Introduction to Development of Management Accounting

- Content

  Management Accounting is practical science of value creation within organisations in both the private and public sectors. Management accounting combines accounting, finance and management with leading edge techniques needed to drive successful business.

Table 1: A historical review of costing/pricing issues via four paradigms

Costing/pricing – Paradigm A

Turn of the century until the 1940s: The era of the Industrial Revolution plus

Direct materials	xx
Direct labour	xx
Manufacturing overhead	xx
Marketing and administrative	xx
Total cost per unit	xx
Desired profit (markup)	xx
Target selling price per unit	xx

Costing/pricing – Paradigm B

The 1940s until the 1980s

The era of cost-volume-profit analysis and direct costing

Variable costs	xx
Direct materials	xx
Direct labour	xx
Variable manufacturing overhead	xx
Variable marketing and administrative	xx
Total variable cost per unit	xx
Fixed costs	
Fixed manufacturing overhead	xx
Fixed marketing and administrative	xx
Total fixed cost per unit	xx
Grand total cost per unit	xx
Desired profit (markup)	xx
Target selling price per unit	xx

Costing/pricing – Paradigm C

The late 1980s and early 1990s: The era of activity-based costing

Variable costs	xx
Direct materials	xx
Direct labour	xx
Variable manufacturing overhead	
Variable with number of units	xx
Variable with product complexity (number of batches)	xx
Variable with product diversity (number of products)	xx
Variable marketing and administrative	xx
Total variable cost per unit	xx
Fixed costs	
Fixed manufacturing overhead	xx
Fixed marketing and administrative	xx
Total fixed cost per unit	xx
Grand total cost per unit	xx
Desired profit (markup)	xx
Target selling price per unit	xx

Costing/pricing – Paradigm D

The 1990s and beyond: The era of market-driven standard (allowable) costs

Selling price (given competitive setting)	xx
Less desired profit	xx
Allowable or target cost per unit	xx

Characteristic of Management Accounting

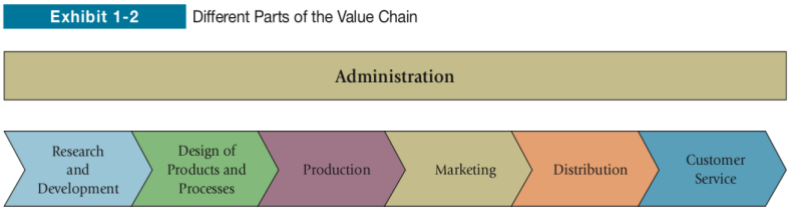
1. Information assist managers in their organizational planning and control activities as well as performance measurement
2. For internal uses
3. Timeliness
4. Planning
5. Opportunity costs and estimates
6. Internal information needs

Major differences between Management and Financial Accounting (Horngren, 2015)

Exhibit 1-1 Major Differences Between Management and Financial Accounting

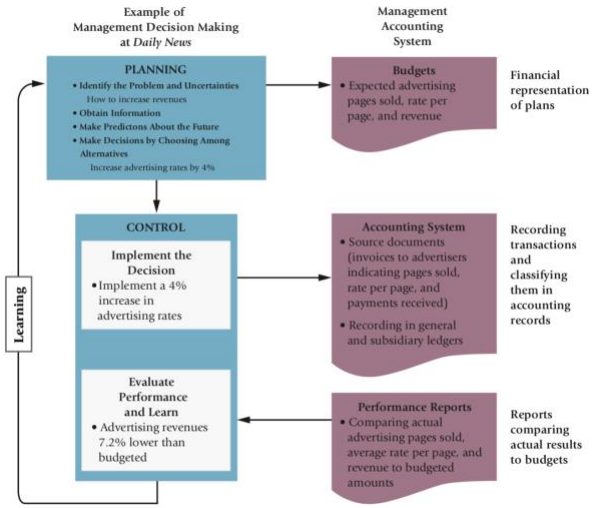
	Management Accounting	Financial Accounting
Purpose of information	Help managers make decisions to fulfill an organization's goals	Communicate an organization's financial position to investors, banks, regulators, and other outside parties
Primary users	Managers of the organization	External users such as investors, banks, regulators, and suppliers
Focus and emphasis	Future-oriented (budget for 2014 prepared in 2013)	Past-oriented (reports on 2013 performance prepared in 2014)
Rules of measurement and reporting	Internal measures and reports do not have to follow GAAP but are based on cost-benefit analysis	Financial statements must be prepared in accordance with GAAP and be certified by external, independent auditors
Time span and type of reports	Varies from hourly information to 15 to 20 years, with financial and nonfinancial reports on products, departments, territories, and strategies	Annual and quarterly financial reports, primarily on the company as a whole
Behavioral implications	Designed to influence the behavior of managers and other employees	Primarily reports economic events but also influences behavior because manager's compensation is often based on reported financial results

The value chain is the sequence of business functions by which a product is made progressively more useful to customers.

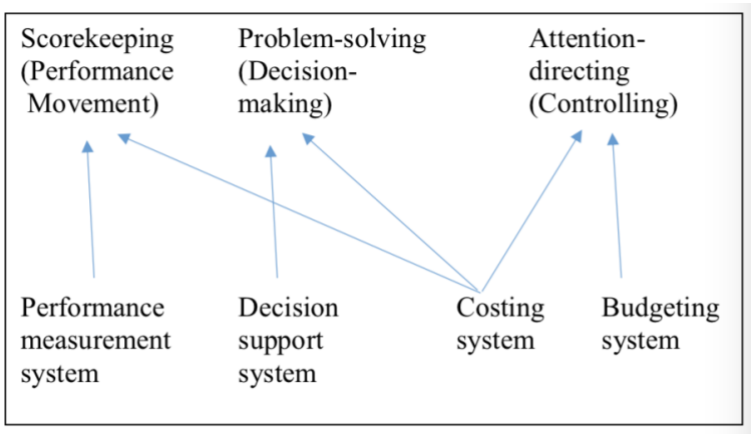


Key Success Factors: Cost and Efficiency, Quality, Time, Innovation and Sustainability

5 Steps Decision Making:
1. Identify the problem and uncertainties
2. Obtain information
3. Make predictions about the future
4. Make decisions by choosing among alternatives
5. Implement the decision, evaluate performance and learn



Substance of Management Accounting



Management Accounting: Technical Core

A. Output Costing systems: Job Costing and Process Costing
B. Control System: Standard costing / variance analysis and Budget
C. Performance Packages: Divisional Performance Measurement and Balance Score Card
D. Decision Support: Variable costing/BEP, Investment Appraisals – ROI, IRR, Opportunity Cost and Transfer Pricing

The History of Management Accounting

1. Era of Industrial Revolution Plus (Volume of Activity for Unit Cost and Profit)
    - Emergence of organizations and increasing complexities managing them
    - Business discover a need to control their costs of operations
    - Results in the invention of basic management accounting tools such as budgeting, standard costing, variance analysis and payback calculations

Paradigm A

The costs involved in this era were direct materials, direct labour, manufacturing overhead and even marketing and administrative costs, all of which were tied together in a total cost per unit of output. The total cost per unit was a desired profit and the sum of total cost and desired profit yielded a target selling price per unit. In many instances, the total cost per unit excluded marketing and/or administrative costs, which were included as a factor in the desired profit. The ultimate result was still the target selling price per unit- the price that would yield desired profitability if projected costs per unit could be achieved. Two issues of contention surface immediately: 1) What volume of activity should be used to determine unit costs? 2) How should desired profit be determined?

The variety if answer typically offered is amazing even if both questions are put to an audience of practitioners representing various departments of the same company, as I have done over many years. Table 2 shows possible answer for the “volume of activity” question, which must be addressed to determine total unit costs for Paradigm A, B, and C. Answers usually lean in the direction of expected volume or something referred to as standard or nomal volume. A rather difficult aspect of the expected volume answer is its implicit circular reasoning – expected volume assumes as selling price while it is being used to determine unit costs and ultimately a “target” selling price.

The answer for the “desired profit” question typically used to be very subjective or rule-of-thumb oriented. In recent years, however, up tp date return on investment and cost of capital concepts have been considered in the most prevalent answers. As we move on to subsequent paradigms, these two questions or issues of contention remain and others emerge.

2. 1940s to 1980 (Lead to Consumption Volume Profit analysis and direct costing)

    1. After WW2
    2. This is the era of demand more than supply because product highly regarded.
    3. Every country protect themselves trade off no internationalization operating in protected amrkets

    - 1940s to 1960s

        i. Western industrialized countries. Product highly regarded. Managers mainly concern internal matters. Production-focus on manufacturing control and internal administration. The implication is little incentives to minimize manufacturing costs. Mass production because of growing mass market inefficient and poor management practice
        j. Production – focus by management on manufacturing controls and internal administration (help managers to make decision internally as the purpose of management accounting). Direction and focus. The strategy needs to be derived from and guided by business strategy and key business process requirements rather than by technology, functional or internal administration and control demands. As opposed to strategic and environmental issues. Because measures of current management accounting use balance score card that measures not only financial but also sustainability and environment to achieve the vision. In this case, managers is only concern about the mission.

        Implications:
            i. Little incentives to minimise manufacturing cost (no incentives for any increasing cost can be charged to customers)
            ii. Mass production because of growing mass mass market (economic of scale) inefficient (found in many) and poor management practices

    - 1970s to 1980s

        Oil price shock in 1973, threatened to established market. This lead to worldwide recession:
        1. Decline in protected markets and increased global competition
        2. Rapid technological Development

        Implications:
        1. Technological changes had substantial impact on information process within organization
        2. Reduced cost and improved quality
        3. Effect on the design, maintenance, and interpretation of information systems

Increased scientific knowledge – creates significant new markets and increased importance of product development and innovation

Increased costs in the service and manufacturing overhead activities within manufacturing firms

Increased in non-manufacturing sector such as continuing growth in commercial and financial sectors, and major increases in the size of industries such as leisure and tourism

Implications:

i. Conventional cost accounting (with its origin in production and manufacturing) was found to be deficient to aid effective management and control of these sectors and activities
ii. Companies control costs through reducing labour costs, introduce new management and production techniques

Era of the relevance costing because in this era differentiates between the fixed and variable cost. Relevance cost helps the manager to analyse the capacity of fixed cost such as machinery to produce potatoes in one hour. And manager can estimate the maximum capacity they can produce with the machine. The higher the production, the lower the cost of potatoes per unit. On the contrary, the variable cost is linear with the kg of potatoes produced. In this sense, Manager can be more accurately to operate more efficiently.

Non-relevance cost: Costs which are not relevant to a decision are known as non relevant costs and include: sunk costs; committed costs; non cash flow costs; general fixed overheads; and net book values. Such as:

1. **Sunk** costs are past costs or historical costs which are not directly relevant in decision making, for example development costs or market research costs.
2. **Committed** costs are future costs that cannot be avoided, whatever decision is taken.
3. **Non cash** flow costs are costs which do not involve the flow of cash, for example, depreciation and notional costs. A notional cost is a cost that will not result in an outflow of cash either now or in the future, for example sometimes the head office of an organisation may charge a 'notional' rent to its branches. This cost will only appear in the accounts of the organisation but will not result in a 'real' cash expenditure.
4. **General fixed overheads** are usually not relevant to a decision. However, some fixed overheads may be relevant to a decision, for example stepped fixed costs may be relevant if fixed costs increase as a direct result of a decision being taken.

5. **Net book values** are not relevant costs because like depreciation, they are determined by accounting conventions rather than by future cash flows.

Relevance cost: Relevant costs and revenues are those costs and revenues that change as a direct result of a decision taken. Relevant costs and revenues have the following features:

1. They are **future** costs and revenues – as it is not possible to change what has happened in the past, then relevant costs and revenues must be future costs and revenues.
2. They are **incremental** – relevant costs are incremental costs and it is the increase in costs and revenues that occurs as a direct result of a decision taken that is relevant. Common costs can be ignored for the purposes of decision making. In exam questions look out for costs detailed as differential, specific or avoidable.
3. They are **cash flows** – in addition, future costs and revenues must be cash flows arising as a direct consequence of the decision taken. Relevant costs do not include items which do not involve cash flows (depreciation and notional costs for example).
4. Opportunity cost is an important concept in decision making. It represents the **best alternative** that is **foregone** in taking the decision. The opportunity cost emphasises that decision making is concerned with alternatives and that a cost of taking one decision is the profit or contribution forgone by not taking the next best alternative.

   If resources to be used on projects are scarce (e.g. labour, materials, machines), then consideration must be given to profits or contribution which could have been earned from alternative uses of the resources.

   For example, the skilled labour which may be needed on a new project might have to be withdrawn from normal production. This withdrawal would cause a loss in contribution which is obviously relevant to the project appraisal.

   The cash flows of a single department or division cannot be looked at in isolation. It is always the effects on cash flows of the whole organisation which must be considered.

Paradigm B

This era introduces the distinction between fixed and variable costs, which ultimately leads to cost-volume-profit analysis and direct costing. The fixed/variable cost dichotomy and its implications encompass the most dynamic developments in management accounting from the 1940 to the 1980s. On the surface, not much seems to change between this and the previous era other than the distinction between fixed and variable costs as part of a total unit cost and a

target selling price. However, even a cursory consideration of Tables1 and 2 reveals a refinement of one of our issues of contention, that is:

1. Variable costs per unit are determined by engineering standards and analytic techniques, which means that the volume of activity issue relates essentially to fixed costs.
2. Furthermore, many variable costs have become more fixed over time. Union contracts and labour legislation have affected labour costs in just this fashion. The issue of how to determine desired profit remains an issue of contention as we move to Paradigms C and D.

Variable costs per unit for direct materials and direct labour are determined easily by the engineering specification for materials and labour requirements. Similarly, the per-unit amounts of other variable costs can be calculated. Techniques that typically are variations of regression analysis isolate the variable cost per unit as the 'b' coefficient n flexible budget formulations.

