



CHAPTER 5

MARKETING: STRATEGY

Your firm's marketing department is responsible for providing an attractive product at a convenient location for consumer purchase. The product's price should be equal to or less than the perceived value of the product. The department needs to communicate this information to make consumers aware of your desirable product offered at a fair price. In short, the role of your marketing department is to serve the consumer. If it fails this responsibility, your firm is likely to fail in its mission!

The marketing function in the simulation has been simplified somewhat from that found in the business world so that the simulation will be tractable. A sufficient number of elements have been included so that you can deepen your understanding of the role marketing plays in the firm and in the business world.

Your firm's marketing management should begin the simulation by setting marketing (functional level) goals and objectives and developing marketing strategy to accomplish these goals (see Chapter 4). Marketing goals should support the overall goals developed at the business level. The goals should focus upon what marketing can contribute to achieving the business-level goals. The following business-level goal was used as an example in Chapter 4:

Generate sufficient sales to maintain a share of the market (goal) equal to at least 30 (hurdle) percent (index) by Year 5 (time).

Marketing goals and objectives that could support this business-level goal might be:

Goal: Sell only product models (goal) which represent the current state (hurdle) of technology (index)(time implicit).

Objective: Introduce a new model (goal) at the beginning (hurdle) of each (time) calendar year (index).

Goal: Increase sales (goal) 10 (hurdle) percent (index) faster than our nearest competitor during our management tenure (time).

Objective: Increase sales (goal) by 15 (hurdle) percent (index) per year (time).

Other marketing goals and objectives may focus upon selling expense reductions, transportation cost control, sales forecasting, etc.

Marketing strategy should be designed to enable your marketing department to attain its goals and objectives. The strategy should plan for the allocation of marketing resources to gain a competitive advantage and to achieve a synergistic impact. The strategy for the model goal might focus upon the timing and size of research and development expenditures. The effects of inflation should be taken into account. The strategy for increasing sales would involve the size, timing and geographical allocation of resources for promotion, distribution and pricing. An effective marketing strategy should include all of the marketing decision variables which require resources.

The quarter to quarter tactical decisions which your marketing management must make are described below. These decisions are guided by your marketing strategy and company policy. The decisions regarding the product to sell, the wholesale price to charge, the distribution of product among the sales offices, the level of advertising expenditures to commit and the size and compensation of the sales force are the responsibility of your marketing department. In addition to managing your firm's marketing mix, your marketing department is responsible for forecasting sales. Accurate sales forecasts are critical to the success of your firm. Sales forecasts will be the basis for estimating cash receipts, variable costs, plant expansion requirements, production requirements and inventory levels. An inventory that is too small results in lost sales and lost customers. An inventory that is too large results in excessive storage and financing costs.

This chapter contains a description of the marketing activities found in *The Business Policy Game* and the costs and expenses associated with these activities. The next chapter contains suggestions to assist in forecasting sales and economic activity. A careful reading of both chapters will help you understand the marketing function as it relates to *The Business Policy Game*. This knowledge, together with careful planning, will enable your firm to design and maintain an effective marketing mix which will provide a synergistic boost to your firm. Keep in mind, however, that customers' needs and desires change over time. An optimal mix will not necessarily remain optimal over your entire management tenure.

Your firm has a sales office located in each of your three domestic market areas, as well as in Sereno. Each office contains an area sales force manager plus staff. All customer orders generated in the area flow through the office. The office also is responsible for training and administrative duties required to keep the sales force operating effectively. This includes hiring and training additional salespeople to compensate for losses through normal attrition and terminating people when they are no longer needed. Finally, the product inventory for each area is managed

by the sales office. To increase inventory, sales office orders must be placed with headquarters so that goods can be shipped.

Costs and Expenses

Unless otherwise noted, the costs described in this and subsequent chapters are those that were in effect at the beginning of Year 3, Quarter 1. The costs in Merica and Sereno are subject to inflation, but the rates of inflation for each country are generally different. For example, the general selling expenses for each sales office are described below as consisting of a fixed component, a semi-fixed component and a variable component:

	<u>Dollar Cost</u>	<u>Peso Cost</u>
Fixed component for each sales office	\$37,500	Ps 225,000
Semi-fixed component for each salesperson	\$ 4,000	Ps 24,000
Variable component for each unit sold	\$ 0.20	Ps 1.20

If in Year 3, Quarter 1 your sales office, say in Area 2, had 10 salespeople and sold 100,000 units, the general selling expense for the area would be:

Fixed component for each sales office	\$37,500
Semi-fixed component for 10 salespeople	\$40,000
Variable component for 100,000 units sold	<u>\$20,000</u>
Total general selling expense	\$97,500

These costs will rise as the price level rises due to inflation in Merica. If the Consumer Price Index should rise by 10 percent, the general selling expense then would be:

Fixed component for each sales office	\$41,250
Semi-fixed component for each salesperson	\$ 4,400
Variable component for each unit sold	\$ 0.22

and the total general selling expense for the same number of sales and salespeople would rise to \$107,250.

If the Sereno sales office employed the same number of salespeople and sold the same number of units in Year 3, Quarter 1 (before the 10 percent price level rise), the general selling expense would be:

Fixed component per sales office	Ps 225,000
Semi-fixed component for each salesperson	Ps 240,000
Variable component for each unit sold	<u>Ps 120,000</u>
Total general selling expense	Ps 585,000

Now comes the kicker. If Sereno prices should rise by 20 percent, due to inflation (at twice the rate of Merica), the local currency costs also increase by 20 percent, and the total general selling expense for the same number of salespeople and the same number of units sold would be Ps 702,000.

It is important to remember when playing *The Business Policy Game* that you begin with information about costs and expenses in each country for Year 3, Quarter 1, but the relationships among these costs may change over time as each country experiences its own rate of inflation. All costs are subject to inflation, but they are subject to **different inflation rates in each country**. Current price levels and forecasts of future price levels are regularly reported in the Quarterly Industry Report as the Consumer Price Index.

