

## Topic 8: Creating Value I – Managing Activities

### Activity based analysis

#### **What is activity-based analysis?**

- Involves identifying and managing the value, and not just the cost, of activities
- Activities represent the 'building blocks' of an organisation's competitive advantage
  - All differences between companies in cost or price derive from the hundreds of activities required to create, produce, sell and derive their products and services.
- What you measure is what you get
  - If you don't measure it, you don't improve it, and if no necessary steps are taken, it worsens.
- People perform activities which consume resources; the understanding of activities allows us to:
  - manage costs and analyse profitability of customers/product lines
  - identify and reduce constraints
  - improve quality

#### *Features of Cost Management Systems*

- elimination of non-value-added costs
- direct versus indirect costs
- shift in the cost structure

#### **Activity based costing (ABC)**

- Traditional cost systems use a single overhead cost pool and single cost driver to 'spread' or average costs across products/services.
  - Issues:
    - Cross – subsidization problem where high volume products are overcosted and low volume products are undercosted
    - May not depict an accurate representation of activities performed and the resources consumed
    - Measures overall costs but makes management of costs and activities difficult
- ABC aims to improve cost allocations by:
  - Identifying activities performed
  - Estimating cost of activities
  - Calculate appropriate cost drivers
  - Assign activity costs to products/services

<b>Difference ABC and ABM</b>	
<i>Activity based Costing (ABC)</i>	<i>Activity based Management (ABM)</i>
<ul style="list-style-type: none"><li>– Measures product/service cost; thus price more correctly</li><li>– Assesses product/ service profitability</li><li>– Addresses: "what do things cost?"</li></ul>	<ul style="list-style-type: none"><li>– Manages product/service costs</li><li>– Assesses what adds value and how processes can be improved</li><li>– Addresses: "how to manage and improve activities?"</li></ul>

## Activity based Management (ABM)

- *Activity Based Management (ABM):*
  - Using activity based costing information to improve operations and eliminate non-value-added costs
  - Essence of ABM is using the results from ABC analysis to manage an enterprise more effectively.
- Aim to maximize value-added activities, whilst minimizing non-value-added activities, and managing costs
- Value adding enhances the value of the product/service in the eyes of the customer and are necessary parts of the organisation
- Non-value added activities are:
  - Unnecessary and dispensable
  - Necessary but inefficient and improvable
- Non-value added costs, from the above activities, could be eliminated without deterioration of product quality, performance or perceived value.
- 5 steps to eliminate non-value-added costs:
  1. identifying activities
    - resulting activity list should be broken down to the most fundamental level practical
    - i.e. purchasing list broken down into its component activities → obtaining part specifications, obtaining vendor lists, negotiation, ordering, expediting etc.
  2. identifying non-value-added activities
    - is the activity necessary?
      - Duplicate/nonessential = non-value-added
    - Is the activity efficiently performed?
      - Compare performance with a value-added baseline established using budgets, targets or external benchmarks.
    - Is an activity sometimes value-added and sometimes non-value added?
      - i.e. if it is necessary to move work-in-process units between production operation, but unnecessary to move raw materials around while in store = non-value-added activity
  3. understanding activity linkages, root causes, and triggers
    - rework of defective units = non-value-added activity
  4. establishing performance measures
    - continual measurement and comparison of performance ensures necessary and efficient activities
  5. reporting non-value-added costs
    - non-value-added costs should be highlighted in activity centre cost reports.
    - Identifying non-value-added activities can improve processes thus overtime eliminate such costs

- One way of depicting ABM is the ***Two-dimensional activity-based costing model***:
  - This model combines the cost assignment role of ABC with the process and evaluation view of an ABC system
  - Vertical dimension → cost assignment viewpoint of the ABC system
    - Assigns the costs of resources to the firm's cost objects
  - Horizontal dimension → process view of the ABC system
    - Emphasis on the activities themselves and the various processes which work is accomplished in the organisation
    - Activity analysis:
      - Identifies and describes the activities conducted in the enterprise
      - Entails the root causes of activities and the events that trigger these activities and the linkages among activities.
    - Evaluation analysis:
      - Evaluates activities through performance measures
      - It is these activities that comprise activity-based management

#### *Achieving Cost Reduction*

- once non-value-added activities have been identified, 4 techniques may be used to reduce the resulting non-value-added costs:
  1. activity reduction
    - scaling back the activity by reducing the time or amount of resources devoted to it
  2. activity elimination
    - elimination on the basis that the activity is unnecessary
  3. activity selection
    - the most efficient activity is selected from a set of alternatives
  4. activity sharing
    - getting more mileage out of an existing activity by combining functions in a more efficient manner.
    - E.g. using common parts in several related products rather than having unique parts for each product.

#### **Customer Profitability Analysis**

- Uses activity based costing to determine the activities, costs and profit associated with serving particular customers.
- Some customers can be more profitable than others. Customers that order in small quantities, order frequently, often change their orders, require special packaging etc are ***less profitable*** than customers who demand less in terms of customized services.
- A system must be in place that enables the company to identify which customers are using customer support services and how frequently they do so.

#### Continuous Improvement

- The constant effort to eliminate waste, reduce response time, simplify the design of both products and processes and improve quality and customer service.