From Yew Ming Chia

The use of distinction between Fixed and Variable Costs (This distinction and its implications encompass the most dynamic period development during this period)

Leads to CVP analysis and direct costing

Compare to earlier period

1. Variable costs per unit are determined by engineering standards and analytic techniques, which means that the volume of activity issue relates essentially to fixed costs. Other techniques such as regression analysis method and its variations are used to isolate the b coefficient in flexible budget formulations.
2. Furthermore, many variables costs have become more fixed over time. Union contracts and labour legislation have affected labour costs in just this fashion.
3. Issue of fixed cost remain. Need to consider fixed costs when determining the volume of activity to divide by in deriving the per-unit costs.
4. Therefore the issue of volume of activity to divide by has become a larger issues as the amount of variable costs has diminished and relative amount of fixed costs has increased.

3. Late 1980s to early 1990s (Lead to Activity Based Costing) (Kaplan, 1973)

Scenario

- Uncertainty for industries throughout the world
- Unprecedented advances in manufacturing and information processing technologies
- Flatter organizational structures

- Information flows needed throughout the organization
- Increased recognition of service industries (including industries in the commercial sector) as an important part in many economies)

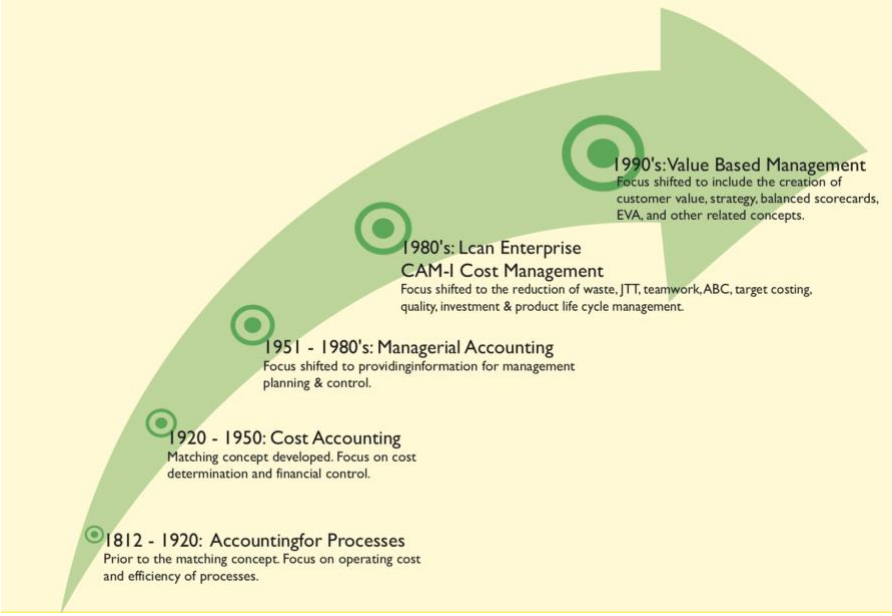
Drivers of Management Accounting Change (in magnitude and intensity)

- Change in information demand by decision maker within organizations
- Global economic and financial environment (Global Competition in 1980s) (Gluck, 1983)
- Information technology
- Management styles and forms
- Environment and ethical matters

Implications

1. Increasing role of accounting in restructuring, privatisation, and commercialisation of all sectors of the economy.
2. Results in academics and practitioners re-examining knowledge and methods in management accounting.
3. Different types of information needed.

Development of Management Accounting Chart (Kamal, 2015)



Paradigm C

Much of the recent, exciting revival of interest in cost/management accounting relates to this era, which embodies activity-based costing (ABC). On the surface, this era considers only two additional variable costs in the development of a total cost per unit. Recognition of these additional variable costs is designed to improve the accuracy of a total unit cost, which then should improve the determination of selling prices and product mix decisions. The new or additional variable costs of ABC relate to product complexity and product diversity. As shown in tables 1 and

2, there are three elements of variable manufacturing cost under ABC: 1. Costs that vary with units of product 2. Costs that vary with product complexity, such as number of batches 3. Costs that vary with product diversity, such as number of products. The implications of the new categories of variable costs initially suggest a decreased number of fixed costs, but further consideration of ABC leads me to suspect that the supposed additional variable costs are really fixed costs. This additional issue of contention could revive the controversy over 'direct costing versus absorption costing', a paramount issue of the late 1950s and 1960s. It doesn't take much to see the possibility that ABC is nothing more than an updated, revised, and, most likely, more accurate version of absorption costing.

It's unfortunate that advocates of ABC virtually have ignored the significance of Paradigm B's direct casting implications that were put forth so eloquently by J S Earley in 1955. According to Earley, the new management accounting 'implied basing decisions on their estimated effects on marginal balances and contribution margins rather than upon "full cost" calculations. It involves consistent references to variable costs and "specific" fixed costs where these are relevant – and neglect of those costs unaffected by decisions.

Another interesting facet of cost/management accounting virtually ignored by the advocates of ABC is the emergence of Paradigm D. This paradigm, which appears to have had its origins in Japan (Hiromoto), has the potential to revolutionise cost or management accounting as it implicitly asks ABC enthusiasts, What do cost have to do with the determination of selling prices? With the exception of cost based pricing contracts, the market determines the price and the role of cost is to help determined weather or not it is wise to enter the market or stay in the market.

4. 1990s to beyond (Strategic Concern and Product Life Cycle)

   ✓ Balance Score Card in 1992

   1. No longer looking to the development of a total unit cost in order to help determine a selling price
   2. The allowable or target cost per unit is a market driven standard cost that has to be met if desired profit are to be achieved
   3. Promotion of continuous improvement to reduce cost (along with empowerment of employees with aim of creating positive relationship with suppliers and customers, as well as to increase quality and performance. (Japanese Kaizen Costing)

   Paradigm D

   The 1990s and beyond – the era of market driven standard (allowable target) costs as opposed to engineering-driven standard costs. Under Paradigm D we no longer look to the development of a total unit cost in order to help determine a selling price. Instead we use the selling price we believe the market will allow us to help

us determine the cost that the market will allow. Peter Drucker has referred to this concept as price-led costing as opposed to cost led pricing.

The allowable or target cost per unit is a market driven standard cost that has top be met if desired profit are to be achieved. Paradigm D questions the validity of any Paradigm based on engineering driven standard costs. Perhaps after some 90 years the engineering driven standard costs. Perhaps after some 90 years, the engineering driven standard costs of Frederick Taylor and his contemporaries have been partially or wholly displaced by market driven standard costs.

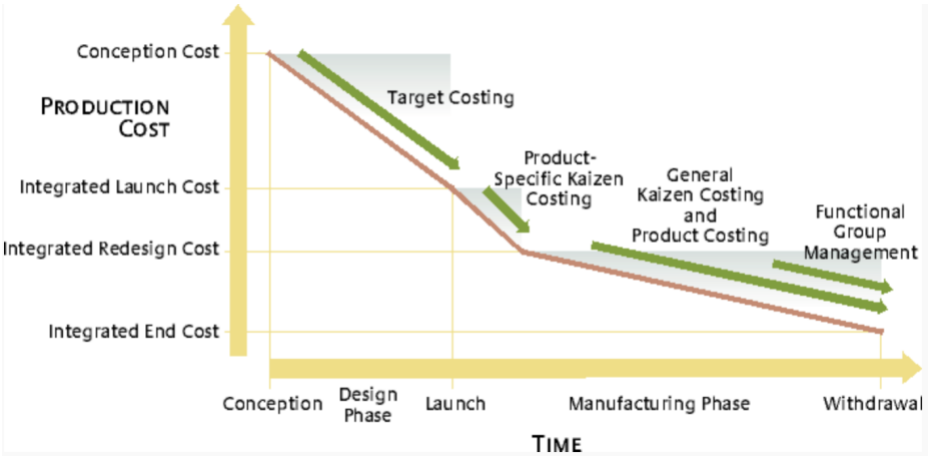
We still have the issue of how to determine desired profit with Paradigm D. However, Paradigm D creates a whole series of provocative new issues such as:

1. All that counts is that **total cost per unit ultimately must not exceed the allowable or target cost** if the desired profit to be attained. This idea may mean that now the distinction between fixed and variable costs is either irrelevant or considerably less relevant.
2. If we truly believe in continuous improvement, then the allowable or target cost per unit must be reduced over time.
3. The way we work may have to change in order for us to reduce costs. Ultimately, this change can lead to the empowerment of our own workforce for, as we all know, often it is this closest to the action who can lead us on the path of continuous improvement.

This issue of continuous improvement via empowerment involves all people in the workforce – those in the factory, in procurement, in marketing and distribution, and in administrative offices. Continuous improvement as follows: “Do activity costing if you must. But don’t fool yourself into thinking that ABC will help you become a global competitor. For that, get busy with the improvement process. (Scarlett and Chartered Institute of Management, 2001)

Current scene

1. Diminishing product life-cycles (product do not last enough for engineering-driven standards to be established and utilized – therefore must achieve the allowable or target cost in design stage if a desire profit is to be realized. (Bayus, 1994)(Mirsa, 2017) (Anonymous, 1999)
2. Strategic concerns with various product lines. This is related to many type of products produced by the company (iPhone X, iPhone 8, Mac Book, Apple Watch) (MIT Review, 2017)



- ✓ Development of Cost and Management Accounting System
  - Use of financial accounting system for planning and control

    Business Characteristics: 1) Single or simple products 2) Simple organisation structure 3) Mainly involve buying and selling

  - Simple cost and management system
    Business Characteristics:
    1. Multi stage production process within an organisation
    2. Relatively capital intensive
    3. Specialized workers involved in specialised manufacturing activities
    4. Head office may be located away from factories
    5. Manufacturing relatively homogeneous products
    6. Efficient Production
    7. Measure mainly input resources to output
    8. Performance relies mainly on some highly summarised measures
    9. Stable manufacturing environment

The two main problems in an agency relationship are:

1. Conflict of goals or interest between the principal and the agent – the principal is concerned with the verification of the agent's effort to ensure that it is optimal to the organisation
2. Different attitude toward risk. The problem is to induce the agent to take the actions that the principal would take. (Different attitude toward risk, existence of private information, and limited or costly observability, some divergence of interest will always exist between the principal and the agent, creating a phenomenon called agency costs.
3. Principal attempts to limit agency cost by establishing appropriate incentives and incurring monitoring cost. Designed to limit the agents welfare as the expense of the principal.

- Empirical Study
  The rise and fall of management Accounting (Johnson and Kaplan, 1987)

1. Management accounting reports are of little help to operating managers attempting to reduce costs and improve productivity.
2. The management accounting system fails to provide accurate product costs
3. Managers horizons contract to the short-term cycle of their monthly profit and loss statement.

The challenge is the vigorous global competition, rapid progress product technology and wide fluctuations in currency exchange rates and raw materials prices demand excellence from corporate management accounting systems.

Fall of Management accounting is because it's too late, too aggregated and too distorted to be relevant.

1. The opportunity. Excellent management accounting systems occur at a time when the costs for collecting, processing, analysing and reporting information have been decreasing.
2. Management Accounting's Roots. Historians have demonstrated that accounting reports have been prepared for thousands of years. 19th century enterprise owners to their production process.

Is Management Accounting Irrelevant (loss relevance?)?

1. When and how did you become aware that management accounting systems were failing to provide relevant information for management planning and control decisions?
2. How do you think management accountants in industry and academic will respond to your book?
3. What should management do to facilitate the creation of relevant management accounting and control systems? And why is it important that engineers and operating managers work with accountants in modifying management accounting and control systems?

- Exam Question
  1. 2014:
     - Management accounting can be described as a socio-technical practice. Explain why it can be so described.

       Answer
     - Explores non-technical aspects of accounting for management using a wide range of social science perspectives
     - Possess potential to generate a social science approach to management accounting because it embraces considerations such as the role of the state, changes in the nature of capitalism, and corporate governance and accountability.
     - Sociological or behavioural impact such as how MA affects people, how people affect MA
     - Development of MA helps to reflect social movements and contexts

2. 2015:
   - Outline and assess the role played by management accounting in the Japanese "economic miracle"

     Promotion of continuous improvement to reduce cost (along with empowerment of employees with aim of creating positive relationship with suppliers and customers, as well as to increase quality and performance. (**Japanese Kaizen Costing**) in 1990 and beyond.

     Another interesting facet of cost/management accounting virtually ignored by the advocates of ABC is the emergence of Paradigm D. This paradigm, which appears to have had its origins **in Japan (Hiromoto),** has the potential to revolutionise cost or management accounting as it implicitly asks ABC enthusiasts, what do cost have to do with the determination of selling prices? With the exception of cost based pricing contracts, the market determines the price and the role of cost is to help determined whether or not it is wise to enter the market or stay in the market.

   - Argue a case for or against management accountants being directly involved in organisational strategy.

     For MA being directly involved in Organizational Strategy

     1. Management Accountant is someone in finance department in company
        With job titles such as financial analyst, cost accountant, business analyst, controller, chief financial officer (CFO), corporate accountant, and more, management accountants analyze financial statements, manage risk, and help make diverse investment decisions about capital expansion, sustainability projects, acquisition of computer-based manufacturing systems, and more—all necessary components of successfully implementing an organization's strategy.
     2. Business Planning
     3. Advisor Senior Management
     4. Supporting Other Department
     5. Working in Cross Functional Context

        Being an excellent management accountant means understanding more than just the organization's financials. Understanding the fundamentals of the organization's business and its industry as a whole will help inform you when assisting with strategic business-planning decisions.

        "From a nonaccounting standpoint, a strong knowledge of the industry and competitors, as well as our business, products, and strengths, is vitally important," says Christian Cuzick, CMA, senior director of finance for Janssen, Inc. Janssen is the pharmaceutical division of Johnson & Johnson that develops treatments in the areas of cardiovascular health and metabolism, immunology, infectious diseases and vaccines, neuroscience, and oncology.

If you work for a pharmaceutical company, for example, knowing your industry means being familiar with competitors and their drugs, being aware of the costs to develop a new drug and bring it to market, being familiar with drug patents and other pertinent laws and industry regulations, and understanding how the clinical-trial process works. In any industry, understanding how changes in the political or social climate, or even world events, can have a financial impact on your company, and knowing how to proactively plan for such impacts is important. Knowing your industry also means understanding existing regulatory requirements and keeping abreast of potential changes that could affect business. "I spend a large percentage of my time meeting with customers, participating in industry groups, and attending conferences to make sure I am caught up on the latest business issues," Cuzick says. These activities not only help him learn more about his industry, but they also help him establish a network of people that can keep him informed and answer any industry-specific questions he has.

