

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

**A Comparison and an Implementation of Time Driven Activity Based Costing
and Activity Based Costing Methods in Private Schools**

Metin Yilmaz

Dumlupinar University, Kutahya, Turkey
metinyilmaz@dpu.edu.tr

Ali Coskun

Fatih University, Istanbul, Turkey
alicoskun@fatih.edu.tr

Senay Yilmaz

Dumlupinar University, Saphane Vocational School, Kutahya, Turkey
senay.yilmaz@dpu.edu.tr

Abstract

Due to the recent increase in demand for private schools, these schools have experienced a growth in number and in significance. Therefore, it has been crucial for the executives of private schools to be able to gain competitive advantage and to make strategically decisions. This increase of demand for private schools has also increased the competition in the area. Due to this increasing competition in private schooling, it has been more significant to correctly calculate the costs. This study points out the applicability of activity based costing and time driven activity based costing methods of modern costing methods and the differences between them so that the executives of private schools could make strategic decisions. Even though both Activity Based Costing (ABC) and Time Driven Activity Based Costing (TDABC) methods can be applied in private schools, it seems more advantageous to apply time driven activity based costing since it allows a faster way to access the information and it is easier to update, which provides a better chance for long-lasting usage.

Keywords: Activity Based Costing Method; Time Driven Activity Based Costing Method; Private Education; Costing; Education Institution.

Introduction

The present scene of intense competition forces enterprises to seek ways to produce quality products with the minimum cost. The goal is to increase the feasibility and to reduce the costing due to the production of shortened time through the elimination of the unnecessary (Yükcü, 2000; Yilmaz, 2012). The fast growing global competition and technological development have required an alteration of approaches and practices particularly in enterprise management. Naturally, it has been followed by the search for new approaches in accounting management, which is the base for administrative decision making. Recently experienced alterations and approaches, as their natural outcomes, requires an adaptation process to meet the needs for methods of costing and administrative accounting within enterprises (Hacıüstemoglu ve Sakrak, 2002).

Regarding the future of the enterprise, it has been crucially significant for administrators to reach the most accurate costing data in the fastest way. TDABC, as a driver distribution, has made ABC method even simpler through the usage of solely "time" driver. Therefore,

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

TDABC leads to faster and more effective decision making and a better usage of institutional performance.

Activity Based Costing Method

With technology becoming a significant factor within modern production scene, the total costing of enterprises has experienced a change. Direct labor, the used to be basis of production costing has been replaced by indirect factors. Therefore, it seems that loading keys, such as direct labor, functions insufficiently in distributing general production costs into products and services; besides that, these keys are becoming far from representing the relationship between the general production costs and products and services (Gering, 1999; Beheshti, 2004; Hacirüstemoglu ve Sakrak, 2002).

The goal of ABC approach is to be able to calculate product costs and services in a reliable fashion considering the fact that an easier way of calculation is possible without being dependent on production volume of some costing types (Rayburn, 1996).

ABC method is determined as a method to produce the most accurate data needed by the administrators and as an alternative to traditional costing methods (Gupta and Galloway, 2003; Weetman, 2003). In addition to this, ABC method provides data on cost factors, activities, resources, performance measurement, customer profitability, distribution chains, merchandisers, brands, and on other fields that directly affect the profitability of an enterprise. ABC method relies on processes, activities, and then products, services, and customers for resource costing so that the costing can be calculated more reliably (Cooper and Kaplan, 1988; Eker, 2002; Kaplan and Atkinson, 1998). ABC method is defined as “ an attitude of management and costing which is based on the idea that products consume the resources of the enterprise on the level of activity thus points out that indirect expenses must be classified among activities and which recognizes linear relationships between products and indirect expenses without depending solely on production volume (Oker, 2003).

ABC method offers a number of advantages for the enterprises.

Among these advantages: (Innes and Mitchell, 1990; Ozer, 2004; Gokcen, 2004);

- It provides a reliable indicator regarding particularly the cost of long-term variable goods for strategic level administrative decision making.
- It provides meaningful financial or non-financial data for operational level cost management and performance assessment.
- ABC, to gain competitive advantage, determines what goods, if altered, will deliver cost saving in terms of product model.
- ABC focuses on customer satisfaction on basis of demand and needs by indicating available activity fields for cost reduction.
- It provides more realistic and more meaningful costing data.
- For offering more detailed and thorough data on activity costs and cost drivers it provides assistance for administrators regarding costing management and pricing.

