As Easy As ABC - An Introduction to Activity Based Costing

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As Easy As ABC
An Introduction to Activity Based Costing

By Rob DiMonte and Mark Pickering

Published in Charter, the Journal of the Australian Institute of Chartered Accountants, October 1997 (Vol. 68 No. 10, pages 33 to 35). The article was selected as the Journal’s best Management Accounting article for the year.

This article is an introduction to the concepts and mechanics of Activity Based Costing and how it can be used to provide different views of the costs and profitability of organisations to support management decisions.

There is currently a resurgence of interest in Activity Based Costing (ABC). A recent Australian Society of CPA’s survey indicated that while only 12% of manufacturing firms have adopted ABC, 29% are considering adoption. Major banks are using ABC to determine the costs and profitability of products and services and to justify the introduction of fees where products are unprofitable. Governments are moving towards using ABC to cost services/outputs provided and to allocate funding based on the levels of service provided. Yet many accountants still consider ABC to be a tool to more accurately allocate factory overhead to products and therefore relevant only to manufacturing firms.

It is now ten years since Cooper and Kaplin introduced ABC and, with the current resurgence, a good time for a refresher of the concepts of ABC and how it is being used by management to strategically manage costs. This article broadly covers what ABC is and the information views provided to management along with examples.

What is ABC?

ABC is a cost management tool which can be used to provide information on how and why costs are being incurred and where the company earns profits/losses. This input is invaluable to management in decisions such as:

- Which products/services should be provided at what price?
- Which customers should sales efforts focus on?
- What distribution channel strategy should be followed?
- How can processes be improved?
- How can costs be reduced?

ABC works off the premise that entities incur costs in order to perform activities (the things done on a day to day basis) to make products/services in order to serve customers. Usually there is a goal of ultimately making profits. This relationship is depicted in figure 1.

Activity Based Management (ABM) is generally used to refer to managing the activities performed in the business using activity cost, volume and attribute information.

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ABC concepts can be used in a number of different ways, depending on the objectives:

- simple model/back of the envelope calculations to identify issues and take immediate action,
- detailed models for input into strategic decisions, may be updated occasionally, and
- regularly updated models used to manage the business on an ongoing basis.

Major Steps in the ABC Process

Figure 2 indicates the general steps involved in implementing ABC. Depending on the objectives of the project, Step 1 through to Step 7 can take between one and twelve weeks to perform initial analysis. Implementing a sustainable ABC reporting system can take substantially longer.
Table 1. Activity Based Costing Views

<table>
<thead>
<tr>
<th>View</th>
<th>Indicative Information Provided</th>
<th>Decisions/Actions Supported (Examples)</th>
</tr>
</thead>
</table>
| **Product/Service Profitability** | • Product/service cost by activity and cost pool.  
• Includes all product related costs, including marketing, delivery and service.  
• Product/service profitability. | • Focus sales efforts on profitable products.  
• Reprice profitable products for volume growth.  
• Make non-profitable products profitable:  
  • Focus on high cost/low value activities.  
  • Reprice.  
  • Change value proposition.  
  • Eliminate non-profitable products.  
  • Transfer pricing of shared services. |
| **Customer Profitability**   | • Major customer/customer group costs by activity and cost pool.  
• Major customer/customer group profitability. | • Focus sales efforts on profitable customers.  
• Reprice or enhance service to profitable customer groups to ensure retention.  
• Make non-profitable customers profitable:  
  • Focus on high cost/low value activities.  
  • Reprice.  
  • Change value proposition.  
  • Reduce/eliminate sales efforts to non-profitable customers. |
| **Distribution Channels**   | • Distribution channel costs by activity and cost pool.  
• Distribution channel costs by activity and cost pool. | • Focus sales efforts on profitable/low cost distribution channels.  
• Move customers from high to low cost distribution channels.  
• Reduce cost structure of high cost distribution channels through activity analysis. |
| **Activity/Process**        | • List of activities performed.  
• Cost of activities.  
• Drivers of costs.  
• Where activities are performed. (duplication and fragmentation)  
• Attributes of activities (eg time taken, value added vs non value added, quality prevention vs breakdown).  
• Total process costs across the organisation.  
• Activity/process based performance measures. | • Cost Reduction, focus on:  
  • High Cost Activities  
  • Low Value Added Activities  
  • Reducing Duplication  
  • Outsource high cost activities.  
• Process Enhancement  
  • Quality Improvement  
  • Speed of Service.  
  • Performance Measures. |

ABC Views of Costs and Profitability

ABC provides alternate views of an organisation’s costs and profits. Table 1 indicates four of the more common ABC views used with examples of information that can be obtained by management and decisions and actions supported.

**Product/Service Profitability View**

*Allocation of Manufacturing Overhead*

Allocating manufacturing overhead to products based on a single factor, such as direct labour, can cause large distortions to gross margin costings. These distortions can be particularly large when overheads are a significant portion of total costs and products differ in processes, volumes and complexity. ABC can be used to more accurately allocate overheads to products manufactured. Figure 3 indicates typical differences identified between traditional and ABC manufacturing costs.

An example is the food manufacturer that allocated packaging costs based on weight of product processed. Using ABC it was determined that packaging costs were driven by the number of packets processed, not the volume of product. ABC indicated that packaging costs in the traditional costing system were wrong by up to 100%.
Introduction to Activity Based Costing

Figure 3. An Activity Based Costing Analysis Can Identify Significant Costing Inaccuracies.