6. Managing Other Employees
7. Working with External Stakeholders
8. Continuous Professional Development

Against MA being directly involved in Organizational Strategy

1. Management Accountant should be objective and independence, present the fact what they present about the numbers not influenced by politics in organization.

3. 2016 (No Question)

- Case Study
  1. UK Universities Transformation

- Calculation
  1. Era of Industrial Revolution Plus

Era of industrial revolution plus

Direct materials	xx
Direct labour	xx
Manufacturing overhead	xx
Marketing and administrative expenses	xx
Total cost per unit	xx
Desired profit (mark-up)	xx
Target selling price per unit	**xx**

Era of industrial revolution plus
(£-in thousands)
Calculating and using unit product costs

Manufacturing costs	
Direct materials	200
Direct labour	250
Manufacturing overhead	450
Marketing and administrative expenses	500
Total	1,400

2. 1940s to 1980s

Variable costs	
Direct materials	xx
Direct labour	xx
Variable manufacturing overhead	xx
Variable marketing and administrative expenses	xx
Total variable cost per unit	xx
Fixed costs	
Fixed manufacturing overhead	xx
Fixed marketing and administrative expenses	xx
Total fixed cost per unit	xx
Grand total cost per unit	xx
Desired profit (mark-up)	xx
Target selling price per unit	**xx**

Variable costs		
Direct materials	1.00 per unit	
Direct labour	1.25 per unit	
Manufacturing overhead	0.50 per unit	
Marketing and administrative expenses	0.25	
Total cost	3.00 per unit	
Fixed costs		
Manufacturing overhead		350,000
Marketing and administrative exp.		450,000
Total		**£800,00**

3. 1980s to 1990s

For product costing and pricing

Late 1980s to early 1990s

Variable costs	
Direct materials	xx
Direct labour	xx
Variable manufacturing overhead	
Variable with number of units	xx
Variable with product complexity (no. of batches)	xx
Variable marketing and administrative expenses	xx
Total variable cost per unit	**xx**
Fixed costs	
Fixed manufacturing overhead	xx
Fixed marketing and administrative expenses	xx
Total fixed cost per unit	**xx**
Grand total cost per unit	xx
Desired profit (mark-up)	xx
Target selling price per unit	**xx**

Late 1980s to early 1990s

Variable costs		
Direct materials	1.00 per unit	
Direct labour	1.25 per unit	
Variable manufacturing overhead		
Variable with number of units	0.50 per unit	
Variable with product complexity (no. of batches)	0.40 per unit	
Variable with product diversity (no. of products)	0.35 per unit	
Variable marketing and administrative expenses	0.25 per unit	
Total variable cost per unit	**£3.75 per unit**	
Fixed costs		
Manufacturing overhead		175,000
Marketing and administrative exp.		450,000
Total		**£625,000**

Notes:

1. Example of calculation includes two additional variables cost in development of a total cost per unit
2. Recognition of these additional variable costs is designed to improve the accuracy of a total unit cost, which then should improve the determination of selling prices and product mix decisions.

Notes II:

1. The new or additional variable costs of ABC relates to product complexity and product diversity
2. Three elements of variable manufacturing costs under ABC:
    - Cost that vary with units of products
    - Cost that vary with product complexity, such as number of batches
    - Cost that vary with product diversity, such as number of products

4. 1990s to beyond (No Sample calculation)

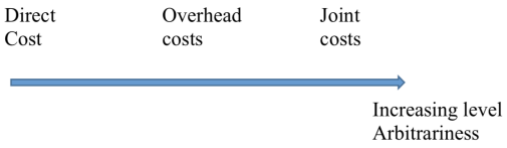
Cost Allocation

- Content
  Cost allocation is attaching cost to cost objects, then assigning service department costs to production centres and products, then criticism of information (containing allocated cost). The reason why need to allocate cost, systematic allocation approach and proposed approach to treatment of committed costs.

  The process of assigning a resource cost to a department or a product when a direct measure does not exist for the quantity of the resource consumed by the department or product.

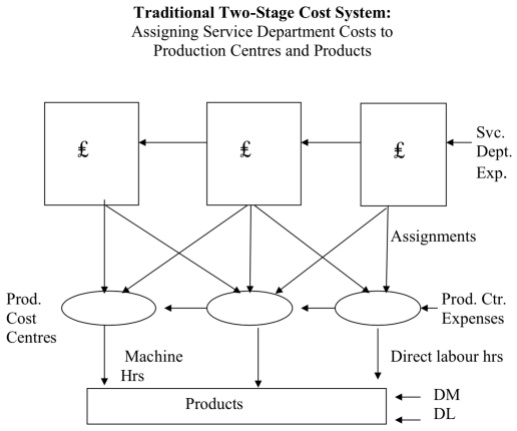
  Service department cost must be allocated when direct measurement of the output from a production department is not available.

  Reliability of cost information is a function of the quality of measurement.



  Assigning service department costs to production centres and products.
  First stage
  a. Service department cost are assigned to production or operating departments
  b. In addition, the cost directly arising in these production departments are directly traced to these departments. (All organization expenses are assigned directly or through assignment from service departments, to production departments)

  Second stage
  a. Costs are assigned from production departments to the products processed through these departments.



Cost allocation relates to the reliability of information and also arbitrary (chips, potatoes can be allocated similarly). This cost allocation sometimes is not traceable and not attributable. There are three costs: direct cost, overhead cost and joint cost. Direct cost is most accurate and joint cost is less accurate.

Criticism related to allocated costs are:
1. For assessing performance (bias or not)
2. For decision making (do the information reliable enough)
3. Empirical evidence on prevalence of allocation in practices

Reasons for allocating costs
1. Financial accounting
2. Cope with uncertainty
3. Fairness, inform debates, agreed resource allocation
4. Perception of economic rationality
5. Motivate agent to judge their needs

*Additional: From the Book

Exhibit 13-1 Purposes of Cost Allocation

Purpose	Examples
1. To provide information for economic decisions	To decide on the selling price for a product or service To decide whether to add a new product feature
2. To motivate managers and other employees	To encourage the design of products that are simpler to manufacture or less costly to service To encourage sales representatives to emphasize high-margin products or services
3. To justify costs or compute reimbursement amounts	To cost products at a "fair" price, often required by law and government defense contracts To compute reimbursement for a consulting firm based on a percentage of the cost savings resulting from the implementation of its recommendations
4. To measure income and assets	To cost inventories for reporting to external parties To cost inventories for reporting to tax authorities

The target pricing approach is another illustration of the five-step decision-making process introduced in Chapter 1.

1. *Identify the problem and uncertainties.* The problem is the price to charge for Provalue in 2014. The uncertainties are identifying what customers want, how competitors will respond, and how to manage costs.
2. *Obtain information.* Astel's managers do market research to identify customer needs, the prices that competitors are likely to charge, and opportunities to reduce costs.

3. *Make predictions about the future.* Managers make predictions about the effect of different prices on sales volumes and how much they can reduce costs through value engineering and product redesign.
4. *Make decisions by choosing among alternatives.* Managers decide to reduce Provalue's price from $1,000 to $800, anticipating sales to increase from 150,000 units to 200,000 units in 2014.
5. *Implement the decision, evaluate performance, and learn.* Cross-functional value-engineering teams redesign Provalue to achieve a target cost of $720 per unit, considerably lower than the current cost of $900. At the end of 2014, managers will compare actual and target costs to evaluate performance and to identify ways to reduce costs even further.

In a production environment: if service costs are not assigned, these negative outcomes can happen

1. Unnecessary demand made on the service by the user department
2. Unable to determine the efficiency level of the service department
3. Without assigning expenses, it will be difficult to price the services to the user department
4. Managers of service department may not know the level of service to be provided to the user departments.

Unless managed properly, value engineering and target costing can have undesirable effects:

- Employees may feel frustrated if they fail to attain target costs.
- The cross-functional team may add too many features just to accommodate the different wishes of team members.
- A product may be in development for a long time as the team repeatedly evaluates alternative designs.
- Organizational conflicts may develop as the burden of cutting costs falls unequally on different business functions in the company's value chain, for example, more on manufacturing than on marketing.

Assignment of expenses of service department costs can overcome the above negative consequences because the managers of user department will:

1. Exercise more control
2. Compare the cost of services
3. Ability to communicate desired quality of services

As such the two main purposes for assigning service department expenses are:

1. For cost control and efficiency purpose
2. For reassignment to products that flow through the production department

Systematic Allocation Approach

This can be adopted if interacting service between service/support departments and to the operating department. There are 3 methods to allocate. In comparison, because allocation methods do affect the cost responsibilities of managers, it is important for the accountant to understand the consequences of the different methods and to have

good reasons to the eventual choice. It is important to keep a cost-benefit perspective in choosing an allocation method.

- Direct Method. The direct allocation method is the most widely used method (before the advancement of computerized systems). This method allocates each service dept.'s cost directly to the production dept. Costs of service provided to other service depts. are ignored.

	Service Dept		**Production Dept.**		
	EM	IS	MD	AD	Total
Budgeted Mfg. O/H costs before any inter-departmental cost allocations	£600000	£116000	£400000	£200000	£1316000
Allocation of **EM** (3/8 for MD, 5/8 for AD)	(600000)	---	225000	375000	
Allocation of **IS** (8/9 for MD, 1/9 for AD)	0 ---	(116000)	103111	12889	
Total Budgeted Mfg. O/H of production depts.		0	£728111	£587889	£1316000

- Step Down Method

	Service Dept		**Production Dept.**		
	EM	IS	MD	AD	Total
Budgeted Mfg. O/H costs before any inter-departmental cost allocations	£600000	£116000	£400000	£200000	£1316000
Allocation of **EM** (2/10 for IS, 3/10 for MD, 5/10 for AD)	(600000)	120000 236000	180000	300000	
Allocation of **IS** (8/9 for MD, 1/9 for AD)	0 ---	(236000)	209778	26222	
Total Budgeted Mfg. O/H of production depts.		0	£789778	£526222	£1316000

- Reciprocal Method

	Service Dept		Production Dept.		
	EM	IS	MD	AD	Total
Budgeted Mfg. O/H costs before any inter-departmental cost allocations	£600000	£116000	£400000	£200000	£1316000
Allocation of **EM** (2/10 for IS, 3/10 for MD, 5/10 for AD)	(624082)	124816	187225	312041	
Allocation of **IS** (1/10 for EM, 8/10 for MD, 1/10 for AD)	24082	(240816)	192652	24082	
Total Budgeted Mfg. O/H of production depts.	0	0	£779877	£536123	£1316000

- Empirical Study

1. (Ahmed and Scapens, 2000)

Cost allocations for cost estimation, pricing and profit analysis (Jones, 1985). costing system used for pricing purposes by Josiah Wedgwood, the English pottery manufacturer, in 1772 (McKendrick, 1961). cost information (including allocated overheads) to restructure their pricing policy when faced with new market conditions (Roll, 1930). the problem of dealing with overheads came to the fore (Solomons, 1952). For decades economists and accounting researchers have argued that allocations are arbitrary and unnecessary (Edwards, 1952; Stigler, 1966; Thomas, 1969).

Recently, the proponents of activity-based costing have argued that the traditional overhead allocation systems are obsolete and of little relevance in the context of new production and manufacturing technologies (Cooper and Kaplan, 1988; Miller and Vollmann, 1985).

These traditional allocation systems are widely observed in practice and used for such purposes as product costing, cost control, income tax computations and cost-plus pricing

Cost allocations their meanings and significance and perhaps helped them persist as managerial practices.

US in the late nineteenth and early twentieth centuries in terms of the gains resulting from co-ordinating economic activities within the firm compared to market co-ordination.

They argued that new management accounting practices evolved with `one common purpose: to evaluate internalized processes' (1987: 42). For example, they argue that

costing systems emerged in the US railroad industry (such as cost per ton mile and voucher systems) to provide information for rate-setting and assessing the performance of individual departments and managers in what was regarded as the ® rst administrative hierarchies.

First, budgets were devised to co-ordinate internal resource flows from raw material to final products, and second, the return on investment measure was developed to compare performance in the various parts of the organization.

Management accounting information after the Second World War became `too distorted, too aggregated and too late to help man- agers control operations'. Johnson, in particular, identified two reasons for this failure of management accounting: namely the rigidity of financial reporting rules enforced by the accounting profession after World War I and the implied endorsement accounting educators gave to financial accounting after World War II' (1994: 260). Relevance Lost and Total Quality Management.

a. Uniform Costing
b. Government Contracting
    - The first world war

2. (Doost, 1996)
3. (Kaplan, 1973)
4. (Miller and Buckman, 1987)

Allocated fixed costs is that they can serve as a proxy for difficult-to-calculate opportunity cost. Two main results are that the expected value of opportunity costs equals both the incremental productivity of capacity and the optimal transfer price.

Variable costs of the service department is recommended. economic efficiency of transfer prices based on either variable cost or full cost is compared with optimal transfer pricing policies. Full cost is the sum of allocated fixed costs and variable costs, and it contrasts with variable costs. Transfer price is important because it is a principal method for effectuating prudent use of the service. transfer prices to be a primary method of cost. A perceived weakness of the full cost charge is that it is by definition above marginal (variable) cost, and consequently it leads the user department to equate full cost and marginal benefit rather than marginal cost and marginal benefit. Allocating fixed costs according to actual usage may be desirable since these allocated costs can serve as a useful proxy variable for the difficult to observe opportunity costs due to delay and rationing. t there is over congestion if no cost is placed on the use of the fixed resource. A full cost method might be preferable to a variable cost method. opportunity cost varies to reflect the current usage-level of the service department.

When there are small economies-of-scale (a nearly linear production function), a full cost charge is appealing; when there are large economies-of-scale, a variable cost charge is appealing. Use a full cost charge when there are small economies-of-scale and to use a variable cost charge when there are large economies-of-

scale.

