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Evaluation of the commonly served Meals at Home and Schools to determine their Contributions in Meeting the Nutritional Needs of Pupils enrolled for Morning School Hours in selected Schools in Al-Zawiyya City, Libya

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Abstract

This study was conducted on twenty (20) classes consisting of 445 grade 6 and 7 primary school pupils drawn from five (5) public schools in Al-Zawiyya City, Libya. The main objective was to assess the nutritional quality of some of the traditional meals offered to the pupils at the schools as well as the hygienic and safety standards in meal preparation in the schools' cafeteria. Data on the nutritional status of the pupils were obtained directly from their parents through a carefully designed questionnaire consisting of a number of questions posed to the parents; while the quality characteristics of the meals served at the schools' cafeteria were gathered through visits to and interaction with the cafeteria staff and by proximate analysis of the popular traditional meal samples namely *albazeen*, *couscous bel-khdra* , *macaroni ambakabaka*, *reshda ambakabaka*, *macaroni belsalsah*, *ruz belbaslah* , *tobekha bazeelaa* , *shakshouka*, *mhachi* (*velvl ,oureih*), *alzumaith* and *albasisa*, for fat, protein, ash, moisture and carbohydrate contents. Proximate analysis results of each of these meals indicate the percent fat and protein contents to be respectively as: *albazeen* (3.50 and 7.62); *couscous bel-khdra* (8.74 and 7.22); *macaroni ambcabach* (4.30 and 5.00); *macaronibelsalsah*(5.30 and 5.50); *ruz belbaslah* (8.25 and 4.68); *tobekha basilaa* (7.30 and 8.73);

shakshouka (14.50 and 5.80); *alzumaita* (21.30 and 6.85) and *albasisa* (20.50 and 5.95). Also, the results of the analysis of the questionnaire indicate that 60.22 % of the pupils do not take breakfast at home before going to their schools; 63.82% of the pupils prefer to purchase their breakfast from the schools' cafeteria to bringing it from their homes, whereas 26.97% of the pupils exhibited signs of leanness and general body weakness with many of them suffering from dental caries. The results of the assessment of the extent of observation of both hygienic and safety standards during meal preparations and servings at the schools' cafeteria showed that 60.00% of the schools' cafeteria lacked the hygienic standard and food quality requirements of school meals. And it was observed that 100% of all the schools' cafeteria staff did not have any health certificate to certify their freedom from any contagious or communicable diseases.

Key words: school meals; nutritional status; questionnaire, *Albazeen*, *Alzumaita*, *Albasisa*

Introduction

The association between food and health is well established (Insel *et al.*, 2004). Indeed, many consumers of today are highly aware of the health properties of food, and the market for healthy food and food with special health benefits is increasing. Also, prevention of disease through healthy eating is becoming just as important as treatment of the disease (Institute of Medicine, 2007 and 2008).

Malnutrition or undesirable physical or disease conditions related to nutrition can be caused by eating too little, too much or an unbalanced diet that does not contain all nutrients necessary for good nutritional status. An essential prerequisite to the prevention of malnutrition in any community is therefore the availability of enough food to provide for the nutrient needs of people of all age groups. For adequate food to be available, certainly there must be adequate food production or sufficient funds at the national, local or family level to purchase enough food. Availability of food, however, is just part of the picture. It is now recognized that malnutrition is only the overt sign, or symptoms, of much deeper problems in any society. Similarly, food insecurity includes both inadequate quantity and quality of food. Inadequate dietary intake and disease, particularly infections, are immediate causes of malnutrition. It is obvious that each person must

eat an adequate amount of good-quality and safe food throughout the year to meet all the nutritional needs for body maintenance, work and recreation, and for growth and development particularly in children (ADA, 2008; Clark and Fox, 2009). In addition, one must be able to digest, absorb and utilize the food and nutrients effectively. Poor diets and disease are often the result of insufficient household food security, inappropriate care and feeding practices and inadequate health care. It is now understood that good nutrition depends on adequate levels of all three of these factors (Insel *et al.*, 2004).

Children in particular, need not just enough calories, but enough nutrients for proper growth and development (Buzu, 2001; Barba and Ma Isabel, 2008; Clark and Fox, 2009). Improper growth has health implications that can affect a variety of development outcomes. Food security can affect children's success in terms of educational outcomes, family life, and overall health. For example, food insecurity has been linked to worse development trajectories for children, such as impaired social skills and reading development (FAO/WHO/UNU, 2001; Moshfeghet *al.*, 2008). School meal programs have been implemented in many countries as a solution to alleviating issues with food insecurity (Condon *et al.*, 2009; Currie *et al.*, 2012). It is now generally recognized that every person, particularly children, must get balanced diet. A balanced diet is intended to provide all the necessary nutrients required by the human body (Insel *et al.*, 2004; WHO/FAO/UNU, 2007).

Naturally, there is no single food material that can provide all the nutrient requirements of any human — many food items contain adequate amounts of some nutrients but are very deficient in others. Thus, it is the consumption of a combination of many food materials that usually provides a balanced diet. The traditional diets of most societies in developing countries, including Libya, are good. Usually only minor changes are needed to enable them to satisfy the nutrient requirements of all members of the family. Moreover, the quantity rather than the quality of food eaten remains a more common problem.

The consumption of early morning meals, otherwise known as breakfast, has been proven to have positive effects on both the physical and mental activities during the period after the meal or during the remaining parts of the day. This has attracted more

attention to the quality and quantity of meals served as breakfast. Results of many studies (Griffith *et al.*, 2000; Buzu, 2001; Condon *et al.*, 2009) indicate that some components of a breakfast play key roles in maintaining satiety up to four (4) hours after the meal was consumed; and that the best foods eaten at breakfast that provide a feeling of fullness for a long period of time are those that provide the total calories from 10 – 15% protein, 15 – 30% fat and 55 – 75% carbohydrate (WHO, 1991 and 2003). These studies also provide a fairly clear indication that the malnourished body has a reduced ability to defend itself against infection.

Breakfast has been adjudged as very important in providing the body with the nutrients and energy required in kick-starting the day's activities, especially in children of school age. It has been reported that skipping of breakfast by children aged 11 – 13 years may result to lethargy, tiredness, difficulty in comprehension and behavior problems in the school environment (DAA, 2009). Children that do have their breakfasts have been shown to have better comprehension, longer attention span and better performance at school.

Skipping breakfast by school children, especially the females, has been reported to be very rampant in the Arab nations, ranging from 28 – 70% (ACN, 2009). Utter *et al.* (2007) reported that many children skipped breakfast either because they disliked homemade meals usually offered at breakfast or they do not have enough time for breakfast at home in the morning. Moreover, skipping breakfast among school children remains a serious concern around the globe (Hoyland *et al.*, 2012).

Nutritional problems are complex in their a etiology , and there are many different nutritional deficiency diseases especially among the school-aged children. Knowing how they occur is one vital part of solving and, better still, preventing nutritional problems (Rand and Young, 1983). Schools can make important contributions to improve children's meals and nutrient intakes (Azouz, 2014). School-aged children spend at least 6 hours at school every school day and obtain up to 47% of their calories from meals and snacks consumed at school (Condon *et al.*, 2009; Azouz, 2014). The ability to predict the occurrence of nutritional problems makes prevention a more realistic prospect. Against this background, this study was designed to evaluate the nutritional quality, safety and hygienic standard during preparation, and contribution of some Libyan traditional meals offered

as breakfast, in meeting the nutrient needs of pupils enrolled in morning shift in selected public schools in Al-Zawiyya City, Libya.

Materials and Methods

This study was conducted only on pupils in the school morning shift during the Third Term of the 2013 / 2014 school year. Five (5) Public Schools in Al-Zawiyya, a town located at about 45 kilometers west of Tripoli, Libya were selected. A total of 445 pupils between the age bracket of 11 and 13 years and consisting of 302 females and 143 males were sampled. The pupils were drawn either from the sixth grade (end of the elementary school) or from the seventh grade (beginning of the middle or intermediate school), and a total of twenty (20) class rooms were involved (4 class rooms from each school). A room was provided in each school to serve as cafeteria where the breakfast meals were served to the selected pupils, and volunteers were deployed for this purpose. Information on the nutritional and the eating habits of the pupils was gathered through a carefully designed questionnaire that provided the idea about the meals taken at home by each pupil, especially at breakfast. Also, samples of some of the traditional meals (*albazeen, couscous belkhadra, macaroni ambakabaka, reshda ambakabaka, macaroni belsalasah, ruz belbaslah, tobeekha bazeela, shakshouka, alzumaiith, albesisa* and *almahchi*) commonly served at home as breakfast by pupils' families, were collected and subjected to proximate and chemical analysis, moisture, protein, lipid, ash and mineral analysis.

Moisture, crude protein, lipid, ash and mineral contents were determined as prescribed in AOAC (2006) and Nelson (2010). The carbohydrate content was obtained by difference (i.e, the sum of the percent moisture, crude protein, lipid and ash subtracted from 100) (AOAC, 2006; Nelson, 2010); the extraction of the minerals: calcium, iron, sodium and potassium were carried out as prescribed in the Association of Official Analytical Chemists (AOAC, 2006), while their quantification was done using atomic absorption spectrophotometer (Perkin-Elmer 3300), whereas the phosphorus content was quantified by Vanadomolybdate method. The data obtained were subjected to statistical analysis using the MS-Excel 2007.

Results and Discussion

Result of the responses from the school children to reason for skipping breakfast is presented in **Table 1**. The data obtained showed that 71% and 66% of the female and male respondents, respectively, skipped breakfast at home for the various reasons stated in the table (**Table 1**). The result also showed that 69.89% of the total respondents preferred having breakfast together with their colleagues at school, 62.70% enjoyed having the breakfast during the break period at school, while 60.22% disliked to have breakfast early in the morning, and the least reason for skipping breakfast, 25.84% of the respondents, was their dislike of the kind of meals offered for breakfast at home (**Table 1**). Only 39.55% of the respondents skipped breakfast as result of food insecurity at home. And the females are more likely to skip breakfast than the males (**Figure 1**). Although the reason for this trend was not clearly understood, however, this observation is in agreement with those made by Rampersaud *et al.* (2005) and Nickolas *et al.* (2000), who also observed that the most prevailing reason for skipping of breakfast at home by school-aged children is peer influence. It is also important to note that a significant number of the respondents claimed that they did not have enough time (wake up too late) to have their breakfast at home, this is very worrisome.

Table 1: Reasons given by the Respondents for skipping breakfast at Home

Respondents' Reasons	Total	Percent (%)
Do not want to eat at the early morning.	268	60.22
Disliked the kinds of meals on the breakfast table.	115	25.84
Preferred breakfast during the break period at the school day	279	62.70
Preferred buying snacks from the school cafeteria.	235	52.81
Did not have enough time for breakfast at home.	267	60.00
Usually, breakfast is not available at home.	176	39.55
Preferred breakfast with colleagues at school.	311	69.89
preferred to purchasing breakfast from the school's cafeteria	284	63.82

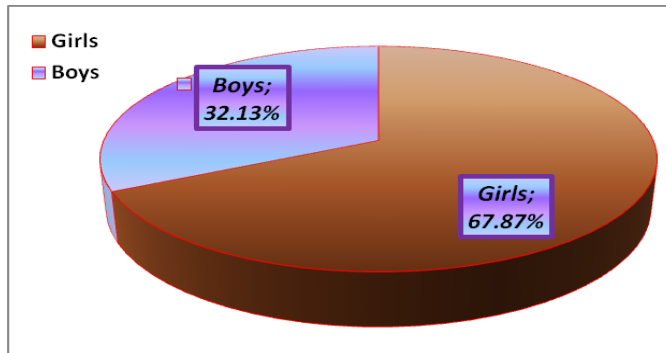


Figure 1: The percentage of skipped breakfast at home

From the families' side, the respondent mothers indicated that they usually put on the breakfast table whatever food that is at their disposal, or whatever food item they deem suitable for breakfast in the morning. The list usually include (in addition to those listed in the materials and methods) bread, tea, tea with milk, cheese and sometimes biscuits and honey. Some mothers also indicated that their children preferred breakfast that contained chocolate products, cocoa, milk and good varieties of biscuit especially those stuffed with milk cream (**Figure 2**). The highest contributors to the children's breakfast, in most cases, are bread (90%), tea (76%), eggs (61%) and *besisa* (57%), and the least is chocolate (12%) as indicated in **Figure 2**.

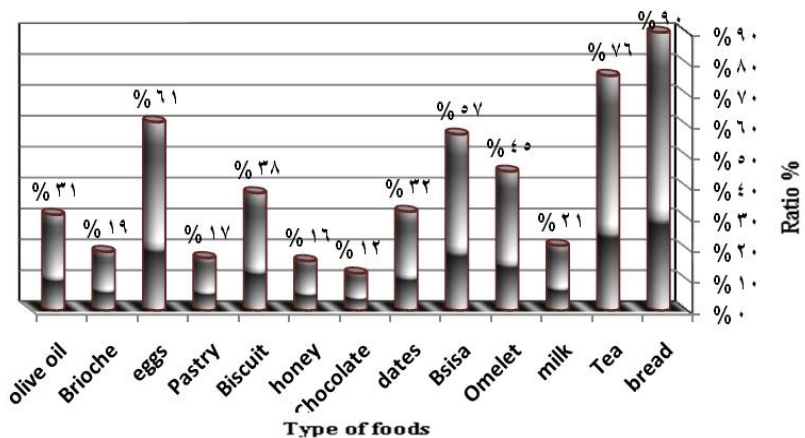


Figure 2: families brakfast table

The fact that many of the children respondents skipped breakfast because they disliked the homemade foods offered as breakfast is also in line with the observations of Utter *et al.* (2007) and Hoyland *et al.* (2012), who also noted that breakfast skipping among school-aged children remained a considerable problem around the globe. In response to the idea of bringing breakfast to the school, 70.79% of the children respondents disliked bringing the breakfast with them to the school, 62% felt too big or uncomfortable to do so, but would prefer to have money from their parents to purchase breakfast from the school cafeteria, irrespective of the quality of the meals or the prevailing unsanitary conditions at the cafeteria.