Advertising

The role of advertising is to communicate with consumers. This communication may focus upon the product advantages and features that are stressed by your functional marketing strategy, or it may announce the availability of a new model. The specific message to be carried in your advertising is beyond the scope of this simulation. However, rest assured that the advertising agency that creates your advertising messages will promote your product in the best possible light.

The level of advertising expenditures is completely under the control of your firm's management. The marketing department is responsible for determining the advertising expenditure for each market area. The relative effectiveness of a firm's advertising in each area tends to follow an "S" shaped curve. Small expenditures will tend to have little effect on the market. (No one can hear you when you whisper.) As expenditures are increased, advertising effectiveness tends to increase at an increasing rate. At some level, the point of inflection on the curve is reached, and further increases in expenditures tend to yield relatively smaller benefits. As expenditures continue to be increased, a position is reached where additional expenditures yield no additional effectiveness. Expenditures beyond this level will eventually lead to a situation where additional expenditures will actually decrease advertising effectiveness. What would be your reaction to watching 24 advertisements for the same product during half an hour of television viewing?

The secret to successful advertising is to keep advertising expenditures at a level where the returns realized from each dollar spent on advertising significantly exceed the expenditure. The problem then becomes: "At what levels of expenditure do we realize this condition?" If your firm becomes somewhat frustrated in its attempts to find this ideal range, don't feel lonely. The major Fortune 500 firms don't know exactly where they are on the effectiveness curve either.

Advertising expenditures have a carry-over effect in that expenditures in one quarter will continue to affect sales for several quarters into the future. When planning your promotional campaign, be aware of this fact so that your firm can use it to best advantage. Your company may decide to engage in a constant or steadily increasing level of advertising each quarter. On the other hand, it may decide to engage in a seasonal strategy where expenditures are heavier in some

seasons and lighter in others. Alternatively, your firm may decide to utilize a pulse strategy where it advertises heavily for several quarters, decreases expenditures for several quarters and returns to a heavy sequence for several quarters. You will want to avoid large fluctuations in advertising expenditures which we refer to as the "Yo-Yo strategy." Such expenditure patterns may only succeed in earning your firm the title of Yo-Yo Champion of the World.

Consolidated advertising expenditures for each of the firms in *The Business Policy Game* were \$144,000 during the last quarter of Year 2, with about 15 percent more being spent in your home area and about 56 percent less (in dollar terms) in Sereno than in the other two areas.

On an annual consolidated basis, past advertising expenditures have averaged between \$0.70 and \$1.55 for each unit of product sold. However, keep in mind that the purpose of advertising is to stimulate sales; thus, past sales volume should not be used as a basis for setting future advertising expenditure levels. Advertising expenditures should be based upon the amount of sales the firm wishes to generate. This will depend upon the amount of inventory available, production capacity and time of year. Be sure to purchase advertising for each market area in which your firm is operating. This requires entering advertising expenditures on your decision form for each area. Remember, you aren't likely to sell much of your product if you don't advertise it. You also are not likely to sell as much as you expect if you advertise very little.

Enter the amount in thousands of dollars or thousands of pesos to be spent in each area. The amount must be specified even though no change is desired from the previous quarter.

Limits: 0 to 999 (in thousands of dollars) for Merica

0 to 9999999 (in thousands of pesos) for Sereno

	Marketing	
	Price	Adv(000s)
Area 1	\$ 10.00	\$ 46
Area 2	\$ 10.00	\$ 40
Area 3	\$ 10.00	\$ 40
Sereno	Ps 75	Ps 105

Price

Your company's marketing department is responsible for setting the wholesale price for your firm's product in each of the market areas. There are no legal restrictions on charging different prices in different areas. Past prices charged by firms in your industry world have tended to hover around the \$10 level in Merica although they have tended to fluctuate more in Sereno.

Conometric studies have indicated that prices tend to be somewhat elastic in this range. Thus, increases in price would tend to decrease total revenue while decreases in price would tend to increase total revenue, all other things remaining equal.

It should be obvious that your firm is part of an oligopoly, and your pricing actions should reflect this knowledge. Pricing in an oligopoly is somewhat treacherous. Each firm generally has a narrow range over which it may vary its price without competitor reaction. When your firm lowers its price beyond this range, your competitors are likely to follow suit. This may result in an expanded market with all firms sharing in the expansion. This movement could also set off a price war with rapidly falling prices (and profits). If the industry price continues to drop, there will come a point where one or more firms will be operating in the realm of profitless prosperity. As price drops below a certain level, consumers may view the product as being inferior and decide not to purchase it. A reduction in price may also decrease the funds your firm has available to spend on enhancing sales through other marketing activities.

As a general rule, firms in a mature industry tend to avoid price competition and instead develop a strategy to compete on the basis of product, promotion and distribution. Price competition can be met overnight. A change in the other three variables of the marketing mix takes more time to copy. Thus, a comparative advantage gained through altering one of the other variables of the marketing mix is longer lived than an advantage gained through a price change.

The wholesale price of your product must be set for each market area each quarter. Management may specify any price that it desires, except that company policy limits quarterly price changes to a maximum of 30 percent per quarter in Merica and 40 percent in Sereno. Large price changes are discouraged, given the unknown effect that they may have on the market. Different prices may be specified for each market area. If your Merica price is in whole dollars, enter zeros for the cents so that there is no question of whether you forgot to enter the cents' figures. Prices in Sereno are entered in whole numbers of pesos, with no decimal fraction.

Maximum change: 30 percent in any quarter in Merica
40 percent in any quarter in Sereno

Limits: 1.00 to 99.99 (in dollars) for Merica
1 to 99999 (in pesos) for Sereno

If there is no sales office in an area, the price must be 0.

Product

The products sold by the firms in your industry world are quite similar. However, there are quality and other perceived differences among the products which create customer preferences for each firm's product. Thus, firms may pursue a differentiation strategy. From time to time, a firm's research and development department may create a new model which it hopes will be more desirable than the older version of the firm's product. If the new model is introduced into the marketplace, the firm's market share will often increase given no other change in the marketplace.

Thus, companies that introduce new, innovative models will generally be more successful than firms that continue to rely upon their older, somewhat obsolete products. However, too frequent model changes will result in potential customers not knowing what product you are selling.

