part in planning a program or making a decision usually feel more enthusiastic about accepting and executing it.
10. To increase accomplishment of task through the combined efforts of a number of individuals working together.
11. To provide collusion between members in order to modify formal working arrangement more to their liking. Membership therefore provides the individual with opportunities for initiative and creativity.
12. To enhance companionship and a source of mutual understanding and support from colleagues.
13. To provide members of the group a sense of belonging
14. To provide guidelines on generally acceptable

behavior by making sure that members adhere to official rules and regulations.
15. To provide proper protection for its members from outside pressures or threats.

Individuals have varying expectations of the benefits from group membership, relating to both work performance, and social process. However, working in groups may mean that members spend too much time talking among themselves rather than doing (Mullins, 2010). It is important therefore, that the manager understands the reasons for the formation of work teams and is able to recognize likely advantageous or adverse consequences for the organization.

Team characteristics and team-building objectives

To Trevor (1999), team is a term used widely today for group of people coming together for a common purpose. Teams must be able to bring added value as a team to the organization. Co-operation is essential for team success. Meanwhile Mullin (2010) opines that the characteristics of an effective work team are not always easy to isolate clearly. He went further by advising that the underlying feature is a spirit of co-operation in which members work well together as a united team and with harmonious and supportive relationships. To Athanasaw (2003) the criteria for effectiveness of cross-functional teams are many and varied, but the success of any project may require that all criteria be met if the project is to be successful. However, according to Stevens (1993), much of the literature categorizes self-management and interpersonal skills. Self-management involves the team collectively managing the team's basic managerial and or supervisory function. These include; goal-setting, performance management and task coordination. Meanwhile Denison et al. (1996) explained interpersonal skills to include, conflict resolution, collaborative problem solving and communication.

Team characteristics

In an elaborate form, Adair (1986:67) also suggests the following characteristics of effective work team to include;

1. Clear objectives and agreed goals
2. Openness and confrontation
3. Support and trust
4. Cooperation and conflict
5. Sound procedures
6. Appropriate leadership
7. Regular review relations

In addition, he emphasized the importance of careful selection of team members. Team members are not only expected to be technically or professionally competent, but also the ability to work as a team members and the possession of desirable personal attributes such as willingness to listen, flexibility of outlook and capacity to give and accept trust. Meanwhile, Mullins (2010) isolated the following as characteristics evidence that members of a team are working as an effective team members, they include:

1. A belief in shared aims and objective.
2. A sense of commitment to the team.
3. Acceptance of team values and norms.
4. A feeling of mutual trust and dependency.
5. Full participation by all members and decision making by consensus.
6. A free flow of information and communication.
7. The open expression of feelings and disagreements.
8. The resolution of conflict by the members themselves.
9. A lower level of staff turnover, absenteeism, accidents, errors and complaints.

However, as Brooks (2006) points out, that teams operate at the higher order of group dynamics that it is more reflective of “effective work teams” rather than work groups. Finally, Athanasaw (2003) considers these factors necessary for teams to be effective, listening, giving performance feedback, making one's point at a team meeting, group problem- solving, leaning a new job, peer counseling, conducting team meetings, resolving conflict and working collaboratively.

Team building objectives

In the last fifteen years, organizations structure has undergone a shift from the individual climb of corporate ladder, to an increasing emphasis on work teams and groups. The shift to work teams is largely due to factors such as globalization, downsizing and the need for technological efficiency. As companies expand and tasks become more complex, more and more specialists are needed within organizations to work as a team. In addition, the convergence of products, services and technology from around the world has forced companies to work in cross functional environment for which the best original design is often working in teams.

Other reasons for the emergence of work teams are stiff competition, and shifting authority down to members of work teams, which increase productivity (Ezigbo, 2011). She concludes that a well-functioning team can bring out the best in its members because problem solving skills and creativity increase with mutual support that builds morale in teams. Teams occur when a number of people have a common goal and recognize that their personal success is dependent on the success of others (Crainer, 1998).