Figure 3 shows the most popular traditional meals in the study area and frequency of their weekly consumption by the respondents. It is important to note that most of the meals are prepared through the cooking process; some are easier to prepare than others, and therefore are more frequently consumed, while others require very tedious preparation process and use of ingredients that may require additional preparation procedures before incorporating them into the main meals, in addition to a very lengthy cooking time, this last category are less frequently consumed despite their high nutritional values. This explains the reason for more frequent consumption of *macaroni ambakabaka* (3-5 times / week) and *shakshouka* (3-6 times / week) as compared with the other meals (**Figure 3**). About 72.14 % of the family respondents indicated that these two meals were preferred because of their ease of preparation, it takes a very short time to prepare either of the two meals and the majority of the parents have good knowledge or are skilled in preparing the two meals. *Albesisa*, for instance, is a breakfast meal prepared from a combination of some legumes and cereal grains that are roasted, crushed and then mixed with olive oil. *Albesisa* is usually served as a breakfast meal in a semi-liquid form (due to the presence of the olive oil).

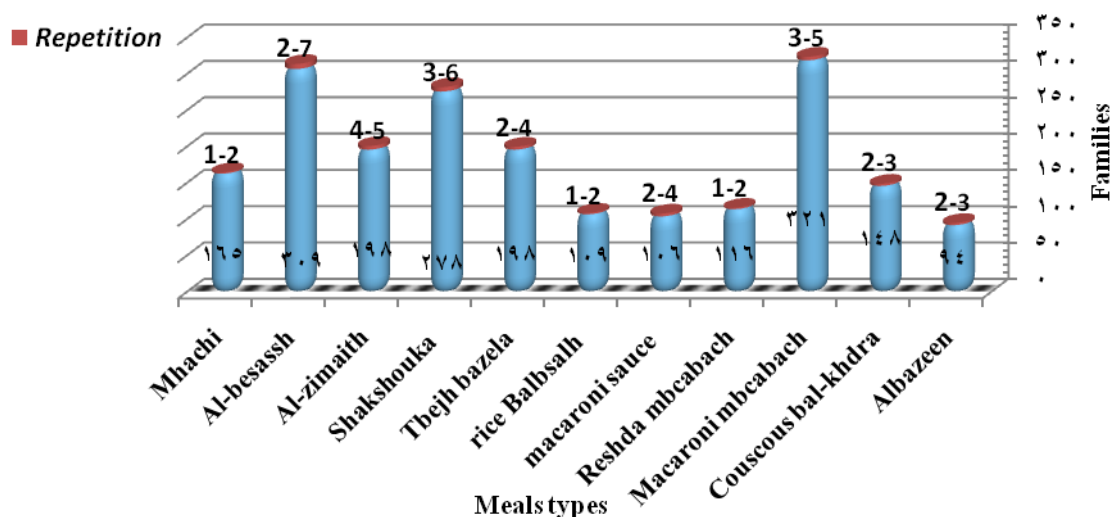


Figure 3: The percentage of consumption types of poplar diets during the week

On the chemical analysis of the traditional meals, data presented in **Tables 2** and **3** showed the proximate and mineral composition of the prepared meals, respectively. The results show that *Albasisa* recorded the highest carbohydrate (62.00%) and a higher fat (20.10%) contents; it also recorded the lowest moisture, protein and ash percent: 11.20%, 5.95% and 0.55%, respectively (**Table 2**). The highest percentages of moisture, 72.50 and 70.00, were recorded in *shakshouka* and *tobekha bazeelaa*, respectively, while the protein contents in the two meals were 5.80% and 7.30%, respectively (**Table 2**). In general, the data presented in **Table 2** revealed that the formula of Some Libyan meals may not be adequate as a sources of nutrients for school children when compared with those recommended by FAO/WHO/UNU (1985 and 2001), and especially when consumed regularly. The diet of the school-aged children must be adequate to support normal growth and development. The Institute of Medicine's recommendations reflected new developments in nutritional science, i.e., increase the availability of key food groups in the school meal programmes, as appropriate, and enhance the ability of school meals to foster healthful eating habits and safeguard children's health (Institute of Medicine, 2008). Protein/calorie deficient diets have been

observed to result to underweight, wasting and lowered resistance to infection, stunted growth and impaired cognitive development and learning ability in school children; and iron deficiency in school-aged children has been associated with retardation of growth, decreased immunity (Shinjini and Sunita, 2001; Gowri *et al.*, 2005; Fairweather-Tait, 2001).

Table 2: Proximate Composition of the Common traditional Libyan meals .

Type of Meal	Component (%)				
	Moisture	Protein	Fat	Carbohydrate	Ash
<i>Albazeen</i>	65.50	3.50	7.63	22.75	0.50
<i>Couscous belkhdra</i>	51.20	8.74	7.22	31.20	0.75
<i>Macaroni ambakabaka</i>	62.70	4.30	5.00	27.35	0.54
<i>Reshda ambakabaka</i>	65.00	6.37	8.61	19.59	0.40
<i>Macaroni belsalasah</i>	58.40	5.30	5.50	30.10	0.50
<i>Ruz belbaslah</i>	54.20	4.68	8.25	32.18	0.48
<i>Tobeeekha bazeelaa</i>	70.00	7.30	8.73	13.15	0.75
<i>Shakshouka</i>	72.50	5.80	14.50	6.55	0.50
<i>Alzimaith</i>	45.71	6.85	21.30	26.10	0.52
<i>Albesisa</i>	11.20	5.95	20.10	62.00	0.55
<i>Almhachi (velvl , Qureih)</i>	64.70	8.35	10.20	16.23	0.50

Table 3: Mineral (Ca, Fe, P, K and Na) Contents of the Common traditional Libyan meals

Type of Meal	Minerals (mg / 100g)				
	Ca	Fe	P	K	Na
<i>Albazeen</i>	24.25	1.75	18.30	211.00	96.00
<i>Couscous belkhadra</i>	6.25	1.50	23.00	206.00	162.00
<i>Macaroni ambakabaka</i>	25.00	1.30	21.50	215.00	74.00
<i>Reshda ambakabaka</i>	16.00	1.81	22.11	173.00	67.00
<i>Macaroni belsalasah</i>	7.20	11.80	31.10	205.00	235.00
<i>Ruz belbaslah</i>	26.15	1.25	21.10	211.00	87.00
<i>Tobeeekha bazeelaa</i>	10.00	1.87	24.70	371.00	365.00
<i>Shakshouka</i>	20.00	2.17	33.60	200.00	130.00
<i>Alzimaith</i>	11.00	1.75	47.00	199.00	160.00
<i>Albesisa</i>	43.00	1.20	39.00	211.00	51.00
<i>Almhachi (velvl , Qureih)</i>	19.00	3.20	44.00	303.00	112.00

Also, data in **Table 3** showed that a 100g of the traditional Libyan meals, investigated in this study could contribute significant amounts of the minerals: calcium, iron, phosphorus, potassium and sodium to the daily requirements of these minerals by the growing school-aged children. Appropriate amounts of minerals must be provided in the diets of school-aged children since a deficient intake of certain minerals can produce diseases and lead to abnormal development (Camara *et al.*, 2007; DAA, 2009). **Table 3** also showed that the generality of the meals recorded low concentrations of iron, except *macaroni belsalasah* which recorded 11.80mg of iron per 100g. Minerals have a number of functions in the body. Sodium, potassium and chlorine are present as salts in body fluids, where they have a physiological role in maintaining osmotic pressure. Minerals form part of the constitution of many tissues. For example, calcium and phosphorus in bones combine to give rigidity to the whole body (Insel, 2004). Minerals are present in body acids and alkalis; for example, chlorine occurs in hydrochloric acid in the stomach. They are also essential constituents of certain hormones, e.g. iodine in the thyroxine produced by the thyroid gland. In addition, iron deficiency anemia is one the most prevalent nutritional deficiencies affecting the world's

population today, especially among children and women in developing countries, including Libya (Fairweather-Tait, 2001; Gowri and Sangunam, 2005). Most programmes aimed at decreasing the incidence of iron deficiency utilize fortification of the diet with various iron compounds (Leung, 1998; Gowri and Sangunam, 2005; Clark and Fox, 2009). Mineral deficiency is usually caused by a low mineral content in the diet when rapid body growth is occurring, adolescence period, and / or when there is poor absorption of minerals from the diet (Mitchell, 1992; Affenito *et al.*, 2007; DAA, 2009; Currie *et al.*, 2012). During this period, not only must the absolute amounts of mineral be increased in the edible portion of foods, but these minerals must also be in form that are biologically available to the person consuming them (Favier, 1993).

Fruits and vegetables play important role in providing micronutrient minerals in children's diet. Unfortunately, only 21.57% of the family respondents reportedly consumed fruits and vegetables along with the major meals (lunch and dinner). Also, food quality and safety are affected by food hygiene, food handlers, people involved in food processing, those retailing the food and finally, practices in the home. Certain codes and government inspections may help ensure some degree of safety, and education and knowledge of food hygiene by all people will reduce the likelihood of contamination in the home. However, available facilities also influence food hygiene. Households that have poor facilities, no refrigeration, contaminated or inadequate water supplies or fuel shortages will find it more difficult to ensure food safety. The results of the assessment of the extent of observation of both hygienic and safety standards during meal preparations and servings at the schools' cafeteria showed that 60.00% of the schools' cafeteria lacked the hygienic standard and food quality requirements of school meals. And it was observed that 100% of all the schools' cafeteria staff did not have any health certificate to certify their freedom from any contagious or communicable diseases. In conclusion, healthful eating habits are essential to reducing children's risk of immediate and long-term health problems. Nutrition-related health problems of children range from growth retardation, iron-deficiency anemia and dental caries, to chronic diseases such as obesity, heart disease, type 2 diabetes osteoporosis. Also, considerable amount of literature, documenting studies both in experimental animals and in people, demonstrates that dietary deficiency diseases

may reduce the body's resistance to infections and adversely affect the immune system. This study has shown that very sizable numbers of Libyan school-aged children especially the females skip breakfast meals, and consequently suffer body weakness, leanness and other health problems including the dental caries (due to too much consumption of sandwich, potato chips sweets and chocolates).

Recommendations

The results of this study have shown that 26.97% of the pupils investigated exhibited signs of leanness and general body weakness with many of them suffering from dental caries. The prevalence of this nutritional problem was observed among the pupils who relied on the school cafeteria for their breakfast. It was also observed that 38.79 % of those who suffered from physical weakness were females; the reason for this could be due to the composition of the breakfast meals served by the school cafeteria, which usually consist of high levels of sweetened confectioneries, chocolate products, juices, chewing gum,etc., and heavily salted snacks including potato chips and crackers. These categories of diet make the pupils to have the feeling of fullness, and consequently unable to partake the major meals after returning from schools as observed in this study, that 12.12% of the females who skipped breakfast had no appetite for lunch after their return from the school, but they rather prefer to take it in the late hours of the day or ignore lunch entirely. Finally, the results of this study confirmed that: 214 females (70.86% of the total respondents) skipped breakfast at home, out of which 83 of them (38.79%) exhibited physical and body weakness;. In the same context, 27 males (18.88 %) of the total male respondents suffered from dental caries . Based on the above observations, the following are **recommended**:

- (i) a massive sensitization of the Libyan populace on healthy eating habits through the mass media, social media, newsletters, electronic and print media aimed at improving the situation in line with guidelines of the International Agencies such as WHO and FAO;
- (ii) appointment of consultant nutritionist and establishment of offices for them in all Libyan public schools;

- (iii) the Ministry of Information to encourage the provision of scientific journals on pharmaceutical and healthy food habits;
- (iv) Encourage collaboration with the International Agencies such as WHO, FAO and UNICEF to develop good and healthy nutritional programmes .
- (v) Conduct more studies on the nutritional habits of other segments of the Libyan population.

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Relationship Between Human Resource Management Practices, Business strategy and Firm Performance in Malaysian small and Medium Scale Enterprises

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Abstract

Due to the contribution of Small and Medium Scale Enterprises (SMEs) in economic growth, most government policies lay emphasis on how this sector should be improved. This study examines how human resource management practices (HRM) affect business strategies of Malaysian SMEs. The study also examines how HRMP and business strategy affect the operational performance of these small firms. Regression analysis is employed to achieve the objectives. The sampled population includes SMEs in the Kuala Lumpur area of Malaysia. The result shows that HR practices affect SMEs business strategies positively with training and development, selective hiring and behaviour and attitude as the significant HR variables. Business strategies also positively affect firm performance. The result also shows that business strategies in combination with HR variables have positive impact on operational performance of SMEs in the study area

1. Introduction

Human Resource Management (HRM) within an organization is a function that focuses on management, recruitment and provision of direction for workers in an organization. Strategic human resource management could be seen as the development of a consistent, aligned collection of practices, programs in form of strategies and policies towards achieving the objectives of an organization (Mello and Mello, 2002). As organizations resort to the use of many business strategies to achieve organizational goals, the role of HR management

systems serves as solutions to problems in business organizations. Human resource management strategies such as selective hiring, extensive training, and pay for performance evaluation, employment security, behaviour and attitude, teamwork, compensation, human resource planning as well as communication of strategy have been identified as key variables that affect firm performance. Other identified strategies include cost reduction, innovation and quality enhancement which form part of the business strategies through which the SMEs survive within a competitive environment.

Businesses are classified as small, medium or large. In developing countries, SMEs assist hugely in economic growth. Based on their own criteria, various agencies in Malaysia has different definitions of SMEs which is usually benchmarked against annual sales turnover, number of full-time employees and/or shareholders' funds. According to Small and Medium Industries Development Corporation (SMIDEC) (2007), SMEs are defined as enterprises with annual sales turn over not exceeding RM25 million and with full-time employees not exceeding 150.

The contribution of SMEs to total employment has been increasing as a result of steady increase in employment by SMEs when compared with that of the large enterprises (World Bank, 2011). Over the last decade, a clear path for accelerating the development of SMEs has been charted through specific strategies outlined in the country's development plans. The plan of Malaysian government is for the country to become a high-income and knowledge based nation by 2020. Under the New Economic Model (NEM), the Malaysian government launches about 226 SMEs development programme out of which about 76% are on capacity building with the aim of enhancing skills, technical knowledge, capabilities and competencies of SMEs' owners and workforce. Therefore, it is important to examine the organizational performance of these small businesses.

Despite the increase in growth rate of SMEs in other parts of the world, the establishment of SMEs in Malaysia is not as much as recorded in other parts of the world to the extent that contributions of SMEs to the Malaysian gross domestic product (GDP) is about 32% which is very low when compared with the contributions of SMEs to the GDP of other countries such as Singapore, Taiwan, Korea, USA and New Zealand; where SMEs contribute more than 40% to the GDP.