The model life cycle for the consumer durable good produced by your firm is relatively short. Thus, we advise your firm to engage in an aggressive R & D program so that it will have replacement products available when the sales of an existing model start to slide. The products developed by your R & D department may be entirely new models or they may be variations in features and/or packaging of existing products. A few years back, Quaker State introduced a packaging innovation with its new screw-on top containers of oil which gave it a packaging advantage in the marketplace. This packaging innovation (for motor oil) eliminated much of the mess of adding oil to a car and allowed the user to safely store the partly-used cans. Now most other brands have copied this innovation, but Quaker State held the competitive advantage for several years. Product innovation does not, however, guarantee success. Anheuser Busch brought out a new nonalcoholic drink a while back called Chelsea. It bombed badly! A word to the wise. If your new model turns out not to be a winner, it is advisable to be working on another to replace it quickly.

A major advantage of pursuing a differentiation strategy through product innovation is that it is difficult to copy. A classic example is the Volkswagen Beetle which was the envy of the automotive world for many years. It was a unique design which cornered a significant share of the new car market. Unfortunately for Volkswagen, its innovative Rabbit did not fare as well after several successful years due to the competition copying the product with improvements. While innovation may provide a temporal advantage, the advantage is not permanent. However, product innovation is much more difficult to copy than price changes. In turn, changes in promotion, distribution or in the sales force are generally easier to make than product changes. On the other hand, they are also more difficult to copy than price changes. As your marketing department considers making changes to your marketing mix, it should keep in mind the ease with which such changes may be matched by your competitors.

New Model

When a new model is released by your firm's research and development department, its availability together with its current savings level will be reported in the firm's Operating Information Report. For example, a new model number 5 might be shown as follows.

Each new model will have a different labor and material cost associated with it, which will be reported along with the release of the model. The costs that are reported are for Quality 2. The costs for other quality levels may be calculated easily, as shown below under "Model Quality." The inflation-adjusted standard costs reported for labor and materials will reflect any available cost savings that may have been achieved by your company's production and operations training program (See Chapter 7). These savings are referred to as savings levels and are shown in the report. The higher the savings level, the lower the cost. A new model may be introduced immediately or it may be held for introduction at a later date.

		STANDARD COSTS PER UNIT for Next Quarter			
		Merica Area 1 \$	Merica Area 2 \$	Merica Area 3 \$	Sereno Ps
Model 5 Quality 2	Labor Cost	3.35	3.35	3.35	16.65
Savings Level 4	Material Cost	1.73	1.73	1.73	10.80
Model 4 Quality 2	Labor Cost	2.88	2.88	2.88	15.75
Savings Level 4	Material Cost	1.50	1.50	1.50	9.45

Note: For Quality 1 add 10%. For Quality 3 subtract 10%

Each model released from the R & D department is assigned a sequential number with higher numbers indicating more recent releases. It is possible for the firm in the above example to be producing Model 3 and have Models 4 and 5 available for introduction. If more than one model number is available, there is no marketing advantage in skipping a model to produce the highest numbered model, unless your next model is two or three models behind those offered by competitors, making it technically obsolete.

If the firm decides to introduce Model 5, it will no longer be possible to introduce Model 4 in the future or to restart production of Model 3 as the tools and dies required to produce those earlier models will have been sold. In addition, the board of directors adopted a firm policy several years ago that older models of the company's product will not be produced once a newer model is introduced. The board wanted to avoid the potential negative image which could be created if consumers believed that the firm was producing and selling obsolete products.

IMPORTANT NOTE

While more than one firm may be producing a product with the same model number, the model number is a unique identifier for each company. The products will not be perceived to be identical by consumers. For example, both Lee and Levi Strauss make blue jeans. The jeans made by these two companies are perceived as unique products by consumers.

Your research and development department works closely with your marketing research department. Prior to the release of any new model, the marketing research department will assess the sales potential of the new model under development. The management of your firm has a long established policy that research studies of any new product released for production must indicate at least an 80 percent likelihood that the new model's sales will exceed sales of the model currently in production by as much as, perhaps, 20 percent. Note: Your management should be aware that research information is never totally accurate. Thus, there is up to a 20 percent probability that sales of the new model will not match the sales volume of the current product. In that event, it is unlikely that sales will decrease more than 5 percent from the current model sales level.

If a new model is available and your company wishes to put it into production during the current quarter, enter the new model number on the decision form. For example, if Model 4 is reported to be available, and your firm decides to introduce it, enter "4" on the decision form. Production of the old model ceases, and production of the new model begins immediately. Thus, the production costs in all plants for the current quarter will be those of the new model. However, the new model will not be sold in a market area until next quarter unless inventory of the old model in the area is exhausted. Sales for the current quarter in each area will be from the inventory on hand of the old model. Any units of the old model not sold during the quarter will be sold to a liquidation agent at the end of the quarter at a price equal to your firm's production cost (plus the 20 percent markup for units shipped to areas without production plants—see below). The liquidator's price does not include transportation costs your firm may have paid. All available inventory for next quarter will be of the new model.

If a sales office in an area has unfilled orders after it has exhausted its inventory of the old model, any shipments received by the sales office during the quarter will be substituted for the old model to satisfy the remaining orders. Because all production during the quarter is of the new model, all shipments from plants to fill sales office orders will be of the new model. As price is set only once a quarter, the new model will be sold at the same price as the old model. Thus, purchasers in the market area during the latter part of the quarter will get a bargain if your firm stocks out of the old model earlier in the quarter. Note that it is possible to sell units of the old model to a liquidator in one area which has a surplus of the old model while another area stocks out of the old model and must sell units of the new model to meet current quarter demand.

IMPORTANT NOTE

During the first quarter of production of a new model, customer orders are all for the previous model even if all previous-model inventory has been sold. Customers will not be aware of the new model until the following quarter. Any perceived increase in benefits of the new model will not have an effect on sales until the new model is officially released.

