

# Factors Influences the Use of Cost Accounting Systems in Libyan Agricultural Firms

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## Abstract

This paper used quantitative approach to examine the relationship between six contingent factors that influence the Libyan agricultural firms to practice cost accounting systems. The available literature focused on the practice of cost accounting systems in manufacturing and servicing firms, this study filled the gap in the literature in term of studying the factors that influence the cost accounting practices in the agricultural firms. A questionnaire survey was used to collect data from 227 respondents, and the response rate was 81% (184). It was found that there is a positive relationship between the size, competition, legal obligation, and importance of cost information and practice of cost accounting systems, while the relationship between product diversity, cost structure and practice of cost accounting systems was found to be not significant.

**Keywords:** cost accounting systems, agricultural firms, traditional costing, and activity based costing.

## 1. Introduction

Agriculture is one of the oldest activities known to humans. It started with rearing animals and then growing plants; nowadays, farming is important for all countries to feed the people and provide raw materials for other industries. Agricultural firms like other firms in manufacturing and service sectors, are facing significant changes in their business environment including the increase in intensity of competition, product diversity, and scarce resources, all require managers to seek accurate information for survival.

Nowadays, agricultural firms in Libya are facing several challenges which make them want to implement cost accounting systems. Increasing competition from foreign companies such as Italian companies and companies in the USA, which have started to invest in the agricultural sector in Libya. In addition, the agricultural sector in Libya suffers from lack of resources, such as water and arable land (Agricultural Ministry, 2009). The practice of cost accounting systems provide useful information for planning, controlling and for short and long term decisions which will assist managers to make the right decisions to use the scarce resources in an optimum manner (Fleischman & Tyson, 1993; Talha, 2010). Although cost accounting systems is useful for firms, the literature related to cost accounting systems focused on the significance of costing systems in manufacturing and later in service firms, while agricultural firms did not receive much attention from accounting researchers.

The accounting literature indicates that studies related to examining the factors which influence firms to implement cost accounting systems focused on manufacturing and services sectors (Brierley et al., 2001; Fullerton & Mcwatters, 2004), because costing systems serve manufacturing businesses and production of commodities (Hume-Schwarz, 2007). Other researchers argued that accounting

researchers paid more attention to study the factors that affect manufacturing firms because the manufacturing sector was the reason for developing cost accounting systems (Edwards, 1937; Fleischman & Parker, 1991; Fleischman & Tyson, 1993; Ning, 2005). Although accounting researchers have been referring to the importance of cost accounting systems in agricultural firms since the 18<sup>th</sup> century, currently, the accounting literature still lacks qualitative and empirical studies related to the practice of cost accounting systems in agricultural firms and factors that influence agricultural firms to implement costing systems (Argilés & Slob, 2001; Roger Juchua 2000).

This paper examines factors that influence the agricultural firms to implement cost accounting systems. The rest of this paper is organized as follows: section three reviews the literature, section four is on research hypotheses, section five on research method, section six on research findings, and the final section seven includes research discussion and conclusion.

## 2. Review of the Literature

The literature in this paper consists of three parts: the first part gives a brief idea about the inception of cost accounting systems. The second part includes the development of cost accounting systems in agricultural firms. The third part includes studies related to the practice of cost accounting in farming as well as the need for further studies.

### 2.1 The Development of Cost Accounting Systems

Most of the accounting researchers argued that the industrial revolution which happened in the 18<sup>th</sup> century was the starting point for costing systems (Mephram, 1988; Garner, 1947). In the 18<sup>th</sup> century, there were three types of organizations: first, family firms which meant families produced commodities for their own needs; second, handicraft firms which were independent craftsmen who worked in small shops; and third, domestic firms which meant entrepreneurs bought raw materials and sent them to a variety of artisans, whereby each of them accomplished a specific process involved in the manufacturing of a product. However, practicing cost accounting systems at that time was worthless (Garner, 1947). Because the owners of these firms could determine their product costs easily, because the market provided them with the prices for raw materials, finished goods and intermediate outputs. Determining the product cost was done by gathering the market prices of its subcontracted components.

However, during the end of the 18<sup>th</sup> century, the business environment faced several changes, such as increased market demand for more commodities. There was also a need to minimize the transaction costs. These changes led to firms gathering the artisans under one roof in one location. This, in turn made landlords seek for ways to control their product costs by assessing production efficiency and monitoring material flows. Firms assessed production efficiency by determining the difference between sales and total prime costs as material costs and labor costs (Johnson & Kaplan, 1987), whereas firms controlled material flow by weighting the input and estimating the output expected from that input. The need for cost control in that era gave rise to costing systems.

