Decision Making and Relevant Information-book/class paid for by myself-no obligation to help anyone, no obligation to allow anyone to spy on me without huge costs.

I. Information and the Decision Process

a. Decision model is a process that involves both quantitative and qualitative decision systems.

II. Five Step Decision Making Process For Precision Sporting

a. Step 1: Identify the problems and uncertainties – reorganization to reduce labor costs
b. Step 2: Obtain information- salary will increase but employee number may decreas
c. Step 3: Make predictions about the future - 640 current costs to 480 current costs
d. Step 4: Make decisions by choosing among alternatives
e. Step 5: Implement the decision, evaluate the performance and learn.

III. Relevant Costs And Relevant Revenues

a. Relevant costs and relevant revenues are future oriented revenues.
b. Relevant costs and relevant revenues must:
    i. Occur in the future
    ii. Differ among the alternative courses of action
c. Two alternatives: to present all revenues and costs and to present only those that pertain to operations.
d. Those that are no longer pertinent are sunk costs.

IV. Features of Relevant Information

a. Past costs are not usually considered and are sunk costs depending on whether or not there needs to be a comparison basis
b. Future costs are future revenue is considered
c. However some future costs and revenue that are not different are excluded from the tabulation
d. Quantitative and qualitative nonfinancial decisions are weighted appropriately.

V. An Illustration of Relevance: Choosing Output Levels

a. Selling a new products or adjusting amount of sales of old products
b. One-Time-Only Special Orders
    i. Accepting an rejecting special orders when there is idle production capacity and the special orders have no long run implications.
    ii. Fixed manufacturing costs relative to production costs available.
c. Business function costs – the sum of all costs in a particular business function or a value chain – manufacturing costs, marketing costs
d. Full costs of the product – all the fixed and variable costs for product.
e. You can use the relevant revenue and relevant costs as operating income only when special projects.

VI. Potential Problems in Relevant – Cost Analysis

a. Ex producing an extra 5000 might increase overall amounts of production but would still be in the relevant range 30,000-48,000, and may not be a relevant cost
b. However, increasing the overall from 30,000 to 32,000 would require an additional shift of work making this relevant.
    i. When irrelevant costs are included

1. The 4.50 of fixed manufacturing cost per unit(one time only in the special-order decision), included in the 12 dollar per unit manufacturing cost in the one time only special order decision.

ii. When the same unit costs are used at a different output levels
    1. Generally total costs are calculated as a whole
    2. Utilizing the unit cost of 4.50, would result in 157,500 of extra cash that would be added to total costs. However, this is an extra amount.
        a. Best way is to focus on total revenues, total costs and the relevance concept.

iii. Insourcing-versus – outsourcing and make-versus buy decisions
    1. Make a component part or purchase it from a supplier
    2. Outsourcing – purchasing goods from outside vendors rather than purchasing the goods from inside the organization which would be insourcing.
    3. Make-or-buy decisions – consider quality, dependability of suppliers and costs as important for make-buy decisions.

	Expected Total Costs of producing 250,000 units in 2000 batches next year	Expected cost per unit:1/250000
Direct materials	9000000	36
Direct manufacturing labor	2500000	10
Mixed(variable and fixed) batch level manufacturing overhead costs of materials and handling and setup	2000000	8
Fixed manufacturing overhead costs of plant lease, insurance and administration	3,000,000	12
Total manufacturing manufacturing cost	18,000,000	72

iv. Another example is examining the relevant costs in making or buying dvd players. In making dvd players, there are significant higher costs. For example, there might be fixed manufacturing costs during idle capacity.

v. Incremental cost – is the additional total cost in an activity

1. Making dvd players will result in an incremental cost of 15,000,000
2. Buying dvd players will result in an incremental cost of 16,000,000
    a. The difference between the two is 1,000,000 is the differential cost
3. The 3,000,000 is not an incremental cost – it will be incurred no matter what.

VII. Strategic and Qualitative Factors

a. Although there is value in producing their own goods, quality, specifications, design, reliability, there is often value consideration in outsourcing the goods
b. However, long-term contracts are in place to create a prioritization of quality and speed. Companies may send their own engineers to these outsourced manufacturers to enhance the process. This is response to the analysis of risk.

