

Using Resource Consumption Accounting for Improving the Competitive Advantage in Textile Industry

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Abstract: Due to increasing competition in the Iraqi Textile Industry, the cost reduction has become an essential to improve the competitive advantage of local companies. This study aims to explore the role of Resource Consumption Accounting (RCA) in improving the competitive advantage of Iraqi Textile Companies based on a case study implemented in an Iraq State Textile Factory. In order to explore the role of implementing of RCA in achieving a cost-effective competitive advantage, a case study was carried out in the Hila Textile Factory to determine the existing costing system and then the quantitative analysis was carried out to indicate how RCA implementation can improve the competitive advantage of the case study factory. The findings show that RCA considers idle capacity by separating total costs into variable and fixed and consequently assign lower total costs for the products in comparison with the traditional costing system. It also provides more accurate and reliable cost information that leads to achieve a cost-effective competitive advantage by refining the product cost. Therefore, implementing of RCA helps the administrators of local textile industry to set a lower product price and then gain a competitive advantage. The study presents insights on how to measure the cost of idle capacity in the textile companies. In addition because the previous literature has documented a little attention by researchers this study fill up the gap in the literature by examining the impact of RCA on competitive advantage in the context of textile industry.

Key words: Resource consumption accounting, competitive advantage, activity based costing, traditional costing system, textile industry, costing system

INTRODUCTION

The global competitive environment has led to a shift in customer demand, changing customer desires and expectations and shifting to low-volume production with a lot of mass production. In addition, technological development has affected the capital structure of the companies toward increasing the size of fixed and indirect costs arising as a result of using a high technology manufacturing systems. The textile industry in Iraq has a similar cost structure whereby the fixed costs constitute the main component of the total production cost and consequently this sector has lost the local market against the Foreign imported products. Internationally, organizations seek to strengthen their competitive position either by achieving price competitive advantage or by enhancing the quality of their products. In order to achieve a competitive advantage, the organization must strive to reduce production costs in a manner that positively affects its price policies. However, traditional costing systems are unable to provide solutions to cost allocation problems for products because they distribute the overhead costs of the activity randomly to products,

which adversely affects the management decisions reed to pricing and the product mix. Therefore, the organizations are working to confront this development and progress by confronting it from a strategic perspective and managing costs that are considered elements of competition in the modern environment through production at the lowest cost, highest quality, competitive prices and to satisfy customers.

The previous research has been emphasized on the role of the costing system in enhancing the competitive advantage and concluded that the traditional costing methods have not been sufficient to meet the changing corporate requirements, accounting and management modalities and new costs such as activity-based costing and target costing. For this reason, the accounting literature has developed a new costing system that combines Activity-Based Costing (ABC) with the German Flexible Cost Method (GPK). It is a system based on measuring cost allocation and focuses on quantity. The focus of previous literature has been focused on developing a costing method to overcome the weaknesses of TCS and revealing the determinants of competitive advantage in the

manufacturing companies, e.g., Wegmann and Stephen (2009), Balakrishnan *et al.* (2011), Rahimi *et al.* (2014), Oseifuah (2014), Ameen *et al.* (2018), Herman *et al.* (2018) and Irshad *et al.* (2018).

Despite the great interest of researchers in the study and evaluation of cost systems and their impact in enhancing the competitive advantage we find a lack of attention in studying the role of implementation of resource consumption accounting in achieving the competitive advantage of the company. The lack of attention was documented in the many previous studies such as Ozyapici and Tanis (2016) which indicate that the literature have no study examine the differences between TCS and RCA in the real life practices. This study aims to examine the role of implementation of RCA in enhancing the competitive advantage of the Iraqi Textile Industry. A case study approach is applied to explore the impact of RCA implementation on the competitive advantage of textile industry using the financial data of the Hila Textile Factory of December 2017. By a comparison between the product cost measures resulting from the TCS and those calculated after implementing of the RCA, this study attempts to demonstrate that RCA information can enhance the competitive advantage of the Iraqi Textile Companies.