Example of Introducing a New Model in Quarter Y			
	Quarter X	Quarter Y	Quarter Z
Old Model	Produce & Sell	Sell/Liquidate	
New Model		Produce/Sell only if old model stockout	Produce & Sell

Always enter the model number to be produced, even if it is the same as the last quarter. For Year 3, Quarter 1 the only model available is number 1.

Maximum: Highest model number reported available from the R & D Department
Minimum: Same model number as produced during the last quarter. Once a new model has been placed in production, an earlier model may not be reinstated
Limits: 1 to 12

Model/Quality	
Model	# 1
Quality	# 2

Model Quality

When a new model is put into production, the quality level at which the product will be produced and sold must be specified. A new model may be sold as a deluxe (superior quality), standard (average quality) or economy model. Your board of directors has a long standing policy that the quality level of a product model will not be changed as long as the model is in production. They wanted to prevent customer confusion and the potential ill will which could be created by selling different quality levels of the same product. Quality levels can be changed only when a new model is introduced.

Quality level is determined by manufacturing tolerances and the quality and quantity of raw materials used. Features of the product are important, too. Deluxe quality may signify extra features that are not available in a standard quality model, and economy quality may signify fewer features than for the standard model. It is not related to whatever you may have spent on research and development in order to bring the new model to market.

As you would expect, quality costs money. More costly material must be used and more care in assembly is required with each increase in quality. The relative costs for the three quality levels are:

Deluxe (Quality 1)	110% of standard cost for quality 2
Standard (Quality 2)	100% of standard cost for quality 2
Economy (Quality 3)	90% of standard cost for quality 2

Notice that the demand for your product is price-elastic, or sensitive to price changes. That is, a price increase can be expected, all other things being equal, to result in fewer units being sold. As you also might expect, the demand for higher quality products is less price sensitive than the demand for lower quality products. Therefore, if you change to a deluxe version (Quality 1) when you introduce Model 2, you can expect price increases to depress sales less than they would if you stayed with a standard version (Quality 2). Conversely, if you change to an economy version (Quality 3), you can expect demand to be more price sensitive than with the standard version (Quality 2).

IMPORTANT NOTE

If you change model quality when introducing a new model, the price sensitivity of the new quality will not take effect until the new model is officially released in the quarter following the initial production.

As a rule of thumb, higher quality products require more marketing effort than lower quality products. You will generally find that the higher price attached to higher quality products (normally yielding a higher margin) is also accompanied by higher promotion expenditures and higher cost distribution channels. Thus, to be successful, higher quality products tend to be marketed differently than lower quality products. Remember the difference in target markets.

When specifying the quality level of a new model on the decision form, enter the number of the quality level you have chosen:

- 1 -- deluxe
- 2 -- standard
- 3 -- economy

If you continue to produce the same model as in the previous quarter, you must also continue the same quality level.

Limits: 1, 2 or 3

May be changed only when introducing a new model

Salespeople

Your firm has a sales office located in each of your market areas, including Sereno. Each office contains an area sales force manager plus staff. All orders generated in the area will flow through the office. The office is also responsible for training and administrative duties required to keep the sales force operating effectively.

You have two decisions to make regarding the sales force. First, you must decide how many salespeople are required in each area. Second, you are required to develop a compensation package for the salespeople. This package consists of salary and commission rates.

Hiring Salespeople

The Operating Information Report for Year 2, Quarter 4, shows the number of salespeople working for the company during that quarter.

To determine the number of salespeople available for the next quarter, add the number of salespeople in training to those already active. Those who have resigned already have been subtracted from the reported number of active salespeople. The report does not show the number of

salespeople fired. Your firm should know that information as it is part of the decision set that you submitted.

	Area 1	Area 2	Area 3	Sereno
Active Salespeople (number of)	12	10	10	13
Salespeople in Training	0	0	0	0
Salespeople Resigned	0	0	0	0
Memo: Sales Training Expense	0	0	0	0

Each firm can expect to lose salespeople over time through normal attrition. They may leave due to better career opportunities in other industries, retirement, illness or death or dissatisfaction with the compensation package being provided by the firm. Your firm has full control over the compensation package; however, you have no control over other factors which may cause a salesperson to leave the organization. We recommend that you plan for some resignations and maintain a sales force of sufficient size so that one or two resignations (or even more) during a quarter would not be devastating to the firm.

If your firm decides to hire additional salespeople, enter the number of salespeople to be hired under Salespeople-Hire on the decision form in the areas the salespeople are to work. A salesperson must be trained for one quarter prior to being assigned to sell in the field. Thus, if you hire 2 salespersons in Quarter 2, they will be available to sell in the field during Quarter 3.

	Salespeople			
	Hire	Transfer	Comm	Salary
Area 1	#	#	20 ¢	\$ 3000
Area 2	#	#	20 ¢	\$ 3000
Area 3	#	#	20 ¢	\$ 3000
Sereno	#	#	60 ¢	Ps 8971

Training costs during the quarter amount to \$10,000 in Merica at the beginning of Year 3, Quarter 1. Costs in Sereno for the same period are Ps 36,000. The costs will be subject to inflation at the rate of increase in the Consumer Price Index in each country.

Salespeople in training will be carried on the training roster for one quarter and will be automatically assigned to the area in which they are training in the following quarter. No further entry is necessary after the quarter in which the salespeople were hired. If you make an entry in the following quarter, you will hire additional salespeople to begin their training period in that quarter.

Limits: 0 to 99

Transferring Salespeople

Salespeople may be transferred from one area to another. If your firm hires a salesperson in Area 2 and decides that the salesperson is needed in Area 3 instead, it may transfer an **active** salesperson (not one still in training) to Area 3. The transfer can be accomplished by entering "-1" in Area 2 and "1" in Area 3 under Salespeople-Transfer on the decision form. Your positive "moves in" to other areas may not exceed the value of negative "moves out." That would signify increasing the size of your sales force, and an increase only may be accomplished by hiring new salespeople. If your negative values are larger than your positive values, the additional negative values will result in that number of salespeople being fired (see below).