The phases to set up ABC method follow these steps (Garrison and Noreen, 2000; Oker, 2003):

- Determining activities.

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

- Categorizing activities (determining activity cost pools).
- Redistribution of indirect costs based on activities (loading cost onto activity cost pools).
- Determining suitable cost factors for transferring costs into goods.
- Loading activity costs onto goods.

Despite the benefits of ABC, it never gained widespread acceptance, largely because of problems in implementing it. ABC usually requires time-consuming surveys and high data-processing costs; in addition, there are significant behavioral and organizational hurdles (Oker and Adıgüzel, 2010). The shortcomings of ABC method can be classified into four groups: the complexity of the method, mistakes of computation in the method, the long time period required to set up the method, and the difficulties of updating the ABC method (Kosan, 2007).

Time Driven Activity Based Costing Method

TDABC offers an easy-to-update and implement, transparent, and scalable method by eliminating the difficulties faced with ABC. It offers a practical and systematic option to enterprises for customer, products and the profitability of orders, capacity utilization and determining costs. The most remarkable feature of TDABC approach is that it allows the capacity to be calculated dynamically, to be added to activity costs, and to be dissociated from unutilized capacity costs (Kaplan and Anderson, 2007; Yilmaz and Baral, 2007).

TDABC shortens and thus simplifies the process of cost calculation by shortening the research period of implementers for time-consuming interviews and for including resource costs within activities. Many enterprises have given up ABC method since it is costly to form, maintain and time-consuming to implement. To solve these issues, TDABC notion has been suggested. TDABC is a method offering a chance to define complex operations in a simple way through the usage of time equations (Bruggeman, et al., 2005).

This method makes it possible to generate a simpler ABC method, also to easily update the changes within model structure, and to dynamically reflect the determined capacity into activity costs as well and at the same time it offers a chance to calculate activity key cost rates which changes on occasion. For all the activities occurring within the enterprise, time driven cost rates are calculated. The cost of cost objects such as customer or product is practiced according to cost equations generated as a result of designing work process and operational activity (Yilmaz and Baral: 2007).

The most significant feature of TDABC is to transform cost drivers into time equations. Therefore, even though the production circumstances experience a change, these equations will be easily updated. Besides, with TDABC method the costs of a great number of sub-activities will be determined and these operations will also be less costly (Wegmann, 2007; Silver, 2007). The only feature differentiates TDABC method from ABC method is the usage of "time" driver as a costing driver. Therefore, it is obvious that the only difference between two methods is operational while the basis is the same for both (Gremco and Gremco, 2007).

From this point of view TDABC method, compared to ABC method, seems as a beneficial method for big and small businesses in terms of offering faster and simpler set-up, being easy-to-update, and indicating the unutilized capacity, at the same time it is a more accurate method which indicates the amount of unutilized capacity, provides data on the feasibility of

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

the personnel and activities and in this regard allows administrators to make resource planning (Carikcioglu and Polat, 2007).

Consequently, TDABC is based on time, notices the calculation of per minute cost. Since it is simpler, less costly, and easy-to-implement, it eliminates the most of the shortcomings of traditional ABC method. By focusing on the actual capacity of the unit, it emphasizes what activities and products the capacity are related to and the cost of forming a unit with the related capacity (Yilmaz and Baral, 2007).

Within this regard, it can be pointed out that TDABC includes these steps (Bruggeman, et al., 2005; Everaert and Bruggeman, 2007; Carikcioglu and Polat, 2007):

- 1) To determine of cost pools where activities happen.
- 2) To determine the cost of each resource pool.
- 3) To predict the practical capacity of each resource pool.
- 4) To calculate the unit cost of each resource pool through dividing the total cost of resource pool by practical capacity.
- 5) To determine the necessary duration for the each subdivision of the activities depend on time drivers.
- 6) To determine the cost of cost objects through multiplying unit cost by the necessary duration for the activity.

What TDABC method presents as an innovation is to predict time drivers, which is a prerequisite for the fulfillment of the activity, separately for each subdivision (for each featured condition) of the activities which have separate features, which is called time drivers (Carikcioglu and Polat, 2007).