Skinner (1985) claimed that the introduction of mass production in 1850 led to the increase of the size of manufacturing overhead costs. Therefore, mechanical engineers claimed that manufacturing overheads should be allocated to products (Johnson & Kaplan, 1987). However, firms treated manufacturing overhead costs as period costs and priced their products and valued their inventory using market prices (Kaplan, 1984).

In the late 18<sup>th</sup> century, firms began to expand by mergers and acquisitions (Muetter, 1996). The expansion resulted in firms seeking to minimize transaction costs and coordinating among the producers, suppliers and distributors (Milgrom & Robert, 1993).

The most important result to that expansion was the firms started to produce the intermediate products inside the company because the intermediate prices provided by markets had disappeared. Therefore, firms had to compute costs for inventory valuation (Johnson & Kaplan, 1987). Besides, making different parts in different places to produce one product increased the manufacturing overhead costs. Hence, determining efficiency became more difficult, making the control of manufacturing overhead costs more important. This necessitated the practice of product costing for inventory valuation.

## 2.2 The Development of Cost Accounting Systems in the Agricultural Activities

The development of cost accounting systems in the agricultural sector had its origins in the 18<sup>th</sup> century. According to Juchau (2002), Arthur Young is considered as the first person to pay attention to cost accounting systems for farming in the 18<sup>th</sup> and 19<sup>th</sup> centuries. He was unquestionably the most significant writer during the English Agricultural Revolution (Gazley, 1973). Despite farming being considered as the oldest activity for human beings, the development of cost accounting systems in this sector was delayed. According to Ernle (1961), many factors caused this delay before the 18<sup>th</sup> century. For instance, a lack of capital, markets and communication; also agricultural production was more for domestic consumption.

The 18<sup>th</sup> century saw technological development in agriculture, such as cultivation techniques, which saw increased agricultural production and use of capital; also improved crop rotation systems. Therefore, farmers needed cost accounting systems information in a timely manner. Arthur Young noted the absence of cost accounting records, which would enable the farmers to determine cost of crops, animals and different modes of farming (Juchau, 2002). However, in the 18<sup>th</sup> century, the practice of farm book-keeping was at an infancy stage (Juchau, 2002). Young seized the opportunity of absence of cost accounting practices in the agricultural sector to advocate improved farm accounting practices, especially by prescribing records required to support farm management decision making. In particular, Young advocated improved practices in cost management including cost comparisons, cost allocations and product costs which reflected the realities of operating a mixed-farm in the 18<sup>th</sup> century Britain (Juchau, 2002).

Accounting writers in the 18<sup>th</sup> century encouraged farmers to keep accounting records to assist the farmers to make better decisions about the performance of livestock and crops, so as to avoid relying on guesswork. For instance, they could know exactly how much money they spent on feeding their herds if they kept regular records; they could also know the costs of every kind of livestock (cattle, sheep, etc.). In mixed farms, it is important to determine the intermediate products costs to enable farmers to undertake cost analysis to determine which crops are profitable. Furthermore, practicing cost accounting systems in mixed farms can assist farmers to allocate overhead costs.

## 2.3 Significance of Cost Accounting Systems in the Agricultural Sector

Business organizations need cost information (Ning, 2005), especially large and multi-product farms. Juchau, (1986) argues that for large agricultural firms that produce several products, management accounting systems for decision making is obviously needed. Argiles & Slof, 2003; Hannan, 2008; Manalo, 2005; Wijewardena & Zoysa, 1999 argued that firms can benefit from cost accounting systems

information in many ways, such as cost management, managerial decision making, product pricing, performance evaluation, budgeting and budgetary control, and preparing of financial statements. As claimed by Kaplan and Cooper (1998) cost accounting systems achieve three goals including, the measurement of the cost of goods sold, valuation of inventory for financial reporting. It provides operators and managers with economic feedback about process efficiency, it determines the cost of activity, services, products, and customers. In brief, the agricultural firms can gain many advantages from the use of costing systems. It helps in making better administrative decisions in several ways, such as allocating overhead costs on cost centers in the fields, especially if a farm plants different types of crops and uses many kinds of machines. Cost accounting opens up new ways of looking at farming operations. It can provide a breakdown of income and expenses by acre and yield units, and enable comparison of performance of different fields, determine why one block may be producing more than another and analyze optimal use of land. According to Jack and Jones (2007), farmers who practice costing systems will perform better than farmers who do not apply costing systems.