Literatur review: Internationally, the changes in the means of production have led to the failure of traditional cost methods. The provision of appropriate information for the decision-making purposes required by various administrative and marketing activities leads to the emergence of resource consumption accounting as a means of calculating the real cost of products. White (2009) defines RCA as a management and cost accounting method that leads to the creation of costs for resources and to the creation of costs as resources are allocated to a business. In the same context, Wang *et al.* (2009) argues that the resource consumption accounting is a management accounting approach that provides dynamic, integrated, policy-based, comprehensive and information to support manager's organizational optimization decisions. David *et al.* (2002) indicate that the RCA is a method for examining and taking the corrective activities with considering the control learning function. Perkins and Scott Stovall (2011) indicate that RCA is a combination of action analysis that includes detailed information on the cause-effect relations and the resource capacity of the Activity Based Costing (ABC) which allows monitoring cost behavior at the resource level. Recently, research on resource consumption accounting

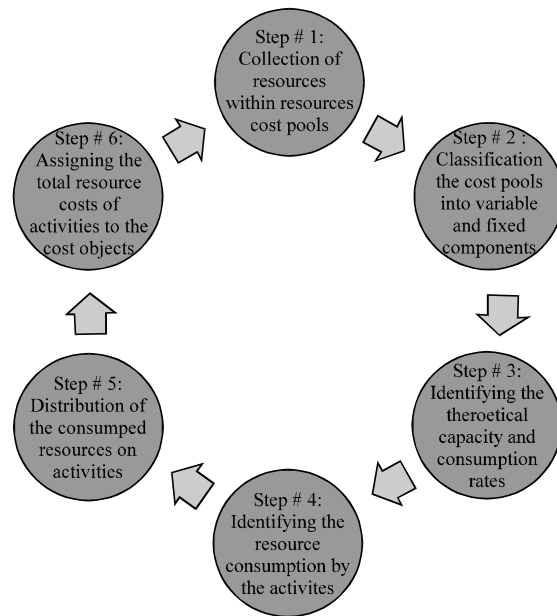


Fig. 1: Implementation steps of RCA

has received more attention due to the shortcoming related to the traditional costing systems e. g., Sally and Douglas (2004), Krumwiede and Suessmair (2008), Michael and Maleen (2009), White (2009), Inanlou *et al.* (2014), Sachitra and Chong (2016) and Terin *et al.* (2018).

RCA is considered as the new cost accounting system resulting from the combination of German GPK and ABC. As a new approach to accounting it offers the best solution for cost accounting and management by combining the theoretical advantages of account-based activity with the practical advantages of the German accounting system. One of the main strengths of RCA is emphasizing on idle capacity through separating fixed costs from variable costs which allow managers to highlight idle capacity. In this context, Peacock and Juras indicate that RCA has three main advantages using cost information other than the historical information, the ability for grouping and tracking the cost data at different levels and the ability to treat the idle capacity. As indicated in Fig. 1, RCA implementation requires six steps (Perkins and Scott Stovall, 2011; Ozyapici and Tanis, 2016). These steps are:

Step 1: Collection of resources within resource cost pools. This step requires investigating the interrelationships of resources and identifying resource pools. The resource pools are created based on the similarities and relations between the resources such as fuel, oil, gas and maintenance.

Step 2: Classification the cost pools into variable and fixed components. The second step firstly distinguishes between the primary and secondary costs and then all resource pools are classified to fixed and variable components.

Step 3: Identifying the theoretical capacity and consumption rates. This step analyzes the cost pools to show the theoretical and practical capacity in order to identify the idle capacity costs. The consumption rates are also calculated in this step.

Step 4: Identifying the resource consumption by the activities. In order to determine the activity cost, the quantity of resources consumed each activity are identified. The capacity of each resource pool is compared with the theoretical capacity to determine idle capacity and idle capacity cost.