Within this regard, depending on the method's structure mentioned above it seems that two parameters are required for the operability of the duration (Kaplan and Anderson, 2003; Polat, 2011; Yilmaz and Baral, 2007);

- The unit cost of the procured capacity
- The capacity consumed by the activities carried out for cost objects

TDABC method, as ABC method does, launches with predicting the cost of the procured resource (Kaplan and Anderson, 2003). The cost of these resources is the cost of the stable factors of production. TDABC uses time equations and resource costing for activities is automatically appointed in this method (Kaplan and Anderson, 2007).

An example of time equations as follows (Bruggeman, et al., 2005; Everaert and Bruggeman, 2007): Should order processing depend on three time drivers, customer type (new/old), the number of input data (the number of demand entries), order type (standard/urgent). Considering, basic order data entry takes 5 minutes, each entry requires 3 minutes and new customer data takes 20 minutes and in case of an urgent order it takes an additional 7 minutes:

$$\text{Order processing duration per data} = 5 + 3 * X1 + 20 * X2 + 7 * X3$$

X1; order processing (demand entry) number,

X2; value: in case of a new customer (1), old customer (0),

X3; value: urgent order (1), standard (0),

Thus, for a new customer, in case of 5 urgent orders, it will take $(t_{jk}) = 5 + 3 * 5 + 20 * 1 + 7 * 1 = 47$ minutes to process the order data.

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

Implementation of Time Driven ABC and ABC in Private Schools

This study aims to achieve an exemplification on “Enrollment Activity”, which is the first activity of a private school. The data on the private school has been derived from the data indicated in a study by Yilmaz (Yilmaz, 2010).

Table 1 shows the activity centers and activities belonging to the private school. Since the study takes “Enrollment Activity” as reference point, the table shows only the activities within this pool. Table 2 shows the cost drivers.

Table 1: Activity Pools and Activities

ACTIVITY CENTERS	ACTIVITIES
Activity-1 Enrollment	<ul style="list-style-type: none"> • Parents and students visiting Enrollment Office • The new students to enroll at school meeting vice principals of 9th, 10th, and 11th grades • The placement exam • Assessment and evaluation of placement exams by data processing department • The Negotiation of enrollment conditions between vice principals and the students • The initiation of accounting record regarding the students of who has got the access for enrollment who wish to enroll • School enrollment in Students’ Bureau after completing the accounting record process • Re-registration of 9th grade and 10th grade students in accounting
Activity -2 Teachers Training	
Activity -3 Students Orientation	
Activity -4 Educational Activities	
Activity -5 Summer School	
Activity -6 Students’ Clubs	
Activity -7 Parent-Teacher Meetings	
Activity -8 Certificate Programs for Students	
Activity -9 Students Parents Counsels	
Activity -10 Administration, Accounting, Information, Cleaning, Transportation and Security Services	
Activity -11 Maintenance	
Activity -12 Graduation	

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

Table 2: Cost Drivers

Activity Centers	Cost Drivers
Activity-1 Enrollment	The number of newly registered students
Activity -2 Teachers Training	The number of teachers
Activity -3 Students Orientation	The number of 9 th graders
Activity -4 Educational Activities	The number of students in total
Activity -5 Summer School	The number of summer school attendees
Activity -6 Students' Clubs	The number of Students' club participants
Activity -7 Parent-Teacher Meetings	The number of Parent-Teacher meetings
Activity -8 Certification Programs for	The number of certification program attendees
Activity -9 Students Parents Counsels	The number of counseling activities for each grade
Activity -10 Administration, Accounting, Information, Cleaning, Transportation and Security Services	The number of students in total
Activity -11 Maintenance	The number of students in total
Activity -12 Graduation	The number of graduates

Table 3 shows the data regarding enrollment activity. These data are the ones to be used in ABC and TDABC implementations.

Table 3: Data Regarding Enrollment Activity

ACTIVITIES	Number of Staff	Time Spent Working in Activities	Number of Individuals provided with services	Costing Factors		
				9 th Grade	10 th Grade	11 th Grade
Activity 1- Enrollment	1 Enrollment Officer (financial officer)	4 month	414	-	180	108
				Newly Enrolled		
				126	43	11
	1 Bureau Officer	4 month	414	126	180	108
	3 Vice Principal	4 month	1150	700	300	150
	1 Typesetting Officer	4 month	1150	700	300	150

Subsidiary datum regarding enrollment process: 414 students have enrolled in the education season. Among those, 180 students are newly-enrolled students, 126 for 9th Grade, 43 for 10th Grade, 11 for 11th Grade. Re-registration just requires accounting record. A staff member of accounting department (financial office) is responsible for the enrollment during the set time period. The Bureau officer is responsible for the final registration. The typesetter officer is responsible for the optical mark reading of placement exams. Enrollment procedures last four months (May, June, July, August).

