

Tactical Decision-Making and Activity-Based Costing

(Relevant to PBE Paper II – Management Accounting and Finance)

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Introduction

Management decision-making can be generally classified into three levels: the frontline operational level, the middle tactical level, and the top strategic level. Tactical decision-making is used by mid-level managers to monitor and compare the performance of departments.

Internal benchmarking through departmental comparisons can be used to motivate different departments and to improve performance by making relevant information available, with competition for resources among peer departments serving as a powerful stimulus. Outcomes at the departmental level can also be monitored. An example of this would be monitoring the number of tyres produced weekly by the tyre production department of an automobile factory. Furthermore, tactical decision-making can be used to monitor and control the progress of one-off projects. An example of this would be monitoring to ensure the maintenance of suitable stock levels following the introduction of a just-in-time production system in a factory.

In practice, a company first evaluates its infrastructure and how it operates and then makes adjustments. To make a tactical decision, the company management analyses information, and then determines an immediate course of action with the intention of achieving a specific goal that will directly and immediately benefit the company.

Tactical decision-making allows a choice to be made among several alternatives, with an immediate or limited end in view. It is the most commonly used framework for decision-making where limited resources must be allocated within a given time deadline. A general approach to tactical decision-making includes the following steps:

1. Recognise and define the problem.
2. Identify alternatives, and then eliminate those that are infeasible.
3. Identify the costs and benefits.
4. Consider the total relevant costs and benefits of various alternatives.
5. Assess qualitative factors.
6. Select the alternative offering the greatest overall benefit.

For these series of tactical decision-making to work, activity-based costing provides more appropriate cost measurement than the traditional volume-based overhead costing method in terms of cost identification and making relevant cost decisions.

The Role of Activity-based Costing in Tactical Decision-making

Activity-based costing (ABC) plays an important role in costs and benefits identification, especially with regard to subsequent tactical decision-making regarding alternative valuation. ABC was first introduced in the United States in the 1970s, and has attained wide acceptance as a more accurate alternative to traditional costing, especially in manufacturing applications. Instead of budgeting overhead expenses using direct cost drivers, ABC splits overhead expenses into activity cost drivers, leading to a more tangible assignment of costs.

ABC allocates overhead expenses to a product based on the actual overhead spent to produce that product. Whenever common resources, i.e. overhead expenses, are spent on different activities across products, a cost driver weighting measurement is involved for an appropriate allocation.

ABC is also commonly employed in service industries, as it focuses on service activities measured. Companies have wide varieties of products and customers, resulting in cross-product, cross-customer subsidies of costs. Those costs are also attributed more appropriately to products and customers via ABC.

Implementation of Activity-based Costing

The objective of ABC is to line up actual consumption with specific product/service costs. The ABC approach is normally related to multiple products or services using shared and common indirect resources. A benefit of ABC is that products requiring higher concentrations of activities and subsequent overhead expenses are identified, allowing management to focus attention on opportunities to reduce those associated costs or to price them more appropriately.

The ABC allocation process involves many steps, including:

1. specifying the different activities performed by the business;
2. identifying cost activities;
3. computing the total costs of each activity over the financial period;
4. setting a cost-allocation basis, that is, cost drivers;
5. identifying indirect costs per cost driver;
6. calculating the overhead rate per cost activity;
7. computing overhead costs based on each product's use of the various cost activities; and then
8. adding direct expenses and indirect expenses to yield total product costs.

Calculation of ABC is more sophisticated than the calculation of traditional overhead costing. After managers recognize the activity cost drivers, overhead rates are assigned per cost driver. The rates are measured by dividing budgeted costs per driver by the anticipated resource requirements for each cost driver.

Despite its complexity, the benefits of ABC can be numerous: management can differentiate profitable from unprofitable products, cost controls can be used to eliminate unnecessary costs, and products can be better priced. One important thing to note is that, prior to applying ABC, management should consider whether the cost

savings from more accurate budgeting are greater than the costs of identifying overhead cost drivers and each product's individual resource requirements.

Example of ABC in a Service Industry

The accounting firm Chan & Tong CPAs prepares the following condensed annual budget.