VIII. International Outsourcing

a. Consider exchange rates when entering into a contract. It may change the buy or produce internally decision.
b. Forward contracts would lock the exchange rate at a predetermined price.

IX. Opportunity costs and outsourcing

a. If capacity is not idle, then the choice is no longer just analyzing whether to make or buy. The choice revolved around how to best use available capacity.
b. There are two choices analyzing relevant costs:
    i. Create in house dvd players
    ii. Buy dvd players and use the additional capacity to sell digiteks
        1. The net relevant costs of buying video-system DVD players and making and selling Digiteks are 16,000,000-2,500,000 = 13,500,000
c. Opportunity cost is the contribution to operating income that is foregone as a result of not choosing the next best alternative use.
d. Total alternatives approach for make or buy decisions –
    i. Subtracts out the cost of buying and then producing digiteks
e. Opportunity-cost approach to make or buy decisions.
    i. Add back the opportunity cost to the total estimated cost of making the own dvd player.

X. Carrying Costs Of Inventory

a. Opportunity cost approach is:
    i. The incremental cost of the alternative
    ii. The opportunity cost of the foregone opportunity.
    iii. Example
        1. Purchasing 125,000 units worth of inventory in multiple separate payments(8% cost of holding smaller amounts of inventory) vs
        2. Purchasing the inventory in 2 payments. Much higher costs of higher purchase orders and larger inventory orders.

XI. Product-Mix Decisions with Capacity Constraints

a. Short term context determination of what products to buy and in which quantity.

	Snowmobile Engine	Boat Engine

Selling price	800	1000
Variable cost per unit	560	625
Contribution margin Per unit	b. 240	c. 375
Contribution margin percentage(240/800), (375,1000)	d. 30%	e. 37.5%

f. Select the highest contribution margin of the most limited resource, restricts or limits the sale.

	Snowmobile engine	Boat Engine
Contribution margin per unit	240	375
Machine hours required to produce one unit	2 machine hours	5 machine hours
Contribution Margin per machine – hour 240 per unit/2 machine hours/unit 375 per unit/5 machine hours/unit	120/machine hours	75/machine hour
Total contribution margin for 600 machine-hours 120/machine hourX600 machine hours 75/machine hourX600 machine hours	72000	45000

g. Selection of the highest contribution margin of the highest constraining resource.

h. Striving for an increase in contribution margin with a smaller increase in expense amount can allow for enhancing quality.

XII. Customer based activity(specific costs that affect customers), activity based costing, relevant activity

a. Quantities of certain products segments and customers may need to be need to be changed.

b. Survey of activity levels that affect customer specifications
c. Furniture handling labor/furniture handling equipment cost written off as depreciation/rent/marketing support/sales order and delivery processing/general admin/allocated corporate office costs.

XIII. Relevant revenue and Relevant Cost Analysis of dropping a customer
a. Example: considering the relevant costs needed for operation including – marketing, processing fees, delivery, furniture handling.
b. After comparing the costs with the inflow of revenue, a decision can be made based on whether a decrease in costs from losing the segment will offset the intake of revenue.
    i. If the relevant costs are higher than revenue a decision can be made as to whether dropping the unit is beneficial.

XIV. Relevant revenue and Relevant Cost Analysis of adding a customer
a. Consider all relevant costs and opportunity costs
b. For example, space in a warehouse may be available indefinitely.
c. Furniture handling costs may be high. However, revenue may offset the initial costs.
d. Depreciation expense of newly purchased equipment would be considered. However, past equipment that is already purchased is not considered.

XV. Relevant cost of closing or adding branches or segments
a. Analyze the cost distribution across the organization as a result of closing the division. For example, closing the business may not change depreciation or corporate admin costs.

XVI. Irrelevance of past costs and equipment related costs.
a. Depreciation costs/book value minus salvage – are “useless” costs.
b. Relevant costs include those are that impact the buying decision of the new machine.
    i. Book value – not relevant
    ii. Salvage value - relevant
    iii. Loss on disposal(net out 1 and 2) - relevant
    iv. Replacement costs – relevant

XVII. Decisions and Performance Evaluation
a. Id problem and uncertainties
b. Obtain information
c. Make predications about the future
d. Make decisions by choosing among alternatives
e. Implement the decision, evaluate the performance and learn