Step 5: Distribution of the consumed resources on activities. The resource costs identified in the last step are distributed to the activities based on the resources consumed by each activity.

Step 6: Assigning the total resource costs of activities to the cost objects. The operating costs determined in the previous steps are distributed to the products in proportion to the amount of usage and the product cost is determined.

As shown in Fig. 1, RCA focuses on separating of the fixed and variable cost permits the manager to identify the idle capacity costs. Accordingly, the real cost of producing can be accurately identified. The RCA system is better than the traditional costing systems in product pricing because it allocates the general costs accurately to the products by looking at the unused capacities of the company. As a result, RCA system help managers to increase competitive advantage by allowing them to determine the lowest price of the product (Ozyapici and Tanis, 2016). In this context we can say that competition between organizations is linked to lower prices as well as higher quality. Since, the RCA system excludes the cost of unused capacity and provides lower selling prices for the same product or service quality over the long term as well as providing the shortest cost and pricing strategy it enables these organizations to strengthen their competitiveness. As a result of the global competition, the textile companies are developing new products and designing their own production processes to reduce their costs in order to provide a competitive advantage over their competitors. In the light of these developments and innovations, companies should be able to calculate their

real cost since costs that cannot be calculated accurately and reliably will not cause the ability of companies to accurately price their products and face significant financial problems (Baki and Burak, 2017). The increasing global competition also puts pressure on companies to offer their products at competitive prices. Companies respond to these pressures by focusing on the value of customers. In order to maintain their market presence, the company must not only match what competitors can do, but must They discover what customers want to buy and then meet their expectations while maintaining profitability. Thus, the RCA system plays an important role in balancing product profitability and pricing decisions. In contrast to traditional cost systems, RCA system provides short-term insight into decision-making in order to determine the lowest selling price, especially in the short term for the product or service.

MATERIALS AND METHODS

A case study methodology was applied to explore the role of implementation of resource consumption accounting in improving the competitive advantage of Iraqi Textile Companies. The Hila Textile Factory was selected as a case study in order to reach the results of this study and the data were gathered from the financial reports, cost reports and operational reports for the year 2017. A semi-structured interviews were also performed as data source regarding production, standard costs, standard labor and other operations related data. The descriptive analysis was firstly carried out to explain the nature of the current costing system of the Hila Textile Factory (HTF) and the then an exploratory analysis was performed to reveal the impact of RCA implementation on the product costs. Finally, a comparative analysis was achieved to reveal the differences between the traditional costing system adopted by HTF and the proposed costing system in terms of their effects on the cost reduction and competitive advantage.

RESULTS AND DISCUSSION

The overall results of this study can be summarized under three sections are the existing costing system, RCA implementation and the comparative analysis of the competitive advantage.

The existing costing system in HTF: Hila Textile Factory (HTF) belongs to the state company of Hila Textile products which was established in 1969 as one of the main textile companies in Iraq. Currently, the factory produces three products are polyester, cotton and

cotton-polyester blended textile which are considered for this study as the cost objects. In accordance with the traditional costing system adopted by HTF, all direct costs are distributed directly to the products. Moreover, the indirect manufacturing overhead of the factory is allocated to the HTF's products upon the size of the actual production. Accordingly, the calculated cost of the products do not reveal the real costs which misleads the management by providing wrong information that cause a wrong decision. This misleading is resulting from depending on the TCS that randomly allocate the indirect costs to the cost objects through over-estimating or under-estimating the costs in the factory.

Table 1 shows the direct and indirect costs of Hila Textile Factory HTF at the end of December, 2017. The direct costs totalled 2,150,000 IRD (Iraqi Dinars) whereas the indirect costs totalled 11,435,000 IRD and the total manufacturing costs of December 2017 was 13,585,000 IRD. In order to determine the prices of its products; polyester, cotton and cotton-polyester blended cloth, the factory also adds the indirect manufacturing costs.