In addition, little is known on the role of human resource management as a determinant of business strategies in Malaysia. There are still some gaps in the research on HRM and organizational performance. In examining the role of human resource practices and business strategy, some of the little studies done in Malaysia reveal that competitive advantage and optimal performances of firms are adversely affected when the personnel in the firms adopt negative practices and business strategies (World Bank, 2011).

The impact of human resource (HR) management practices on the performance of firms has received considerable attention. Studies have shown that there are quite a large number of researches on the relationship between human resource management and firm performance. However, majority of the research is conducted on the operations of firms in the developed world while few studies are done in the case of Malaysia. This study examines human resource management practices in Malaysian Small and Medium Scale Enterprises (SMEs) to find out if they help to improve business strategy of these SMEs and if HRMP and/ or business strategies affect firm performance.

2. Literature Review

The increasing competitiveness in global businesses has placed a high demand on organizations to find a way of achieving high performance thereby resulting to the growth in researches conducted on strategic management by academic and practitioners. Resources may be viewed as all capabilities, assets, organization, firm attributes, processes, information and knowledge controlled by an organization that facilitates an increase in its efficiency and performance. The resources could mean any input that enables the functions in an organization to be carried out (Moingeon et al., 1998). It can therefore be concluded that a brand image, a machine, a bit of knowledge, and a patent can constitute resources.

The advent of the Resource Based View (RBV) theory of strategic human resource management has therefore resulted into the integration of each human resource practice into a system to form a strategy that will be used to measure performance of human resource. Huselid, (1995) suggests that comprehensive selection procedure,

employment, recruitment, incentive, performance and compensation, management system, enhance retention of quality employees and extensive employment involvement and training all have the potential of improving the performance of a firm. The application of the Resource Based View (RBV) in human resource management (HRM) research has resulted into the shift of the HRM field from an individual function and practices to the examination of how these practices and functional areas can be bundled together as a source of competitive advantage. This has therefore opened an opportunity for development in the field of strategic management by answering questions on how HRM can affect firm performance.

Selected human resource practices and their effects on business strategies or their effect on firm performance in combination with other mediating variables have been examined. Such selected human resource practices include: training and development, employment security, selective hiring, behaviour and attitude, performance appraisal, HR planning, teamwork and compensation.

A right candidate with potential to perform a function is identified through rigorous, valid, and sophisticated selection system. Human resources election process that is based on selective hiring leads to about 6% variation in firm performance (Singh, 2003). Performance appraisal of the employees of an organisation might aim at motivating employees for better contribution to organisational success. The amount of formal training such as training for current and future skills given to employee could help to explain extensive training. Firm investments in both technical and non-technical training will have an impact on the extent to which the firm actually succeeds in developing the skills/knowledge of its employees.

According to Lee et al., (2010), employment security refers to job security via work force stabilization in a careful way. This can be viewed as the extent to which an organization provides stable job for its employees. In small firms, compensation is particularly important due to its effect in significantly affecting the recruitment and retention of qualified human resource personnel. Teamwork could mean a group of employees created on purpose to carry out a particular job or to solve problems. It is logical to reason that teamwork will enhance performance of any organization which aims at profit maximization. The ability of the firm to forecast the human resource requirement of the organization as well as the amount spent on staff is measured by

human resource planning. Employee attitudes such as organizational commitment especially when achieving organizational goal is more important than individual achievement may be the focus of HRM. Attitude to work may affect individual productive capabilities and consequently affect firm strategies and performance.

Several authors in the last few years have tried to give different definition of business strategy. Lee et al. (2010) defines a firm strategy as a set of decisions on firm direction. On the other hand, Liao (2005) believes that any coordinated sets of commitment used by a firm in order to achieve competitive advantage through the exploitation of core competencies can be seen as the firm's strategy. A business strategy outlines a firm's products, goals and services offered and the markets served with the basis for competition (service, quality, price, etc.). A strategy may also outline the organizational structure, policies and systems to execute the strategy. In addition, firm's will have systems and policies which focus on operations and functions and are not truly "strategic" in nature.

Proponents of the strategic choice-perspective argue that the choice of a strategy by an organization is a function of the environment (Miles et al., 1978). Though there is yet to be a consensus on the right definition of strategy, Miles et al. (1978) believe that business strategy can be classified into three which are; defender, prospector and analyser. An organization that is characterized as a defender tries to create a niche for itself by sealing off a portion of the total market in order to make it difficult for its competitor to penetrate the market. Prospectors on the other hand, respond to their environment by enacting a more dynamic environment than their competitors by finding and exploiting new products and market opportunities. In the case of an analyser, they tend to minimize risk while maximizing the opportunities for profit.

Other forms of strategy that small business owners make include reactive, complete, planning, opportunistic and critical planning strategies (Von Gelderen et al., 2000). A reactive strategy implies that an individual is driven by the situation, makes little proactive use of information and that actions are not planned. On the other hand, a complete planning strategy implies a comprehensive representation of the work process, a long time frame to plan ahead, a large inventory of signals, clear knowledge and anticipation of error situations, and a proactive orientation. An opportunistic strategist on the other hand

begins with some form of rudimentary planning. However, he deviates from these plans easily when opportunities occur.

Other forms of business strategy are classified as innovation, cost reduction and quality enhancement strategies (Lee et al., 2010). Reduction of cost strategy involves the enrichment of competitiveness by reducing the cost of services or products. This strategy improves efficiency in production and reduces expenditure through the adoption of new technology, enhancing the production scale, or re-engineering production process, so that the services and products of a business can be sold at a lower price in the market. Innovation strategy implies an emphasis on products and services development which differ from those of their competitors. Quality enhancement strategy aims to give workers more involvement and allow them also to be flexible as change occurs in the production process (Huang, 2001).

The nature of strategy adopted by a firm has been linked to its human resource practices. It is essential to rigorously control and reduce expenses for businesses that prefer a cost-reduction strategy, and to strive towards greater economies of scale (Huang, 2001). It is further emphasized that firms can pursue an innovative strategy through possessing a number of characteristics which include; performance appraisals which may reflect group-based and longer-term achievements, jobs that require close interaction and coordination among groups of individuals, jobs that allow employees to develop skills that can be harnessed for other positions in the firm, , pay rates that be minimal but allows employees to have more freedom to choose the mix of components (salary, bonus, stock options) that make up their pay package and also be stockholders in the business, compensation systems that deemphasize external or market-based equity but encourages internal equity with broad career paths to reinforce the development of a broad range of skills.

Despite the wide spread support of the existence of an association between business strategy and human resource practices, the result in the study of Chan et al., (2004) did not find support for any relationship between the two variables among firms in Hong Kong. This result should be interpreted carefully because the authors only included one variable of competitive strategy rather than the three variables specified in the literature. Therefore, there is possibility that the result could have been different if all the three variables are used.

Based on the purpose of study, there are different views of firm performance. In this study, firm performance is measured through operational performance. With reference to Lee et. al (2010), a number of criteria of operational performance measures have been identified; superior quality, which include short and dependable delivery, volume flexibility, fast new product development and low cost, delivery and flexibility, dependability, efficiency. The flexibility scope involves many activities which comprise: handling of non-standard orders, adjusting product mix and producing products in small quantities (Jay ram, Droge and Vickery, 1999). Delivery flexibility involves timing of the introduction of new products as well as on-time delivery.

In a study of the interaction between strategy fit and organizational performance, Bookman and Xiucheng (2002) result gives a positive relationship between firm HRM strategy and performance among western firms in China. Aligning the performance measure of an organization to the strategic requirement of the firm, it has been found to have a negative effect on performance in a number of Dutch firms (Verboten and Boons, 2009). Similarly, Huang (2000) examines the link between organizational performance and human resource strategies and find that firms which are successful are the ones with highly effective approach to their human resource management. The performance of a firm has also been found to depend on the ability of the entrepreneurs to develop an effective strategy.

In a case study using 14 SMEs across different industries, Rangone (1999) finds that firms are able to achieve competitive advantage by adopting three main strategies namely innovation capability, production capability and market management. Von Gelderen et al., (2000) similarly believe that small enterprise performance relates to the personal strategies of their owners.

In a strategic human resource literature, good fit between a firm's HRM strategies have been suggested to lead to superior performance. In a study conducted by Browning et al., (2009) among small firms in new Zealand, the authors find that service organisations which perform high are actively engaged in the best practices across the areas of development and training, team working, selection and recruitment and communication. A strategic approach to the implementation of these practices is evident.

Examining the vital competencies of human resource (HR) professionals in the manufacturing companies of Malaysia, Long & Resource (2009) use Human Resource Competency Survey (HRCS) model to examine the relationship between business knowledge, strategic contribution, HR delivery, personal credibility, HR technology and firm performance. They find that the top nine ranking HR competency factors in Johor are from the domain of personal credibility and HR delivery. Their sample reveals from the respondents' self-rated competency that personal communication, effective relationship, legal compliance and performance management rank above all other factors. They state that competencies such as business knowledge, strategic contribution and HR technology have significant correlation with firm performance.

Focusing on three types of HRM practices namely, training, performance appraisal and information technology; where incentives acts as moderators on organizational performance, Lo, Mohamad, & La, (2009) examine the impact of incentives on human resource practices on manufacturing companies in the Malaysia context. Using a sample of eighty-five firms in Sarawak, Malaysia, they find that two human resource management practice components namely, information technology and training have direct impact on organizational performance. They find that organizational performance relationship between with HR practices is not moderated by incentive but have a positive relationship with organizational performance.

In their study in some banks in the United State, Richard and Johnson (2001), examine whether SHRM effectiveness (employee participation and empowerment; teamwork; workforce planning-flexibility and deployment; advanced issue identification-strategic studies; management and executive development; succession and development planning (managers); workforce productivity and quality of output; and employee and manager communications) are related to organizational effectiveness (productivity turnover). Their results reveal higher firm performance correlation with SHRM though the extent of the correlation depends on the performance measure used.

Lee et al. (2010) investigate the link between human resource management (HRM) practices such as (HR Planning, development and training, employment security, team work, compensation/incentives and performance appraisal), business

strategy (cost reduction, innovation strategy quality enhancement strategy) and firm performance by using structured questionnaires distributed to 236 managers in steel industries in Taiwan. They employ Structural Equation Modelling in their analysis. They represent firm performance as operational performance which is further divided into cost of production, product quality, and product delivery and flexibility in production. Their findings show that all the variables of HR practices have influence on firm performance. All HR practices have positive relationship with the three business strategy (innovation strategy, reduction in cost, quality enhancement). Business strategy has positive relationship with firm performance. The coupling of HR practices with business strategy has positive relation to firm performance. The short coming of the study is that they focus only on the Taiwanese steel industry thus making it difficult for their result to be applicable to other industries in Taiwan or other countries.

3. Methodology

Conceptual Framework

The conceptual framework for the study is presented in Figure1.

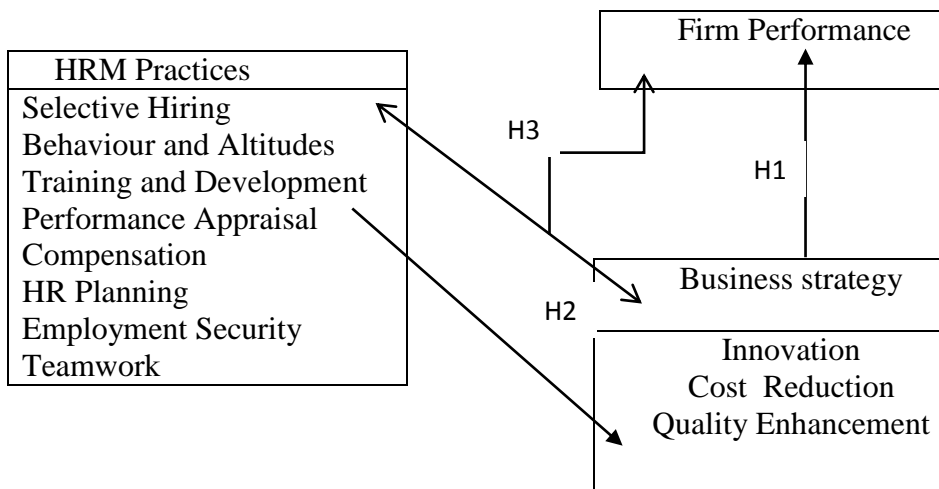


Figure 1: A Conceptual Model of HRM Practices, Business Strategy and Firm Performance

The above research model is developed to answer the research questions, H1 represents hypothesis 1 while H2 and H3 represent hypothesis 2 and 3 respectively.

Research Design

This study applies a quantitative research method to investigate the effects of Human resource management (HRM) on business strategy and firm performance in SMEs in Malaysia. Structured questionnaires comprising selected response item scales as well as quantitative performance information distributed to SMEs in the Kuala Lumpur area of Malaysia is used. The dependent variables used in this study are business strategy and firm performance. Specifically, business strategy of these firms is measured with variables that ask questions on cost, innovation and quality enhancement while firm performance is measured by using product quality, production cost, flexibility and delivery as suggested by Lee et al., (2010). The independent variables are; selective hiring, behaviour and attitudes, training and development, team work performance appraisal, human resource planning, compensation/incentives and employment security as well as the combination of all variables for business strategy. The items to measure human resource practices are adopted from (Ahmad and Schroeder, 2003, Lee et al., 2010). Items to measure the firm strategy (innovation, cost reduction and quality enhancement) are adapted from (Lee et al., 2010). All items are measured using 5 point likert scale where strongly disagree is coded as "1" while strongly disagree is coded as "5".

Hypotheses

Based on the conceptual framework, the following hypotheses are developed:

Hypothesis 1: There is a significant positive relationship between business strategy and SMEs' performance.

Hypothesis 2: There is a significant positive relationship between business strategy and human resource practices

Hypothesis 3: HRM practices and business strategy have positive influence on SMEs' performance.