<table>
<thead>
<tr>
<th>Products</th>
<th>Traditional</th>
<th>ABC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20.0%</td>
<td>-10.0%</td>
</tr>
<tr>
<td>B</td>
<td>10.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>C</td>
<td>0.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>D</td>
<td>-10.0%</td>
<td>-20.0%</td>
</tr>
<tr>
<td>E</td>
<td>-20.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>F</td>
<td>0.0%</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

**Full Product Profitability**

While reporting the gross margin on products is common, few companies identify the true profitability of the products or services they provide as many of the costs, such as marketing, selling and delivery, are reported below the gross margin and not included in traditional product costs. Consequently, traditional costing does not always reflect reality, for example the unprofitable company that has all profitable products. Some companies in low margin businesses, with net profits of less than 5% of total costs, are making product decisions on less than 40% of costs! By allocating all product related costs to products, ABC provides management with information on true profitability.

A food manufacturer used ABC to identify that one of its “marginal” products was actually losing in excess of one million dollars per year, once delivery and product specific marketing costs were taken into the profitability calculation. Elimination of the product added significantly to the bottom line.

Costing and profitability are equally as important to service organisations. Banks have used ABC to determine the profitability of various account types in order to establish fees to move products and services into profitability and prevent the current service line subsidisation. Government agencies are using ABC to cost outputs/services and are allocating funding based on levels of output.

**Customer Profitability View**

Few companies report the profitability of major customers and customer segments past the gross margin line. ABC can be used to determine the true cost of servicing customers for use in customer profitability analysis. Often it is found that high volume customers, in effect, subsidise high contact, high complexity customers. It is not unusual to find 30% of the customers generating 150%-200% of a company’s profits, 40% of the customers being profit neutral and the remaining 30% of customers destroying profits. Figure 4 indicates a typical customer group profitability result.

Companies in this position are in real danger that competitors, who understand the true profitability of customers, will cherry pick profitable customers and the company will be left with the non-profitable customers.

A textile manufacturer was asked to quote to retain the business of one of its key retail customers after the customer was approached with significantly discounted prices by one of the manufacturers’ competitors. An ABC customer profitability analysis showed the manufacturer made significantly higher profits from this customer than the existing costing system indicated. Profits from this customer had been subsidising large losses generated by custom work performed for sports/community/education organisations. The manufacturer quoted prices reduced by 20% to the retailer, retained the business and then went about the difficult job of addressing the profitability of its other customers.

**Distribution Channel Profitability**

Organisations distribute their products and services through numerous distribution channels. A manufacturer, for example, may distribute through wholesalers, retailers and directly to the ultimate customer through a dedicated sales force. Each of these...
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channels involves a differing level of investment and organisational effort. ABC can provide the cost/profitability information vital to determine a distribution strategy.

Major banks have used ABC to determine the costs of providing services through branch networks, automated teller machines, telephone banking and electronic means. Fees are being used to accelerate the movement of transactions to the lower cost distribution methods.

**Activity/Process View**

Many cost reduction efforts fail because the work (activity) performed is not removed and costs ultimately return. ABC allows sustainable cost reduction by providing management with the information required to control costs by acting in the drivers of costs and activities to take work out. By identifying duplicated and low value activities (eg moving inventory, rekeying data, reworking product), cost reduction efforts can take place without negatively effecting customer service. Figure 5 represents activity costs for a manufacturing company.

### Figure 5. Activity Based Costs for a Manufacturer

<table>
<thead>
<tr>
<th>ACTIVITY-BASED COSTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble Product</td>
<td>$250,000</td>
</tr>
<tr>
<td>Build Components</td>
<td>200,000</td>
</tr>
<tr>
<td>Sell Product</td>
<td>200,000</td>
</tr>
<tr>
<td>Design and Test</td>
<td>180,000</td>
</tr>
<tr>
<td>Process Orders</td>
<td>100,000</td>
</tr>
<tr>
<td>Perform Maintenance</td>
<td>80,000</td>
</tr>
<tr>
<td>Perform Accounts Payables</td>
<td>80,000</td>
</tr>
<tr>
<td>Procure Materials</td>
<td>70,000</td>
</tr>
<tr>
<td>Collect Accounts Receivables</td>
<td>70,000</td>
</tr>
<tr>
<td>Set-Up and Changeover</td>
<td>60,000</td>
</tr>
<tr>
<td>Move and Store Materials</td>
<td>50,000</td>
</tr>
<tr>
<td>Rework Product</td>
<td>50,000</td>
</tr>
<tr>
<td>Expedite</td>
<td>40,000</td>
</tr>
<tr>
<td>Manage Human Resources</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Activity Costs</strong></td>
<td>$2,000,000</td>
</tr>
<tr>
<td><strong>Material Costs</strong></td>
<td>$1,000,000</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>

The focus of the activity view is not always cost reduction. ABC, by looking across functional silos, provides activity information to improve processes such as delivering product/services to customers more quickly or enhancing the quality of products.

A telecommunications company used ABC to both enhance process and reduce costs. In one division ABC information was used to reduce the time taken to issue a customer bill by one third and to identify over $15 million of cost reduction opportunities in duplicated activities.

**Conclusion**

Activity Based Costing is much more than an alternative method of allocating manufacturing overhead to products. It is a tool that can be used by management, across all industries, to provide invaluable information for the strategic management of costs and profits.

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