#### **2.4 Studies Related to Practice of Cost Accounting in the Agricultural Sector**

The evaluable accounting literature indicates that there are very few studies on cost accounting systems in the farming sector as argued by several researchers including (Argilés & Slob, 2001; Roger Juchua 2000; and Jack and Jones, 2007). Juchua (2002) argued that the writer paid attention to cost accounting systems in farming was Arthur Young in the 18<sup>th</sup> century, who referred to the significance of cost accounting systems for agricultural activities. However, nowadays there are still accounting researchers who suggest that accounting researchers should pay more attention to cost accounting systems in the agricultural sector (Athanasios, Stergios, & Laskaridou, 2010). Athanasios et al., (2010) claimed that the agricultural sector almost neglected from accounting researchers and practitioners, because of the low level of managerial sophistication and lack of economic means in agriculture firms. Practicing cost accounting systems in the agricultural firms has several advantages. According to Luening (1989) and Allen (1994), (as cited in Argilés & Slob, 2001), implementation of cost accounting systems in agricultural firms can improve farm management and lead to better farm performance.

Tahir et al., (2004) ensured that cost control in farming operations can increase profits. According to them, farm costing is useful to monitor plantation expenditures that are increasing as farming becomes modernized. To achieve this, cost information ought to be supplied adequately and in a timely manner. Lee and Kao (2000) argued in their study, that they applied both the activity based costing (ABC) model and the simulation technique to analyze the operational costs in the Pu Shin wholesale fish market in Taiwan. The ABC system is a system that assigns costs to activities; then assigns these costs to units that consume that activity. Many industries have successfully employed the ABC system to improve operational performance and cost management. Lee and Kao (2000) hoped to use this system in the agricultural firms. They based their believe on the data obtained from a case study. To apply the ABC system in the wholesale fish market in Taiwan, they utilized four steps. Firstly, they determined the activities. They found six activities in five sections. The sections were the cultured fish (section A), cultured fish (section B), cold storage polyester box (section C), cold storage fish basket (section D) and imported fish (section E). The six activities included unloading, ordering, billing, grading, weighing, numbering, auctioning and administrative operations. Second, was the allocation of resource costs. According to Ostrenga (1990) (as cited in Lee & Kao, 2000), allocations can be classified into two categories: direct charging and estimation, which means allocating resource costs by using resource

drivers and arbitrary allocation. They used direct charging and estimation charging. The third step was the computation of the resource costs. To know the duration of each operation, they installed v8 camcorder. They recorded the time of every operation to determine how much each operation costs. They computed the processing cost of each kilogram of fish. They found using ABC helped managers to determine the product price accurately and this was better than using traditional costing.

Jack (2008) argue that although target costing system is not used in agricultural activities, however, target costing is a potential system to be used in the agricultural sector. Jack and Jones (2007) referred the same idea in their study. Jack (2008) explained that farmers use what could be named as an intuitive form of target costing. Farmers depended on previous prices in the prior year to estimate potential prices to set target costs and then redesign their operations in order to achieve that target. Jack (2008) found that there are some factors that make the practice of target costing in agricultural firms difficult, including the need for detailed cost information and monitoring reports. To achieve this factor, the firms need multidisciplinary teams. However, agricultural firms started to collect data which make target costing probably to be applied in farming, furthermore the logic of target costing as strategic tool fits with the decision making strategy in farming.

Just a few studies are concerned with the study of factors that influence the practice of cost accounting systems in the agricultural firms including Juchau (1986) who argued to the significance of practicing cost accounting systems in the agricultural sector to rationalize managerial decision making processes, and assist firms to use the scarce resources in a proper way. Juchau (1986) argue that for a large farm that produces several products, the landlord needs to implement management accounting systems to improve his decision. Many accounting researchers in other sectors (manufacturing and service) ensured Juchau's opinion, such as Al-Omiri and Drury, 2007. However, none of the researchers examined the influence of these factors on agricultural firms. According to the contingency theory, there are no ready-made cost accounting systems for all organizations; researchers should determine what cost accounting systems are appropriate for the agricultural firms. Moreover, some researchers referred that legal requirements force firms to implement management accounting systems (Geiger, 1996); also this factor has been tested in manufacturing firms. Therefore, this study adopted these factors to study their affect on implementing cost accounting systems in the Libyan agricultural firms.