Sampling Procedure

Sample size selection is achieved through random sampling method which produces 100 SMEs from the small and medium enterprises in Kuala Lumpur area of Malaysia. The questionnaires are distributed to about 100 SMEs which cut across all industries within Kuala Lumpur area of Malaysia. This area is part of the heart of the country and therefore represents what is obtainable in the country to a large extent. The formula as stated in Lee et. al., (2010) is used to calculate the sample size and it is expressed as:

$$n = p(1-p) [Z_{\alpha/2} \div B]^2$$

Where n equals the sample size which the study needs, $Z_{\alpha/2}$ equals to the confidence level, and B represents the error tolerance. To obtain a normally distributed sample as reported in Lee et.al. (2010), the value used as p is 0.5 and $Z_{\alpha/2}$ equals to 1.96 by setting confidence interval to be 0.05, and error bond or error tolerance to be 0.10. Therefore, the study needs a minimum sample of 96

Statistical Analysis

This study uses regression analysis to measure the relationship between human resource practices and business strategies and firm performance. An overview of the basic model is stated below as:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots \dots \dots \beta_n X_{ni} + U_i$$

Where Y_i = business strategy, X_1 to X_n are human resource practices in the first regression. In the second regression, Y_i = firm performance, X_1 to X_n are business strategies. For the last regression analysis, Y_{it} = firm performance, X_1 = business strategy while X_2 = human resource practices. U_i = error term, β_0 = constant, $\beta_1 \dots \beta_n$ are coefficients and i = firm index.

The variables that are used in this study are tested for their reliability and validity. Reliability test is calculated to identify the reliability of the scales. The variables pass the minimum required Cranach alpha value required for a reliable analysis except for employment security that is a little bit below the minimum value and as a result is dropped from the analysis. The Cronbach alphas obtained from this study on the tested instruments are as follows: selective hiring 0.77, behaviour and attitude 0.80, training and development 0.83, teamwork 0.82, performance appraisal 0.77, human resource planning 0.77,

compensation 0.91, cost reduction strategy 0.79, innovative strategy 0.87, quality enhancement 0.81 and 0.86 for firm performance. The results show that the Cronbach alpha for the entire variables used in this study range from 0.77 to 0.91 (Table 3.1).

Table 1: Cronbach Alpha Values

Construct (N=100)	Instruments (α)	No of items
Human Resource Practices		
Selective Hiring	0.77	9
Behavior and Attitude	0.80	4
Training and Development	0.83	4
Teamwork	0.82	4
Performance Appraisal	0.77	5
Human Resource Planning	0.77	4
Compensation	0.91	4
Business Strategy		
Cost Reduction	0.79	4
Innovation Strategy	0.87	4
Quality Enhancement	0.81	2
Firm Performance		
Operational Performance	0.86	6

A factor analysis using principle component analysis with an orthogonal varimax rotation is carried out to validate the instruments used in establishing human resource management practices, business strategies and firm performance. It is shown that the entire instruments loaded well (Appendix A) with correlation above 0.5 which suggests that there is high degree of internal consistency for each of the dimensions (Lee et al., 2010, Ahmad and Schroeder, 2003). In

creating these measures of HRM practices, business strategy and firm performance, no item is dropped as they loaded heavily with an anti – image correlation of 0.5 and above (Appendix A). The factor analysis yields a five factor solution with respect to human resource practices. These explain 54% variance (Table 3.2). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy score is (0.79) which is well above the recommended 0.5 level and Bartlett's test of sphericity is significant. Factor analysis with respect to business strategies yields a two factor solution. These explain 67% variance (Table 3.2). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy score is (0.89) and Bartlett's test of sphericity is significant. For firm performance, the analysis explains 60% variance (Table 3.2) with a single factor solution. Bartlett's test of sphericity is significant and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy score is (0.86).

Table 2: Summary of Factor Analysis Result (significant at 1% level)

	Human Resource Practices	Business Strategies	Firm Performance
Percentage of Variance Explained	54	66	60
Kaiser-Meyer-Olkin	0.79	0.89	0.86
Bartlett's Test of Sphericity Chi-Square	df=703 2180	df= 45 549	df= 15 252

4. Result and Discussion

In table 4.1, 34 % of the firm CEOs has master's degree while 7% has studied up to PhD level. It can be inferred from this that more strategic practices will be obtained in the study area as most of the sampled group have high level of education. This confirms the assumption that the study group is situated in an education centre. However the number of respondents with less than secondary education is 2%, those with secondary education are 10% while others are 4%. The highest percentage level of qualification of CEOs in the study group is

bachelor's degree where up to 43% of respondents have studied to degree level in their respect fields of operation. From the descriptive statistics as shown in table 4.1, it can be said that the service sector (72%) is more in number than the manufacturing sector (22%) in the studied location. This agrees with fact that; of the total number of SMEs in Malaysia, about 86.5% are in the services sector while the manufacturing and the agricultural sector account for about 7.3% and 6.2% respectively. The reason is not farfetched as the service sector is becoming increasingly important as a source of national revenue and most governments have positioned their policies to encourage service sector development.

Table 3: Characteristics of Sampled SMES and their Employees (N=100)

Characteristics	Categories	Frequency	Percentage (%)
Sector Type	Service	72	72
	Manufacturing	28	28
Qualification	<Secondary Education	2	2
	Secondary Education	10	10
	Bachelor's Degree	43	43
	Master's Degree	34	34
	Doctorate Degree	7	7
	Others	4	4
Years of Operation	1-5	32	32
	6-10	19	19
	11-15	21	21
	16-20	13	13
	Others	15	15
Number of Employees	1-50	76	76
	51-100	15	15
	101-150	3	3
	151-200	6	6

From Table 4.1, 32% indicates that their number of years of operation is between 1 and 5, 19% has functioned between 6 and 10 years, 21% has been in operation for 11 to 15 years, 13% has been in operation for 16 to 20 years while 15% has been in business for over 20 years. The higher percentage of recent SMEs indicates an increasing involvement of entrepreneurs into SME operation in the study area. About 76 % of SMEs in the study area have workforce of less than 50 workers while 15% employ between 51 and 100 workers. 3% of SMEs in this study location employ between 101 and 150 workers while 6% of them employ more than 150 workers. The high percentage of SMEs in the study location employ less number of workers and this might be due to the nature of their business or that they have not grown to the extent of employing more workers at their current stage of operation.

Regression Results

Table 4: Human Resource Practices and Business Strategy

Independent Variables		Business Strategy		
	Coefficient	t- statistics	P-value	VIF
Training and Development	0.20***	2.64	0.01	1.53
Selective Hiring	0.25**	2.22	0.03	1.63
Behavior and Attitude	0.28***	2.83	0.00	2.03
Teamwork	0.09	0.91	0.37	1.61
Performance Appraisal	0.09	0.90	0.37	1.66
Human Resource Planning	0.13	1.23	0.20	1.61
Compensation	0.13	1.45	0.15	1.37
(Constant)	1.15	3.37	0.00	
F -Value	24.07***		0.00	
$R^2 = 0.43$	Adjusted $R^2 = 0.41$ Durbin Watson = 1.92			

and * represent significant at 5% and 1% probability level

To test the effects of HR practices on business strategies and SMEs' performance, a step- wise multiple regression analysis is carried out. Table 4.2 presents the results of the analysis of the effect of human resource practices on business strategies of SMEs in the sampled area.

As noted in Table 4, the result shows a positive relationship between human resource practices and SMEs performance. The variables are significant at 1% probability level with F-value of 24.07. The result differs with the result of Chan et al., (2004) who find no support for any relationship between HR practices and business strategy among firms in Hong Kong although the authors only included one variable of competitive strategy rather than the three variables specified in the literature.

The results also show that training and development, selective hiring and behavior and attitude affect SME business strategy positively. Behavior and attitude is statistically significant at 1% with a coefficient of 0.28 and t-value at 2.83. Selective hiring and training and development are also significant at 5% and 10% probability level with t- values and coefficients of (2.22,0.25) and (2.64,0.20) respectively. The result agrees partly with the findings of Lee et al. (2010) who find all HR practices to have positive relationship with the three business strategy (cost reduction, innovation strategy, quality enhancement) although they employ Structural equation modeling in establishing the relationship. However, the results reveal that only three variables can significantly explain business strategies in the studied group. All other variables representing HRpractices are insignificant in establishing relationship between HR practices and business strategies. The finding is consistent with studies indicating that higher the training and development facility provided by the company the better the performance will be.

Table 5 Business Strategy and Firm Performance

Independent Variables		Firm Performance		
	Coefficient	t- statistics	P-value	VIF
Innovation Strategy	0.37***	3.55	0.00	2.03
Quality Enhancement	0.22**	2.18	0.03	2.03
Cost Reduction	0.16	1.55	0.12	1.6
(Constant)	1.30	4.14	0.00	
F -Value	28.75***		0.00	
R ² = 0.37	Adjusted R ² = 0.36 Durbin Watson = 1.86			

and * represent significant at 5% and 1% probability level

Table 5 shows the results of the analysis of the effect of business strategies on the performance of SMEs in the sampled area. The result reveals a positive relationship between business strategies and SMEs performance. The variables are significant at 1% probability level with F-value of 28.75. The result differs with the result of Verboten and Boons (2009) who find that aligning the performance measure of an organization to the strategic requirement of the firm has a negative effect on performance in a number of Dutch firms. However, the result agrees with Björkman and Xiucheng (2002) who establish a positive relationship between firm strategy and performance among western firms in China.

The results show that innovative strategy and quality enhancement positively affect SME performance. The result is statistically significant at 1% with a coefficient of 0.37 and t-value at 3.55 with respect to innovative strategy. Quality enhancement is also significant at 5% probability level with t-values and coefficients of 2.18 and 0.22 respectively. Cost reduction is positive but statistically insignificant. The result agrees with the findings of Lee et al. (2010) who find that business strategies do substantially and positively relate to firm performance. However, this study shows that only two out of three variables can significantly explain the operational performance of SMEs in the studied group.

Table 6: Human Resource Practices, Business Strategy and Firm Performance

Independent Variables		Firm Performance		
	Coefficient	t- statistics	P-value	VIF
Human Resource Practices	0.51***	4.06	0.00	1.77
Business Strategies	0.39***	3.65	0.00	1.77
(Constant)	0.29	0.81	0.41	
F -Value	43.64***		0.00	
$R^2 = 0.47$	Adjusted $R^2 = 0.46$ Durbin Watson = 1.84			

and * represent significant at 5% and 1% probability level.

Table 6 presents the results of the analysis of the effect of human resource practices and business strategies on operational performance of SMEs in the sampled area. A positive relationship between SMEs operational performance and the interaction of HR practices and

business strategies is established. The result is significant at 1% probability level with F-value of 43.64. The result agrees with the findings of Lee et al. (2010) who find that the integration of HR practices with business strategy has positive relation to firm performance. The results also show that both HR practices and business strategies have positive and significant effect on SME operational performance with higher coefficients of 0.51 and 0.39 respectively and these are all statistically significant at 1%. The result supports Richard and Johnson (2001) who conducted a study to understand the effect of human resource practices on firm performance. As they used business strategies as a contingent factor, they conclude that business strategy moderates the relationship between human resource practices and firm performance.

Model Fit, Normality of Data and Multi-Co linearity

In order to determine the presence of multicollinearity among independent variable sin this study, both Tolerance and Variance Inflation Factor (VIF) are estimated. The result of VIF is reported alongside with each regression result. Notably from each table where the regression result is reported, all of the Tolerance levels are within the acceptable range as can be seen from all VIF values which are well below 5. Thus, the presence of multicollinearity is absent in the sampled group. For the test of model fit, the Durbin –Watson range falls between the acceptable values (near 2) for all the regression results. This reveals the absence of any auto correlation problems in the data used in this research. The normality plots of residuals also reveal the fulfillment of normality assumption.

5. Conclusion

The study examines the impact of human resource management practices on business strategies of Malaysian SMEs. It also examine how business strategies (cost reduction, innovation and quality enhancement) affect Malaysian SMEs performance and finally it shows how SMEs performance in Malaysia are affected by the interaction between human resource management (HRM) practices and business strategies. A quantitative research design is employed. This design is delivered through the use of structured questionnaires comprising selected response item scales as well as quantitative

performance information distributed to SMEs in the Kuala Lumpur area of Malaysia. Random sampling method is used and regression analysis is used to achieve the result. Validity and reliability analysis as well as test of model fit are conducted. In this study, 100 SMEs are sampled.

The evidence from the results shows that HR practices affect SMEs business strategy. While analyzing business strategies and HRM practices, a positive relationship between the variables is established. Training and development, selective hiring and behavior and attitude significantly and positively affect the performance of SMEs in the studied group. This result helps to strengthen the importance of these three variables in the study group as they are helpful in establishing a relationship. However, four out of the seven variables are insignificant in helping to explain HR practices' impact on SMEs business strategy though the coefficients are positive.

An analysis on the relationship between business strategies and SMEs performance reveals a positive effect of business strategy on performance. The results agree with the results of prior researchers except with the finding of Verboden and Boons (2009). However cost reduction is not significant in explaining SMEs performance but innovation strategy and quality enhancement are significant and positive as well. In this study, the integration of business strategies and human resource practices has a positive impact on SMEs operational performance. Human resource practices and business strategies each has a positive effect on SMEs performance.

The results show that other HR factors are insignificant to explain SMEs business strategy. The positive result can be attributable to the three significant HRM variables; therefore, it is important that HRM practices with regards to these insignificant factors be improved. Better awareness of the benefits of HRM practices should be created by government agencies to encourage higher rate of employees' retention in the business organization. It is also important that the existing SMEs in the study area should improve on their HRM practices especially in the area of teamwork, performance appraisal, human resource planning and compensation. Agencies that cater for SMEs should lobby for more favorable policies that will boost growth in this sector as it is a vital sector that helps to enhance economic

growth through its contribution. Problems facing SMEs should be explored and solutions proffered.

Limitation of the Study

Sampling issue is one of the notable limitations. Though the results are positive, this cannot be used to make generalizations in Malaysia as a whole as only small group is studied. In addition to this, other forms of performance are not included in the study. Other moderating variables such as the effect of the relationship between the supervisors and subordinates on firm performance are not included in the study as this might have an important effect on the outcome since the relationship between the two is important in organizational performance.

Recommendations for Future Study

It is recommended that future studies may consider doing a cross-regional or inter-state analysis to be able to make accurate generalization on the relationship between HMR practices in SMEs and its impact on performance. Studies on different states while be more desirable. Other forms of SMEs performance rather than operational performance should be included if data will be made available by the firms. Effect of mediating variables cannot be overemphasized in this analysis and as a matter of fact their inclusion in such analysis will generate a better outcome. It is recommended that future study might consider comparing SMEs HRM practices with that obtainable in large firms.