### Approaches consistent with continuous improvement

- Two approaches to continuous improvement (i.e. reduction) in production costs:
  1. Target costing
    - Applies to the **design of a new** product and its production process
    - Aims to manufacture the product at a cost that will enable the firm to make a profit when the product is sold at an estimated market-driven price.
    - Market-driven price = target price
    - Desired profit margin = target profit
    - Cost at which the product must be manufactured = target cost
  2. Kaizen costing
    - Contrast to target costing
    - Process of cost reduction **during** the manufacturing phase of an existing product
    - Improvement is the goal and responsibility of every worker
    - To help achieve the continuous cost reduction implied by the kaizen costing concept, an annual kaizen cost goal is established.
      - **Kaizen goal:** established for the cost-reduction rate and amount during the current year. Actual cost performance throughout the year is compared with the kaizen goal. At the end of the current year, the current actual cost becomes the cost base for next year. Then a new lower kaizen goal is established.
      - **How are kaizen goals met?**  
Continual and relentless reduction of non-value-added activities and costs, elimination of waste and improvements in manufacturing cycle time, and cutting material costs.

### Other management tools consistent with continuous improvement

#### *Value engineering*

- **Value engineering** = technique used to achieve a product design that meets the target cost
  - Cost-reduction and process-improvement technique that utilises information to identify candidates for improvement efforts
  - E.g. in the area of direct materials, value engineering include changing the quality or grade of materials, reducing the number of bolts in a part, using a component common to other products.

#### *Benchmarking*

- Def.: the continual search for the most effective method of accomplishing a task, by comparing existing methods and performance levels with those of other organisations or subunits within the same organisation.

#### *Reengineering*

- Def.: the redesign of a process, with an emphasis on finding creative new ways to accomplish an objective.
- Involves radical shift in thinking about how an objective should be met
- Does not involve minute improvements, but often major improvements.

### Theory of constraints

- Def.: a management approach that seeks to maximize long-run profit through proper management of organizational bottlenecks or constrained resources.
- **Key idea** → identify the constraints in the system that are preventing the organisation from achieving a higher level of success, then to seek to relieve or relax those constraints.

### Example

Premier International Bank (PIB) is examining the profitability of its Premier Account, a combined savings and checking account. Depositors receive a 7% annual interest rate on their average deposit. PIB earns an interest rate spread of 3% (the difference between the rate at which it lends money and the rate it pays depositors) by lending money by home loan purposes at 10%. Thus PIB would gain \$60 on the interest spread if a depositor had an average Premier Account balance of \$2000 ( $\$2000 \times 3\% = \$60$ ). The Premier Account allows depositors unlimited use of services such as deposits, withdrawals, checking accounts, and foreign currency drafts. Depositors with Premier Account balances of less than \$1000 pay a \$20 a month service fee for their Premier Account. PIB recently conducted an activity-based costing study of its services. It assessed the following costs for six individual services. The use of these services by three customers is as follows.

Details of services used for ABC	Activity-based cost per transaction	Account usage		
		Rudd	Brown	Abbott
Deposit/withdrawal with teller	\$2.50	40	50	5
Deposit/withdrawal with ATM	\$0.80	10	20	16
Deposit/withdrawal on prearranged monthly basis	\$0.50	0	12	60
Bank checks written	\$8.00	9	3	2
Foreign currency drafts	\$12.00	4	1	6
Inquiries about account balance	\$1.50	10	18	9
Average Premier Account balance		\$1100	\$800	\$25000

Assume Rudd and Abbott always maintain a balance above \$1000, whereas Brown always has a balance below \$1000.

### Solution:

- a) Compute the profitability of the Rudd, Brown and Abbott Premier Accounts at PIB.

	ABC per transaction	Rudd	Brown	Abbott
Activity Costs				
Deposit/withdrawal with teller	\$2.50	\$100	\$125	\$12.50
Deposit/withdrawal with ATM	\$0.80	\$8.00	\$16.00	\$12.80
Deposit/withdrawal on prearranged monthly basis	\$0.50	\$0	\$6.00	\$30.00

Bank checks written	\$8.00	\$72	\$24	\$16
Foreign currency drafts	\$12.00	\$48	\$12	\$72
Inquiries about a/c balance	\$1.50	\$15	\$27	\$13.50
Total Costs		\$243	\$210	\$156.80
Average account balance		1,100	800	25,000
Interest spread gain	3.0%	= \$33.00	=\$240.00	=\$750
Service Fee (A/c balance <\$1,000)		0	\$20 p.m.	
Total Revenue		=\$33.00	=\$264.00	=\$750.00
Profitability		(\$210.00)	\$54.00	\$593.20

**b) What evidence is there of cross-subsidization among the three Premier Accounts? Why might PIB worry about this cross-subsidization if the Premier Account product offering is profitable as a whole?**

- Cross subsidisation one's negative contribution is offset by the positive
- Rudd is making a loss for the PIB, and benefiting significantly from Abbott and Brown. As such, there is evidence of cross-subsidisation from Abbott and Brown to Rudd
- Individual premier a/c occurs when profits made on some accounts are offset by losses other accounts
- Bank services used are not uniform
- Aggregate profitability is \$437.20. abbot highly profitable; rudd highly unprofitable; brown small profit but cause of huge monthly fees. If customer relationship is maintained, it is unlikely that brown will continue to pay high fees.
- High balance low activity type = profitable

**c) How might PIB use information from its ABC system to better manage its business? What changes would you recommend for PIB's Premier Account?**

- Adding more activities would make the system hard to understand, costly to implement – but improve accuracy and help PIB make better decisions
- Help in setting up prices more effectively
- It can provide insights into inefficiencies
- Will help PIB refine forecasting of costs and to explain why actual costs differ from budgets:

**END OG SAMPLE**