In Libya, the government spends billions of Dinars on the agricultural firms which belong to the public sector. These firms produce massive products, including plantation and livestock. However, in the past, the agricultural firms in the public sector monopolized the local markets. In other words, all other farms were small farms which could not compete with public firms. Recently, agricultural firms from Italy and the USA are investing in the agricultural firms in Libya. Therefore, in this study, the researchers wanted to know if the agricultural firms' size, cost structure, the level of competition, product diversity, importance of cost information and legal obligation influenced the Libyan agricultural firms to implement cost accounting systems, because according to Aljazawe (2006), the implementation of cost accounting systems in the agricultural firms in Libya are very far from satisfactory.

Most of the studies related to cost accounting systems in agricultural firms are theoretical studies using qualitative method. For instance, the study by Lee & Kao (2000) relied on case studies to determine which is better for fishing firms, i.e. ABC or traditional costing. Toluyemi's (1999) study depended on unstructured interview to examine the accounting information systems in the agricultural department in Nigeria. Furthermore, contingency theory indicates that there is no ready-made cost accounting systems for all organizations. Instead, the business environment determines what is the suitable cost accounting

systems for the firm (Haldma & Laats, 2002). Therefore, the accounting literature needs more research regarding the implementation of cost accounting systems in the agricultural sector. The current study used quantitative method to examine what factors influence the agricultural firms to practice cost accounting systems, as well as to determine what type of cost accounting systems are used in the Libyan agricultural firms.

## 2.5 Research Design

The quantitative method was used to study the relationship between the contingent factors that influence the Libyan agricultural firms to practice cost accounting systems, including size, cost structure, legal obligation, intensity of competition, importance of cost information and product diversity. A questionnaire was used to collect the data from the research sample. The study was conducted in the agricultural firms in Libya, particularly agricultural firms which belong to the public sector. Therefore, 57 agricultural firms were included in this study as officially registered under the Libyan government. Managers, management accountants, financial accountants, and production managers were targeted to answer the questionnaire. A total of 228 questionnaires were distributed by hand over four weeks; the response rate was 80% (184 questionnaires). The response rate was relatively high because the researchers distributed the questionnaires by hand. Therefore, the respondents could clarify any ambiguous questions with the researchers.

## 2.6 Research Hypotheses

An accounting literature suggested several contextual factors which might influence the practice of cost accounting systems in the business environment. Most of these variables were examined in the manufacturing sector. In this study six contextual factors were examined including:

### - *The size*

Most of the accounting researchers studied the influence of the size on the practice of cost accounting systems such as (Emmett & Forget, 2005; Obara & Ukpai, 2001; Pavlatos & Paggios, 2009; Roztocki & Schaltz, 2003). The researchers argued that large firms that produce many products need to practice cost accounting systems to determine every product cost separately. Furthermore, farm size influence the cost accounting system functionality (Foong & Teruki, 2009). Argiles and Slof (2003) claimed that big farms will produce more than small ones by using more machines and developed technology. Therefore overhead costs will also be more, in such farms decision makers should apply cost accounting techniques to allocate those costs. Therefore, the following hypothesis is proposed:

H<sub>1</sub>: There is a positive relationship between the size of agricultural firms and the practice of cost accounting systems.

### - *Cost structure*

According to previous researchers cost structure plays significance role in choosing suitable cost accounting system for a firm (Bjørnenak, 1997). If direct costs is considered the majority of the product costs, there is no need to implement sophisticated cost accounting systems such as activity based costing, whereas if the indirect costs constitute the majority of product costs, it is difficult to determine the product cost accurately relying on traditional costing (Brierley et al., 2001). Therefore, the following hypothesis is suggested:

H<sub>2</sub>: There is a positive relationship between cost structure and practice of cost accounting system in agriculture.

### - *Level of competition*

Level of competition is the most important factors that influence firms to practice cost accounting systems is intensity of competition (Ning, 2005). When the business organizations produce similar products in a competitive environment, the first step they think about is to reduce the product costs to be able to set competitive prices. Thus, to decrease the product costs, firms should implement cost accounting systems (Tani et al., 1994). From the above discussion, the following hypothesis is suggested:

H<sub>3</sub> There is a positive relationship between the level of competition and the practice of cost accounting systems in agricultural firms.