You may transfer salespeople from several areas at the same time. However, you may not transfer salespeople in and out of the same area in one quarter. They must either go into an area or out of an area. Not both. In addition, you must maintain **at least one** salesperson in each area unless you are closing the sales office in the area. (If you close the sales office, you are leaving the area. See "Closing a Sales Office" on page 75.) Transfers take place immediately. A transferred salesperson may not be very effective until he or she has moved and settled into a new market area. The salesperson will, however, continue to draw a salary. In addition, the salesperson will be provided with a moving allowance of \$5,000 (or Ps 30,000 in Sereno), shown under Other Expense for the area **from** which the individual moves.

Maximum negative (to be transferred out):	number of active salespeople
Maximum positive (to be transferred in):	the sum of positive numbers may not exceed the sum of negative numbers

Limits:	-99 to 99
---------	-----------

Firing Salespeople

You may fire salespeople in an area by entering the number of people you want to fire under Salespeople-Transfer. You indicate that the salespeople are to be fired by entering a negative number in the area with no balancing positive number indicating a transfer to another area. Thus, if you decide to fire 2 salespeople in Area 3, enter -2 under the Transfer column for Area 3. A salesperson fired in a quarter is given \$5,000 (or Ps 30,000 in Sereno) in severance pay (charged to Other Expense) at the beginning of the quarter and is no longer a member of the sales force. Remember, you must maintain at least one salesperson in each area if you intend to sell goods in the area. If you remove all salespeople from an area, the sales office in the area will be closed and sold. See "Closing a Sales Office" on page 75.

Maximum to be discharged:	Number of active salespeople
Limits:	-99 to 0

Sales Salaries

It is the custom in your industry to pay salespeople a base salary plus a commission. At the end of Year 2, each salesperson was receiving a base salary of \$3,000 (or Ps 8,971 in Sereno) per quarter plus commissions. Salespeople have no expense accounts. Increases or decreases in salaries will affect the performance level and job satisfaction of your salespeople. Higher salaries generally will tend to increase the loyalty of the sales force and result in lower turnover. Lower salaries usually lead to employee dissatisfaction, lower productivity and increased resignations. When developing your compensation program, heed Armand Hammer's sage advice, "If you pay peanuts, you'll get monkeys." However, at some point, diminishing returns will set in as salaries are increased. How loyal and happy can you make a sales force? The higher the salary, the less the need to earn a commission by selling.

The salary that your firm decides to pay its sales force must be entered for each area on the decision form in the Salespeople-Salary section. Each sales office determines the salary the salespeople in its area will receive. Salespeople in Sereno will be paid in pesos. Caution is urged when changing salaries. A Yo-Yo pattern here is likely to buy employee mistrust and resignations.

Limits: 1 to 9999 (in dollars) for Merica

1 to 9999999 (in pesos) for Sereno

If there is no sales office in an area, salary must be 0.

Sales Commissions

In addition to a base salary, salespeople recently have been paid a commission amounting to 20 cents for each unit sold, or 60 centavos in Sereno. Increases in the level of commissions will normally serve as a sales incentive, leading to an increase in the number of units sold. Decreases often have the opposite effect. As with advertising expenditures and sales salaries, the effect of increasing commissions is subject to the law of diminishing returns. The sales office in each area may adjust the level of sales commissions or change the relative emphasis on salary and commissions each quarter. Enter the amount of the desired commission in number of cents or centavos per unit under Salespeople-Comm for each area on the decision form.

Limits: 1 to 99 (in cents per unit sold) for Merica

1 to 99999 (in centavos per unit sold) for Sereno

If there is no sales office in an area, commission must be 0.

Managing the Sales Force

Managing the sales force involves resolving three questions:

1. How many salespeople should we employ?
2. Where should we deploy the sales force?

3. How should we compensate the sales force?

In order to determine the number of salespeople to employ, your firm must develop a sales forecast. Well-managed firms develop a sales quota which they expect their salespeople to meet. The number of salespeople to employ is then determined by dividing the forecasted sales for the quarter by the sales quota. During Years 1 and 2, salespeople have sold between 6,000 and 11,000 units per quarter, averaging about 8,000. Your salespeople may or may not match these figures depending upon the economic conditions in your industry, the aggressiveness of your competitors and your management skills.

If you develop a sales quota for your sales force, you can use the sales quota to allocate your salespeople among your market areas. Simply allocate your sales force by dividing the sales forecast for each area by the sales force quota and you have the required number of salespeople for the area. Unfortunately, your actual management activity is not quite that simple. You may already have recognized that salespeople are allocated in lumps of one person. Thus, if you forecast 104,000 units to be sold in an area and your sales quota is 10,000 units per salesperson, you're left looking for four-tenths of a salesperson. Here's what you get paid the big bucks to do: make wise decisions!

After your sales force is functioning in the field, it is wise to monitor the average number of units each person is selling in each area. You likely will find that all is not going according to plan. A quick calculation or two normally will show that salespeople in some areas are producing a much higher return than those in other areas. This would suggest that you transfer some salespeople out of the low producing areas into the high producing areas to balance more evenly the return obtained per salesperson in each area. Remember, though, that reducing the number of salespeople in an area will require the others to work harder if they are to maintain the same level of total sales. They may not be able to (or choose not to) work hard enough to do that.

While both salaries and commissions provide compensation for the salesperson, their uses are somewhat different. Salary provides security for the salesperson in that, regardless of the number of units sold, the salesperson is guaranteed a fixed salary. Salary is not a strong motivator to create additional sales. On the other hand, the commission is not paid unless a sale is made. It provides no security for the salesperson. It does provide a strong motivator for increasing sales. Each unit sold provides more money for the salesperson. Some mixture of the two compensation options is recommended. Your firm may want to place the emphasis of your compensation package upon one or the other of the two alternatives. However, be sure that your sales force can make a decent living, or they will be looking for another job. It should come as no surprise that some people work better when the emphasis is upon salary, and other people work better with the emphasis upon commission.

Promotional Balance

You spend your promotional budget on advertising and salespeople. What is the proper balance? Marginal analysis would call for shifting dollars from the lower contributing area to the

higher contributing area. In effect, that is what we discussed previously when we suggested that you shift salespeople among areas to balance the number of units sold per salesperson. The proper allocation is more difficult when deciding whether to take money from advertising and put it into enlarging the sales force or vice versa.