As shown in Table 1, the indirect costs of the factory in December 2017 were 11,435,000 which constitutes about 96% of the total production costs and include seven costs categories are: salaries and wages, depreciation, electricity and water, fuel and oil and indirect materials.

Implementation of RCA: The implementation of resource consumption accounting in HTF requires six steps to be performed. In the first step, all factory resources are collected within resource cost pools and then each cost pool will be analyzed to variable and fixed components in the second step. The theoretical capacity and consumption rates are identified in the third step. The fourth step contains determining the resource consumption of each activity and then all resource consumptions will be distributed on the activities in the fifth step. Finally, the total costs of each activity will be assigned to the HTF's products.

Step 1; Collection of resources within resource cost pools: In the first step all resources consumed by the factory during 2017 were collected into resource cost pools. The resource pool integrates all the similar resource costs consumed by the manufacturing processes such as indirect labor, depreciation, energy, indirect materials. Table 2 shows the resource pools.

As shown in Table 2, three resource pools were created are labor, machines and indirect materials and equipments. Accordingly, salary and wages constitute the labor resource pool while depreciation, electricity and

Table 1: Actual results of Hila Textile Factory

Cost items	Amount	Total
Direct costs		2,150,000
Salaries and wages	5,600,000	
Depreciation	2,500,000	
Electricity and water	1,560,000	
Fuel and oil	850,000	
Indirect material	925,000	
Total indirect costs		11,435,000
Total costs		13,585,000

Table 2: Resource pools of Hilla Textile Factory

Resource	Resource costs	Resource pools
Salaries and wages	5,600,000	Labor
Depreciation	2,500,000	Machines
Electricity and water	1,560,000	
Fuel and oil	850,000	
Indirect material	925,000	IND. Mt. & Eq.
Total costs	11,435,000	

Own calculations based on information extracted from the production reports

water and fuel and oil constitute the machine resource pool and the third resource cost pool (indirect materials and equipment) including the indirect materials. In RCA system, the costs of each resource pool are initially divided into primary and secondary costs. In this study, since resource pools contain one or two resources in terms of simplicity no such classification has been made. However, since, the real-life resource pool could contain many sources such resources should be classified as primary and secondary resources. After consolidation the production costs within separated cost pools it is necessary to classify these cost pools into fixed and variable costs in order to reveal the idle capacity cost.

Sept 2; Classification the cost pools into variable and fixed components: In order to separate the resource cost pools into variable and fixed a semi-structured interviews with the production supervisors were performed. The findings indicate that resource cost pools can be either directly separated or indirectly using the process analysis. Thus, the following analysis explains the method by which the resource separation has been performed.

Labor resources pool: Salaries and wages were separated to fixed and variable components based on the nature of the indirect labor. The total workers were 70, distributed on different activities are 20 in the material handling activity, 22 in the assembly activity, 15 in the production activity and 13 in the activity of quality control. The total wages of 45 workers totaled 36,000,000 are considered as a fixed cost because they receive their wages on a fixed basis regardless the production level. While the total wages of the remaining 25 workers totaled 20,000,000 are considered as a variable cost.

Table 3: Total cost analysis into fixed and variable

Resource pool	Total costs	Fixed costs	Variable costs
Labor	5,600,000	3,600,000	2,000,000
Machines	4,910,000	2,500,000	2,410,000
Indirect materials and equipment	925,000	-	925,000
Total costs	11,435,000	6,100,000	5,335,000
Percentage	100	53	47

Table 4: Production capacity and resource pool rates

Resource pool	Theoretical capacity	Practical capacity	Fixed cost rate	Variable cost rate
Labor	16,800	12,320	214, 285	162,337
Machines	4,320	3,751	578,703	642,495
Indirect materials and equipment	-	2,500	-	370

Own calculations based on information extracted from the production reports

Machine resource pool: The depreciation of machines used in production which totaled 2,500,000 was classified as a fixed cost while electricity and water used in production machines which totaled 2,410,000 are considered as a variable cost.