International Conference on Economic and Social Studies (ICESoS` 13)
"Economic Crises and European Union"

Yilmaz, in his study depend on ABC method, calculates the total expense of the enrollment activity as 54.868 TL. The product group share of the expense as follows (Yilmaz, 2010).

The calculation of loading rates and the share of departments (9th, 10th, 11th Grades) as follow:

Enrollment (Activity 1): the number of newly-enrolled students in a year is 180. There are 126 students to enroll at 9th Grade, 43 students to enroll at 10th Grade, and 11 students to enroll at 11th Grade.

Loading rate: 54.868 TL/180 newly-enrolled student number(II. Distribution loading key)= 304,82 TL/ 1 newly-enrolled student

$$9^{\text{th}} \text{ Grade } 126 \times 304,82 = 38.408 \text{ TL}$$

$$10^{\text{th}} \text{ Grade } 43 \times 304,82 = 13.107 \text{ TL}$$

$$11^{\text{th}} \text{ Grade } 11 \times 304,82 = 3.353 \text{ TL}$$

Table 4: Allocating Costs using ABC

Activity Centers	Load Rates	9 th Costs		10 th Grade Costs		11 th Grade Costs	
		Allocation Key Criteria x Load Rate	Activity Costs	Allocation Key Criteria x Load Rate	Activity Costs	Allocation Key Criteria x Load Rate	Activity Costs
Activity-1 Enrollment	304,82 TL/ newly enrolled students	126 x 304,82	38.408 TL	43 x 304,82	13.107 TL	11 x 304,82	3.353 TL
Activity -2 Teachers Training	2.969,6 TL/teacher	11,59 x 2.969,6	34.418 TL	16,53 x 2.969,6	49.088 TL	9,88 x 2.969,6	29.340 TL
Activity -3 Students Orientation	283,48 TL/9 th grader	126 x 283,48	35.718 TL	-	-	-	-
Activity -4 Educational	2.393,37 TL/student	126 x 2.393,37	301.564 TL	180 x 2.393,37	430.806 TL	108 x 2.393,37	258.484 TL
Activity -5 Summer School	401,1 TL/summer school attendee	-	-	180 x 401,1	72.197 TL	108 x 401,1	43.317 TL
Activity -6 Students' Clubs	650,8 TL/students' club attendee	72 x 650,8	46.859 TL	178x 650,8	115.842 TL	-	-
Activity -7 Parent-Teacher Meetings	3.544,14 TL/parent-teacher	4x 3.544,14	14.177 TL	6 x 3.544,14	21.264 TL	4 x 3.544,14	14.177 TL
Activity -8 Certificate Programs	66,395 TL/certification	126 x 66,395	8.366 TL	-	-	-	-
Activity -9 Students Parents Counsels	8.357,5 TL/counseling	4 x 8.357,5	33.430 TL	6 x 8.357,5	50.145 TL	4 x 8.357,5	33.430 TL
Activity -10 Administration, Accounting, Information,	695,2 TL/student	126 x 695,2	87.595 TL	180 x 695,2	125.136 TL	108 x 695,2	75.081 TL
Activity -11 Maintenance	142,7 TL/student	126 x 142,7	17.978 TL	180 x 142,7	25.686 TL	108 x 142,7	15.411 TL
Activity -12 Graduation	482,73 TL/student	-	-	-	-	108 x 482,73	52.135 TL
GRADE COSTS IN TOTAL			618.513 TL		903.271 TL		524.728 TL
STUDENTS COST PER UNIT (Total Cost/The number of graders)			618.513 TL / 126= 4.908 TL		903.271 TL / 180= 5.018 TL		524.728 TL /108= 4.858 TL

Table 5: Comparison of ABC and Traditional Costing

	Activity Centers		
	9 th Grade	10 th Grade	11 th Grade
Conventional Costing Method	4.943 TL/student	4.943 TL/ student	4.943 TL/ student
Activity Based Costing Method	4.908 TL/ student	5.018 TL/ student	4.858 TL/ student
The Difference between Two Costing Systems	35 TL/ student	(75 TL/ student)	85 TL/ student

Calculating Costs Appointed onto Product Groups through TDABC

The costs of each resource group have been calculated with the first Distribution. While the capacity belonging to each resource group has been determined, laboring hours have been taken into consideration. The practical capacity of the workers who work in activity venues has been calculated (assuming daily labor lasts 6.5 hours). Then, by the division of total costs by practical capacity, the cost rates of capacity have been indicated. Table 6 shows the cost rates of each resource group.