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The Concept of Control on the Activities of Islamic Banks and Its Dimensions

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Abstract

The control on the activities of Islamic banks has multiple dimensions, integrated and with special nature, this integration, comprehensiveness and diversity control came from a deep faith in Almighty Allah, and the full acknowledgement that Almighty Allah knows the hidden and concealed, and Almighty Allah is the upper controller of everything, where Almighty Allah said: " Allah had been a watcher over you " (Surah Al-Nisa', verse: 1) and also every Muslim individual must be proficient in his work, and improves his performance, where Almighty Allah said: "I do not waste the reward of the best work" (Surah Al Kahaf, verse: 30), and to be aware that Almighty Allah knows all what it is inside the mind of the human, Almighty Allah said: " And know that Allah knows what is within yourselves, so beware of Him" (SurahAl-Baqarah, , verse: 235), and Almighty Allah said: "You will be asking about what you done." (SurahAl Nahal, verse: 93).

Keywords: the concept of control on the activities of Islamic banks , the self control of the human conscience or internal and external control of audit, objectives of Islamic control and the methods of following-up, the concept of control and legal legitimacy in Islamic banks.

1. Introduction

The control on the activities of Islamic banks has specific nature and it can be classified into three main types which they are; the self-control, internal control, and external control, and because the control dealing with the money of depositors and investors, and in most countries of the world there are specific legislation governing the control on banks to ensure the safety of clients' transactions, and the extent of implementation of the objectives of the monetary policy of the state in particular, and the development policy in general, and to contribute to the national projects.

The control system of Islamic banks is characterized to be a comprehensive system starting by individual who is working in bank (Arabic center, and philosophy center, p 87) and management of bank on personnel, and government bodies on management, and from Almighty Allah on everyone.

2. Self-control by the human conscience.

It is controlling the conscience of the individuals who are working in the Islamic bank, it's also considered to be the most important type of control and most vital because it coming from the observant conscience of the employee, and push him to the sincerity in work to do it well and professionally.

Therefore, senior management of bank pay attention on good selection of administrative and technical staff to fill various functions in the organizational structure, holding training and educational courses for them to cultivate and consolidate noble Islamic values in themselves, and thus increase effectiveness of self-control of workers on their behavior and their actions and the required level of performance.

Internal Control or Internal Audit

Internal control in Islamic banks depends on selection of best leaders who believe in Islamic banking to be a good example to their workers and subordinates at different administrative positions in Islamic bank.

Internal audit means efforts of organization, which are accomplished across organizational levels and various administrative for purpose of formulating information and guidance systems, planning and control, and follow-up implementation, inspection, and make decisions to developed it on an ongoing basis.

These controls derive its effects and events through nature of administrative and accounting system of bank, and from relationship to various administrative departments, and connecting with the senior management of bank, which is represented by board of directors or general body of shareholders.

The internal audit tasks in Islamic bank include a number of key objectives, which can be identified in following:

1. To identify deficiencies in information systems planning and implementation of bank transactions to address imbalances effectively to prevent any conflict or duplication or fraud or fallacy.
2. To identify any deficiency in the executive performance of employees in the bank and to find out the causes and treat deviations through qualified developed training or improve the system of the workers in terms of the methods of selection and promotion, performance evaluation and the report of incentives and bonuses for employees in order to be a positive reinforcement for them because of their morals and good behavior, which drives them to be more precise and sincere in doing the audit process according to their conscience.

3. External control or audit.

External control of Islamic banks consisting of the following:

- First: auditors control, whether they are from inside or outside the bank.
- Second: Shariah control or the implementation of the rules of Islamic law in the field of audit, and the central bank control.

First: Auditors control

licensed and classic Islamic banks are subjected to external audit, and every licensed bank must appoint auditor to work annually to do audit of the bank account (examiner auditor), on a condition that this auditor is not belong to the bank, or has a special benefit in it, and not to be a manager or an employee or agent to the licensed bank.

The auditor of licensed banks is required to send copies of his/her report contained details of the audit and inspection of bank's accounts and other documents directly to the Central Bank, also asking the bank's auditor about any additional information or details about the status of the bank.

The general body of the licensed bank's shareholders which represents a public shareholding corporation registered works according to the provisions of the companies law in each bank to elected one or more than one auditor for bank accounts for one year subject to renewal, and determine their fees or authorizing the board of directors to determine their fees.

The auditors shall monitor the work of the bank and checking the accounts professionally, and examine the regulations of financial and administrative system, and verifying the assets of the bank, and

checking the decisions of the board of directors and instructions issued by the bank. The auditors submit their report to the general body of the shareholders in the bank, and they have to elect one of the members to read the report in front of the general body.

The report of the auditors includes the final opinion in the annual balance of the bank, and the profit and loss account resulting from their work and sends a copy of the report to the central bank the report must include one of the following recommendations:

- The ratification of the annual balance and calculating profits and losses and cash flows in a comprehensive way.
- The ratification of the annual balance and the profits and losses account and cash flow statement with preserving the reasons for this condition and its financial impact on bank.
- Non-ratification the balance and profits and losses account and cash flow, and send it back to the board of directors, and stating the reasons for non-ratifying the Recommendation on the budget.

In the case that auditors recommended non-ratification the financial statements and send it back to the board of directors, then the general body of the bank decides one of the following options:

- **First:** Request the board of directors to correct balance and profits and losses account according to the observations of the auditor, and consider it approved after doing the amendments.
- **Second:** Refer the matter to the controller of companies in the Ministry Of Industrial And Trade to appoint a committee of experts from legal auditors to judge in the conflict matter between the board of directors and auditors, and therefore the decision of committee is mandatory after reviewing it by

general body for approval, and then modifying the balance and calculate the profits and losses accounts according to that.

Second: The legitimacy control

Islamic banks are characterized by the existence of "a legitimacy controlling on their activities on their activities and banking works in order to be confidence on their commitment to Islamic Shariah and law, and to interfere to correct any kind of deviations in daily activities and banking (Yousif Qasim, The origins of Shariah law, Dal Al Nahdha AL Arabiya, Cairo)

Despite of the agreement on importance of legitimacy control but there are differences in opinion about the method of appointing and the number of members of the audit board, the authorities that have been granted to the committee or to legitimacy advisers, Some Islamic banks are forming a commission or committee of legitimacy control, which is consist of three members of religious scholars, while other hiring legal external adviser, or hiring legal controller as permanent job in the bank and there are differences in the existing Islamic banks with matters that are related to extent of authorities granted to the members of the audit board, and its relation to administrative, and to whom shall submit reports.

In order to activate the work and the role of Shariah in Islamic banks, we prefer the opinion that the responsibility shall be taken by independent authority composed of three members from the religious scholars of the religious law and Shariah, where they have been appointed and determine their powers and rewarded by the general body of the shareholders in the Islamic bank, The purpose of this procedure is to ensure the freedom and independency to members of the "Shariah Control Board" and to be able to perform their duties away from the pressures that might be exerted on them by the general manager of the bank or some members in the board of directors. As

examples of these pressures that the general body might find legitimacy justifications to some activity or action of certain financial procedure in the bank, and it is not a secret the important impact of granting authorities to the Shariah Control Board similar to those authorities which entitles to the legal accounting auditors.

In order to enable the Shariah Control Board of Islamic banks to play its rules such as consulting and executive the main duties, then its main duties should be as follows:

- To give the advice and idiosyncratic opinion on daily issues that face the Islamic departments and sections of the bank to ascertain the extent of matching transactions commitment to the provisions and rules of Islamic Shariah.
- To notify the Chairman of Board of Directors of the Bank about any fault against the Shariah rules that might happen and how to deal with that fault immediately.
- To participate with bank officials in designing sample of contracts and agreements and special barriers systems for the implementation of all its work and follow them closely.
- To work on innovating and the developing new banking tools in accordance with the provisions of Islamic Shariah to serve customers properly and attract new clients.
- To submit recommendation to General Body of shareholders of Islamic Bank to confirm that transactions have been done during previous fiscal year according to provisions and rules of Islamic law and this recommendations is issued in a form of report of Shariah Control Board to give it same force of auditors' report (Radhwan Mahoud Husny, 2008, The policy of Islamic banking work, Dar wa'el, Alexandria – Egypt, pp 221-223)

4. The Objectives of Islamic Banking Control and Following-Up Methods

There is no doubt that the central bank in the state is considered the main monetary authority which is responsible for issuing banknotes, and regulate the credit process, and doing banking supervision on the activities of licensed banks and other financial institutions. The banking control system depends on a specific set of objectives related to the nature of economic, social and developmental policies in one hand, and monetary and fiscal policies on the other hand.

Main objectives of Central Bank control over other banks, whether traditional or Islamic banks lies in the following:

1. To impose an independent control over banking system because central banks are government bodies that takes the task of maintaining integrity of financial institutes and banks in state.
2. To protect the deposits in the banks, whoever is the owner of deposits, and then the money which is belonging to the depositors or savers and shareholders, and the deposits should be subject to the protection and preservation of the bank which manages them.
3. To direct financing activities of bank for priority sectors in comprehensive perspective of development policy in state.
4. To activate the economic activities, whether to pursue an expansionary credit policy or deflationary for the purposes of maintaining monetary stability and the purchasing power of the national currency and exchange rate, and thus encourage sustainable economic development process.
5. To mobilize domestic savings and attract more savings to the banks, because the increasing in deposits flow towards the banking sector has the greatest impact in the development of the size of savings and thereby increase capital accumulation and investment in the community.

It is recognized that the work of Islamic banks affected by the dimensions and objectives of monetary policy, which draws and supervises the implementation of the central bank in the state and in any case each Islamic bank must be committed like any licensed banks to the rules and controls like keeping the decided reserve cash legally, and secure the required cash to save the reliability of the financial position of the bank and to secure all the rights of depositors, investors and shareholders, this as well as the implementation of the Islamic Bank for all the instructions and directives issued by the Central Bank of licensed banks regarding the management of the credit banking, both quantitative and qualitative, in order to guide them in the frame of the development policy of the state.

As country's central bank is monitoring and following up activities of all banks and financial institutions to ascertain the extent of commitment and implementation of instructions and orders. The central bank is usually using two methods of monitoring and follow-up of activities of banks and licensed financial companies first method is focusing on to monitor and follow-up office through receiving the rotating and non-rotating data, reports, various statistical and information demanded by the bank to implement objectives of monetary policy, in specific dates and accordance to models determined by central bank.

The second method is represented follow-up field inspection and sudden examination by testing the books and records of any licensed bank and checking accounts and documents to make sure that it is correct and not violating the regulations, instructions or orders that been issued by the central bank, and if it turns out to the central bank after inspections that the work of Licensed Bank may went not to the favor of shareholders or depositors, so it has right in issuing his order to bank to stop deviant acts, methods, and work to correct situation to line with Shariah principles and rules applicable in this (Radhawan

Mahmoud Hassan, 2008, policy of banking work, Dar Wa'il, Edition 2, Cairo, p 226-227)

5. The Concept Of Legitimate And Legal Oversight And Controls In Islamic Banks

- **The concept of Shariah in Islam**

The meaning of legitimate control in Islam is putting legitimate permissions derived from legitimate evidences (Al-Munjid in language and media, Dar Al-Mashriq, Beirut, Lebanon, Edition 25,1993, p.703) then following-up in order to rectify any mistakes to ensure the continues of proper and legitimate implementation, hereby are some of the concepts of control and legitimate controls.

meaning of legitimacy control is following-up and test and analysis of all acts and actions and behaviors performed by individuals, groups, institutions and units and other to make sure they are in accordance with provisions and rules of Islamic law using appropriate legitimate means and methods, showing irregularities, errors and correct them immediately, and reporting to authorities , including notes, tips, instructions and ways of development for better and finest on an ongoing basis and keep up with modern developments (Shahata, Husain Husain, 1411 Hijra, Audit and control in Islamic thoughts and objective thought, P.93)

- **The Concept of Legitimate Permissions of Shariah in Islamic banks:**

In this case we mean by legitimate permissions of Shariah: All factors that achieving right legitimacy of Islamic banks, also having the control authority to take control of all methods and procedures to ensure proper functioning of work (Bughaza Abdul Satar , 1985,

Legitimate Permissions of Shariah of Islamic banking, a research paper submitted in the third Islamic conference, Dubai, P.3) . Shariah control body in Islamic bank taken its legitimacy from the idea of establishment of Islamic Bank, so that is sponsoring steps to create a bank, and reviewing the procedures to initiate new entity, and attract people to this entity and legitimizes its existence. (Al Baty Abdul Hamid, 1991, Investment and Legitimate Control in Banks and Islamic Institutions, Faisal Islamic Bank, Edition 1, Saudi Arabia, P.217

- **The Promotion of Virtue and Prevention of Vice and do the duty of “Husbah”**

1. The Promotion of Virtue and Prevention of Vice

Virtue: a name of each act known reason or Sharia classified as good and better.

Vice: a name of deny unacceptable acts (ie: deny the mind and Shariah that the mind healthy by nature does not violate the legitimacy and Shariah (Al Asfani, Abul Qasim Al Hasinyah, strange meaning in Quran, evaluated by Said Gailany, Dar Al Marifah, Beirut, Lebanon, p.331)

In another definition:

Virtue: every good saying or good doing and good ordered done for the sake of the Islamic nation and even the human family.

Evil: all bad said, and did (Al Shahawy, Ibrahim Dasuki, 1962, Husbah in Islam, Al Urubah Library, Cairo, P.9)

Almighty Allah ordered us to Promotion of Virtue and Prevention of Vice and enjoined on sufficient as said: "Let there arise out of you a group inviting to all that is good, enjoining al-Maroofof (all that which

Islam orders) and forbidding al-Munkar (all that which Islam forbids)"Surah All-omraan , verse 104 } And Almighty Allah commended the Islamic nation and described with goodness and it order the good and forbid evil, Allah said: { "You are the best people that have been brought out for mankind; you enjoin good and dissuade against the forbidden" } (Surah All-omraan, verse 111) Almighty Allah explained : that this nation is better other's nations people, its the greatest of kindness to them because they completed all the goodness , and most benefit to the people because they follow the concept of promotion of virtue and prevention of vice, where they ordered all goodness and forbade all evil for each one, and set it for Almighty Allah by Jihad of self and money, and this is the perfection benefit to the creatures, Almighty Allah said when he described the characteristics of our Prophet peace be upon him: (who enjoins upon them what is right and forbids them what is wrong and makes lawful for them the good things and prohibits for them the evil) (Surah Al Araf, verse: 157) is an explanation of perfection letter, the prophet peace be upon him is the one who is Almighty Allah ordered on his tongue all the goodness, and forbade all evil, and permitted all good and prohibited all bad (Bin Taimyah , 1402 Hijra, Al Husbah, justified by Said bin Mohammed, Al Arkam Library, Kuwait, edition 1, p 69)

From all what we shown above, it is already evidently importance of doing the duty of the Promotion of Virtue and Prevention of Vice, believing and anticipation for Almighty Allah and obedience to him, and to his messenger peace be upon him, fulfilling to his great message.