Indirect material resource pool: All indirect materials that directly consumed the production processes totaled 925,000 and it is considered as a variable cost.

The results indicated in Table 3 reveal that fixed cost has constituted about 562 of the total overhead cost. Such a big percentage of the fixed cost inevitably affects the manager’s decisions related to the pricing policies and thus, affects the competitive position of the company.

Step 3; Identifying the theoretical capacity and consumption rates:

This step is dedicated to identifying the theoretical and practical capacity of the primary resource pools as well as determining the fixed and variable cost rates of the cost pools. The main feature of RCA system is to determine the theoretical capacity of the primary resource pools and the quantity of production refers to planned capacity. While the costs of fixed units of resource pools are calculated on the basis of theoretical capacity and relative unit costs are calculated on the basis of production or planned capacity.

The results in Table 4 show the theoretical and practical capacities as well as fixed and variable rates of resource pools. The theoretical capacity of fixed costs; proportional costs (variable) should be distributed according to practical capacity.

For example, assuming that the theoretical capacity of a machine is 30 days and 24 h a day, the practical capacity is determined by the hour and day of operation. The theoretical and practical capacities of the operating company are calculated as follows:

Labor resource pool: Assuming that the worker according to normal standard works for 8 h/day for 30 days, the theoretical capacity of 70 workers is calculated as 16800 h of work. However when workers spend 8 h a day in operation. Accordingly, the operational capacity of 70 workers over 22 days/month is calculated as 12320 h of work.

Machine resource pool: When the machine is working 24 h without interruption, the theoretical capacity of the operator will be determined 720 h/machine. There are six machines in the factory, so, the theoretical capacity is 4320 h/machine. The practical capacity of the machines is determined as follows: 341 m are the daily production amount is multiplied by 5 min. Which is the total production time for machines to produce one meter of textile. So that, the machine’s daily process capacity is found (1705 min). This result is multiplied by 6 machines (10230 min.) this result is then multiplied by 22 which is the working day of the management and gives the monthly operation capacity (225060 min). Operational capacity is divided on a monthly basis by 60, the monthly operation capacity of the machine is found at (3751 h/machine).

Indirect material resource pool: This resource pool does not have the theoretical capacity because indirect materials are directly related to the production of the textile. The practical capacity is 2500 kg which are the total of indirect materials used during the month.

Table 4 also shows the fixed and proportional cost ratios of the theoretical and practical capacities of resource pools. These percentages are calculated as follows:

- Labor fixed cost ratio = labor fixed cost/labor theoretical capacity = 3600000/16800 = 214,285
- Labor variable cost ratio = labor proportional cost/labor practical capacity = 2000000/12320 = 162,337
- Machine fixed cost ratio = machine fixed cost/machine theoretical capacity = 2500000/4320 = 578,703
- Machine variable cost ratio = machine proportional cost/machine practical capacity = 2410000/3751 = 642,495
- Indirect material variable cost ratio = indirect material proportional cost/practical capacity of indirect materials = 925000/2500 = 370

Step 4; Identifying the resource consumption by the activities: In order to calculate the amount of resources

consumed by each activity four activities have been identified are materials handling, assembly, production and quality control. Table 5 shows the consumption of resources by each activity after overall interviews and self-observations in the HTF.

Table 6 summarizes the actual consumption of resources from each resource pool. The following calculations indicate the manner in which we identified the activity consumption of resources.