There is a somewhat crude measure you can use to help determine whether you have the proper balance between your promotion tools. Calculate the number of dollars of sales obtained per dollar spent on advertising by area and the number of dollars of sales obtained per dollar spent on salespeople by area. However, don't shift dollars to balance these returns yet! The actions of your competitors can cause these returns per dollar spent to bounce all over the place while you hold your total expenditures constant. (We said this method was crude!) Calculate these returns for at least a year and take the average before you make any changes. Then you may decide to shift expenditures gradually in the indicated direction while continuing to monitor the resulting returns. Sorry folks, this is as close as we can get in an operational setting. (Of course you could always try some econometric techniques.)

Leaving and Entering Market Areas

Unless your simulation administrator has told you otherwise, at the beginning of Year 3, Quarter 1 your firm will be selling goods in all four market areas: Areas 1, 2 and 3 in Merica and in Sereno. While you **must** maintain a sales office in your home area, you may withdraw from or reenter any of the other three areas, including Sereno. Thus, your firm may decide to compete in all four areas or it may decide to concentrate its efforts in two or three market areas. The existence of a sales force is the key to maintaining a sales office. If there are no salespeople in an area, the sales office will be closed and sold, there will be no shipments to the area and no sales will be made to customers.

Closing a Sales Office

If your management team decides to leave a market area, it may do so by removing all salespeople from the area. This can be done by transferring salespeople to other areas and/or by discharging any remaining salespeople. Salespeople that are moved will require moving expenses and those who are discharged will receive severance pay. When the last salesperson leaves, the sales office in the area will be closed and the building sold to a local developer at 90 percent of book value. The developer's payment is made in the quarter in which the office is closed and the proceeds are available for your firm to use during that quarter. If there is no manufacturing plant in the area, any cash balances remaining at the end of the quarter will be transferred to the parent corporation. If there is not enough cash to meet all obligations, the parent corporation will supply it by purchasing more stock in the subsidiary.

When your firm closes a sales office, it will discharge all local administrative personnel. They will be paid a full quarter's compensation as severance pay, even though they are discharged at the beginning of the quarter. If you close a sales office in Year 3, Quarter 1 in Merica, execu-

tive severance pay for the quarter would amount to \$25,000 (or Ps 150,000 in Sereno). When a sales office is closed, general selling expense for the area will fall to zero. Any unsold inventory will be purchased by a liquidator at your cost and the proceeds will be available for use during the quarter. The sale will be made under the same agreement used to liquidate unsold units of your old model when your firm introduces a new model.

As with any other business decision, you should plan for the closure of a market area. Inventory should be carefully controlled so your firm is not losing profit opportunities by liquidating units of product at cost. Salespeople should be integrated into other areas where possible to minimize firing. You have invested in the training of your sales force, an investment which will be lost if salespeople are fired. Firing employees who are performing well is also harmful to the morale and productivity of your remaining employees in other areas.

Opening a Sales Office

Your firm may decide to reenter a market area that it had previously abandoned. Alternatively, if your firm began the game competing in less than four market areas and expansion is allowed, it may decide to enter a new area. In either case, your company may enter an area in which it is not currently competing by transferring one or more salespeople into the area. When the salespeople are transferred in, the sales compensation level for the area, both salary and commission, **must** be specified on the decision form.

The key to opening a new market area is the transfer of at least one salesperson from another area. That will launch the process of creating the sales office in the area. A new sales office cost \$400,000 in Year 1, Quarter 1 (or Ps 2,392,000 in Sereno, given a Year 1, Quarter 1 exchange rate of 5.98 pesos to the dollar). The current-quarter cost is determined by adjusting for the inflation rate of the country in which the sales office is to be built. For example, if the CPI in Merica is 115 for the most recent quarter, and the Year 1, Quarter 1 CPI was 85.8 (see Appendix C), the cost of a new sales office in Merica would be:

$$\$400,000 \times (115 \div 85.8) = \$536,130$$

If the office is to be built in Sereno, use the Year 1, Quarter 1 CPI in Sereno (74.8, for example) and the original cost of the Sereno sales office (Ps 2,392,000). If the CPI in Sereno for the most recent quarter happens to be 152, then the cost of a new sales office would be:

$$\text{Ps } 2,392,000 \times (152 \div 74.8) = \text{Ps } 4,860,749$$

At the beginning of the quarter, an administrator is hired to open the sales office. The administrator's initial duties include purchasing the sales office, hiring administrative personnel, supervising sales training and organizing sales operations in the new area. Using the above example, initial executive salaries for a sales office (Year 3, Quarter 1) are \$25,000, and the Year 2 Quarter 4 CPI was 100. Therefore, administrative personnel costs for a new sales office in Merica would be:

$$\$25,000 \times (115 \div 100) = \$28,750$$

If the office is to be built in Sereno, the same costs would be:

$$\text{Ps } 150,000 \times (152 \div 100) = \text{Ps } 228,000$$

This amount will be charged to Executive Compensation on your income statement.

Typically a firm will transfer one or two of its salespeople into the area and hire several new salespeople for the area. The experienced salespeople who transferred into the area function as training coordinators. They will also assist the administrator in setting up the sales office.

Price and advertising expenditures must be specified during the following quarter when you begin to sell your product. Be sure to consider your competitor's prices and other elements of their marketing mix when introducing your product in an area.

When the sales office is opened, there are no units of product in inventory to sell. Don't forget to place a sales office order for the first quarter in which the sales force will be in operation. If the sales office is built this quarter, it will be in operation next quarter. Thus, a sales office order should be placed with next quarter's decision set. If you forget to place an order for the sales office, you have created a nice coffee house in which the area's new sales force can read poetry.

Other Marketing Expenses

Besides managing the advertising program and your sales force, your firm will incur several other types of expenses associated with the marketing function. These are shown in Figure 5-1. Most expenses related to selling and distribution activities will be reported as Selling Expense each quarter in the Consolidated Income Statement, partially illustrated in Figure 5-1. Other expenses are classified as Administrative and General Expense. Current levels of these expenses may be found in the reproduction of the reports for Year 2, Quarter 4 in Appendix C.