The service department as a Queueing System. Occasionally idle capacity and occasionally saturated capacity. Transfer price to the operating departments for satisfying a request. These transfer prices will be cost based. Our model assumes that there are no information asymmetries. Transfer price maximize the expected value of net transfer payments. The opportunity costs of satisfying a request are random and vary with the current usage level of the service department. the transfer price does not vary with the number of busy services

three explanations for observed capital idleness given by Winston (1974): (1) unintended idle capacity due to an unfavorable economic environment resulting in a shortfall in de- mand; (2) intended idle capacity resulting from taking advantage of economies-of-scale in capacity expansion; and (3) intended idle capacity resulting from the anticipated random nature of demand.

Zimmerman's (1979) belief that allocated fixed costs can serve as a useful proxy for difficult-to-observe delay and rationing opportunity costs, even in a continuous time, dynamic setting.

The transfer pricing policy which maximizes the expected value of net transfer payments, the service department's "

Potential drawback of decentralization: the transfer price can significantly exceed the sum of opportunity cost and variable cost.

The difference in the value of the objective function between variable cost transfer pricing and full cost transfer pricing is roughly the same as the difference between the optimal transfer pricing policies.

Allocated capacity costs based on straight-line depreciation and 100 percent utilization.

Firm does not find it worthwhile to use a transfer price which varies with the current utilization level or the economic environment. Variable cost transfer pricing and full cost transfer pricing than there is between the optimal transfer pricing policy and the better of the variable cost and full cost policies.

- Past Exam Question
  1. 2014
     Argue a case either **for** or **against** the practice of cost allocation

     Answer:
     For practice of cost allocation
     1. Cheap
     2. Simple
     3. More externally accepted by standard setter in financial accounting
     4. A small number of volume based cost driver
     5. It is appropriate when direct cost were dominant and cost for data analytics high

Against practice of cost allocation
1. Arbitrary
2. Less Accurate
3. Mislead decision making
4. Less relevant to today product where indirect cost involved more
5. Lead wrong strategy for product mix

2. 2015
"The practice of allocating costs has more strengths than weaknesses." Discuss whether or not you agree with this statement.

Answer:

Strength of cost allocation

1. Simple
2. One plant overhead rate
3. Cheaper because no additional cost to trace each cost pool and its percentage.
4. The number that is used for external reporting accepted by standard setter
5. Cost Allocation is still maintained while ABC is implemented as complimentary.

Weakness of cost allocation

1. Arbitrary and less accurate
2. Mislead for decision making to compare cost of product A and B
3. Little relation between consumption and supply and also cause and effect
4. Do not capture accurately indirect cost
5. Little relevant with today products where indirect cost consumption getting higher to create sales compare to old era.

3. 2016
Discuss the view that cost allocation is arbitrary and bears little relation between the consumption and supply of resources.

Answer:

Cost Allocation is arbitrary

A cost allocation is arbitrary because the allocation base used is not likely to give accurate costs. For example, the cost of a lecture is not significantly dependent on the number of students: a class of 10 students requires one lecturer for (say) one hour as does a class of 200 students. Therefore, using the number of students as an allocation base would result in an arbitrary allocation. The system of activity-based costing is based on the idea that arbitrary allocations should be avoided and replaced with cause-and-effect allocations.

Cost allocation systems often systematically underestimate the cost for speciality, low volume products and overestimate cost of high volume standard

products. The implications is that the under costed products are under price to losses and the over-costed products will be overprized, making them less competitive. It can lead to wrong strategy and product mix.

Bears little relation between consumption and supply

Bears little relation between consumption and supply of resources because when we consume 10 hours on SGA for product A, it will not be counted accurately in cost allocation, it will count only the overhead cost will only be allocated to the manufacturing hours and labour hours. What happen is that the SGA cost allocated to product A could be over cost and allocated to product B is under costed. During the budgeting process, this could lead to misleading decision, when the managers want to decide the supply of budget for overhead activity to product A and product B. The product A might not need as much as supply for its ability to makes sales or consumed.

Cost allocation merge support and production centre costs. Cost allocation does not have cost drivers that best demonstrate the cause-and-effect relationship between each activity and the costs in the related cost pool.

- Case Study
  1. Narnia Inc case study on evaluating how accurate cost allocation that affect to product pricing A,B,C compare to other company that only produce solely product A or B or C.

- Calculation
  (Direct Method, Step Down and Reciprocal Method) mentioned above

- Recent Issues
  Shifting from 3 traditional cost allocation to Activity Based Costing

Variable Costing (Excluded from Exam)

- Content
- Exam Question
- Case Study
- Calculation

Activity Based Costing

- Content

  There are different production systems between today and yesterday, remember the movie of Charlie Chaplin. In yesterday world, the great relevance of direct costs to volume such as 1) number of products and 2) Amount of volume related production factors. In today world, the great relevance of indirect costs to activities such as product sustaining and facility sustaining.

  There are two state allocation process (traditional costing system). First stage allocations from overhead to cost centre 1,2,3. Second stage allocations from the cost centre to direct cost (cost object such as products, services and customers).

Traditional systems often systematically **underestimate** the cost for speciality, low volume products and **overestimate** cost of high volume standard products.

Traditional costing systems were appropriate when: 1) Direct costs were dominant 2) Indirect costs were comparatively small 3) Costs for data analytics were high. For the visualization of ABC process, the direct cost were directly flow to the cost object and overhead costs is allocated based on the proportion.

The comparison between traditional and ABC systems are:

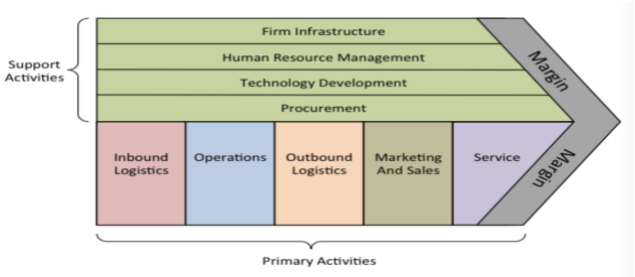
1. Both systems use two stage allocation process
2. First stage: traditional system tend to allocate costs to departments, ABC systems allocate costs to activities
3. Second stage: traditional system tend to rely on small number of volume based cost drivers, ABC systems use many second stage cost drivers.
4. Traditional costing the allocation based on allocation based: direct labour, machine hours etc. ABC's cost driver is activity such as number of transactions, machine shifts, no of product components. Number of setups, standard parts and invoice processed. In addition, the traditional systems often rely on broader and relatively arbitrary allocation bases. It systems merge support and production centre costs
5. Indirect Cost vs Direct Cost. Is Overhead Cost direct or Indirect.

Activity Based Management from ABC

Dealing with unused capacity such as increase production and add production line. However there are issues to be considered such as demand, competition, capital investment and availability of labour.

ABM is based on management decision using ABC information to satisfy customers and stakeholders and improve profits. Product pricing decisions based on cost structure, process improvement and new design decisions.

ABC and Strategy



Operational effectiveness is not a strategy. Strategy is the creation of a unique and valuable position, involving a different set of activities. Strategy requires you to make trade-offs to choose what not to do. Strategy involves creating "fit" among company's activities. Customer profitability analysis uses activity based costing to determine the activities, costs and profit associated with serving particular customers. These customer related costs to help determine the profitability of each customers.

There are limitations for the ABC such as: complicated measurements of activities required to implement system, not all activities can be measured, very detailed ABC systems are costly to set-up and maintain, activity-cost rates need to be

updated regularly. Alber Einstein said that "not everything that can be counted counts, and not everything that counts can be counted"

Steps to design the ABC systems:

1. Identify the major activities that take place in organization:
    a. The activities chosen should be at a reasonable level of aggregation based on cost/benefit criteria
    b. Choice of activities influenced by the total cost of activity centre and the ability of as single cost driver to provide a satisfactory determinant of the cost of the activity.
2. Assign to cost pools/cost centre for each activity:
    a. Costs assigned to activity cost pools will include direct and indirect costs.
    b. Resource cost drivers used to assign indirect costs
    c. Reliability of cost information will be reduced if arbitrary allocations are used to assign a significant proportion of costs to activities.
3. Determine the cost driver for each major activity:
    a. Drivers at this stage called activity drivers. They should:
        i. Provide a good explanation of costs of each activity pool
        ii. Be easily measurable
        iii. The data should be easy to obtain and identifiable with the product
4. Assign the cost if activities to products:
    a. The cost driver must be measurable so that it can be identified with individual products.

ABC and Strategy: Porters's Competitive Forces below.

Target Scope	*Advantage*	
	Low cost	Product uniqueness
Broad (Industry Wide)	**Cost Leadership Strategy**	**Differentiation Strategy**
Narrow (Market Segment)	**Focus Strategy** (low cost)	**Focus Strategy** (differentiation)

- Exam Question

1. 2016:

Explain why activity-based cost systems provide more accurate cost information about business activities and processes than do traditional cost systems.

Answer:

ABC systems allocate costs to activities and use many second stage cost drivers. There are also cost pools in ABC. The cost driver in ABC is activity such as no of transactions, no of machine shift, number of product components, number of set ups, number of non-standard parts and invoices processed. Therefore it is traceable

for each cost incurred for each particular product (in this sense, it is more accurate for product mix decision).

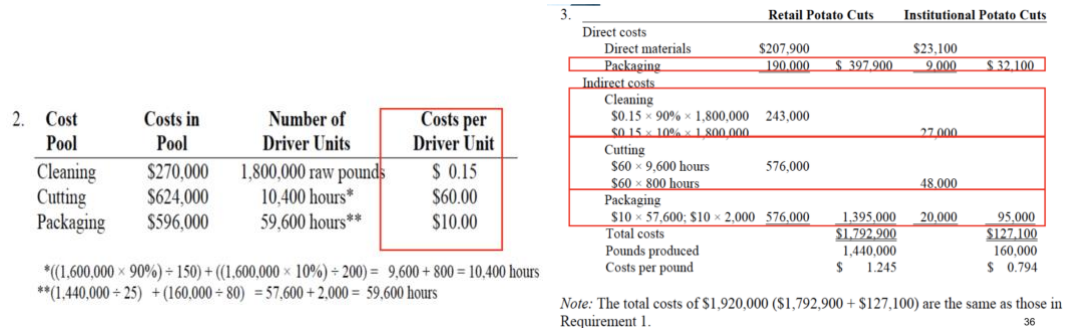
ABC systems seek to only use cause and effect drivers. ABC establishes separate cost driver rates for support departments. Using ABC, the company can implement activity based management to increase production and add product line with the unused capacity. ABM decision using ABC information satisfy customers and stakeholders and improve profits. Product pricing decision for cost structure is more accurate. There will be process improvement and new design decision. This ABC create fit in the company.

ABC and its cost driver enable companies to calculate the customer profitability analysis too. A company may use customer related costs to help determine the profitability of each customer.

Lets see on Southwest Airline that ABM lead to:

1. Limited passenger service
    a. Frequent, reliable departures
    b. Lean, highly productive ground and gate crews
    c. High aircraft utilization
    d. Very low ticket price
    e. Short haul, point to point, routes between midsize cities and secondary airports.

Please see on the following illustration of ABC calculation (not related with above):



2.

Cost Pool	Costs in Pool	Number of Driver Units	Costs per Driver Unit
Cleaning	$270,000	1,800,000 raw pounds	$ 0.15
Cutting	$624,000	10,400 hours*	$60.00
Packaging	$596,000	59,600 hours**	$10.00

*((1,600,000 × 90%) ÷ 150) + ((1,600,000 × 10%) ÷ 200) = 9,600 + 800 = 10,400 hours
**(1,440,000 ÷ 25) + (160,000 ÷ 80) = 57,600 + 2,000 = 59,600 hours

3.

	Retail Potato Cuts		Institutional Potato Cuts	
Direct costs				
Direct materials	$207,900		$23,100	
Packaging	190,000	$ 397,900	9,000	$ 32,100
Indirect costs				
Cleaning				
$0.15 × 90% × 1,800,000	243,000			
$0.15 × 10% × 1,800,000			27,000	
Cutting				
$60 × 9,600 hours	576,000			
$60 × 800 hours			48,000	
Packaging				
$10 × 57,600; $10 × 2,000	576,000	1,395,000	20,000	95,000
Total costs		$1,792,900		$127,100
Pounds produced		1,440,000		160,000
Costs per pound		$ 1.245		$ 0.794

Note: The total costs of $1,920,000 ($1,792,900 + $127,100) are the same as those in Requirement 1.

36

2. 2015:

Explain and assess the use of activity based costing techniques as the basis for cost management.

However ABC strength mentioned above, it has some limitations below:

1. Complicated measurements of activities required to implement system
2. Not all activities can be measured
3. Very detailed ABC systems are costly to set-up and maintain. It leads more labor, administration etc.
4. Activity cost rates need to be updated regularly that is time consuming.

Some industry could be appropriate using ABC some is not. Find journal which industry appropriate using ABC?

3. 2014:
Outline a case for the superiority of activity based costings over more traditional costing systems.

This answer is almost similar with 2016 questions. ☺

- Case Study

1. Exercise Page 214 Horngren
2. Exercise Page 216 Horngren

- Calculation (Ex 5.27)

1. Direct costs
   Direct materials $ 231,000
   Indirect costs
   Product support 1,689,000
   Total costs $1,920,000

Cost per pound of potato cuts $= \frac{\$1,920,000}{1,600,000} = \$1.20$

2.

Cost Pool	Costs in Pool	Number of Driver Units	Costs per Driver Unit
Cleaning	$270,000	1,800,000 raw pounds	$ 0.15
Cutting	$624,000	10,400 hours*	$60.00
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Note: The total costs of $1,920,000 ($1,792,900 + $127,100) are the same as those in Requirement 1.