Team building is not just a good idea; it is a necessity of biological life. A belief in teamwork actually results in a major reduction of medical symptom for managers (Barry and Rhonda, 1990). This style is the one most positively

associated with performance and profitability career success and satisfaction and physical and mental health.

Teamwork is important in any organization but may be especially significant in service industries such as hospitality organization, where there is a direct effect on customer satisfaction. In essence, team working involves a reorganization of the way work is carried out (ACAS, 2007). Teamwork can increase competeiveness by;

1. Improving productivity.
2. Improving quality and encouraging innovation.
3. Taking advantage of the opportunities provided by technological advances.
4. Improving employee motivation and commitment.
5. Being proactive rather than reactive.

As Lucas (2001) rightly puts it, there is no doubt that effective teamwork is crucial to an organization's efforts to perform better, faster and more profitably than their competitors. To Adams (2008), teamwork is not an option for a successful organization, it is a necessity. Teamwork can lead to achievement, creativity and energy levels that someone working alone or perhaps with just one other person could hardly imagine. In a more elaborate way (Center for Management and Organizational Effectiveness, 2010) stress that team is designed to provide skills and promote high levels of team performance and team member satisfaction. They highlighted the following as team building objectives;

1. Learning how to unleash the team's power and potential.
2. Discovering new solutions to help team members enhance their teams effectives and cohesiveness.
3. Exploring ways to build team motivation and commitment to teams objectives.
4. Discovering the tools and resources that can help strengthen the team and building whole-hearted cooperation among team members.
5. Gaining personal insight about how individual actions and behaviors either add to or detract from teamwork and team building.
6. Understanding the role of each team member.
7. Creating an exciting team-building learning experience that will raise their level of interest in, and commitment to teamwork in their organization.

In a concluding note, Ezigbo (2011) highlights the factors that make for effective team work competency, they include; designing teams properly, creating a supportive team environment and managing team dynamics appropriately.

Skills required for effective team working in organizations

More and more task of contemporary organizations, particularly those in high technology and services business, require teamwork. According to Guirdham (2002), teamwork depends not just on technical competence of the individuals composing the team, but on their ability to 'gel'.

To work well together, the team members must have more than just team spirit. They also need collaborative skills-they must be able to support one another and handle conflict in such a way that it becomes constructive rather than destructive. Ashmos and Nathan (2002) also state that, the use of teams have expanded dramatically in response to competitive challenges. In fact, one of the most common skills required by new work practices is the ability to work as a team.

Robbins and Judge (2007) maintain that the key components -making up effective teams can be subsumed into four general categories. First are the resources and other contextual influences that make teams effective. The second relates to the team's composition. The third category is work design. Finally, process variables reflect those things that go on in the team that influences effectiveness, as indicated in Figure 1.

To Heller (1997) he opines that the best culture for an organization is a team culture and that any large organization is a team of teams, so people who have to work together as a team, must also think together as a team. In other words Peeling (2005: 129-130) has it that the important thing in teams is for team member to respect team personalities and use their different skills properly. However, Gomez-Mejia (2001) in his study on team, in relation to productivity, identifies the skills necessary for team members to increase productivity as being technical skills, Administrative skills and interpersonal skills.

Furthermore, Douglas (2003) points out that as we all interact with people to a greater or lesser extent in our everyday lives, there is a tendency to assume that people management skills are merely an extension of our natural abilities. In fact people management skills are the most difficult and rare type of skills but to a large extent, it can be learned. Cloke and Goldsmith (2002) refer to the special skills required for successful teamwork and listed ten skills team members can develop in order to build innovative self – managing teams. All these skills are interrelated, mutually reinforcing and dependent upon each other, and they include;

1. Skill of self-management: Overcoming obstacles together and in the process building a sense of ownership, responsibility, commitment and efficiency within each team member.
2. Skills of communication: Collaboratively developing their skills in becoming better listeners, commiserating with others, reframing communications so they can be heard, and communicating honestly about things that really matter.