### - *Product diversity*

Firms which produce several types of products usually consume different proportions of resources (Tayles & Drury, 2003). Therefore, firms that work in this situation should practice cost accounting systems to determine every product cost separately. An accounting literature suggests that product diversity is one of the factors that makes firms practice more complicated cost accounting systems such as (Schoute, 2009). Based on the above, the following hypothesis is suggested:

H<sub>4</sub> There is a positive relationship between product diversity and the practice of cost accounting in agricultural firms.

### - *Importance of cost information*

The need of cost information for cost control, inventory valuation, managerial decision making motivate firms to implement cost accounting systems (Edwards, 2000), especially in competitive environment when competitors will try to introduce their products in lower prices, this could happen by reducing the production costs (Al-Omiri & Drury, 2007). According to Anderson (1995) the needs for accurate cost data for decision making, cost reduction and cost control may affect firms to practice specific type of cost accounting systems. Therefore, the following hypothesis is suggested:

H<sub>5</sub> There is a positive relationship between the importance of cost information and the practice of cost accounting in agriculture firms.

### - *Legal obligation*

The accounting researchers indicate that a lack of legal obligation influences the practice of cost accounting systems in the agricultural firms. Argiles and Slof (2003) claimed that European agricultural firms do not publish financial statements because of a lack of legal obligation. This result is supported by (Athanasios et al., 2010). Therefore, the following hypothesis is proposed:

H<sub>6</sub> There is a positive relationship between legal obligations and the practice of cost accounting in agriculture firms.

## 2.7 Measurement of the Variable

To measure the variables, the firm size and cost structure the study used objective measurements, whereas, the study relied on the seven-point Likert scale adopted from previous studies. The level of competition was measured using the measure by Al Omiri and Drury (2007), which includes four items, while product diversity was measured using four items used in the studies by Baird, Harrison, and Reeve (2004) and Krumwiede (1998). Legal obligation was measured using Geiger and Ittner's (1996) measure which includes four items. On the other hand, to measure the dependent variables, the study relied on nine items adopted from Hoque (2000) and Geiger and Ittner (1996). Table 1 shows the number of questions used and the reliability (Cronbach's Alpha) of these questions.

**Table 1: Number of questions used and Cronbach’s Alpha**

The variable	Number of questions used	Cronbach’s Alpha
Level of competition	4	.846
Product diversity	4	.848
Importance of cost information	4	.713
Legal obligation	4	.654
Practice of cost accounting systems	9	.865

Cronbach’s Alpha for the variables are higher than the acceptable level which is 0.7 as suggested in the literature (Pallant, 2010); only one variable (legal obligation) is below the recommended level. However, it is above the recommended level of 0.6 as suggested by (Hair, Anderson, Tatham, & Black, 1998).

### 2.8 Research Finding

The researchers used SPSS software to analyze the data collected by the questionnaires, the descriptive analysis shows that most of the Libyan agricultural firms 118 of the respondents or 64.4% used traditional costing, 35 (19%) used ABC, and 31 (16.8%) claimed that there is no specific cost system used. 60 (32.6%) of the respondents claimed that they used unit produced as overhead allocation base, followed by prime cost and direct labor cost, bearing the same number, 41 (22.3%) of the respondents. 14 (7.6%) stated that they used direct labor hours to allocate overheads, and 6 (3.3%) and 4 (2.2%) answered that they used direct materials and machine hours respectively as base for overhead allocation. 18 (9.8%) of the respondents claimed that they used planted area as base for overhead allocation.

Table 3 shows the value of  $R^2$  that explains how much of the variance in the dependent variable is explained by the model (Pallant, 2010). In this paper, R Square value is 0.333. If this value is converted to percentage, that means the model explains 33.3% of the variance in the perceived stress. However, when the research sample is small, R Square is considered to be an overestimation of the true value in the population. Therefore, it is better to rely on Adjusted R Square which will provide a better estimate of the true population value instead of the normal R Square value (Pallant, 2010).

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.577 <sup>a</sup>	.333	.308	.98582

Table 4 depicts the results of the multiple regressions. The Beta value in the Table below was used to evaluate the contribution of each independent variable to explain the dependent variable; thus variables that have high values contribute better than those that have low values. In the Table 4 below, legal obligation has the highest Beta value (.402) which means it contributes better than other variables to explain the dependent variables, followed by the level of competition (.220), then the size (.139), then the importance of cost information (.169) then cost structure (.081), and finally product diversity (-.087). Table 4 shows that the relationship between the agricultural firms’ size, level of competition, legal obligation, importance of cost information and practice of cost accounting systems are statistically significant, while product diversity and cost structure is not statistically significant with cost accounting systems practices.