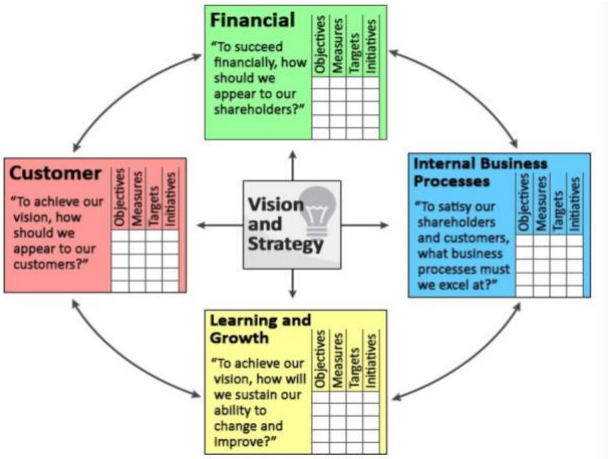
Cost per Pound	Retail	Institutional
Simple costing system	$1.20	$1.20
ABC system	$1.245	$0.794

36

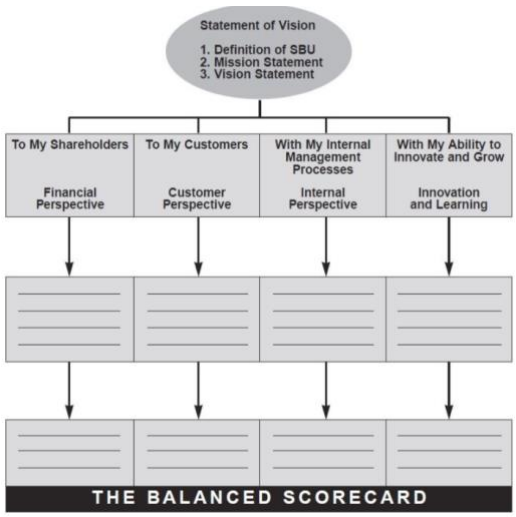
	Retail	Institutional
Direct costs		
Direct materials	11.6%	18.2%
Packaging	10.6	7.1
Indirect costs		
Cleaning	13.6	21.2
Cutting	32.1	37.8
Packaging	32.1	15.7
Total costs	100.0%	100.0%

Balance Scorecard

- Content
  Integrated systems for performance measurement and the role of performance metrics. Embed performance measurement in the management system. Performance measurement and strategic communication. Bad execution in the field.

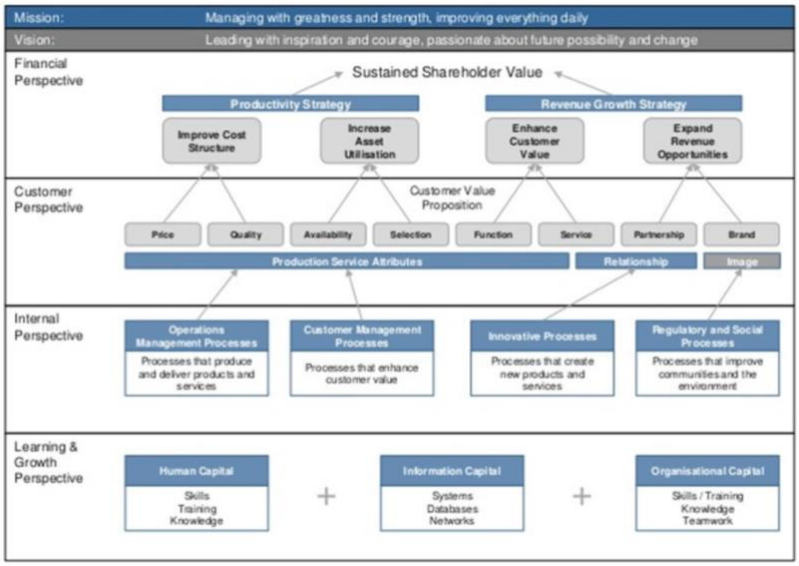


Balance scorecard as a strategic management system starting from the mission or vision then down to strategies, down to goals/objectives and down to measures. There is a way to link measurement to strategy.



The following is the strategy maps of the organization's strategy. The sustained shareholder value divided between productivity strategy and revenue growth strategy. Customer perspective include price, quality to improve the cost structure, availability and selection to increase asset utilisation, function and service to enhance customer value, partnership and brand to expand revenue opportunities.

Internal perspective includes operations management process and customer management processes to support production service attributes. Innovative process for relationship and regulatory and social processes for image. Learning and growth perspective include all of them: human capital, systems databases network and organisational capital.



Strategy Map: Diagram of the cause and effect relationships between strategic objectives. Objectives is statement of what strategy must achieve and what's critical to its success. Measurement is how success in achieving the strategy will be measured. Then target is the level of performance or rate of improvement needed, key action programs required to achieve objectives (cycle time optimization). How to benefit from uncertainty is that entrepreneurship is the ability to keep multiple evaluative principles at play and to exploit the resulting friction of their interplay. A strategy map is visual tool that describes how the organization creates value by linking strategic objectives in cause and effect relationships. BSc looks like the cockpit of F135 which many tools you can operate.

Learning and growth to value our staff measures employee retention index, to maximize productivity to measures output per head, to develop a skilled workforce a number of training hours completed per head, to provide internal information availability survey index, to create organisational alignment peer evaluation measures within between teams, to cultivate a core competence in skill and technology measures related to desired competence.

Internal business processes to continually challenge competitor products in the market place time to market for next generation of product, to compete on product reliability production defect rates, to compete on competitive logistic capabilities stock replenishment cycle times, to compute on product delivery channel mix volumes of transactions conducted through each of our delivery channels.

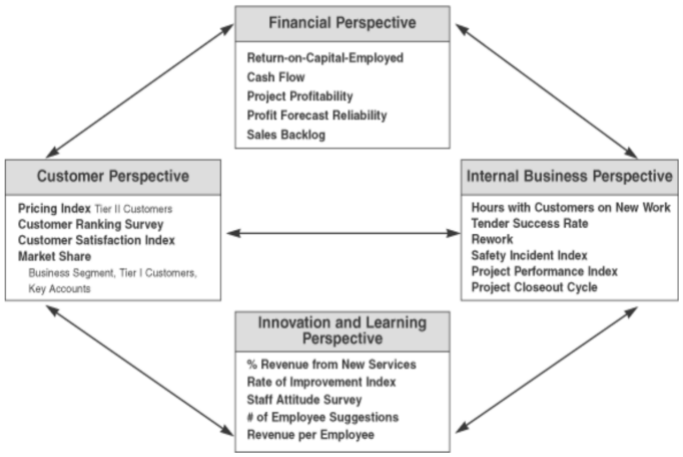
Customer objective to dominate our major market measures market shares, to delight our targeted customers customer satisfaction survey results, to increase revenue through repeat purchases customer retention over time. BSC is also communication tools: MNEs, decentralization or centralization.

Key pitfalls to avoid the failure of balance score card is in the process such as:1) Not driven by senior executive team, only one or a few individuals involves, too long a development process delay introduction because of missing measurements, static not dynamic process. The philosophy is measurement to control not to communicate. Management dictating actions vs employee improvisation to achieve desired outcomes, for management only, not shared with all employees.

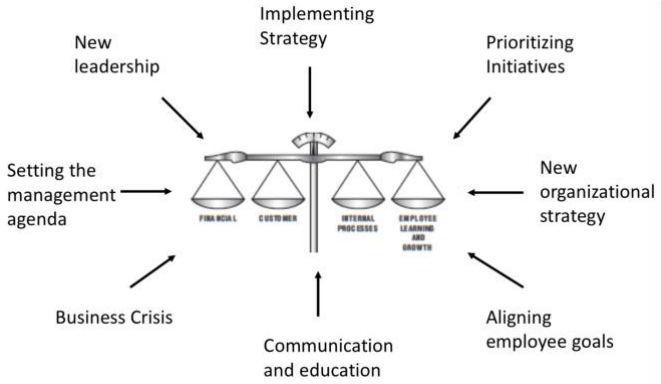
Critique of balance score cards is about sustainability, social dimensions, reductionist and functionalist. Several leading oil companies wanted to develop long partnerships with their suppliers rather than choose suppliers based on low-price competition.

Rockwater's strategic objectives: the vision, strategy that goes to 4 aspect of balance score cards: growth, internal, customers and financial. Measures project life cycle from the beginning such as number of hours spent with prospect discussing new work, tender success rate, project performance effectiveness, length of project closeout cycle.

Sample of Balance Score Card in the Rockwater's company:



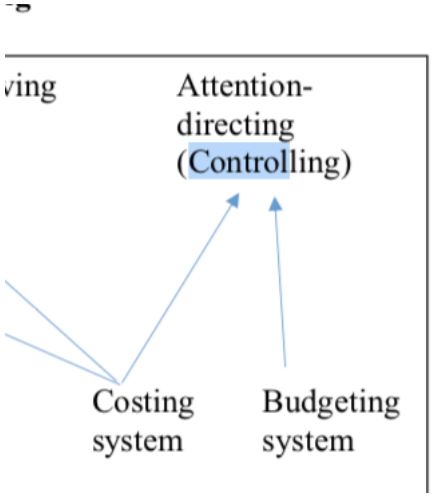
In the Apple case, BSC is used to measure the customer satisfaction. The balanced scorecard and strategy maps. The balance in the balance scorecard is financial vs non-financial issues, tangible vs intangible assets, long term vs short term objectives, internal vs external perspective, performance driver's vs outcomes.



- Exam Question

1. 2016:
   In managing an organization and its members, a business uses different control tools to guide the members' performances. Critically discuss the factors an organization should consider when defining the control tool(s) to use, and the impact that the different control tools might have on the individual and organization performance.

Answer:



Use of financial accounting system for planning and control
Business Characteristics:
1. single or simple products
2. simple organisation structure
3. mainly involve buying and selling

Simple cost and management systems
Business Characteristics:
1. multi-stage production process within an organisation relatively capital intensive .
2. specialised workers involved in specialised manufacturing activities.
3. head office may be located away from factories
4. manufacturing relatively homogeneous products
5. efficient production
6. measure mainly input resources to output
7. performance relies mainly on some highly summarised measures
8. stable manufacturing environment

Information assist managers in their organizational planning and control activities as well as performance measurement
1. for internal uses
2. timeliness

3. planning
4. opportunity costs, and estimates
5. internal information needs

Contingency Theory

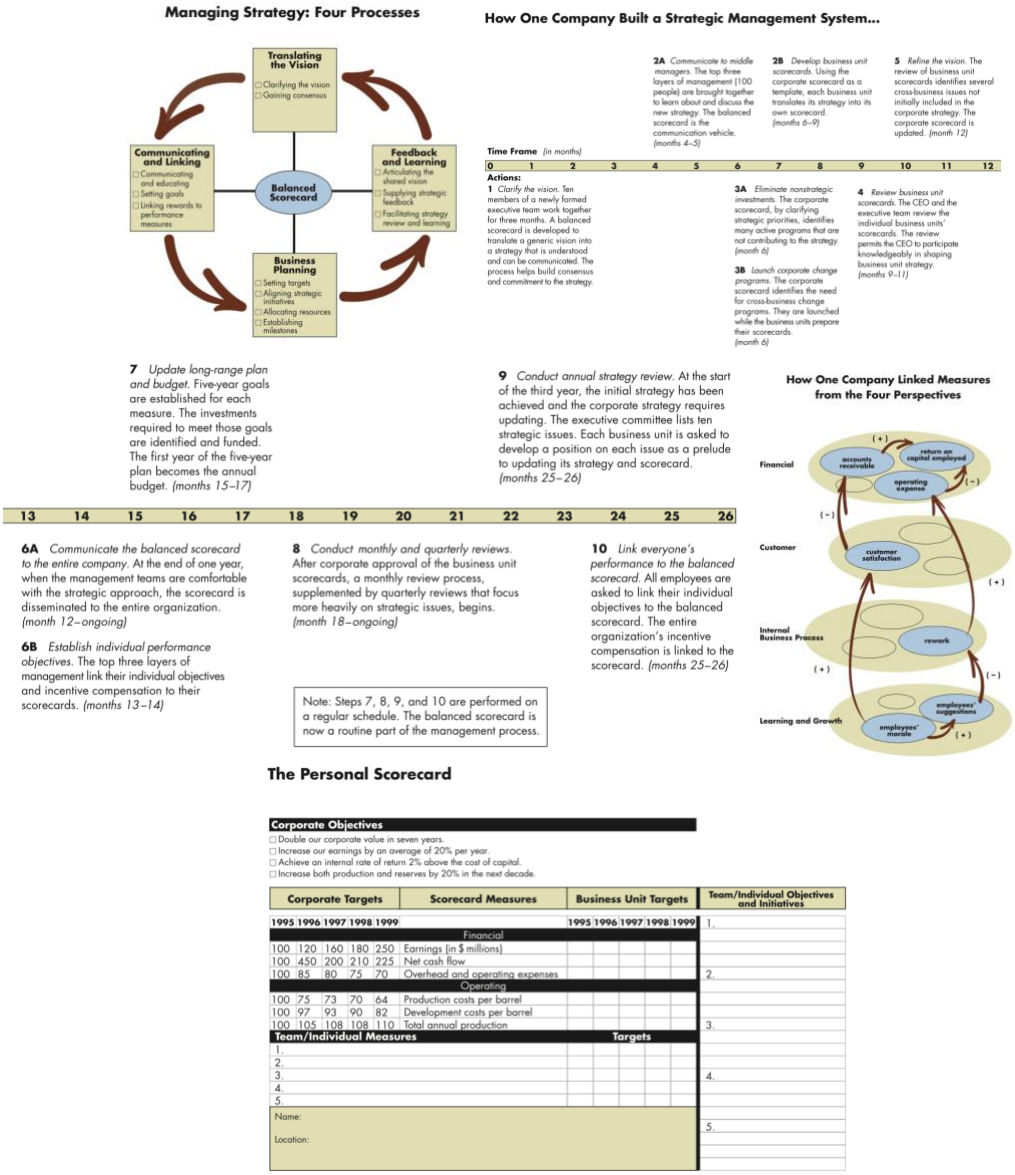
1. No 'best' way to structure organization -It depends on how the variables 'fit'
2. A contingency theory must identify specific aspects of an accounting system which are associated with certain defined circumstances and demonstrate an appropriate matching
3. The use of contingency theory would suggest that organizations align their systems and processes with their environment (external factors) and strategy (internal factors), and that the effectiveness of MAS will depend on the extent to which the MAS's characteristics meet the requirements of the various contingencies faced by the organization.
4. It specifies meaningful system and organizational characteristics that impact actual usage patterns and the capability of these systems to improve the quality, effort or timeliness of decision making and performance
5. Does not capture the complexity of control and decision- making processes within organizations as they ignore important aspects of human behaviour such as intuition, hunch, habit and culture.
6. Variables examined include environment, technology, organizational characteristics, decision style, systems characteristics and MAS effectiveness
7. Issues: What variables? How to measure the variables, e.g., effectiveness? Static nature of relationships of variables

- Case Study
  Solving cost crisis issues in health care,

- Calculation (No Calculation)

Strategy Execution

- Content
  How one company linked measures from the four perspective (Kaplan and Norton, 1996)
  1. Lofty vision and strategy statements don't translate easily into action at the local level
  2. The personal scorecard helps to communicate corporate and unit objectives to the people and teams performing the work
  3. Building a scorecard enables a company to link its financial budgets with its strategic goals



The Personal Scorecard

Corporate Objectives
☐ Double our corporate value in seven years.
☐ Increase our earnings by an average of 20% per year.
☐ Achieve an internal rate of return 2% above the cost of capital.
☐ Increase both production and reserves by 20% in the next decade.