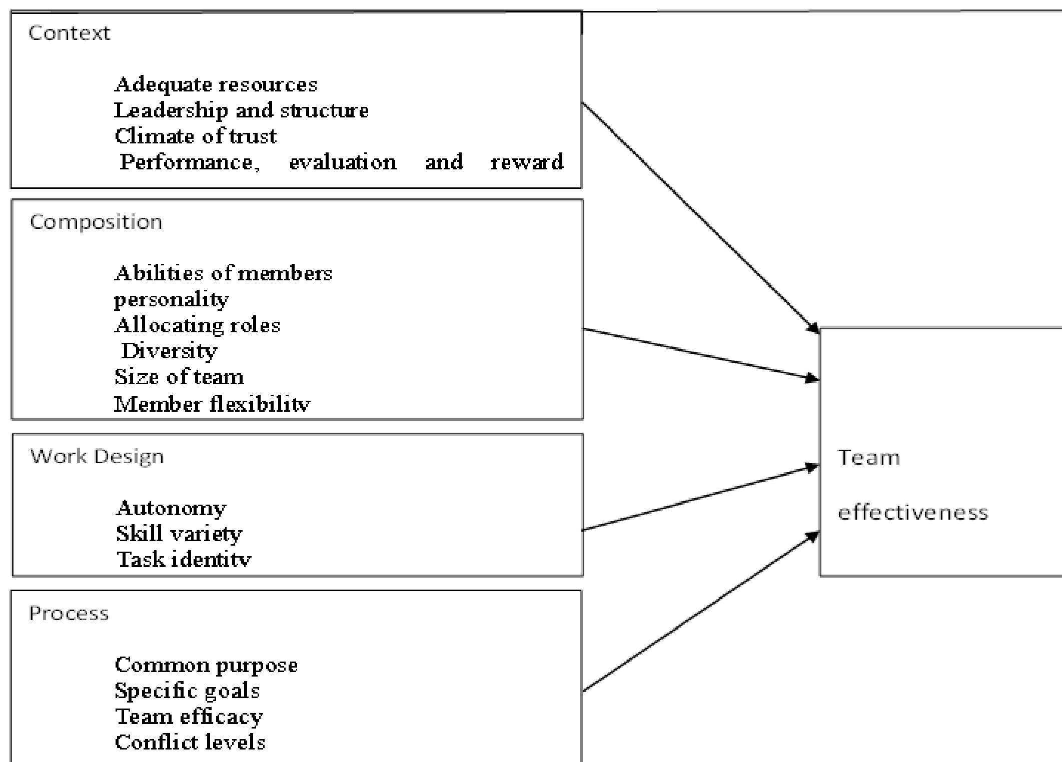

Figure 1. Team effectiveness model (Source: Robbins and Judge (2007) Organizational Behavior (12th Edition) New Delhi, Prentice-Hall).

3. Skill of leadership: Creating opportunities for each member to serve as leader. Employees need to be skilled in linking, organizing, coordinating, collaborating, planning, facilitating, coaching and mentoring.
4. Skill of responsibility: Everyone is personally responsible not only for their own work, but for the work of every other member of the team. Team members have to exercise responsibility in order to become self-managing.
5. Skill of supportive diversity: Collaborative experiences allow team members to overcome prejudices and biases and not create winners and losers, reject outsiders or mistrust people who are different.
6. Skills of feedback and evaluation: Essential to improving learning, team communication and the quality of products, processes and relationships. In a true team environment, self-critical perspectives are expected, welcomed, acknowledged and rewarded.
7. Skill of strategic planning: To identify challenges and opportunities collaboratively and influence the environment in which problems emerge. Strategic planning encourages employees to think long-term, be proactive and preventative and focus on solutions rather than problems.
8. Skill of shaping successful meetings: Team meetings can be streamlined and made shorter, more satisfying and more productive, and result in expanded consensus.
9. Skill of resolving conflicts: Encouraging team members to improve skills in problem-solving, collaborative negotiation, responding to difficult behavior and conflict resolution.
10. Skill of enjoyment: Most team members enjoy working together to accomplish difficult tasks. Their pleasure derives from meeting high performance challenges and producing results that benefit themselves and their teams, organizations and communities.