General Selling Expenses

Sales offices in each of the four areas incur General Selling Expenses. The entry on your firm's Income Statement for each office includes a fixed, a semi-fixed and a variable component. The fixed portion represents a quarterly charge for marketing, administration and overhead costs. The semi-fixed portion consists of a quarterly amount, over and above salary and commission, to support each active salesperson. The variable portion consists of an amount allocated for each unit sold related to administrative costs of selling the product. The Year 3, Quarter 1 costs for each sales office in Merica are:

$\$37,500 + \$4,000 \times \text{number of salespeople} + .20 \times \text{number of units sold}$.

he same costs in Sereno are:

$\text{Ps } 225,000 + \text{Ps } 24,000 \times \text{number of salespeople} + \text{Ps } 1.20 \times \text{number of units sold}$

These costs are subject to the particular country's inflation rate. All Sereno expenses are consolidated using current exchange rates.

The more units that are sold, the lower is the general selling expense per unit because the fixed and semi-fixed costs are spread over more and more units.

	Consolidated M\$000s	Merica Area 1 M\$000s	Merica Area 2 M\$000s	Merica Area 3 M\$000s	Sereno Ps000s
Selling Expense:					
Advertising Expense	144	46	40	40	105
Sales Salaries	116	36	30	30	117
Sales Commissions	79	24	22	22	65
General Selling Expense	406	107	97	97	629
Transportation Expense	196	12	54	54	455
Sales Office Depreciation	12	3	3	3	19
Other Selling Expense	0	0	0	0	0
Total Selling Expense	952	228	246	246	1390
Admin and General Expense:					
Research and Development	72	72	0	0	0
Total Training Expense	68	68	0	0	0
Storage Expense	43	6	13	13	66
Executive Compensation	145	73	24	24	142
Loan Interest	0	0	0	0	0
Bond Interest	50	50	0	0	0
Other Expense	0	0	0	0	0
Total Adm. & Gen Expense	378	269	37	37	208

FIGURE 5-1
Partial Income Statement

Transportation Expense

There are two types of transportation expenses. One results from shipping goods from a manufacturing plant to a sales office in another area. The second results from shipping goods from the sales office (or a plant warehouse within the same area) to a customer. In areas where a sales office is associated with a plant, inventory is stored in a section of the plant warehouse. Thus, no costs are incurred for shipping goods to the sales office as shipments are made directly from the plant to customers when orders are filled. Shipping costs within Merica and to or from Sereno are invoiced in dollars, and those within Sereno are invoiced in pesos. Shipments to Ser-

eno are paid by the Sereno subsidiary in pesos, with the pesos converted to dollars at current exchange rates. For Year 3, Quarter 1 the costs (subject to inflation) are as follows:

<u>Shipments from.</u>	<u>To</u>	<u>Cost per unit in dollars</u> <u>convert pesos at current rates</u>
Sales office or plant	Customer in same area	\$0.10 or Ps 0.60
Plant (Merica)	Sales office in another Merica area	\$0.60
Plant (Merica)	Sereno sales office	\$0.90
Plant (Sereno)	Merica sales office	\$0.90

Shipments from your home plant to the sales office in another Merica area would cost \$0.60 per unit. Shipments from the sales office to a customer would cost \$0.10 per unit. Thus, the shipping cost from plant to customer would total

$$\$0.60 + \$0.10 = \$0.70 \text{ per unit}$$

A shipment from your home-area plant to the sales office in Sereno would be invoiced at \$0.90, per unit and paid in pesos at Year 3, Quarter 1 exchange rates. A shipment from the Sereno sales office to the customer would be invoiced in pesos, with the cost for Year 3, Quarter 1 being Ps 0.60 per unit. The peso cost of a shipment from the home-area manufacturing plant to a customer in Sereno during Year 3, Quarter 1, with a forecast exchange rate of Ps 6.09 to the dollar, would be:

$$(\$0.90 \times 6.09) + \text{Ps } 0.60 = \text{Ps } 6.08 \text{ per unit}$$

All shipping costs are subject to inflation. Shipments to or from Sereno are invoiced in dollars, and thus are subject to the Merica inflation rate. However, the payment is made in pesos at the exchange rate for the quarter in which the goods are shipped. Shipments within Sereno are paid in pesos, and are subject to the peso inflation rate rather than the dollar inflation rate.

Sales Office Depreciation

A sales office was built in each market area in Year 1, Quarter 1 for \$400,000 (Ps 2,392,000 in Sereno, with a Year 1, Quarter 1 exchange rate of 5.98 to the dollar). Each sales office is subject to depreciation on a straight-line basis over 31.5 years. This amounts to 0.7937 percent per quarter or \$3,175 (rounded to \$3,000) for Area 1, 2 and 3 offices and Ps 18,985 (rounded to Ps 19,000) for the Sereno office.

Training Expense

Training expense is incurred when new salespeople are hired. It costs \$10,000 to train a new salesperson in Merica (or Ps 36,000 in Sereno). These sums include the salary paid to the salesperson during the training period. The cost of training new salespeople is recorded under

Total Training Expense on your firm's income statement during the quarter in which the training takes place. Because training is an administrative function, sales training expense is reported under Administrative and General Expense along with production and operations training expense and training expense of new production employees.

Inventory Storage Expense

Each production plant (whether in the home area, a nonhome area or Sereno) has internal warehouse space to store 300,000 units of finished product. Thus, your firm begins Year 3 with storage space for 300,000 units in your home-area plant. If additional plants are built, they also will include storage for 300,000 units. It costs 10 cents per unit (or 60 centavos in Sereno) to store unsold goods in your plant warehouse(s) for a quarter. If your inventory exceeds the available storage space in a plant, your firm will rent space in a public warehouse in the area to store the additional units of product. Units will **not** be shipped to other areas for storage. Public warehouse storage costs amount to 30 cents per unit of product (or Ps 1.80 in Sereno). Units in storage in the public warehouse will be sold prior to units stored in your plant warehouse. All storage costs for a quarter are invoiced and paid at the beginning of the quarter for goods in storage at the end of the previous quarter.