Corporate Targets					Scorecard Measures	Business Unit Targets					Team/Individual Objectives and Initiatives
1995	1996	1997	1998	1999		1995	1996	1997	1998	1999	1.
Financial											
100	120	160	180	250	Earnings (in $ millions)						
100	450	200	210	225	Net cash flow						
100	85	80	75	70	Overhead and operating expenses						2.
Operating											
100	75	73	70	64	Production costs per barrel						
100	97	93	90	82	Development costs per barrel						
100	105	108	108	110	Total annual production						3.
Team/Individual Measures					Targets						
1.											
2.											
3.											4.
4.											
5.											
Name:											5.
Location:											

- Exam Question
  1. 2016
     Discuss how Balance Scorecard can help company to translate its mission and strategy into objectives and measures.

     Remember that Balance Score card have 4 measures by including 3 that are not financial measures, because 4 measures are more suitable for long term vision. 4 measures that should be taken into account are: Financial perspective, Customer perspective, Internal perspective and Learning and Growth perspective. All 4 measures here driving to achieve the vision or long-term goal of the companies.

     We should use strategy map of balance score card (include horizontal and vertical alignment) and 4 processes managing it (Translation vision, Communication and Linking, Business Planning, Feedback and Learning).

     Financial Perspective:

1. Objectives: Profitability, Grow Revenues, Fewer Planes
2. Measures: Market value 30%CAGR, Seat Revenue 20%CAGR, Plane lease cost5%CAGR

Customer Perspective:

1. Objectives: Attract and retain more customers (Net Promoter Score), Flight is on time, lowest prices
2. Measures: Number of repeating customer (70%), number of customer (increase 12% annually), FAA on time rating (1), Customer ranking (1)

Internal Perspective

1. Objectives: Fast ground turnaround
2. Measures: On ground time (30 minutes), On time departure (90%)

Learning and Growth Perspective

1. Objectives: Develop the necessary skills, Develop the support system, Ground crew aligned with strategy.
2. Measures: Strategic job readiness (1Yr-70%) (3Yr-90%) (5Yr-100%), Info system availability 100%, strategic awareness 100%, ground crew stockholders 100%

2. 2015

Identify the main factors which determine the nature of management accounting system and explain how they exert influence and practice.

Management accounting is used by managers for:

1. Develop, communicate and implement strategies
2. Coordinate product design, production, marketing decision and evaluate company's performance.

Management accounting information helps managers formulate strategy by answering questions such as the following:

- *Who are our most important customers, and how can we be competitive and deliver value to them?* After Amazon.com's success selling books online, management accountants at Barnes & Noble outlined the costs and benefits of several alternative approaches for enhancing the company's information technology infrastructure and developing the capability to sell books online. A similar cost–benefit analysis led Toyota to build flexible computer-integrated manufacturing plants that enable it to use the same equipment efficiently to produce a variety of cars in response to changing customer tastes.
- *What substitute products exist in the marketplace, and how do they differ from our product in terms of features, price, cost, and quality?* Hewlett-Packard, for example, designs, costs, and prices new printers after comparing the functionality and quality of its printers to other printers available in the marketplace.
- *What is our most critical capability? Is it technology, production, or marketing? How can we leverage it for new strategic initiatives?* Kellogg Company, for example, uses the reputation of its brand to introduce new types of cereals with high profit margins.
- *Will adequate cash be available to fund the strategy, or will additional funds need to be raised?* Procter & Gamble, for example, issued new debt and equity to fund its strategic acquisition of Gillette, a maker of shaving products.

The nature of management accounting is to help managers make decisions to fulfil an organization's goal. The primary users is managers of the organization (internal). Focus and emphasis is future oriented (budget 2014 prepared in 2013). Rules of measurement and reporting is internal measures and reports that do not have to follow GAAP but are based on cost benefit analysis. Time span and type of reports are varies from hourly information to 15 to 20 years, with financial and non-financial reports on products, departments, territories and strategies. The behavioural implications is designed to influence the behaviour of managers and other employees.

3. 2014
   Evaluate the balance scorecard as a basis for a corporate performance measurement system.

   Usefulness of BSC
   1. BSC as strategic management system
   2. BSC as measurement system
   3. BSC as communication tool

   Key Pitfall to avoid
   1. Not driven by senior executive
   2. Only one or a few individual involved
   3. Too long a development process delay introduction because of missing measurement
   4. Static not dynamic process

   Critiques
   1. Is it sufficient for managing complex stakeholders?
      The publication of the Balanced Scorecard in 1996 highlighted this. It argued that a broader range of strategic and operational metrics are required to make effective management decisions and understand the relationship between financial performance and process performance, customer performance and relationships, and the development of human skills (learning and growth).

      However, many implementations of the scorecard approach failed to make a difference, and there may be some lessons here for adoption of integrated reporting (as an example, see "A Critique of the Balanced Scorecard as a Performance Measurement Tool"). For the scorecard approach, little value was gained if the measures adopted were not linked to strategy and, thus, decision making and alternative choices. If governance and culture weren't impacted then management failed to gain support for strategic shifts. If financial measures remained dominant, trade-off decisions would be biased toward continued short term benefits. In my 2005 book, *Governance, Accountability, and Sustainable Development*, I highlight the governance issue and suggested the need to expand the management lessons learned through broader reporting to the level of broad-based governance.

      For integrated reporting to make real change it must result in a different set of decisions. If, like many scorecards, the integrated report is

either only populated with "available" metrics and/or becomes an end in itself, then it will probably fail in its goal of changing outcomes. Worse still, if the focus becomes one of compliance and audit then it can easily become another costly burden for business that adds little value and fails to impact decision making and corporate behavior. So what is the *actual* desired outcome of integrated reporting? Certainly not the report itself. The need for an integrated approach comes from a pedigree that includes recognition that:

- financial accountability no longer fully represents corporate accountability;
- an effective organization manages a portfolio of resources in order to operate—one of which is financial capital but also includes human, intellectual, relationship, natural, and manufactured capitals;
- for an investor, there may be unknown risks associated with the maximization of financial returns while other capitals required for sustainability are depleted;
- continuing to treat "externalities" as costs for society to bear is no longer socially acceptable nor feasible for global survival; and
- ignoring intangibles can in fact result in destruction of organizational value, shareholder wealth and sustainable capacity (in this case, intangibles is used in the broader sense than those recognized under GAAP, IFRS, and the US Financial Accounting Standards Board).

So for integrated reporting to be effectively implemented, the metrics developed must be strategic in nature and directly linked to the drivers of organizational value and sustainability. This requires adoption and complete understanding from investors so that as an interested party, they start asking the right questions. In many situations, being asleep at the wheel can be caused by not knowing what you don't know. If investors don't understand the interaction of the organizational resources used to create and sustain value, it is going to be hard to support the required strategies for sustainability.

A key challenge for leadership—both managers and investors—will be making the right decisions. Business attempts to operate on a level playing field and, within this, to make decisions that gain a competitive advantage. This in itself is a challenge in a global business environment with a wide range of differing legislative frameworks. Survival is about making the right decisions and balancing financial returns, which drive access to capital with sustainable decisions both for the business and for society. Successful organizations will be those whose decision makers are closest to the societies and communities within which they operate, know the drivers of organizational value and sustainability, and can make fast and informed decisions.

https://www.ifac.org/global-knowledge-gateway/business reporting/discussion/integrated-reporting-will-it-make-difference

2. Questionable cause and effect relationship?
3. Political factors?
4. Why these dimensions? Random selection?

- Case Study
  - St Mary's Duluth Clinic
    The issues are:
    - Board of director confused and unfocus with their role
    - Management and employees had no idea about focus and direction
    - Declining financial performance and emerging resource strains
  - Volkswagen do Brasil: Driving Strategy with the Balanced Score Card (Kaplan and de Pinho, 2010)
    (2) What challenges does Thomas Schmall face upon becoming CEO of Volkswagen Brazil?
    (3) What is Volkswagen Brazil's new strategy?
    (4) How well do the strategy map and BSC capture VW Brazil's new strategy?
    (5) How is accountability practiced as part of strategy execution?
    (6) How did VW Brazil link issues of communication to strategy execution practices?
    (7) What other actions did VW Brazil take to support strategy execution?

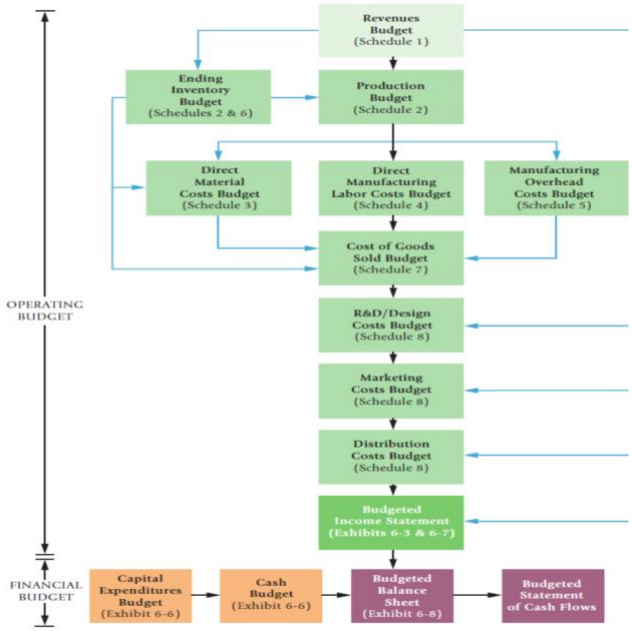
- Calculation
  1. Financial: ROCE, Cash Flow, Profitability, Forecast, Sales Backlog
  2. Customer: Pricing Index, Customer Satisfaction Index
  3. Internal Business Perspective: Safety Incident Index, Tender Success Rate, Rework rate
  4. Innovation and Learning Perspective: %Revenue from New Sales, Number of employee suggestion revenue per employee.

Budgeting

- Content

  What budget can do is the learning machine: 1) imagine the market, the organization, the society and the future, 2) set and communicate goals and targets 3) motivate and control 3) political bargaining 4) manipulation.

  There are two type of budget such as 1) the master budget is an accumulation of lower level budget, translated into financial statements 2) lower level budgets address various planning concern.



There are two insights from behavioural economics planning and biases: 1) Confirmation bias, Optimism bias is the tendency to search for, interpret and favour information in a way that confirms one's pre-existing beliefs and hypothesis 2) Optimism bias causes a person to believe that they are at a lesser risk of experiencing a negative event compared to other.

Optimism bias plus confirmation bias called planning fallacy. It is the tendency for:

1. Underestimate time, costs and risk of future actions and overestimate benefits of same actions
2. Defining feature: people recognize that past predictions were over-optimistic, but still insist that predictions are realistic
3. Recently linked to issues of CEO overconfidence, overvaluation, forecasting errors and corporate frauds

Perhaps the biggest problem in understanding planning is the question of power. A man who neglects what is actually done for what is actually done for what should be done learns the way to self destruction.

Budgeting driven top-down by technical experts, defined in practice by bargaining and manipulation, small mistakes can cause huge losses (rely on skills of few planners). Rationalization presented as rationality is a principle strategy in the exercise of power.

- Case Study
  F35 case as the most expensive military weapons programme in history: cost over lifetime at 1.5 trillion. This military weapons is too big to fail because it might be well be the first modern fighter to have substantially less performance than its predecessors.

The second case is about the Porto Alegre provide the example of Participatory budgeting are 1) instead of relying on a few, all powerful central planners, budgeting decision are localized, 2) neighbourhood budgeting assemblies and city budgeting assemblies, 3) allows people to identify projects and provides decision making power about spending 4) diffusing power and decentralizing RM.

The results of participatory budgeting is:

1. Massive shift in public spending towards poorest city regions
2. Corruption indicators significantly down
3. Tax compliance increased among middle class and rich
4. Increased satisfaction with basic needs provision, higher quality of life
5. Tens of thousands of citizens repeatedly participating in budgeting deliberations

Roles of budget in different scenarios:

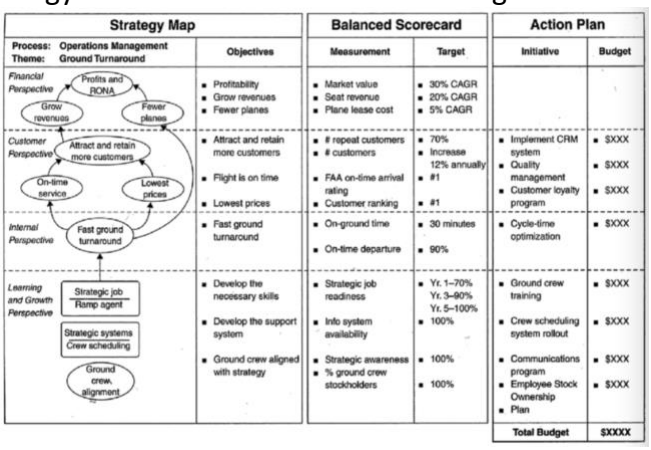
1. Answer machine
2. Ammunition machine
3. Rationalization machine
4. Learning machine

Flexible budget is a budget designed to cover a range of activity. It can be used to compare actual costs incurred to budgeted costs around that level of activity.

Zero based budgeting are:

1. A budgeting approach that assumes the starting point for each budget item is zero
2. Essential feature is a review of the necessity of each expenditure element or activity as part of the budgeting process
3. More costly but more strategically sound.