- Consumed resource (material handling /labor) = (labor practical capacity/total worker number) *material handling process worker number = (12320/70) *20 = 3520 labor h
- Consumed resource (assembly/machine) = (machine practical capacity/total machine hour) *assembly machine hour = (3751/5) *1.25 = 937, 75 machine h

- Consumed resource (production/IND. Mt. and Eq) = indirect material used in the production = 600 kg

Step 5; Distribution of the consumed resources on activities: The cost pools of resources are distributed on the four activities based on the real consumption of resourced as indicated in the Table 6. The total costs of activities can be calculated upon the relationship between the activity and resources using the resource drivers. Table 7 states the results of cost calculation in the HTF based on the production data on December 2017 for each activity.

The above allocated costs were determined by multiplying the quantity of resource consumption from each cost pool by the aggregate rate of resource costs. Thus, the resource cost of activities was calculated using the following Eq. 1:

$$TC = (FCR+VCR) \times RC \quad (1)$$

Where:

TC = Total Costs of activity

FCR = Fixed Cost rate

VCR = Variable Cost rate

RC = Resource Consumption of activity extracted from Table 6

Table 5: Activity centers in Hila Textile Factory

Activities	Number of workers	Production time (min.)	Quantity of materials (kg)
Material handling	20	1.5	1900
Assembly	22	1.25	0
Production.	15	1.25	600
Quality control	13	1	0
Total	70	5	2500

Own calculations based on information extracted from the production reports

Table 6: The resources consumed by activities

Resource pool	Material handling	Assembly	Production	Quality control	Total
Labor	3,520	3,872	2,640	2,288	12,320
Machines	1,125.3	937.75	937.75	750.2	3,751
IND. Mt. & Eq.	1,900	0	600	0	2,500

Table 7: Distribution of resource cost on activities

Resource pool	Material handling	Assembly	Production	Quality control	Total
Labor	1,325,709	1,458,280	994,282	861,711	4,639,982
Machines	1,374,214	1,145,178	1,145,178	916,143	4,580,713
IND. Mt. & Eq.	703,000	0	222,000	0	925,000
Total	3,402,923	2,603,458	2,364,460	1,777,854	10,145,695

Own calculations based on information extracted from the production reports

Table 8: Quantity of activities consumed by products

Activities	Activity drivers	Polyester textile	Cotton textile	Cotton blended with polyester textile	Total
Material handling	Production amount	2,000	2,500	3,000	7,500
Assembly	Production amount	2,000	2,500	3,000	7,500
Production.	Production amount	2,000	2,500	3,000	7,500
Quality control	Central time	110	120	132	362

Table 9: Distribution of the activity costs on cost objects

Activities	Operating cost	Activity rate	Polyester textile	Cotton textile	Cotton-polyester blended textile
Material handling	3,402,923	453.72	907.446	1,134.308	1,361.169
Assembly	2,603,458	347.13	694.255	867.819	1,041.384
Production.	2,361,460	314.86	629.723	787.153	944.584
Quality control	1,777,854	4,911.20	540.232	589.344	648.278
Total	10,145,695		2,771.656	3,378.624	3,995.415
Product units			2,000	2,500	3,000
Ind. cost per unit			1.386	1.351	1.332

Table 10: Cost of idle capacity under RCA system

Resource pool	Labor	Machines	IND. Mt. and Eq.	Total
Incurring costs	5,600.000	4,910.000	925.000	11,435.000
Dist. costs	4,639.982	4,580.713	925.000	10,145.695
Idle capacity	960.018	329.287	0	1,289.305
Idle capacity percentage	17	7	0	11

Table 11: comparative results of TCS and RCA

Products	Product units	Direct cost/unit	TCS		RCA		DIFF
			Incurring indirect cost/unit	Cost/unit	Allocated indirect cost/unit	Cost/unit	
Polyester textile	2.000	287	1.525	1.811	1.386	1.673	(139)
Cotton textile	2.500	287	1.525	1.811	1.351	1.638	(174)
Cotton-poly ester blended textile	3.000	287	1.525	1.811	1.332	1.619	(193)

Step 6; Assigning the total resource costs of activities to the cost objects: In the last step, all cost incurred or allocated to the activities are assigned to cost based on production cost or time. Table 8 indicates the quantity of activities consumed by each product.