Storage costs are subject to inflation at the inflation rate of the country where the goods are stored. Note that storage of goods for a sales office in an area or country without any manufacturing facility is subject to the public warehouse storage rate of 30 cents per unit (or Ps 1.80 in Sereno) in Year 3, Quarter 1. These costs are paid by the subsidiaries for goods stored in their market area or by the parent company for goods stored in the home area.

Other Expense

Other marketing expenses include transfer costs for moving current salespeople and severance costs for fired salespeople. Transferred salespeople receive a \$5,000 (or Ps 30,000 in Sereno) moving allowance. They also continue to draw their current salary. The moving allowance is paid by the area from which the salesperson is moving. Fired salespeople receive a \$5,000 (or Ps 30,000 in Sereno) severance allowance. Both of these expenses are charged to Other Expense on your firm's income statement during the quarter in which they are incurred.

Implicit Cost of Stockouts

If your firm has sufficient inventory on hand to meet consumer demand, its sales will be limited by demand. On the other hand, if consumer demand in an area exceeds that area's inventory, production and sales office purchases, its sales will be limited by the volume of goods available for sale. Some of your customers who want to buy more units of your product than you can supply will become dissatisfied and are likely to take their business elsewhere. The demand for your product will tend to be reduced somewhat in the future over what it would have been if the

stockout had not occurred. A stockout results not only in a loss of present sales, it generally results in the loss of a certain amount of future sales. Thus, when developing an inventory plan, your firm needs to weigh the costs of storing inventory vs. the costs of a stockout.

Maintaining a low inventory level reduces both the cost of funds required to finance the inventory and the storage costs incurred. However, low inventory levels increase the likelihood of stockouts which inflict an implicit cost that can be measured only in terms of lost sales and profits in the current quarter and lower levels of demand in subsequent quarters. Firms normally develop an inventory plan which includes some level of safety stock as a buffer to meet unexpected variations in demand. The level of safety stock selected is determined by balancing the cost of carrying the extra inventory with the cost of stocking out in the quarter.

Summary of Relationships

1. An increase in **advertising** expenditures usually will result in increased sales. Such expenditures are subject to the law of diminishing returns, and sharp fluctuations in expenditures are likely to harm your company's image.

2. The **price** that is charged will affect the level of sales and the amount of sales revenue. Your product is said to be price elastic, with price increases reducing the number of sales and the amount of sales revenue. Price competition is easily copied by competitors, as compared with other marketing focuses.

3. **New model introduction** is likely to increase your sales, with an 80 percent chance of an increase, perhaps by as much as 20 percent. This implies a 20 percent chance that sales may actually decline as a result of introducing a new model. A decline is unlikely to exceed 5 percent of current sales.

4. **Production of a new model** must be started one full quarter prior to selling the model. During the start-up quarter, sales of the old model will continue in each area until the inventory of the old model in the area is exhausted. If additional units are required to satisfy demand, units of the new model produced during the quarter will be substituted at the same price as the old model. All units of the old model remaining in an area at the end of the start-up quarter will be sold at the end of the quarter to a liquidator at cost.

5. **Model quality** affects the price elasticity of your product and the costs of producing it. Deluxe quality is less price elastic and production costs are 10 percent higher than standard quality. Economy quality is more price elastic and costs 10 percent less to produce.

6. **Training expenses** for new salespersons are \$10,000 (Ps 36,000) each.

7. **Sales salaries and commissions** provide incentive for your salespeople. Usually increases in compensation will result in increased sales, subject to the law of diminishing returns. Higher-paying opportunities at competing firms may cause dissatisfaction on the part of some members of your sales force and increase turnover among salespeople.

8. **Closing a sales office** terminates your firm's sales operations in an area. An office is closed by removing all salespeople from the area. Administrative personnel are fired and given one quarter's severance pay. The sales office is sold and your firm receives ninety percent of the book value in proceeds. Any remaining inventory is sold at cost to a liquidator.

9. **Opening a sales office** in an area is accomplished by transferring one or more salespeople from another area into the area to be opened. This sets in motion the hiring of an administrator, the purchase of a sales office and the creation of a sales organization. A sales office cost \$400,000 in Year 1, Quarter 1 (Ps 2,392,000 in Sereno with an exchange rate of 5.98 to 1). Executive compensation is \$25,000 per sales office in Year 3, Quarter 1 (or Ps 150,000). A sales office order must be placed before the sales office will have any product to sell.

10. **General selling expense** includes both a fixed and a variable component. The total may be calculated as

$$\begin{aligned} & \$37,500 + \$4,000 \times \text{number of salespeople} + \$0.20 \times \text{number of units sold (in Merica)} \\ & \text{Ps } 225,000 + \text{Ps } 24,000 \times \text{number of salespeople} + \text{Ps } 1.20 \times \text{number of units sold (in Sereno)} \end{aligned}$$

11. **Transportation expenses** vary according to the originating point and destination. For goods shipped:

<u>Shipments from</u>	<u>To</u>	<u>Cost per unit in dollars</u> <u>convert pesos at current rates</u>
Sales office or plant	Customer in same area	\$0.10 or Ps 0.60
Plant (Merica)	Sales office in another Merica area	\$0.60
Plant (Merica)	Sereno sales office	\$0.90
Plant (Sereno)	Merica sales office	\$0.90

12. **Inventory storage costs** amount to 10 cents per unit (or 60 centavos) for the first 300,000 units in areas which have manufacturing plants. Beyond that, public warehouse space in the area is used at a cost of 30 cents per unit (or Ps 1.80) to store all inventory exceeding the 300,000 limit. For areas without plants, all inventory is stored in public warehouses. Quarterly storage costs are paid at the beginning of each quarter for goods stored at the end of the previous quarter.

13. **Other Selling Expenses** include:

moving allowances: \$5,000 (or Ps 30,000) per salesperson transferred
severance costs: \$5,000 (or Ps 30,000) per salesperson fired.