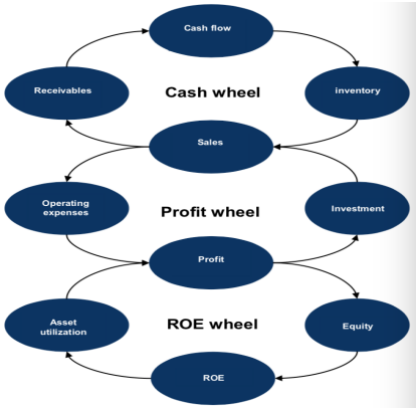
Budgeting and Strategy in the horizontal and vertical alignment:



Budgeting tools: Profit Wheel Analysis

1. **Cash Wheel**
   addresses a basic question: will the budget plan run into liquidity problems?
   - Operating cash flow cycle: sales generate accounts receivable which is eventually turned into cash to manufacture inventory, generating more sales.
   - Steps:
     - Estimate net cash flow from operations
     - Estimate cash needed to fund growth in new assets
     - Estimate financing needs and interest payments
     - Net cash inflows and outflows
2. **Profit Wheel**
   - Steps:
     i. Estimate the level of sales
     ii. Forecast operating expenses
     iii. Calculate the expected profit
     iv. Test key assumptions, perform a sensitivity analysis to estimate how profit might change when assumptions are under or overstated.
   - Profit wheel: helps forecasting sales and expenses
   - Necessary to calculate profit and determine the level of investment to achieve plan
   - Facilitates discussions about assumptions that may otherwise be left unchallenged.

3. **ROE Wheel (Graph charting for ratios could be informative)**
    - Ensures that the budget gives adequate rewards to providers of capital
    - Is ROE in line with the objectives of the firm and with other current and past competitors
    - ROE: Net Income / Average shareholder equity.
    - Can be further broken down to gain additional information
    - According to DuPont, 3 key elements shape changes in ROE: Operating efficiency (net income/sales), asset use efficiency (sales/assets), financial leverage (assets/equity).



There is integration of primary financial measures and ratios: 1) sales, 2)net income 3)cash flow, 4)ROE, 5)Operating efficiency (Net Income/Sales) 6) asset use efficiency (sales/assets)

Reference class forecasting predicts outcome of planned actions based on actual outcomes in a reference class of similar past actions. Remember that human judgment generally optimistic due to overconfidence, optimism and confirmation biases. Helps taking an outside view.

In summary, the learning outcomes are:

1. Understand the structure of the master budget and how it relates to lower level budgets
2. Conceptual and behavioural issues commonly leading to budgeting and cost overruns
3. Ways to mitigate these challenges, relating to the design and specific techniques to control budgeting process.

- Empirical Evidence
- Exam Question

1. 2016: Within the managerial planning and control process (or budgeting process), the reporting, analysis and feedback is often neglected. Explain why this occurs and discuss the possible consequences of such neglect.

    Answer:

    The reporting, analysis and feedback will involve political bargaining and debates that takes much time to reach consensus.

"A man who neglects what is actually done for what should be done learns the way to self-destruction" A question of power.

Reporting, analysis and feedback is often neglected because of confirmation bias (tendency to search favour information in a way that it confirms pre-existing beliefs and hypothesis) and optimism bias (causes a person to believe that they are at lesser risk of experiencing a negative event compared to other) that sum of these equal to Planning Fallacy (Political). In addition, rationalization presented as rationality as principle strategy in the exercise of power. The planning fallacy resulted in: underestimation of cost, over optimistic from past, overvaluation and forecasting error.

Because there is possibility that the actual over than budget because two things happen below:

1. Projects commonly systematically misinform parliaments to get approved
2. The formula of approval undervalue environmental and overvalued economic effects

Budgeting driven 'top-down' by technical experts, but defined in practice by bargaining and manipulation. Small mistakes can cause huge losses: reliance on skills of few planners. Control and accountability. Rationalization to exercise power. What is budgeting role in balance score card.

We need participatory budgeting

Reporting, analysis and feedback takes time and involve political process. However, sound budgeting process should be participatory from the low level organization to higher level organization for final approval. In has been proven by Porto Aleguarto that participatory budgeting lessen the corruption. Budgeting should be:

i. Distributes leadership, responsibility, accountability and control
ii. A participative tool for empowerment, motivation and communication
iii. Technique for scenario planning and adaptation to complex challenges

2. 2015: No Question
3. 2014: No Question

- Calculation
  1. Cash Wheel
  2. Profit Wheel
  3. ROE Wheel: Operating Efficienct, Asset use Efficiency, Financial Leverage
  4. Net Income
  5. Operating Efficiency (Net Income / Sales)
  6. Asset use efficiency (Sales / Asset)

- Case
  1. Gordon Brown
  2. Porto Alegre

3. F35

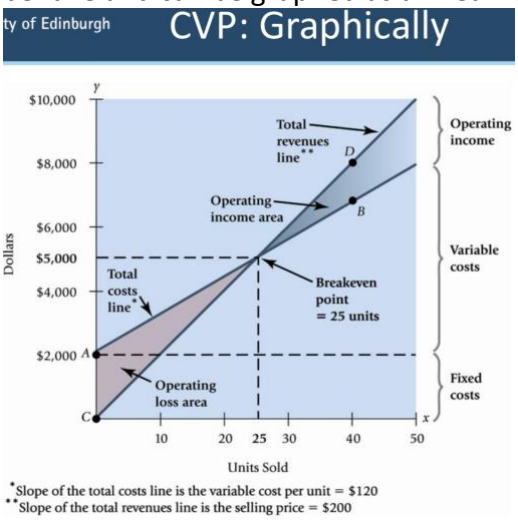
Cost Volume Profit Analysis

- Content

  Features of CVP analysis, breakeven point and output level for target operating income, and how managers use CVP analysis to make decisions and cope with uncertainty.

  CVP is also a decision making tool (use what-if analysis to examine the possible outcome) to answer key questions such as:
  1. What happen if we change price?
  2. What happen if the quantity of units sold changes?
  3. What if we want to make an investment and increase fixed costs?

  Foundational Assumptions in CVP
  1. The cost consist of fixed variable costs
  2. Changes in production/sales volume are the sole cause for cost and revenue changes
  3. Revenue and costs behave and can be graphed as a linear function (a straight line)



Cost Volume Profit Equation, keep in mind the equation below. Revenue is selling price multiply with quantity of units sold. Variable cost is unit variable costs multiply with quantity units sold. Contribution Margin is revenue minus variable costs. Operating income is contribution margin minus fixed costs.

(Selling Price * Quantity of Units Sold) - (Unit Variable Costs * Quantity of Units Sold) - Fixed Costs = Operating Income

From basic equations emerges one of the powerful tools in financial management. Contribution margin is the selling minus variable cost. Contribution Margin per Unit is CMu = SP – VCu.

Contribution Margin also equals CM per unit multiplied by number of units sold (Q) (CM = CMu / SP). CM Ratio (percentage) equals CM per unit divided by selling price

- CMR = CMu / SP (how many cents out of every sales are transformed into the Contribution Margin.

Often multiple product sold in different volumes, with different costs. The same formulae are used, but instead use average contribution margins for bundles of product.

Breakeven Point is a point where a firm has no profit or loss at the given sales level. Breakeven is where the sales – variable costs – fixed costs = 0. Breakeven point is the calculation of breakeven number of units: Breakeven units = Fixed costs / Contribution margin per unit.

Breakeven formula can be modified to become a profit planning tool, adding target operating income to fixed cost in the numerator. Fixed costs + target operating income / contribution margin per Unit.

Foundational Assumptions in CVP: Limitations

1. Selling price, variable cost per unit and fixed costs are all known and constant
2. In many cases only a single product is analysed. If many cases only a single product is analysed. If multiple product are studied, their relative sales proportions are known and constant.
3. Ignore environmental and other types of costs
4. The time value of money (interest) is ignored

Breakeven analysis in Oil and Gas industry is very sensitive, different well different breakeven cost. The amount of oil produced from well can also vary one another, therefore wide range of break-even estimates for a single shale oil play. Breakeven in many different wells normally distributed, and drawn as bell shape curve. Different company has different cost structure, those impact the calculation of breakeven analysis.

CVP and Risk (Margin of Safety). This answer the two very important questions:

1. If budgeted revenues are above breakeven point, how far can they fall before breakeven point is reached
2. How far can they fall before we will begin to lose money.

Risk indicator: margin of safety (MOS), measures distance between budgeted sales and breakeven sales. MOS: Budgeted Sales – BE Sales.

Cost structure and Strategic decisions:

1. Managers make strategic decisions affecting cost structures
2. Sensitivity analysis highlights risks as fixed costs are substituted for variable costs in the cost structure.
3. The risk-return trade off can be measured as operating leverage
4. Contribution margin / net operating income

CVP and Risk also show the high operating leverage or low operating leverage. High operating leverage is a significant share of cost are fixed. Companies earn a large profit on each sale. If sufficient sales to reach BEP are generated, significant profits are earned after this point. On the contrary, the Low operating leverage is a significant

share of costs are variable. While the company may earn little profit margins for each sale, it does not have to generate high volumes to cover fixed costs.

CVP provides structure to answer a variety of "what if" scenarios. What happen to profit if Selling price changes, Volume changes, Cost structure changes, Variable cost per unit changes or Fixed cost changes.

Recap on the lectures are technical and assumptions of CVP, sensitivity analysis and using economic decision making.

- Exam Question
  1. 2016: No Question
  2. 2015: Can the technical problem inherent in standard costing and variance analysis be overcome? Set out a case for or against them being overcome.

     Answer:

     a. Non Standardized Production

        Standard Costing is traditionally suited to businesses involved in the manufacture of standardized products in mass production environments.

        Problems arise when standard costing is applied to organizations involved in the production of small batches of customized products because of the lack of historical benchmark standards for the new custom products. While new standards could be developed for every new batch of custom products, the amount of time that would be required to oversee the entire process for products with such short life cycle may not make it practically feasible.

     b. Service Organization

        Standard costing and variance analysis is more difficult to apply to service sector organizations because major portion of their cost is comprised of overhead expenses rather than production expenses (e.g. direct labor cost, direct materials cost, etc). While traditional variance analysis of overheads does not provide very useful information for overheads control purposes, application of newer approaches to standard costing (e.g. use of activity based costing) can provide a constructive basis for variance analysis of overheads in service sector organizations although this may require significant time and investment in the implementation of a management information system that is capable of delivering such information.

     c. Assigning Responsibilities

        Responsibility accounting is a major function of standard costing and variance analysis. Variances could arise for a number of reasons ranging from unrealistic standards (e.g. failing to take into account an expected increase in wage rates) to operational causes (e.g. increase in direct material usage due to hiring of lower skilled labor). Planning inefficiencies that may have caused large variances due to the setting of faulty standards could be dealt with by computing *planning and operational variances* retrospectively. It can however be more difficult to ascertain the precise causes and assigning responsibilities of an operational

variance to a specific individual, department or function within an organization. It may however be argued that although the causes and responsibilities for variances can get blurred at times, variance analysis does provide a basis for investigation that could actually promote a better understanding of the operational environment among an organization's management.

d. Reporting Delay
Variance analysis is usually conducted as part of the annual budgeting exercise. The usefulness of variance analysis as a control mechanism declines as the duration of reporting period increases because the delay in the provision of such information reduces its relevancy for the decision making needs of management. Use of continuous budgeting system can significantly reduce the lead times associated with variance analysis although it might be costly in terms of management time and the resources required to implement an information system with the required functionality.

e. Behavioural Issues
Standard costing and variance analysis may encourage short-termism due to their inherent tendency towards short-term, quantified objectives and results.

A negative perception of an organization's standard costing and variance analysis process can also encourage other sub-optimal behavior among employees such as attempts to incorporate budget slacks.

The behavioral issues associated with standard costing and variance analysis could be managed by involving employees during budget setting so that they do not view the process as unfair. It is also important for an organization's performance measurement system to be based on a wide range of quantitative and qualitative measures so as to encourage management to adopt a longterm view that is aligned with an organization's strategic direction. What is Absorption Costing?

Case For
1. Standardized Production
2. Service Organization
3. Assigning responsibilities
4. Reporting Delay
5. Behavioural Issues

Case Against
1. Non Standardized Production
2. Service Organization
3. Assigning responsibilities
4. Reporting Delay
5. Behavioral Issues

3. 2014: No Question

- Case Study:

A. Big Decisions and the Future of Energy

Renewable energy sources such as solar and wind power, have been available for a long time. Public policies and energy subsidies? This is the big questions

1. How to decentralize energy generation and distribution
2. Encouraging private investment
3. Subsidies to safe money in the future

B. Construction Fly Ash Brick Project

1. The actual production depends on market demand, he and his partner Alok Gupta estimate that 2.4 million bricks can be sold at a price of Rs 7000 per 1000 bricks. Is this feasible. The expenses analysed includes:
    a. Initial Investment
    b. Fixed Cost per Year
    c. Variable Cost
2. Breakeven point (CM/BEP), ROE (Return on Equity),

- Calculation
    1. Breakeven, Point, ROE

- Empirical Study

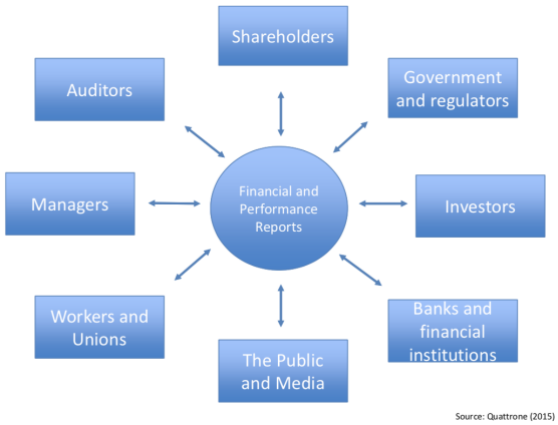
Accounting, Sustainability and Ethics

- Content

  There is a need for future change of financial reporting because it fails to deliver it "promises". One of solutions offered in this course is Integrated Reporting as emerging trend. There are still opportunities and challenges implementing this. The example of company that use this reporting format is Aegon Asset Management Case Study.