After determining the consumption quantities of activities for each product, the cost of the product can be identified by collecting the product shares in four activities. Table 9 shows the distribution of activity costs of the products.

According to Table 9 the indirect cost/unit of polyester, cotton and cotton-polyester blended cloth were 1,386; 1,352 and 1,332 IRD, respectively. The activity rates shown in Table 9 are calculated by dividing the total amount of production for productive activities (Table 10) on the costs collected in the activity pools (Table 11). It is calculated as follows:

- The activity rate of material handling activity = $3402923/7500 = 453.72$
- The activity rate of assembly activity = $2603458/7500 = 347.13$
- The activity rate of production activity = $2361460/7500 = 314.86$
- The activity rate of quality control activity = $1777854/362 = 4,911.20$

On the other hand, to identify the idle capacity of the resources, a comparison between the amounts of an incurred costs and distributed costs should be performed. Table 10 reveals the idle capacity resulting from implementation of resource consumption accounting in HTF.

The idle capacity is obtained by deducting the distributed costs indicated in Table 9 from the actual incurred costs in Table 1. In this sense, the difference between the actual costs (11,435,000) and the distributed

costs (10,145,695) is equal the idle capacity costs of HTF (1,289,305) in December 2017. The idle capacity has appeared in two resources pools are; labor and machines because the cost of the third resource pool (indirect materials) is considered as a variable cost.

Cost effective competitive advantage: The comparative results in Table 11, indicate that the implementation of RCA has generated a cost effective comparative advantage by removing the cost of idle capacity and reducing the product cost.

The comparison between TCS and RCA suggest that the cost/unit of Hila Textile Factory is less than the product cost calculated by the existed traditional costing system. By adopting the RCA, the factory can achieve a cost effective competitive advantage by reducing the cost per unit 139, 174 and 193 IRD, respectively. In this regard, because the resource consumption accounting ignores the cost of idle capacity and set a low selling price in a good quality of products it is necessary to note that HTF can utilize the cost reductions to improve its competitive advantage.

CONCLUSION

This study aims to examine the role of resource consumption accounting method in improving the competitive advantage of the Iraqi Textile Industry. This study utilizes the case study in the Hila Textile Factory (HTF) as a research methodology. The study emphasizes on how the implementation of RCA can enhance the HTF's competitive advantage by comparing the cost of products before and after adopting the RCA in the case factory using a semi-structured interview and the financial data of December 2017. Due to there is a little attention in the accounting literature on the impact of RCA implementation on the competitive advantage of the textile manufacturers this study attempts to fill up the gap in these literatures. The results show that HTF produces

four products are: polyester, cotton, cotton-polyester blended clothes. It uses a Traditional Costing System (TCS) to assign the direct costs to its products while the direct cost is directly allocated to the products. Contrary to the traditional costing system, the implementation of RCA has a capability to uncover the idle capacity costs by analyzing the overhead cost into fixed and variable components.

The analysis reveals that the cost/unit has been reduced for the four products due to implementation of RCA which has helped to highlight and remove the unused capacity cost. Accordingly, the comparison between RCA and TCS reveal a cost savings in the products cost equal 139, 174, 193 IRD, respectively. These savings allow the textile administrators to make different decisions on pricing policy such as reducing the selling price or changing the product mix. Based on the results it can be concluded that using RCA will provide cost information on the real product cost and then help to achieve a cost competitive advantage. Since, the cost reduction is one of the main tasks facing the Iraqi Textile Companies, the accurate cost calculation will help to enhance the competitive position by supporting the decision making processes. Then, the proposed technique can be applied in practice in the context of textile companies in Iraq and other developing countries to improve their competitive advantage.