In a concluding note, O’Rourke (2009) advocate team communication framework, that provide tools for developing the communication skills people need in order to be effective team members and achieve results. Team communication incorporate and emphasizes the cultural context – both internal and external for teams. He advised that teams need a communication protocol (rules for managing team or communication) that they understand and use. He developed a system model for team communication. The system model below shows that communication in teams start within individuals and incorporates team members, which will now expand to the organization. Finally, the communication emphasizes the cultural context of the team (Figure 2).

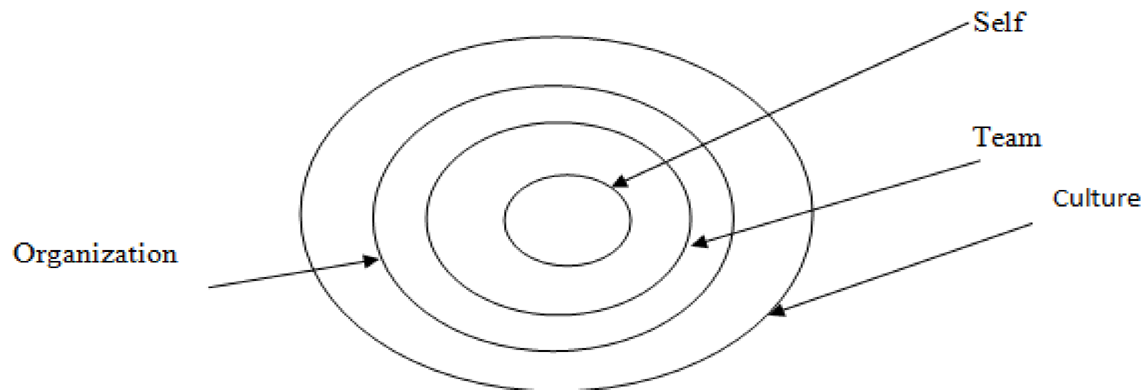

Figure 2. A system model for TeamComm (Source: O' Rourke (2009) "Leading groups and teams", managerial communication series (2nd edition) Ohio: South Western Cengage Learning).

There are so many theories about teams, but this work is based on the theories of these authors;

1. McGregor Characteristics of effective Team: McGregor and his colleagues developed lists of characteristics for effective and ineffective teams. McGregor (1960) his list focuses on management of teams. Other scholars that conducted research similar to his includes, Argyris (1965) who focuses on organizational effectiveness that impact inter- personal competence of team members. He also looks at how the organization supports positive norms, such as openness, experimentation, individuality, thoughtfulness, concern, internal commitment, candidness, encouraging candidness, assisting with experimentation, and encouraging openness.
2. Hackman and Oldham team effectiveness: To Hackman and Oldham (1980) team effectiveness comprises all of the following; the teams' ability to produce an output that meets or exceeds an organization's performance standards or expectations, the team experience serving more to satisfy than frustrate the personal needs of team members, and the team's ability to work together on future assignments as a result of the social process engaged in to carry out current tasks.

The study reviews the work of other authors in line with the objective.

Teamwork approach, sustenance and viability

In a study conducted in Germany at German Sociological Research Institute, at the University of Gottingen, by Kuhlmann et al. (2004). The study emphasized the importance of correct and comprehensive implementation of teamwork, and proposes a "Coherence Thesis", founded on making close links between an organization's various dimensions. "The key issues are the integration of work organization and teamwork with the overall company organization and payment system

Also in another study conducted in Portuguese by Curral and Chambel (1999), investigating the efficiency of teams in Service Sector Companies, the study emphasized the need for what is known as participation security so that the teams function well and proposes innovation ideas. The study examined 26 teams accounting for 70 individuals in total, who work for seven publicity agencies in the Lisbon region.

Oeij and Wiezer (2002) in their study, examined teamwork from the perspective of participation, work intensity, learning new things and multi-skilling and autonomy. The empirical result showed that working in a team is closely associated with an environment typical of the possibility to learn new things and job enlargement attributes. Successful organizations today know that teams make a big difference in achievement of strategic goals. That is why the CMOE (2010) advocate for team that are strong, flexible, and productive to be the competitive edge needed to produce better results, achieve higher quality, lower cost both for the organizations and the customers. Hence, building an effective team requires applying practical skills to maximize team performance and development.