  In financial and performance reporting, stakeholders often have conflicting goals, including profitability, services, quality, cost containment, convenience and satisfaction. Lack of clarity about goals has led to slow progress in performance improvement (Michael Porter). There is a paradigmatic case of controls failure related with the management accounting such as 1) Institutional control failure 2) Organizational controls failure 3) Social controls failure.

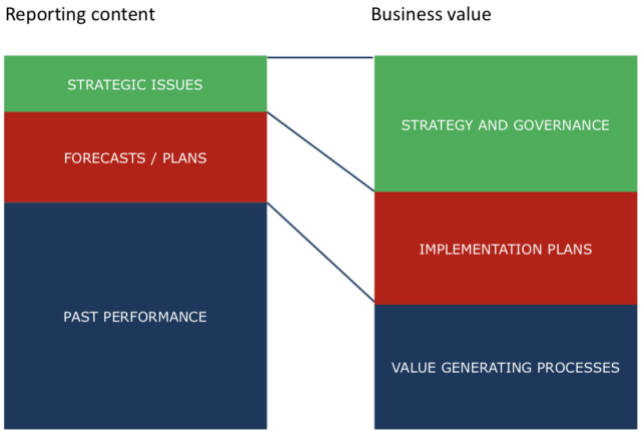
  Please find below for the complexity of Financial Reporting and Management: Theory



We can learn from management accounting failures such as:

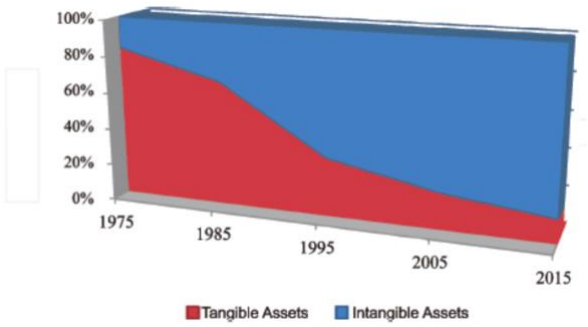
1. A need for precise and accessible financial reporting statements <> An attentiveness towards the elements the statements hide.
2. A need for transparency and risk management <> The awareness of their insufficiency.
3. A need for trust in independent and objective views or audits <> A scepticism about their functionality.

There is a mismatch between reporting and value generator (reporting content and business value) in management accounting world.



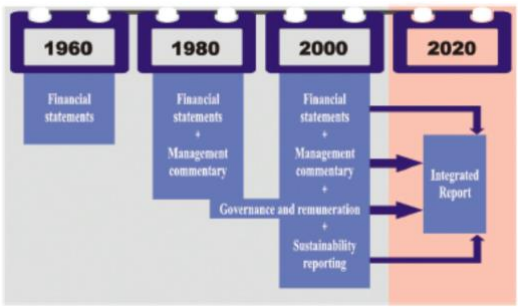
Accounting standard setter:
"If economy and society are so complicated, why should accounting statements be so simple?"

Capitalism without Capital (disruptive companies) such as Uber, Facebook, Alibaba, Airbnb. The trend of tangible assets own by company decrease because it is owned by people, then the intangible asset is rising.

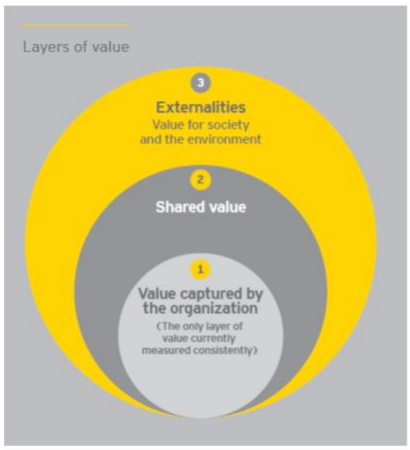


2017 KPMG Survey of Corporate Responsibility Reporting: “We reviewed reporting from almost 5000 companies worldwide. One key finding is that three quarters of companies worldwide are yet to acknowledge climate change as a financial risk in their annual reports.

The evolution of Reporting scheme below (financial reports, sustainability reports and integrated reports):

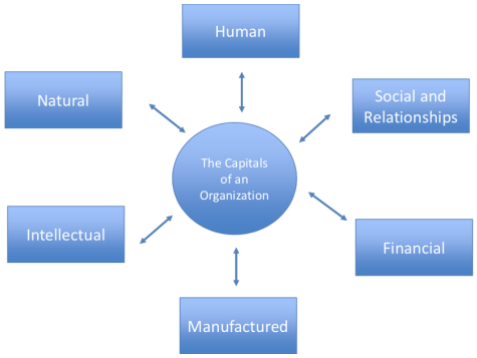


If we graph the integrated reporting, it will look like this one below:



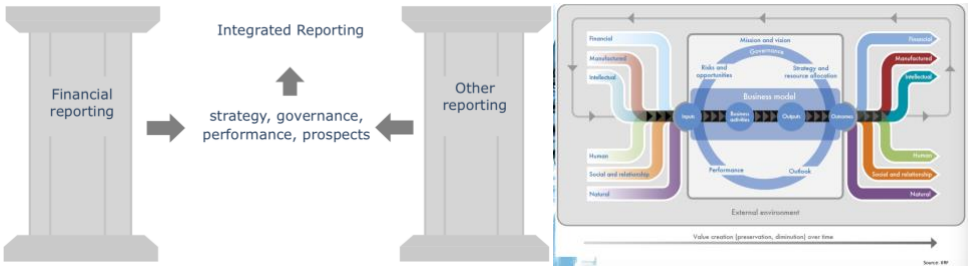
Source: EY (2017)

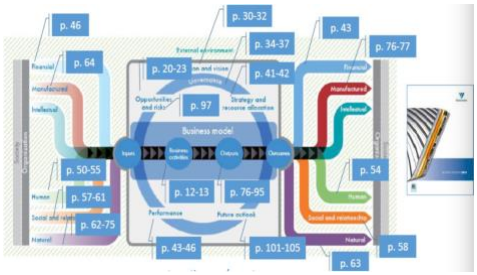
The capital in organization is not only in terms of money but see below:



Quotes from Edzard Reuter, former CEO of Daimler, 1987: “The company has an equal responsibility for the providers of capital, the employees and the environment. This has to be reflected in the reporting.

The two pillars show the integrated reporting and integrated thinking.





There is no current standard regulate the integrated reporting. There is two integration below:

A. Integrated Reporting is the concise communication about how strategy, governance, and performance in the context of external environment, lead to the creation of value in the short, medium and long term.
B. Takes into account the relationships and interdependencies between factors that affect the ability to create value: 1) Capitals 2) Stakeholder’s need 3) External environment 4) Value creation and performance.

Embracing uncertainty and integrated thinking: “A lot of times, people don’t know what they want until you show it to them”. “Where the organizational is turbulent and there is uncertainty about what might constitute a resource under changed conditions, contending frameworks of value can themselves be a valuable organizational resource.

The objective of IR is to

1. improve the quality of information,
2. communicate materiality,
3. enhance accountability and
4. integrated thinking for value creation.
5. Breaking down silos
6. Reporting on intangibles
7. Increase transparency
8. Complying and communicating

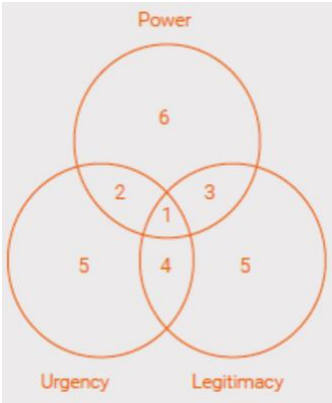
Barriers of Recognizing Plural Forms of Capital and Value

1. Measurement complications: how to capture value?
2. Integrating quantitative and qualitative information
3. Difficult to understand
4. Simply more information
5. Balance profit vs social implications

Integrated Reporting

1. Inevitable, importance to make it productive and embrace it
2. Under increasing uncertainty, pretence of simplicity no longer rational or appropriate financial reporting and management
3. Shift to focus on multiple forms of capital long overdue as sustainability concerns are major contemporary importance
4. No magic formula exist, but this is no excuse for inaction
5. New form of politisation in investment decision making

Stakeholder Power, Urgency and Legitimacy



- Exam Question
  1. 2016: During the last decade, sustainability has grown in relevance due to social pressure on corporations to engage in sustainable activities. It is suggested that 'ethical values guide sustainability'. Critically discuss this statement and describe which 'ethical measure(s)' could an organization use as it moves toward more sustainable (and ethical) accounting decisions.

  Answer

Ethical values Guide Sustainability

It also visits ethical theory with a view to understanding why individuals and subsequently organizations act the way they do and what this might mean for sustainability. Investigate worldviews underlying ethical behaviour

- Assess the ethical underpinnings of the free market economy, and
- Appraise the ethical framework underlying the accounting profession (in the UK).
- Appraise in the light of ethical theory and professional practice, and with particular reference to the accounting function, the ethical stance of an organization.

Social performance is normally linked with ethical issues and includes labour practices, human rights policy, product responsibility and the enterprise's relationship with society.

Institute of Social and Ethical AccountAbility (ISEA or AccountAbility)

The concepts of an accountancy profession and of professionally qualified accountants, which we use throughout this report, reflect an acknowledgement of society's expectations as to how accountants should respond to emerging demands. These expectations revolve around competence and the application of judgement in an ethical context.

social and ethical impacts in a more intuitive and informal way than large companie

The power of the media, such as global broadcasting through satellite television, and the transparency of website reporting play an increasing role in levelling up corporate behaviour and enforcing standards, with the potential to hold businesses to account for their environmental, social and ethical performance in any part of the world.

In a discussion paper published by Henderson Global Investors in May 2003 *Governance for Corporate Responsibility: The Role of Non-executive Directors in Environmental, Social and Ethical Issues*, the trend towards dedicated board examination of corporate responsibility by specialist committees was welcomed.

Corporate policies are likely to have a beneficial impact on all parts of the organisation and will often also help to reduce reputation risks associated with the supply chain. In such cases, implementation and monitoring of environmental, social and ethical codes may be carried out through local agents, thus extending the mechanism beyond the conventional reporting boundaries.

Individual cases involving unacceptable social or ethical policies have attracted huge publicity, intensified by globalisation of media coverage that has had a significant impact on customer choice.

The first report indicates that the challenge of operating supply change management in a way that achieves social and ethical commitments may be undermined by such factors as the need to produce quickly and at low cost, issues around flexibility/seasonality and the search for better deals.

the Institute of Social and Ethical Accountability published its framework standard, AA 1000, which seeks to improve performance by a process of learning through stakeholder engagement based on inclusivity.

As a result of stakeholder engagement regarding their ethical practices, such as labour conditions in the supply chain, enterprises may seek to address the problem through detailed reporting, in the belief that this may also provide a competitive advantage.

As regards disclosure, enterprises are 'encouraged to communicate information on the social, ethical and environmental policies of the enterprise' and to 'apply high quality standards for non-financial information...'. In addition, the OE

hich call for companies to demonstrate that they understand the risks and opportunities associated with social, ethical and environmental issues.

As Jim Hayward, Director of Business in the Environment (a brand of Business in the Community), has remarked, 'A company's reputation – hard to gain and easy to lose – has become inextricably linked to its attitude and performance on social, ethical and environmental issues'.

there are several schemes in operation that serve a more general market, such as those used by governments, eco-labelling for consumers and monitoring of products marketed as ethically sound

The main impetus for rating and benchmarking systems comes from the growth of socially responsible investment (SRI). This involves taking account of social, environmental and ethical considerations and the extent to which corporate strategies and risk management include such factors in the selection, retention and realisation of investments and the responsible use of rights attached to investments.

In the belief that ethical investment can improve returns, the UK's Investment Management Association published a guide in September 2003 on ethically and socially responsible funds for investors who want to learn more about stock screening criteria and processes. The guide identifies some 17 negative criteria and five positive criteria, all of a qualitative nature, and includes charts showing the relative performance of ethical investment over periods of up to 10 years.

Since July 2000, UK pension fund trustees have been required to publish a statement of investment principles including their policy as to whether they take ethical, social and environmental factors into account in their investment decisions

investors are more likely to invest in a mutual fund if it engages in ethical business practices

The proposed standard includes a number of principles regarding quality, integrity and ethical standards to which research groups are expected to be committed.

fund managers are increasingly under pressure to disclose their policy regarding the consideration of social, ethical and environmental factors in investment decisions.

he Institute of Social and Ethical Accountability (AccountAbility) states that 'corporate reports, particularly environmental, social and sustainability reports, are not simply aimed at shareholders and their representatives' and that 'there is a business case for considering wider stakeholder concerns which can ultimately have an impact on shareholders' investments'.

'independent external verification of social, ethical and environmental disclosures would be regarded by shareholders as a highly significant advantage'.

Henderson Global Investors, *Governance for Corporate Responsibility: The Role of Non- executive Directors in Environmental, Social and Ethical Issues (A Discussion Paper)* (Henderson Global Investors, London, May 2003)

Ethical measure could organization use toward more sustainable accounting

- Refer to UN SDGs in Aegon IR

- Case Study
  A. There was one of the most devastating corporate scandals in decades: total financial losses of 14.5 billion euros (Parmalat). There is complexity in Financial Reporting and Management in practice.
  B. With the Integrated Reporting applications in Johannesburg Stock Exchange, it perceived benefit such as:
     a. Improved internal processes leading to a better understanding of business
     b. Better articulation of the strategy and business model
     c. Focus on creating value for stakeholders
     d. Connecting departments
     e. Increased focus and awareness of senior management.
  C. Aegon core business: pension, life insurance and asset management, operates like a holding company with decisions made locally. Look at Aegon integrated reporting that relates to the Sustainable Development of United Nations. It also report about assessing operating risk. Mapping value of co creation and IR.
  D. SAP Integrated Reporting
  E. EY Integrated Reporting

- Calculation
  ✓ The % of the investment in green energy or environmentally responsible company

- Empirical Study

http://accounting-simplified.com/management/variance-analysis/disadvantages-of-standard-costing-and-variance-analysis.html
http://www.flareapps.com/blog/cost-of-neglecting-small-business-financial-planning/
http://mmubs-cimaba.course-source.co.uk/handbook-ethics-accounting

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