2. Doing Husbah Duty:

It is worth to mention here that the meaning of Husbah, which is the Promotion of Virtue if it seems absent, and Prevention of Vice if it seems working by it (Al-Shahawi Ibrahim Dasuki, Al Husbah in Islam, previous reference, P.9) and all Islamic states, and one of them

Al Husbah state, which means that the Promotion of Virtue and Prevention of Vice, and Al Muhtasib is like the obeyed Secretary who required from him justice, and he is like a prince and the Governor. as well as the honesty with all the news that he might tell because the honesty and the justice is parallel with each others as Almighty Allah said in holly Quran “And perfected is the Word of your Lord in sincerity and justice” (Surah Al Anam, verse: 115)

Therefore every guardian should be assisted by the people of truth and justice, and if not he may be assisted by the best and all states including Al-Husbah, originally is a legitimate state and religious positions, and each individual from a state from these states will manage its policy with wisdom and follow Almighty Allah and prophet Mohammed peace be upon him as possible and then he is one of righteous people. Any individual has made an injustice and done it with ignorance so he is absence wrong-doer according to what Almighty Allah said “Verily the pious shall be in Delight, And verily the ungodly shall be in a Scorch” (Surah Al Anfar, verse: 12.13) , the specializations are different in the states, so Al Muhtasib of the Promotion of Virtue and Prevention of Vice is not of the specialization of the rulers and the judges and those who are working in court and so on (Ibn Taymiyyah, Al-Husbah, page 14-16).

Regarding of doing duty of Al-Husbah in Islamic bank it shouldn't be limited on committee of controlling and auditors on legal consultant only, but it has to have a comprehensive general auditing control on all employees and clients of bank and with dealers and so on, because that is coming from concept of committing to do duty of Promotion of Virtue and Prevention of Vice for sake of Almighty Allah.

Legal Framework: often enacted a law when creating most of the Islamic banks on the need to be committed to the provisions of the Islamic Shariah, and the need for a legitimacy control represented by auditor or legal counselor or in the form of Shariah committee for

each Islamic bank ,also it has been written in some countries on the existence of an Shariah control body on the level of state, and the International Union of Islamic Banks has established a high body on the global level, and we review briefly the main points with examples of Islamic banks as models only:

- A. **The text to be bound with the Shariah laws:** some Islamic banks had sufficed by text only to be bound to Shariah law in the main system or in the contract of establishment, or in the law of creation, without written the text on the approach to achieve this commitment, which is a Shariah body is keen on achieving this text and apply it and be responsible for it, which leads to reassurance to the strength and durability of the body and the process of the work of their functions, and thus more trust and confidence on bank's commitment to the Islamic Shariah, and examples of these banks:

Islamic Development Bank: Jeddah, Saudi Arabia, Article (1) of Convention on Establishment says:

(objective of Islamic Development Bank (IDB) is to support economic development and social progress of the peoples of members countries and Muslim communities collectively and individually in accordance to Islamic Shariah) and leads to kind of solidarity and mutual assistance between these countries.(Convention of incorporation, publications IDB, Daralosvhanny for printing, Jeddah, Saudi Arabia, p 6).

The Bank does not have a Shariah control body, where all legitimate inquiries displays to committees came from the Jurisprudence Council. (Letter to the global Islamic bank,24/02/1412AH, Cairo.)

Islamic Bank (Luxembourg): one of the Islamic banks been established in non-Muslim countries and subjected to the laws of that

country which making it committed to no violation of these laws when applied the Shariah law, came in Article No. (12) of the Regulations are as follows: (the Islamic Shariah applied when there is no contrary rule with the rules and regulations in Luxembourg specially law of 1915/08/10 and amendments of that law.(modern Muslim magazine, No.3,1979, p172).

In study underwent on around 50 Islamic banks on level of Islamic world it has turned out that 64% of them are not including necessarily of establishing Shariah body in their systems, and they sufficed with mentioning only to commit to Shariah rules. Beside 63% of these banks don't written in their establishment contracts on create a Shariah body (Report of the Committee evaluate legitimate role of Islamic Knowledge, Cairo, 1993, pp.83).

B.The text on the existence of a controller or a legitimate consultant or Sharia control Board:

1.The text on the existing of controller or a legitimate consultant:

Al Baraka Bank in Sudan, indicated in the list of that bank, item (7) which reads as follows:

Shariah Control: (it is a board formed by the bank for the purposes of “Fatwa” and Shariah, and consists of one legitimate adviser or more).

2.The text on the existence of the Shariah Controller Board:

Faisal Islamic Bank of Egypt, came under Article (3) of Bank establishing Act

As follows: (to form in the bank a Shariah Controller Board and take the responsibility on matching the transactions and actions with the texts of Islamic Shariah rules, and determines the statute of how to set up the bank and how to do the work and other specialties).

Al Rajhi Banking and Investment Corporation (Saudi Arabia), one of the leading banks in process of transformation to the system of Islamic banking, which imposed need to provide Islamic legitimacy controlling, therefore Incorporation Assembly of company has decided to form a legitimate board and set the rules for its work, including that company demonstrate transactions during year (report of board of directors, 1990, Jeddah, Saudi Arabia, P.25)

C. The text on working full time by individual in Islam bank

:within limits of what researcher briefed and read from laws, regulations and contracts for establishment of several Islamic banks, study found that in most texts there are no explicit indication to provide full-time work for legitimate controllers as well as members in Shariah and control board, but seems there are some exceptions that describe full-time work for legitimate controller inside Islamic bank, following are two examples:

Sudanese Islamic Bank of solidarity: the text of the item (55) of the main regulation on the following:

To override decisions of Board of Directors with majority of two-thirds of members in some matters, including:

(Decision to appoint a general manager and vice president and director of research and advisory “Fatwa”, and to determine their suitability and specializations (the basic regulations of Sudanese Islamic Bank, bank publishing, P.21). The meaning of director of research and advisory “Fatwa”; (the administration that is considered it does legitimate controlling functions), and, of course, it is assumed to be one of the elements of legitimacy controlling although it is not explicitly indicated.

Kuwait Finance House: It was mentioned in the speech of President of the Board of Directors in annual report for year 1982. Within talk about religious advisory “Fatwa” and Shariah control as follows:

Besides this board, an internal committee of legitimate control began to work in order to understand and follow up the implementation of the decisions issued by the legitimate committee and this committee is considered an internal audit committee that consist of bank’s staff, and must be consist of legitimate elements by the bank: so that it can perform its duty perfectly (The Modern Muslim Magazine, issue 35, 1403 Hijra, the report of Board of Director year 1982, p.182-183).

D. The text on the existence of a Controller Board at the state level: the United Arab Emirates (UAE) has the lead in the formation of a supreme committee at the state level, as provided for in Article V of the Federal Law No. (6) for the year 1985 are as follows:

"Constitute a decision of the Council of Ministers legitimacy supreme committee includes individual of legitimacy and legality of banking and to control banks and financial institutions and corporate investment, to verify the legality of their transactions in accordance with the provisions of Islamic law as well as to express an opinion with displays on these bodies of issues during doing their activity, and be considered the supreme committee binding to the parties mentioned"

The law has brought this committee to the Ministry of Islamic Affairs and endowments as more government agencies specialized in religious advisory “Fatwa” matters but the vast majority of Muslim countries still do not have a legitimate control committee at the state level (Abdel Moneim Hamdy, 1994, Journal of the Islamic Economy, Bank of Dubai, the United Arab Emirates, No. 54, p 18).

E.The text on the existence of a supreme committee at the global

level: it is included in the agreement of establishing of the International Union of Islamic Banks in Section IV organizational structure of the Union, and explained the basic system of the Union, including the senior Shariah and control Board, also included Article 16 of the convention provisions on the formation of the board and its specialties. The first a meeting of the supreme body of “Fatwa” and Shariah and control Board of the Union of senior Muslim scholars has held in the 20 of May 1399, corresponding to 17 April 1979 in Cairo, and in this meeting the members approved the draft regulatory framework for the system and procedures and work by the board (Journal of Islamic banks, No. 6 for the year 1399, Cairo, p 79) then the first meeting after the formation of Dubai Islamic Bank headquarters was held on 30 Jumada II 1403 Hihra corresponding to April 13, 1983 (Journal of the Islamic Economy, Dubai Islamic Bank, No. 20 of 1403, p 24), then the Board of Directors International Union for Islamic banks had decided at a meeting held in Khartoum on 13 August 1407 Hijra to maintain the supreme committee for religious advisory “Fatwa” and Shariah and Control Board, with the development of its formation and increase its effectiveness, and by benefiting from recommendations and proposals of third commission scientists conference in Islamic bank in Dubai and then approved the Board of Directors of International Union of Islamic Banks, for a list of Supreme committee for religious advisory “Fatwa” and Shariah and Control Board in its meeting held in Istanbul on 13 August 1988(Islamic Economics Journal, No. 171 for year 1407, p 12).

3. The duties and rights of legitimate controller

These duties and rights of **legitimate controller** (whether he was a member in **legitimacy body** or observers or a legitimate adviser),and researcher will try to derive it from laws, regulations and policies that were issued at time of establishment of Islamic banks, as well as from

any other sources as possible. Duties of **legitimate controller** and rights do not exist in all banks Islamic, but it does not mean that they are limited to mentioned Islamic banks; also it does not mean that they are exist in other Islamic banks.

1. Duties

- **A Presence of Clear Legitimate Approach**

Some of Islamic banks when it was established have identified the jurisprudential opinions which are accredited and also show the meaning of usury (Riba) and computational deposits and some Islamic modes of financing, for example:

Jordan Islamic Bank for Finance and Investment (See Law No. 13 of 1978 Jordan Islamic Bank for Finance and Investment, p 412). It was mentioned in the law of establishing two banks in second article as follows: The words and terms indicated in this law have the following meaning, such as usury (Rba), non-usury banking, computational deposits, Speculative-grade bond, Speculation (Mudaraba) financing and dwindling partnership and winning sale of the buying order (Ansari, Mahmoud and others, 1988, Islamic Bank, Al-Ahram book of economic, No. 8, Cairo, p 102) and other jurisprudential opinions and terms which are adhered by the bank according to its law and regulations applied, and based on testing all Islamic doctrines, and according to legitimate interests without adherence to a particular doctrine.

- **The Participation in Regulating the Systems of Islamic Bank**

Participation includes regulating instructions, terms, draft legitimate contracts of transactions as well as reviewing, correct and approve them. As an example Islamic Bank of Qatar, where it is mentioned in legitimate controller procedures of comprehensive study to work's regulations and conditions, and draft contracts to ensure they do not

contain any transactions that are Inconsistent with Islamic law and Shariah.

- **Faisal Islamic Bank of Sudan**

It was mentioned in the basic systems that (the legitimate control body) Act. No (69) to be entrusted to the control body in conjunction with bank officials in modeling contracts and agreements and processes attributable to all bank transactions with shareholders, investors and others, in addition to that to modify and develop the samples listed where appropriate, and in the preparation of contracts and agreements that the bank plans to conclude which has no set by sample before in order to ensure that the absence of contracts and agreements and the operations from Shariah aspects (The basic system of Faisal Islamic Bank of Sudan, previous reference, p.17)

- **The Control**

One of the most important duties and purposes of a legitimate body control or a counselor or legitimate inspector is to observe the work of the Islamic bank and make sure to match the rules of Islamic Shariah, and the Islamic laws and regulations for the establishment of Islamic banks have included that, and ensuring that through periodic reports submitted to the public associations

- **Faisal Islamic Bank of Egypt**

The report includes the following:

(After verification and auditing, and after demonstrating the works and achievements done by the body as well as the resolutions during the year, and demonstrating what is connected with the bank and its branches such as investment works and banking services based on the plan of the body and what included in the plan such as regulations, jurisprudential principles, and texts of legitimacy)

- **Replying to Questions and jurisprudential inquiries**

Almighty Allah said “Ask the followers of the Remembrance if ye know not” (Surah Al-Nahal, 43) , and which reply the legitimate body or the legitimate consultant during the year with all whom concerned and attention with the works of Islamic Bank, such as bank management and the employees or client or the shareholders, or the researchers or Islamic community, or media, also the queries received after the end of the fiscal year from the shareholders, and which are replied in front of the general assembly, and also issuing special publications of “Fatwa” issued by the legitimate bodies that include questions received from different categories and their answers emanating from the Islamic legitimacy.

- **Instilling the Teachings of Islamic Law in the Sense and Conscience of Employees and Customers**

The personnel working in the Islamic bank have a sensitive position in the society, they must be a work models, inspire confidence in dealing with the Islamic bank, and therefore they must be educated according to Islamic way, which makes them a true model for conscious and educated Muslim, who knows his religion and the good of the education. (Abdul Fatah Mohammed Al Aisawi, the philosophy of Islam in building strong family, Modern Arabic Library, Al-Iskandariah, 2007, P 114) they are the members of Shariah bank, because they are close to them, and they know their problems, and trusted, and employees do not embarrassed in asking and showing their problems to them and thus the employees in Islamic banks have Islamic culture, especially in their field. Also the group of clients dealing with the bank are having inquiries frequently and need satisfying legitimate answers, where the employees may not be able to answer them, therefore there should be a control body its job is replying these inquiries.