More also, in their study "Team Conflict Management and Team effectiveness: The Effects of task interdependence and team identification". Somech et al. (2009) explored the dynamics of conflict management as a team phenomenon. The study examined how the input variable of task structure (task interdependence) is related to team conflict management style (cooperative versus competitive) and to team performance, and how team identity moderate these relationships. Results revealed that a high level of team identity, task, and interdependence was positively associated with the cooperative style of conflict management, which in turn

fostered team performance.

METHODOLOGY

The study adopted the survey research design, in which ten (10) manufacturing companies in the South-Eastern Nigeria were studied. The population of the study was 13.623, and the sample size was calculated to be 598 using the Taro Yamane's formula. The sampling selection was the stratified sampling method.

A self-developed structured questionnaire and oral interview guide were the research instruments used for the study. The sample size was distributed among the ten manufacturing organizations in the Southeast under study by the proportionality formula to get 619. Out of the six hundred and nineteen (619) copies of questionnaire that were administered, five hundred and thirty-three copies (533) were correctly filled and returned, giving 86.1% success rate while eighty six copies were incorrectly filled or not returned, giving 13.9% failure rate. Data collected were presented descriptively using charts, simple frequency and percentage distribution, mean and standard deviation. The hypotheses were tested using the Z test statistic.

RESULTS

Table 1 show that the respondents agree that the use of teamwork approach to change management in manufacturing organisation is effective. This is represented in the responses of 194 (36.4%) respondents who noted strongly effective, 212 (39.8%) respondents who noted effective, 11 (2.1%) respondents who were undecided and 116 (21.8%) respondents who noted ineffective, as well as the mean response score of 3.91±1.12.

As indicated from the responses of 240 (45%) respondents who strongly agreed, 129 (24.25%) respondents who agreed, 94 (17.6%) respondents who were undecided, 38 (7.1%) respondents who disagreed and 32 (6%) respondents who strongly disagreed and the mean response score of 3.95±1.21, the respondents are of the opinion that teamwork approach to change management holds good prospects for sustenance and viability in Nigerian manufacturing organisation. With mean response of 4.78±0.48 and 483 (81.2%) respondents strongly agreeing, 85 (15.9%) respondents agreeing and 15 (2.8%) respondents being undecided, the respondents agree that clear objective and agreed goals are characteristics that are evidenced in any effective team.

As 331 (62.1%) respondents strongly agreed, 157 (29.5%) respondents agreed, 35 (6.6%) respondents were undecided and 10 (1.9%) respondents disagreed as well as the mean response of 4.52±0.70, the respondents are of the opinion that appropriate leadership is a characteristics evidenced in any effective team. From the responses of 172 (32.3%) respondents who strongly agreed, 100 (18.8%) respondents who agreed, 40 (7.5%) respondents who were undecided and 221 (41.5%) respondents who disagreed and the mean response of 3.42±1.32, the respondents indicated that trust and support are characteristics that are evidenced in any effective team. Regular review relations was indicated to be a characteristic that is evidenced in any effective team by 138 (25.9%) respondents who strongly agreed, 124 (23.3%) respondents who agreed and 271 (50.8%) respondents who were undecided as well as the mean response score of 3.75±0.84. Having a mean response score of 4.06±0.70, and 125 (23.5%) respondents strongly agreeing, 328 (61.5%) respondents agreeing, 70 (13.1%) respondents being undecided, 5 (0.9%) respondents disagreeing and another 5 (0.9%) respondents strongly disagreeing, conflict and cooperation was indicated to be a characteristics that are evidenced in any effective team.

Teamwork approach to change management holds good prospects for viability and sustainability. This is captured in the responses of 207 (38.8%) respondents who strongly agreed, 311 (58.3%) respondents who agreed, 10 (1.9%) respondents who were undecided and 5 (0.9%) respondents who disagreed as well as the mean response of 4.34±0.61.