**Table 3: Regression Table**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.233	.513		.453	.651		
	Size	.411	.139	.197	2.962	.004	.933	1.071
	Cost structure	.073	.061	.081	1.208	.229	.919	1.088
	Competition	.141	.044	.220	3.209	.002	.884	1.131
	Product diversity	-.063	.053	-.087	-1.193	.235	.773	1.294
	Importance of cost information	.184	.075	.169	2.466	.015	.877	1.140
	Legal obligation	.334	.064	.402	5.237	.000	.704	1.421

Moreover, the results indicated that hypothesis 1 (there is a positive relationship between the size of agricultural firms and the practice of cost accounting systems) was supported, whereby  $t = 2.962$  and  $p < 0.05$ . Whereas, hypothesis 2 (there is a positive relationship between cost structure and practice of cost accounting system in agriculture) was not supported, although  $t$  value is 1.208, but the  $p$  value is greatest than 0.05 (0.229). The hypothesis 3 (there is a positive relationship between the level of competition and the practice of cost accounting systems in agricultural firms) is supported too, ( $t = 3.209$ ,  $p < .002$ ). Hypothesis 4 (there is a positive relationship between product diversity and the practice of cost accounting in agricultural firms) was not supported because ( $t = -1.193$ ), moreover it was not supported because their impact is not statistically significant ( $p > .235$ ). Hypothesis 5 (there is a positive relationship between the importance of cost information and the practice of cost accounting in agriculture firms) was supported ( $t = 2.466$ ), and it is accepted because its impact is statistically significant ( $p > .015$ ). Finally, hypothesis 6 (there is a positive relationship between legal obligations and the practice of cost accounting in agriculture firms) was supported ( $t = 5.237$ ), and it is accepted because its impact is statistically significant ( $p < .000$ ).

### 2.9 Discussion and Conclusion

Although many accounting researchers argued that cost accounting systems developed as a result of industrial revolution (Mephram, 1988), other accounting researchers like Juchau, (2002) claimed that researchers in the 18<sup>th</sup> century referred to cost accounting systems in farming. However, changes occurred in the business environment, such as increased market demand for goods and the need for customer satisfaction increased the importance of cost accounting systems. Firms could use costing information to make appropriate decision to be able to survive in this competitive world. Agricultural firms could improve their performance if they rely on cost information (Luening, 1989; Allen, 1994). The current study indicates that firms size, the level of competition, importance of cost information and legal obligation influence the Libyan agricultural firms to implement cost accounting systems. Because if the agricultural firm became very large that means it produce massive products and most likely rely on developed technology and produce several types of production, therefore implementing costing systems is necessary to allocate the firms' resources to every product accurately to facilitate determining the product cost precisely. Moreover, if the firm works in competition environment setting competitive

prices is necessary to be able to sell the products in the markets, practicing cost accounting can assist firms to reduce the product cost and then set competitive prices. Whereas if the firms subject to governmental control and they have to present how they spent the money and how much money they earn, practicing cost accounting systems will assist these firms in achieving this purpose. The finding supports what previous studies have found, such as (Al-Omiri and Drury, 2007; Ning, 2005; Geiger and Ittner, 1996). Although the accounting literature indicates that product diversity and cost structure influence firms to practice cost accounting systems, this study found that there no relationship between product diversity, cost structure and practice of cost accounting systems in Libyan agricultural firms. This result is similar to the findings of Al-Omiri and Drury's (2007) study, whereby the researchers divided product diversity into two parts: volume diversity and support diversity. Both parts of product diversity do not influence firms to implement sophisticated cost accounting systems.

This paper suggests that accounting researchers should add more efforts to study why accounting literature lacks from studies related to the practice of cost accounting systems in the agricultural firms, using new factors such as increased demand over supply, government subsidies and importance of overhead costs. This can help enhance understanding as to why the agricultural firms adopt cost accounting systems and what cost accounting systems are appropriate for the agricultural activities. The limitation of this paper is that it uses only one method, which is the survey method. Therefore, future studies should use case study method to better understand the practice of cost accounting systems in the agricultural firms.

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