Table 6: Calculation of the Cost Rate of Capacity for Each Resource Group

Activity Centers	Calculation of Resource Group Capacity Cost Rates		
	The Practical Capacity of the Workers who work in activity venues (hour)	Total Expense (TL)	Capacity Cost Rates= Total Expense/Hour
Activity-1 Enrollment	3.120	54.868	17,59
Activity -2 Teachers Training
.....

To be able to make time equations in enrollment section, processes of the activity, activities of the processes, time drivers need to be determined; and to be able to achieve the amount of time drivers and activities, the necessary duration needs to be determined. Table 7 shows datum required by Enrollment section.

Table 7: Enrollment Processes, Time Drivers, Driver Amounts and Time Durations

	Processes	Activities Of The Processes	Time Drivers	Time Driver Amounts	Time Durations
1. ENROLLMENT	Parent–Vice Principal Meeting	- Introduction of the school and pre-interview for the placement exam	The number of parents who interview for enrollment	1.150 parent/student (234 the number of re-registered students)	-40 minutes
	Placement Exam	-Placement exam taken			-60 minutes
		-The evaluation of the exam			-10 minutes
	Parent-Vice Principal Meeting Regarding the Result of the Placement Exam	-Determining discount rate depending on the result of the exam	The number of students who take the exam		-5 minutes
		-The student to enroll visiting Accounting Office			-15 minutes
		Initiation of Account Record for the Student	-Parents dealing with legal documents	The number of student / parent who enrolled	414 parent/student (180 the number of first registry)

Enrollment process consists of steps of parent-vice principal meeting, students taking the placement exam, parent-vice principal meeting regarding the exam result and the initiation of the accounting record of the student.

The process of parent–vice principal meeting consists of pre-interview for the placement exam and introduction of the school, which takes 40 minutes. However, in case the student is a re-registering one, the duration is shorter and takes only 10 minutes.

Time equation for parent- vice principal meeting= $40 \cdot X_1 + 10 \cdot X_2$

X1: the number of parents who interview for the first enrollment

X2: the number of parents who interview for re-registration

The process of taking the placement exam consists of testing and the assessment and all the students already enrolled or to be enrolled take this exam. This process takes 70 minutes.

Time equation for the process of taking the placement exam= $70 \cdot X_1$

X1: the number of students who take the exam

The process of parent–vice principal meeting regarding the result of the exam consists of determining the discount rate depending on the exam result and the initiation of account record for the students who wish enrollment. This process takes 20 minutes.

Time equation for the process of parent – vice principal meeting regarding the result of the exam= $20 \cdot X_1$

X1: the number of students who take the exam

The process of the initiation of account record consists of the activity of parent dealing with legal documents. The process takes 35 minutes. However, for re-registration it takes 20 minutes.

Time Equation for the process of the initiation of account record= $35 \cdot X_1 + 20 \cdot X_2$

X_1 : the number of students who enroll

X_2 : the number of students who re-register

Table 8 shows time driver amounts demanded by each product group (9th, 10th, 11th grades) in Enrollment section.

Table 8: Time Driver Amounts in Enrollment Section

PRODUCT GROUPS	TIME DRIVER S	The number of parents who interview for the first enrollment	The number of students who take the exam	The number of parent/student who enroll	The number of parent/student who enrolled for the first time	The number of parent/student who re-register
9 th Grade		700	700	126	126	-
10 th Grade		300	300	180	43	137
11 th Grade		150	150	108	11	97
TOTAL		1.150	1.150	414	180	234

After necessary time drivers have been determined, the durations demanded by each product can be calculated. Durations demanded by each product group as follows:

Table 9: Calculating Durations Demanded by Enrollment Section

	Parent-Vice principal meeting	Students taking the placement exam	Parent-Vice principal meeting regarding exam result	Initiation of Account Record	TOTAL (minute)
	$(40 \cdot X_1 + 10 \cdot X_2)$	$(70 \cdot X_1)$	$(20 \cdot X_1)$	$(35 \cdot X_1 + 20 \cdot X_2)$	
9 th Grade	$40 \cdot 700 + 10 \cdot 0 = 28.000$	$70 \cdot 700 = 49.000$	$20 \cdot 700 = 14.000$	$35 \cdot 126 + 20 \cdot 0 = 4.410$	95.410
10 th Grade	$40 \cdot 163 + 10 \cdot 137 = 7.890$	$70 \cdot 300 = 21.000$	$20 \cdot 300 = 6.000$	$35 \cdot 43 + 20 \cdot 137 = 4.245$	43.135
11 th Grade	$40 \cdot 53 + 10 \cdot 97 = 3.090$	$70 \cdot 150 = 10.500$	$20 \cdot 150 = 3.000$	$35 \cdot 11 + 20 \cdot 97 = 2.325$	18.915

Then, through multiplying the durations required by each product group by capacity cost rate, the costs appointed on product groups by the enrollment office have been calculated. Table 10 shows these costs appointed on product groups by the enrollment office.

Table 10: Costs Appointed On Product Groups by the Enrollment Section

	Duration Demand by Enrollment office (minute)	Duration Demand by Enrollment office (hour)	Capacity Cost Rate per Hour	Costs Appointed by Enrollment Office
Products	A	B=A/60	C	D= B*C
9 th Grade	95.410	1.590,17	17,59	27.971,03
10 th Grade	43.135	718,92	17,59	12.645,74
11 th Grade	18.915	315,25	17,59	5.545,25
TOTAL	157.460	2.624,33	17,59	46.162,02

Table 11 compares the results of ABC and TDABC methods for enrollment activity in private schools.

Table 11: Comparison of the Results of ABC and TDABC Methods

Products	Costs appointed by Enrollment Office through ABC method (TL)	Costs appointed by Enrollment Office through TDABC method (TL)	Difference between ABC and TDABC methods (TL)
9 th Grade	38.408	27.971	10.437
10 th Grade	13.107	12.646	461
11 th Grade	3.353	5.545	-2.192
TOTAL	54.868	46.162	8.706

According to TDABC method, the cost load is lower than ABC method for 9th Grade product group, with a difference of 10.437 TL, for the 10th Grade product group, the cost load is lower in TDABC method than in ABC method with a difference of 461 TL, for the 11th Grade product group, cost load is higher in TDABC method than in ABC with a difference of 2.192 TL. In total, it seems that TDABC offers less cost load than ABC with a difference of 8.706 TL. This difference shows unutilized capacity for the enrollment activity.

Conclusion

TDABC method is a modern costing technique developed to eliminate the shortcomings of ABC method. TDABC method aim to assist administrators to determine the costs of product groups faster and more accurately. Thus, it will contribute competition through faster and more accurate decisions. This study points out the existing difference between ABC method ad TDABC regarding cost load on products, which can be both positive and negative. The difference is caused by the fact that TDABC uses “time” driver which allows a more detailed computation and it notices cost per minute. For being simpler, less costly, and easy-to-implement, TDABC eliminates the disadvantages of ABC method. It focuses on the actual capacity of the sections. Compared to ABC method, TDABC seems to be a more accurate method for allowing fast and simple set-up, being easy to update, and indicating unutilized capacity and therefore, for being a method allowing administrators to make resource planning by providing data on the personnel and activity efficiency.

Consequently, it seems rather possible to say that the use of TDABC method which makes it possible to reach more accurate data in a faster way will be utmost beneficial for the enterprises.