REFERENCES

- Ahmed, S.A. and M. Moosa, 2011. Application of Resource Consumption Accounting (RCA) in an educational institute. *Pak. Bus. Rev.*, 12: 755-775.
- Ameen, A.M., M.F. Ahmed and M.A. Abd Hafez, 2018. The impact of management accounting and how it can be implemented into the organizational culture, *Dutch. J. Finance Manage.*, 2: 1-9.
- Baki, Y. and C.M. Burak, 2017. The role of resource consumption accounting in organizational change and innovation. *Econ. Manage. Financial Markets*, 12: 131-140.
- Balakrishnan, R., E. Labro and K. Sivaramakrishnan, 2011. Product costs as decision aids: An analysis of alternative approaches (Part 1). *Accounting Horiz.*, 26: 1-20.
- David, K.E., V.D. Merwe and Anton, 2002. Gaining effective organizational control with RCA. *Strategic Finance*, 83: 41-47.
- Eileen, P. and J. Paul, 2006. Alternative costing methods: Precision paint shops dilemma. *Strategic Finance*, 88: 50-55.
- Herman, H., H. Hady and W. Arafah, 2018. The influence of market orientation and product innovation on the competitive advantage and its implication toward small and medium enterprises (UKM) performance. *Intl. J. Sci. Eng. Invention*, 4: 8-21.
- Inanlou, I., M. Hassanzadeh and N. Khodabakhshi, 2014. Evaluating the cost of resources consumed in the main activity of Iran Khodro. *Singaporean J. Bus. Econ. Manage. Stud.*, 2: 199-204.
- Irshad, M.S., Q. Xin and H. Arshad, 2018. Competitiveness of Pakistani rice in international market and export potential with global world: A panel gravity approach. *Cogent Econ. Finance*, 6: 1-18.
- Krumwiede, K. and A. Suessmair, 2008. A closer look at German cost accounting methods. *Manage. Accounting Q.*, 10: 37-50.
- Michael, T. and G. Maleen, 2009. Recognition of idle resources in time-driven activity-based costing and resource consumption accounting models. *J. Appl. Manage. Accounting Res.*, 7: 41-54.
- Oseifuah, E.K., 2014. Activity based costing (ABC) in the public sector: Benefits and challenges. *Prob. Perspect. Manage.*, 12: 581-588.
- Ozyapici, H. and V.N. Tanis, 2016. Improving health care costing with resource consumption accounting. *Intl. J. Health Care Qual. Assur.*, 29: 646-663.
- Perkins, D. and O. Scott Stovall, 2011. Resource consumption accounting-where does it fit?. *J. Appl. Bus. Res.*, 27: 41-52.
- Rahimi, M., Z. Sheybani, E. Sheybani and F. Abed, 2014. Resource consumption accounting: A new approach to management accounting. *Manage. Administrative Sci. Rev.*, 3: 532-539.
- Sachitra, V. and S.C. Chong, 2016. Enhancing competitive advantage of Sri Lankan minor export crops. *J. Global Econ. Manage. Bus. Res.*, 4: 185-194.
- Sally, W. and C.B. Douglas, 2004. Resource consumption accounting applied: The clopay case. *Manage. Accounting Q.*, 6: 1-14.
- Terin, M., I. Yildirim, A. Aksoy and M.M. Sari, 2018. Competition power of Turkey's honey export and comparison with Balkan countries. *Bulg. J. Agric. Sci.*, 24: 17-22.
- Wang, Y., Y. Zhuang, Z. Hao and J. Li, 2009. Study on the application of RCA in college education cost accounting. *Intl. J. Bus. Manage.*, 4: 84-88.
- Wegmann, G. and N. Stephen, 2009. The activity based costing method developments: A state of the art and case study, IUP. *J. Accounting Res. Audit Pract.*, 8: 7-22.
- White, L., 2009. Resource consumption accounting: Manager-focused management accounting. *J. Corporate Accounting Finance*, 20: 63-77.