There is a suggestion to test the use of legitimate control in urging the debtors to pay their loans faster, especially after they increased, and

this could be done by developing the concept of legitimate control and returning back to the origin, which is Alhasbah in order to awake their conscience. Almighty Allah said “We sent them to explain clearly to men what is sent for them, and that they may give thought.” (Surah Al-Nahal, 44). Therefore it is the potential that motivates the society, it is also a kind of change shows the mentality of the individual from any incorrect ideas and lead to emphasizing good behaviors and good ethics helping the Islamic bank to do its message and achieve the desired goal (Jumah Ali, 1991, the work of legitimate body and its problem in Islamic banks, the fourth conference of Islamic Jurisprudence assembly, Haidar Ababd, India, P.7)

- **The Witnessing in Front of General Assembly**

Almighty Allah said “And do not conceal testimony, for whoever conceals it - his heart is indeed sinful”(Surah Al-Baqarah, 283) and the consultant or the controller or the president or the members of legitimate control body submit report to the Shareholders' General Assembly every year, by considering that is testimony on bank's work from legitimate perspective, with the declaration of what the legitimate control body has done and its means to follow-up and monitor all legitimate aspects, and its main notes, and stating the extent of response by the management and personnel to its orders and resolutions, and the extent of commitment to the rules of Islamic Shariah, however, this become a standard procedure in all Islamic banks, even though there was not statement or law on this matter.

2. The Rights

- **Financial rights**

Almighty Allah said “And among those we created is a community which guides by truth and thereby establishes justice” (Surah Al-Arāf, verse 181). The legitimate controller do his job in controlling & directing according to the law and Shariah of Almighty Allah, but when he say his opinion in a matter and judge according to his specialty, then he do the role of Mufti , and to know the permissibility

to take fees or not on his work, then this matter should be consulted with the scholars

- **The Mandatory Decision of Controller**

Allah Said “obey Allah and obey the Messenger and those in authority among you” (Surah Al-Nisa’, 59), where the legitimate controller has been selected according to certain conditions such as qualifications, trust, and loyalty that qualified him to this work. The legitimate controller has an important role in support the Islamic bank to do its works according to the rules of Islam and Islamic Shariah, and the controller can’t do his role unless his decisions are mandatory and should be fulfilled immediately. Therefore one of the rights of the legitimate controller is to make his decisions mandatory to all, even though it was not stating that in the law. Some banks call the legitimate controller another name, which is “legitimacy consultant”, and this mean that his legitimate opinion is consultancy only and it is non-binding for the management of the bank, an example of that The Islamic Bank of Jordan for investment and financing, others put mandatory legal Acts (Jumah Ali, P.20)

- **The Legal Impacts on Defects by Legitimate Controller**

No doubt any defect by the legitimate controller or mistakes made by him will lead to dangerous consequences, such as money pollution because of usury (Riba), or losing the rights of any party whether the bank of shareholders, or depositors, or who enter development and investment projects with the bank that follow the Islamic law and Shariah, and the damage may not occur only on those, but may extended to reach Muslim community in the Islamic bank, and affect negatively the work according to Islamic regulations and Shariah in the community

Summary

The researcher discussed in this paper the professional standards of internal audit and the rules of occupational behavior, and

highlighting the role of the Institute of Internal Auditors in the development of the internal audit profession and its objectives and its system. Also summarized the responsibilities and powers of the internal auditor and standards for the professional practicing of internal audit, and summarized the rules of occupational behavior and the fundamental principles of international audit and the activities that are incompatible with the occupational practicing.

The researcher also saw the need to address the emergence and spread of Islamic banks and their main characteristics and advantages, and the concept activity control of Islamic banks and their dimensions because they are part of this research, and therefore highlighting the main facts about Islamic Bank and its objectives and management, and the means of control over the legitimacy of bank's transactions and accounting control on its work and the privileges and protection of its work and other related topics to Islamic Bank.

The study explained the concept of control over Islamic bank's activities and its dimensions, and self-control of human conscience, furthermore discussed the concept of banking control in Islamic banks in general as well as internal and external audit, and the objectives of Islamic banking control and the means of following-up the works inside Islamic banks, and the concept of legitimacy control and its terms and conditions in Islamic banks.

Recommendation:

- To give advice and idiosyncratic opinion on daily issues that faces Islamic departments.
- To notify the Bank about any fault against the Shariah.
- Bank officials must be innovating and the developing new banking tools in accordance with the provisions of Islamic Shariah.

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A New Lifting Capacity Model for Horizontal Wells Based On Laboratory Experiments

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ABSTRACT

The numerical correlations used in determining the lifting capacity for vertical wells cannot be applied directly to calculate the lifting capacity for horizontal well without modifications. Therefore it is necessary to formulate an experimental technique from which a new correlation is generated which can be used for the determination of the lifting capacity for the horizontal well.

The objective of this study is to investigate the behavior of hole cleaning in the horizontal well and to determine the factors effecting the cleaning capacity of the drilling fluids such as mud circulation conditions as well as other various drilling parameters.

This study is conducted in our drilling laboratory using a scaled horizontal well consists of the circulating mud components similar to that present in actual drilling operations. The experimental work used consists of using four muds formulation systems mixed with different cutting sizes and concentrations. The returned cuttings are removed from mud return line for selected given time increments and accordingly their weights and sizes are determined.

INTRODUCTION

Lifting capacity is one of the primary functions of the drilling fluids. The circulation of drilling fluid is an integral part of the drilling operations. The two primary functions of circulation fluids are:

- Cleaning the bottom hole and bit from the generated cuttings.

- Lifting the cuttings to the surface through the annular space between the drill pipe and the hole's wall.

In an ideal drilling operation, the cuttings should be removed as fast as they generated by the bit. The lifting mechanism is achieved by the driving force created by the mud velocity in the annulus with the help of the mud viscosity. Excessive mud viscosity will result in drill pipe sticking and excessive mud velocities result in the erosion of the unconsolidated shale formations in the walls of the well. Therefore, it is necessary to optimize these two important drilling parameters in order for the drilling operation to be as economical as possible without having technical difficulties during the drilling operation. Excessive drilled cuttings accumulation on the bit will hinder the drilling operation and increases the drilling cost of the well. Optimization of the lifting capacity of the mud is necessary to achieve the previous mentioned objectives.

For horizontal wells, the drilling fluid velocity and the cutting slip velocity become very important to control due to the high friction resulted between the cuttings and the walls of the horizontal well. It is difficult to investigate the effect of all drilling parameters on hole cleaning simultaneously. As a result, the majority of hole cleaning studies have identified the fluid velocity as the key parameter affecting the lifting capacity and it is also important to know that inadequate hole cleaning can cause many problems such as stuck pipe, lost circulation and blowout.

OBJECTIVES

Many difficulties and challenges are faced during horizontal well cleaning. Several factors contributing to the effect of poor hole cleaning direct or indirect. The objective of this study is intended to study the relationship between cuttings removal, mud rheology and cutting concentration on the lifting capacity for horizontal wells.

To meet the proposed objectives of this study, the following procedure was followed:

- Determine the optimum cuttings size for efficient cuttings lifting capacity for horizontal wells.

- Determine the optimum annulus transport and settling velocities of the cuttings in the annulus.
- Formulate a mathematical model for determination of mud lifting capacity while drilling for horizontal wells.
- Utilization of probabilistic program to define which factor has more effect on lifting capacity of the drilling fluid.

The drilling parameters measured and studied in the laboratory are; flow rate, mud rheology, cutting concentration, and cutting size.

MATHEMATICAL FORMULATION

In order to develop the mathematical mode based on the experimental results, the following assumptions were mad:

- The system is considered ideal: (Mass flow rate in = Mass flow rate out).
- All the friction forces throughout the system is neglected, due to of the nature of the material used for making the circular pipe.
- The flow is laminar along the annulus.
- Cuttings distribution inside the volume system in mud tank are considered equal to the initial condition maintained by the mixer.
- Mud rheological properties are considered constant and are maintained by additives using the controlling ratio of yield point, YP / plastic viscosity, PV.

The method used for calculate the lifting capacity in this experiment is derived from the mass balance equation:

Mass flow rate in = Mass flow rate outfor an ideal case

$$\text{Ideal mass flow rate} = \frac{\text{Total weight of cuttings in system}}{\text{Total ideal circulation time}}$$

$$m^o_{ideal} = \frac{W_{ideal}}{t_{ideal}}$$

Where:

m°_{ideal} = ideal mass flow rate

W_{ideal} = Total weight of cuttings in system

t_{ideal} = Total ideal circulation time

$$\text{Actual mass flow rate} = \frac{\text{Total weight of cuttings retained in total circulation time}}{\text{Total actual circulation time}}$$

$$m^{\circ}_{actual} = \frac{W_{actual}}{t_{actual}}$$

Where:

m°_{actual} = actual mass flow rate

W_{actual} = Total weight of cuttings in system

t_{actual} = Total actual circulation time

$$\text{Total circulation time} = \frac{\text{Total mud volume in system}}{\text{Operational pump flow rate}}$$

$$\text{Lifting Capacity, LC} = \left[1 - \frac{m^{\circ}_{ideal} - m^{\circ}_{actual}}{m^{\circ}_{ideal}} \right] \times 100$$

EXPERIMENTAL APPARATUS AND PROCEDURES

This study is conducted using laboratory experiments with actual mud samples mixed with different cutting concentrations and different cutting

sizes in specially designed experimental apparatus which is illustrated in Figure 1 and 2.

The main components of the experimental apparatus are Mud Tank, Mixer, Pump, Pressure Gauge, Annulus, Shale Shaker and three sizes of cuttings are selected to run the experimental procedure. Also in all experiments we used water base mud (base compositions are fresh water and bentonite). Additives are used to get the desired properties of mud samples. Mud compositions depend on the ability of cutting suspension and pump capacity

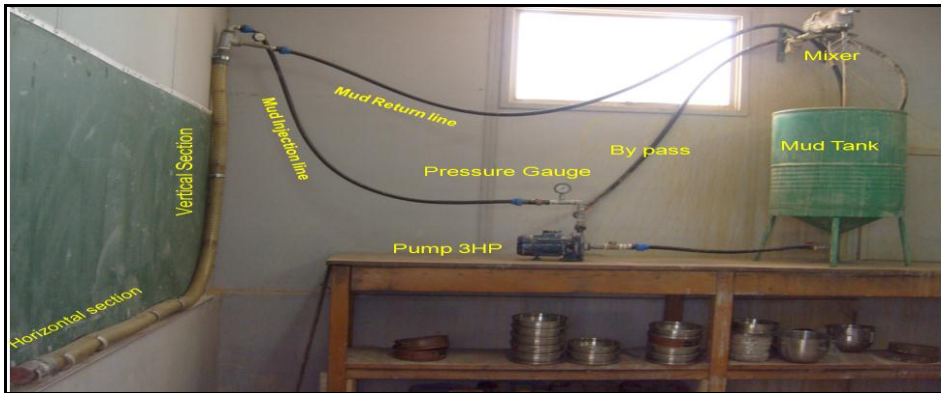


Figure 1: Picture of the experimental apparatus

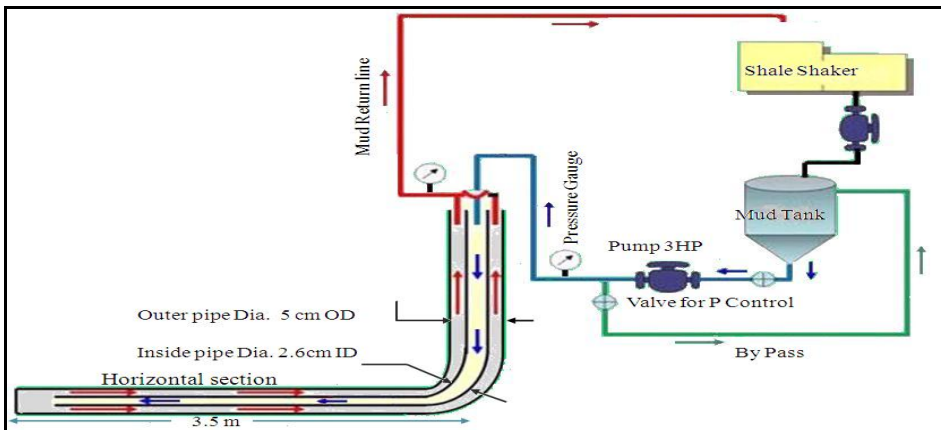


Figure (1): Schematic of mud circulation system of the experimental apparatus

The following steps were used for all experimental Runs:

1. Calibrate the system with fresh water to get a straight line relationship between flow rate and pressure.
2. Measure the total circulation time for selected mud type.
3. Total circulation time is divided to several stages; each stage 30 sec. The cuttings are collected after 30 sec at the sieve.
4. 3 gm/L, 4 gm/L, and 5 gm/L concentrations of cutting are used.
5. Set pump for selected rate and pour the cutting in mud tank.
6. Collect the cuttings coming out from the system at the shale shaker after 30 second collection time increment. Additional time can be taken at last stage.
7. Dry and weight the cuttings retained at the sieve at each stage which will be used for lifting capacity calculations.

The following procedure was followed for circulating the mud through experimental apparatus:

- a. Adding different cutting concentrations to the mud and passing the mud slurry using centrifugal pump through the model with specified different velocities.
- b. Measure the cuttings at the outlet at every specified time increments.
- c. Repeating the previous two steps using different cutting sizes and different mud rheological properties.

RESULTS AND ANALYSIS

The following summarize the results obtained during this study:

- For the Lifting Capacity, LC calculations, the results were obtained from four different types of mud samples, different cutting sizes, different cutting concentration, and different mud flow rate. The results are summarized in Tables 1 and 2.
- The results obtained from this study are depending on different mud characterization such as cutting size, cutting concentration, mud flow rate, mud rheology. Consequently, will result in different lifting capacity values.
- Other assumptions were made in order to obtain accurate results, by holding some mud characteristics as constant in order to calculate

the most accurate lifting capacity. The results of the lifting capacity value for all types of muds with different cutting concentrations, cutting sizes, and mud flow rates were obtained with no mud loss and no filtration (no mud loss).

- A relationship was obtained for the total lifting capacity as function of mud flow rate, cutting size, and cutting concentration with different mud rheology (density and viscosity).
- The selected results were used based on the most representative data for generating the general lifting capacity model for horizontal well.