Having mean responses > 3.5, the respondents agreed that skill of communication (4.77±0.48), skill for leadership (4.57±0.1), skill for resolving conflict (4.59±0.60) and skill for feedback and evaluation (4.16±0.67) are skills required for an effective team. From the responses of 303 (56.8%) respondents, 147 (27.6%) respondents, 72 (13.5%) respondents, 6 (1.1%) respondents and 5 (0.9%) respondents who strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively, the application of teamwork oriented-approach in management of organisational change is effective. The respondents agree that strategy for teamwork approach to change in their organisation is very effective. This is captured in the responses of 407 (76.4%) respondents who strongly agreed, 81 (15.2%) respondents who agreed, 40 (7.5%) respondents who were undecided and 5 (0.9%) respondents who disagreed.

Test of hypothesis

Teamwork approach to change management in Nigeria manufacturing organizations to a large extent holds good prospects for sustenance and viability. In testing this hypothesis, the data presented in Table 1 were tested using Z-test (Table 2). Decision rule if $Z_{cal} > Z_{critical}$, reject the null and accept the alternative hypothesis, otherwise vice-versa.

DISCUSSION

The calculated Z-value is 5.763.This value is greater than the critical Z-value of 1.96. Therefore, the null hypothesis is rejected and the alternative hypothesis accepted.

Table 1. Extent to which teamwork approach to change management holds good prospects for sustenance and viability in Nigerian manufacturing organisations.

Question	Options	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev.
Effectiveness of the use of teamwork approach to change management in manufacturing organisation (strongly effective; effective; undecided; ineffective; strongly ineffective)		194 (36.4)	212 (39.8)	11 (2.1)	116 (21.8)	0 (0.0)	3.91	1.12
Teamwork approach to change management holds good prospects for sustenance and viability in Nigerian manufacturing organisation		240 (45.0)	129 (24.2)	94 (17.6)	38 (7.1)	32 (6.0)	3.95	1.21
Characteristics that are evidence in any effective team	Clear objective and agreed goals	433 (81.2)	85 (15.9)	15 (2.8)	0 (0.0)	0 (0.0)	4.78	0.48
	Appropriate leadership	331 (62.1)	157 (29.5)	35 (6.6)	10 (1.9)	0 (0.0)	4.52	0.70
	Trust and support	172 (32.3)	100 (18.8)	40 (7.5)	221 (41.5)	0 (0.0)	3.42	1.32
	Regular review relations	138 (25.9)	124 (23.3)	271 (50.8)	0 (0.0)	0 (0.0)	3.75	0.84
	Conflict and cooperation	125 (23.5)	328 (61.5)	70 (13.1)	5 (0.9)	5 (0.9)	4.06	0.70
Teamwork approach to change management holds good prospects for viability and sustainability		207 (38.8)	311 (58.3)	10 (1.9)	5 (0.9)	0 (0.0)	4.34	0.61
Skills required for an effective team	Skill of communication	426 (79.9)	92 (17.3)	15 (2.8)	0 (0.0)	0 (0.0)	4.77	0.48
	Skill for leadership	337 (63.2)	161 (30.2)	35 (6.6)	0 (0.0)	0 (0.0)	4.57	0.61
	Skill for resolving conflict	342 (64.2)	161 (30.2)	30 (5.6)	0 (0.0)	0 (0.0)	4.59	0.60
	Skill for feedback and evaluation	150 (28.1)	338 (63.4)	25 (4.7)	20 (3.8)	0 (0.0)	4.16	0.67
The application of teamwork oriented-approach in management of organizational change is effective		303 (56.8)	147 (27.6)	72 (13.5)	6 (1.1)	5 (0.9)	4.38	0.83
strategy for teamwork approach to change in your organization is very effective		407 (76.4)	81 (15.2)	40 (7.5)	5 (0.9)	0 (0.0)	4.67	0.65

Source: Field Survey, 2014.