References

- Beheshti, H. M. (2004). Gaining and Sustaining Competitive Advantage With Activity Based Cost Management System. *Industrial Management and Data Systems Journal*, 104-5, 377-383.
- Bruggeman, W., Everaert, P., Anderson, S. R., & Levant Y. (2005). Modeling Logistic Costs using TDABC: A Case in a Distribution Company. *Working Paper, September*, 1-17.
- Carikcioglu, P., & Polat, L. (2007). Time Drive Activity Based Costing (TDABC) and an SME Case Study. *4th SMEs and Efficiency Congress, GCP, Istanbul*, 517-532.
- Cooper, R., & Kaplan, R. S. (1988). Measure Costs Right: Make the Right Decisions. *Harvard Business Review, September/October*, 96-103.
- Eker, M. C. (2002). Activity Based Costing Method of Overhead Costs in accounting of Distribution and Use of No. 8 Group Master Account. *Uludag University, Faculty of Economics*, 21- 1, 237-256.
- Everaert, P., & Bruggeman, W. (2007). Time-Driven Activity-Based Costing: Exploring The Underlying Model. *Journal of Cost Management, March-April*, 21- 2, 16-20.
- Garrison, R.H., & Noreen, E. W. (2000). Managerial Accounting. *Ninth Edition, McGraw-Hill, USA*.
- Gering, M. (1999). Activity based costing focusing on what counts. *Management Accounting, February*, 77-2, 20-21.
- Gupta, M., & Galloway, K. (2003). Activity based costing/management and its implications for operations management. *Technovation*, 23, 131-138.
- Gremco, O.D. L. V., & Gremco, Y. L. (2007). Time-Driven ABC: The Simplification Of The Assessment Of Costs Through Resorting To Equivalents. *30th Annual Congress of the Eropean Accounting Association, Lisbon*.
- Gökçen, G. (2004). Business Decisions Using Activity-Based Costing. *Journal of Accounting and Finance, July*, 23, 58-67.
- Hacıüstemoglu, R., & Sakrak, M. (2002). Latest Approaches to Cost Accounting. *Türkmen Publishing, Istanbul*.
- Innes, J., & Mitchell, F. (1990). Activity Based Costing: A Review with Case Studies. *Chartered Institute of Management Accountants, London*.
- Kaplan, R. S., & Atkinson, A. (1998). Advanced Management Accounting. *Prentice Hall International*.
- Kaplan, R.S., & Anderson, S. R. (2003). Time-Driven Activity Based Costing. *White Paper, HBS Working Paper Number: 04-045, November*, 1-18.
- Kaplan, R.S., & Anderson, S. R. (2007). Time-Driven Activity-Based Costing: A Simpler and More Powerful Path to Higher Profits. *Harvard Business Press Books*.

- Kosan, L. (2007). A New Approach to Cost Calculation: Driven Activity-Based Costing System. *Mali Cözüm*, 84, 155-168.
- Oker, F. (2003). Activity-Based Costing, Production and Service Business Practices. *Literature Publications, November, Istanbul.*
- Oker, F., & Adigüzel, H. (2010). Time-Driven Activity-Based Costing: An Implementation in a Manufacturing Company. *The Journal of Corporate Accounting & Finance / November/December*, 75-91.
- Ozer, A. (2004). Impact of Activity-Based Costing Related to Marketing Decisions. *Journal of Accounting and Auditing Overview, September, 13*, 123-138.
- Polat, L. (2011). Time Drive Activity-Based Costing Implementation of an Industrial Company. *Journal of Accounting and Finance, January, 49*, 126-137.
- Rayburn, L.G. (1996). Cost Accounting: Using a Cost Management Approach. *McGraw Hill.*
- Silver, B. (2007). Deeper Into Simulation, Part III: Activity Based Costing. <http://www.brsilver.com>. (22.02.2013). <http://www.brsilver.com/2007/01/05/deeper-into-simulation-part-3-activity-based-costing/>
- Weetman, P. (2003). Management Accounting: An Introduction. *Financial Times Prentice Hall.*
- Wegmann, G. (2007). Developments Around the Activity-Based Costing Method: A State-of-the Art Literature Review. 1-13. <http://ssrn.com>. (13.01.2013). <http://ssrn.com/abstract=1012664>.
- Yilmaz, R., & Baral, G. (2007). Corporate Performance Management Driven Activity-Based Costing. *International Congress of Social Sciences of the Turkish World, Proceedings Code 537121, Jalal-Abad, Kyrgyzstan.*
- Yilmaz, M., & Coskun A. (2012). A Modern Method For Calculating Unit Cost Per Student At Secondary Schools. *Dumlupınar University Journal of Social Sciences*, 33, 277-290
- Yilmaz, S. (2010). Activity-Based Costing Method And Implementation of Private Education institution. *Unpublished Master's Thesis.*
- Yükcü, S. (2000). JIT Effect of Cost Accounting Practices JIT Manufacturing System. *Accounting and Audit Review, 1*, 18-30.