Table 1: The four Mud types used for this experimental

	Mud type1	Mud type 2	Mud type 3	Mud type 4
Density (ppg)	8.9	8.8	8.8	8.8
Plastic viscosity (cp)	11	10	8	7
Yield point (lb/100 ft ²)	20	14	10	7
Q_1 (cc/sec)	1.207	1.150	1.074	1.293
Q_2 (cc/sec)	0.971	1.003	1.001	1.029
Q_3 (cc/sec)	0.816	0.907	0.953	0.859
Q_4 (cc/sec)	0.619	0.715	0.857	0.513

Table 2: Cutting size and concentrations used for all Mud Types

Cutting Size (micron)	S_1	S_2	S_3
	710	850	2000
Concentration (g/L)	C_1	C_2	C_3
	3	4	5

The following relationships are studied for all types of mud:

- lifting capacity versus mud flow rate for cutting size (S_1 , S_2 , and S_3) at different mud cutting concentrations (3 gm/L, 4 gm/L, and 5 gm/L)
- lifting capacity versus mud flow rate for cutting concentration (3 gm/L, 4 gm/L, and 5 gm/L) at different mud cutting sizes S_1 , S_2 , and S_3
- The lifting capacity versus cutting size for three different mud cutting concentrations (3gm/L, 4gm/L and 5gm/L) at four different mud flow rates
- Lifting capacity versus cutting concentration with different flow rates for cutting size (S_1 , S_2 , and S_3).

The filtrations of our raw data were used from each relationship to get most of the representative data for our model equation generation.

Mud type 1

The Mud type 1 with different cutting sizes at different mud concentration have the same trend (the increase in mud flow rate increased the lifting capacity) except mud with cutting size S_3 at concentration 3 gm/L and 4 gm/L. In this case we are decided to delete these data point from our data base to generate our model equation, because these data not representative the data behavior observed in other trends in Mud type1.

The generated lifting capacity model for Mud type 1 for specified drilling fluids parameters of specified ranges of cutting size is shown in Figure 3 and the equation presented below.

$$LC = 0.6645 \times \ln(q) + 0.536 \qquad R^2 = 0.8459$$

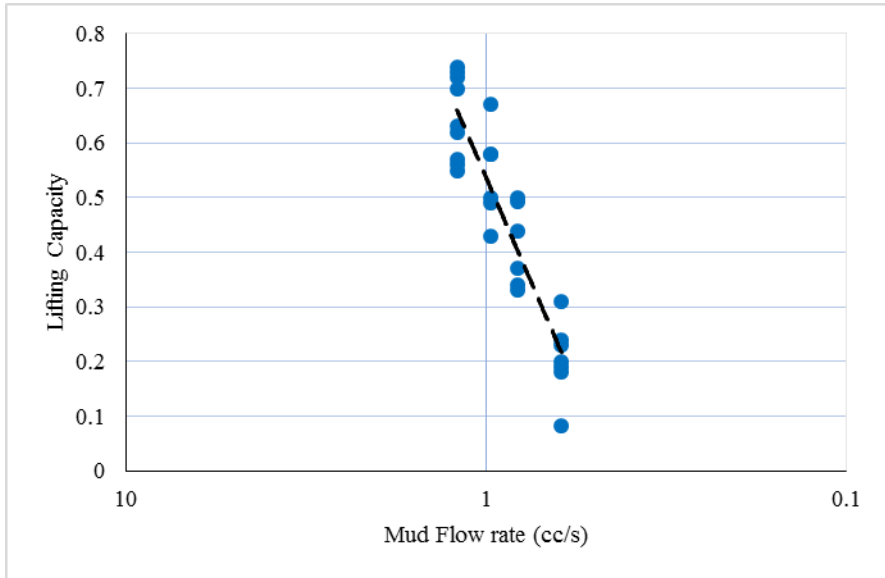


Figure 3: Lifting capacity vs. flow rates for Mud type 1, cutting sizes S_1 , S_2 , and S_3 , at different concentration.

Mud type 2

The Mud type 2 with different cutting sizes at different mud concentration have the same trend (the increase in mud flow rate increased the lifting capacity) except mud with cutting size S_2 at concentration 3 gm/L. In this case we are decided to delete these data point from our data base to generate our model equation, because these data not representative the data behavior observed in other trends in mud type 2.

The generated lifting capacity model for Mud type 2 for specified drilling fluids parameters of specified ranges of cutting size is shown in Figure 4 and the equation presented below.

$$LC = 1.5389 \times \ln(q) + 0.6941 \quad R^2 = 0.8128$$

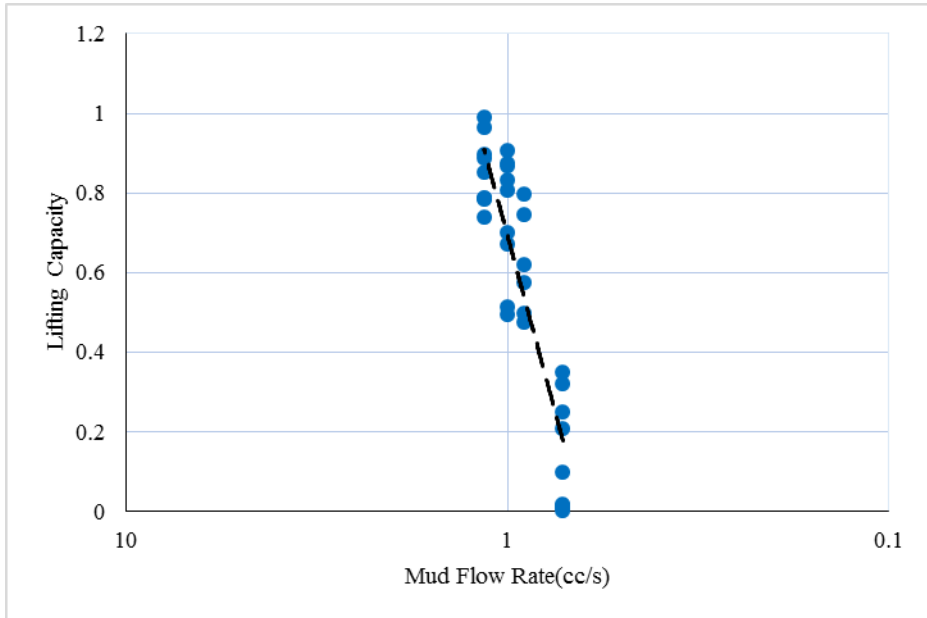


Figure 4: Lifting capacity vs. flow rates for Mud type 2, cutting sizes S_1 , S_2 , and S_3 , at different concentration.

Mud type 3

the Mud type 3 with different cutting size at different mud concentration have the same trend (the increase in mud flow rate increased the lifting capacity) except mud with cutting size S_3 at concentration 3 gm/L and 4 gm/L at flow rates 1.001 and 1.074 cc/sec. In this case we are decided to delete these data point from our data base to generate our model equation, because these data not representative the data behavior observed in other trends in Mud type 3

The generated lifting capacity model for Mud type 3 for specified drilling fluids parameters of specified ranges of cutting size is shown in Figure 5 and the equation presented below.

$$LC = 3.1937 \times \ln(q) + 0.8262 \quad R^2 = 0.8145$$

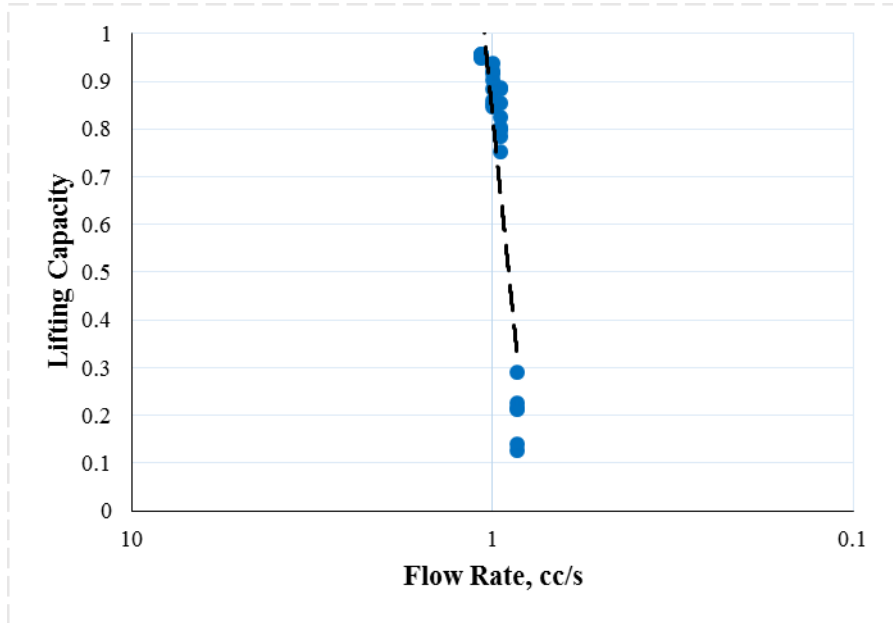


Figure 5: Lifting capacity vs. flow rates for Mud type 3, cutting sizes S_1 , S_2 , and S_3 , at different concentration.

Mud type 4

The Mud type 4 with different cutting size at different mud concentration has unstable behavior, where this one has under effect of rheology and pump efficiency. In this case we are decided to filtrate these data point from our data base to get most of data available to generate our model equation.

The generated lifting capacity model for Mud type 4 for specified drilling fluids parameters of specified ranges of cutting size is shown Figure 6 and the equation presented below.

$$LC = 0.7425 \times \ln(q) + 0.646 \quad R^2 = 0.8142$$

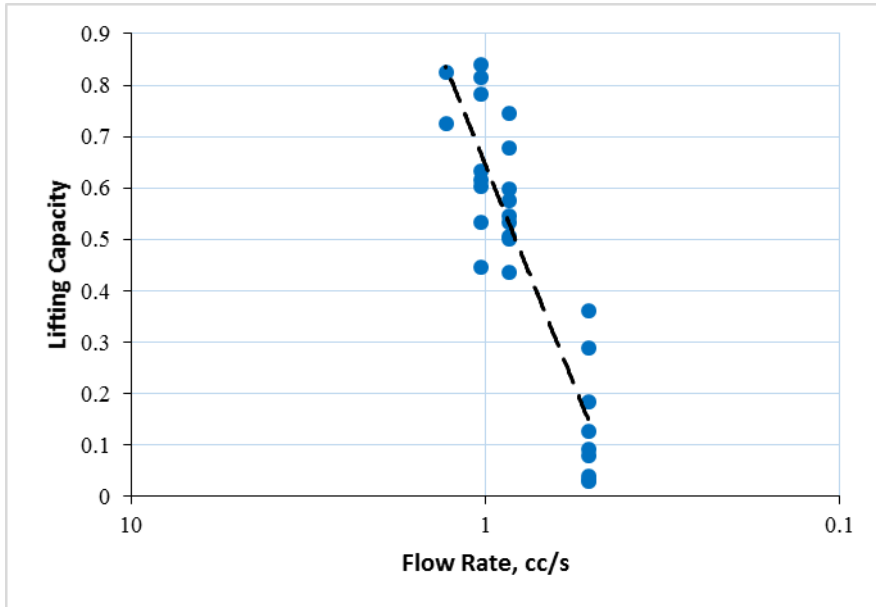


Figure 6: Lifting capacity vs. flow rates for Mud type 4, cutting sizes S_1 , S_2 , and S_3 , at different concentration.

Mathematical Formulation for the lifting Capacity using integrated results from all muds based on single variable parameter (flow Rate)

The derived relationship between lifting capacity vs. mud flow rate for different cutting sizes (S_1 , S_2 , and S_3) at different mud cutting concentrations 3 gm/L, 4 gm/L, and 5 gm/L with different rheology and mud flow rates which shown in the previous table for all types of mud have shown the same trend (increase in mud flow rate will increase the lifting capacity), except for some few data due to many factors, such as human error and pump efficiency, as shown in Figure 7. In this case we are decided to filtrate these data point from our data base to get most of data available to generate our numerical model.

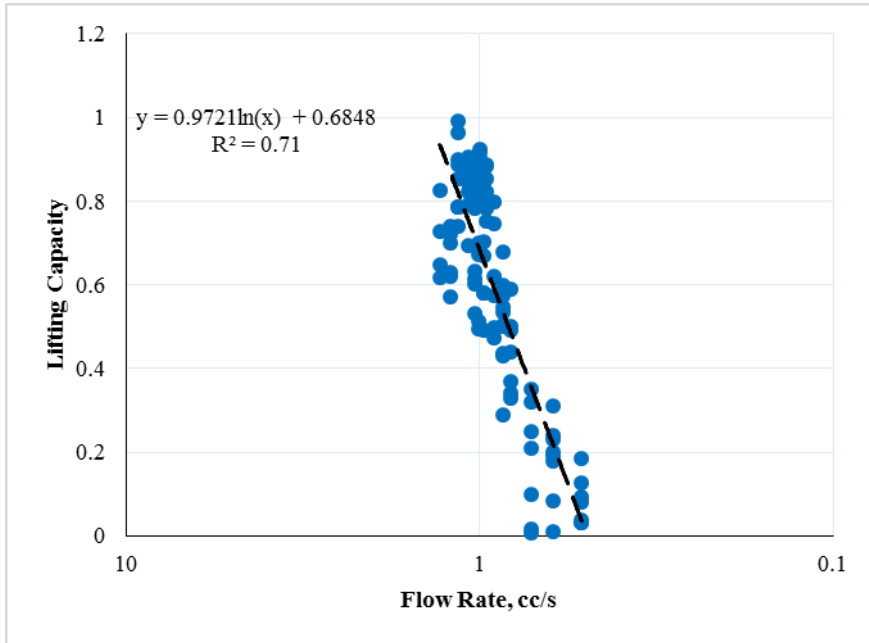


Figure (7): Lifting capacity vs. flow rates for all mud's, cutting sizes S_1 , S_2 , and S_3 , at different concentration.

From figure 7, the new numerical model for all types of mud was generated, as shown below.

$$LC = 0.9721 \times \ln(q) + 0.6848 \quad R^2 = 0.71$$

CONCLUSIONS

During the course of this work, the following conclusions have been drawn:

1. There is an optimum cutting size for maximum lifting capacity for each cutting concentrations used.
2. The lifting capacity observed form the experimental results do not only dependent on mud velocity, but it is also dependent on the cutting concentrations used.
3. It was observed that when cleaning the system after each experiment, accumulation of rock cuttings were present in the bottom of the horizontal section of the model.

4. In this study a lifting capacity correlation relating the lifting capacity with mud flow rate, cutting size, cutting concentration, mud density, mud velocity is generated for the horizontal well.

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