Hence, teamwork approach to change management in Nigeria manufacturing organizations to a large extent holds good prospects for sustenance and viability. This result is in line with the findings by Kuhlmann et al.(2004) and Oeij and Wiezer (2002) who noted that the key issues are the integration of work organization and teamwork with the overall company organization and payment system, and thus successful organizations today know that teams make a big difference in achievement of strategic goals.

CONCLUSIONS

The major findings of this study were that teamwork approach to change management in manufacturing organizations to a large extent holds good prospects for sustenance and viability. This being so because these prospects are based on the characteristics that every effective team has. These Nigeria characteristics are clear objective and agreed goals, appropriate leadership, trust and support, regular review relations, and conflict and cooperation. To exhibit these characteristics that will ensure that the team is effective, it is paramount that the team possesses the skills of communication, leadership, conflict resolution, and feedback and evaluation. When these are done, the application of teamwork oriented-approach in the management of organizational change will be very effective, not minding the unique attributes of such organisation. The study concludes that teamwork has the prospect of making manufacturing organizations very effective, viable and sustainable.

Table 2. One-sample Kolmogorov-Smirnov (Z) test result for hypothesis.

Variable		Mean response on teamwork approach
N		533
Normal Parameters[a,,b]	Mean	4.2759
	Std. Deviation	0.35049
Most Extreme Differences	Absolute	0.150
	Positive	0.150
	Negative	-0.106
Kolmogorov-Smirnov Z		5.763
Asymp. Sig. (2-tailed)		0.000

[a]Test distribution is Normal; [b]Calculated from data.

Specifically, it has the benefits of improved productivity and product quality, innovativeness and manpower development. Teamwork sustenance, which entails the involvement of employee in any change process discussion and implementation, has the advantage of curbing resistance to change, thereby giving the organization the opportunity to be innovative, which will ensure its viability, sustainability and survival. Organizations achieve sustainability and viability when change is effectively managed. This is only achievable when the organization has the ability to and can cope with challenges, unique to the organization, that are encountered in the course of change management

RECOMMENDATIONS

Based on the findings, the study recommended that,

1. For an improved product design with high quality that will appeal to customers' satisfaction any day, teamwork should be encouraged in Nigerian manufacturing organizations.
2. It is also recommended that team incentives and rewards should be strictly adhered to in order to boost team performance and effectiveness.
3. Team members should be carefully selected so that members with requisite skills are selected to work towards achieving the required objectives.
4. Team members should interact with one another in order to understand their weaknesses and strengths, by doing so, they will build trust and support for each other, which will make their team more cohesive
5. Managers of manufacturing organizations should encourage employees to undergo constant training, development, workshops and seminars. This is to keep them abreast of current issues and changes as it concerns their organizations, as such they will be proactive rather than reactive in dealing with challenges that might come up.

LIMITATIONS OF THE STUDY

In carrying out a study of this nature, the following constraints were encountered;

Finance: The study covered ten manufacturing organizations in South Eastern part of Nigeria. A lot of travelling was involved in visiting these organizations while distributing questionnaires and interviewing the respondents. Also a lot of secretarial work was required in typing, printing, photocopying and duplicating materials. All these require funds to accomplish them.

Time: The researcher due to her engagement in office work and family had to combine this work with other family and office work load.

The attitude of some respondents: Some of the respondents claimed that they were too busy and refused to accept our questionnaire. Even some that accepted the questionnaire refused to answer some questions in the instrument.

Data: All the materials needed for this work could not be gotten because as the respondent was gathering information for the work, new materials were been rolled out. Notwithstanding, the respondent visited many libraries both locally and internationally, organizations under study and made use of the internet; to gather enough data needed for this work. However, in all, we obtained responses which we consider adequate for the study.

SUGGESTION FOR FURTHER STUDIES

While this study was thoroughly conducted, it is not conclusive in itself as there are areas of this study that should be exhaustively research on. To this end, it is suggested that further studies should be carried on: "the relevance of teamwork as a tool in implementing change in the Nigerian service industry" and "a multivariate analysis of change management and teamwork approach as predicators to process optimization in manufacturing organizations in Nigeria".

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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