<u>Chan & Tong CPAs — Annual Budget</u>		
Revenue		\$8,000,000
Direct labour	\$2,400,000	
Overheads	<u>\$1,200,000</u>	
Total costs		<u>\$3,600,000</u>
Operating profit		<u>\$4,400,000</u>

The predetermined overhead rate is based on a volume-based cost driver, direct labour costs, for calculation. It is $\$1,200,000 \div \$2,400,000 = 50\%$.

Under the traditional costing approach, Chan & Tong CPAs calculates applied overhead and operating profit for the audit of Chan Company as follows:

<u>Chan & Tong CPAs — Chan Company Audit</u>		
Revenue		\$520,000
Less: Direct professional labour	\$280,000	
Absorbed overheads (50% × \$280,000)	<u>\$140,000</u>	<u>\$420,000</u>
Operating profit		<u>\$100,000</u>

Chan & Tong CPAs distributes its estimated annual overheads of \$1,200,000 to several activity cost pools. It first divides its overhead costs into three cost pools — administration, customer support, recruiting and training — as below:

<u>Chan & Tong CPAs — Annual Overhead Budget</u>				
Activity cost pools	Cost drivers	Estimated overhead ÷	Expected use of cost drivers per activity =	Activity-based overhead rates
Administration	Number of manager hours	\$670,000	1,675	\$400 per manager hour
Customer support	Revenue billed	\$320,000	\$8,000,000	\$0.04 per dollar of revenue
Recruiting and training	Professional hours	<u>\$210,000</u>	6,000	\$35 per professional hour
		<u>\$1,200,000</u>		

Then, Chan & Tong CPAs identifies corresponding cost drivers and re-allocates the overhead costs of its services for the audit of Chan Company as follows:

<u>Chan & Tong CPAs — Chan Company Audit</u>				
Activity cost pools	Cost drivers	Actual use of drivers	Activity-based overhead rates	Cost allocated
Administration	Number of manager hours	158	\$400	\$63,200
Customer support	Revenue billed	\$420,000	\$0.04	\$16,800
Recruiting and training	Professional hours	520	\$35	<u>18,200</u>
				<u>\$98,200</u>

Finally, Chan & Tong CPAs compares the costing statements of traditional costing and activity-based costing.

<u>Chan & Tong CPAs — Chan Company Audit</u>			
	<u>Traditional Costing</u>	<u>Activity-Based Costing</u>	
Revenue	\$520,000	\$520,000	
Expenses			
Professional labour			
	\$280,000	\$280,000	
Absorbed overheads	<u>\$140,000</u>	<u>\$98,200</u>	
Total expenses	<u>\$420,000</u>	<u>\$378,200</u>	
Operating profit	<u>\$100,000</u>	<u>\$141,800</u>	
Profit margin	19.2%	27.3%	

As demonstrated in this example, a more accurate profit margin can be achieved under activity-based costing. From the perspective of price competition, ABC may also help in making pricing decisions on audit work.

Clearly defined measurement of activity costs enables managers to identify and control activity costs in a systematic manner. This is in contrast to the traditional volume-based overhead costs, based on 50% of direct labour costs, which may cover up overhead costs inappropriately classified and measured. With the traditional approach, cost control can hardly be achieved.

Further Benefits of ABC Implementation

ABC systems are rather complicated and costly to implement. However, in both manufacturing and non-manufacturing sectors, many companies still choose to adopt ABC systems for a number of reasons:

1. ABC provides accurate product lines costing, especially where non-volume based overheads are significant and a product with numerous activity related overheads is produced.
2. ABC allows flexible analysis of costs by treating cost objects as processes, e.g. areas of responsibility or customers, rather than simply for products alone.

3. The margin accuracy for individual products and services, as well as customer classifications, grows increasingly difficult to attain as direct labour may be quickly replaced by automated equipment. Subsequently, the service company's shared common costs, i.e. overhead expenses, become the most significant portion of the total costs.
4. As fast-changing technologies continue to reduce product life cycles, companies do not have time to set prices or conduct cost adjustments once costing errors are detected.
5. Companies with wrong cost measurements are likely to lose bids owing to over-costed products, incur financial losses due to under-costed products, and fail to detect activities that are not cost-effective.
6. As costs related to computer technology have kept decreasing, the costs associated with developing and operating ABC systems have also decreased.

Concluding Remark

With rapidly advancing technology for cost identification and measurement, activity-based costs can be measured and consolidated into big data sets for costing and pricing decisions, as well as performance evaluation at the middle tactical decision-making level.

References:

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