

THE PIMS STUDY: QUALITY, COMPETITIVE POSITION AND BUSINESS PERFORMANCE

9.1 INTRODUCTION

The **PIMS Study** (Profit Impact of Market strategy) is based on a large data base of more than 3,000 businesses belonging to 450 companies. The Strategic Planning Institute (SPI) started the PIMS study in 1972, for the specific purpose of determining how key dimensions of strategy affect profitability and growth. **Three kinds** of information have been collected:

- **Market Conditions:** They include such things as the distribution

channels used by the SBU (strategic business unit), the number of their customers, their size, and the rate of market growth and inflation.

- **Competitive Position:** Measures of competitive position include market share, relative quality, prices and costs relative to competition, and the degree of vertical integration relative to competition.
- **Financial Operating Performance:** They include such things as profitability (ROS, ROI , etc.), cash flow, value enhancement and stock price, which are measured on an annual basis over periods ranging from 2 to 12 years.

The resulting findings were then processed to provide answers to the following questions based on the experiences of other businesses operating under similar conditions:

1. What profit rate is **normal** for a given business, considering its particular market, competitive position, technology, cost structure, etc.?
2. If the business continues on its current track, what will its future operating results be?
3. What strategic changes in the business have promise of improving these results?
4. Given a specific contemplated future strategy for the business, how will profitability or cash flow change, short-term and long-term?

A **major benefit** of the PIMS model is that it can answer a number of **what if** questions about a firm's business strategy. It provides a benchmark for comparing a business with the profile of an **average** business. It is also a measure of the quality of a firm's businesses. However, the PIMS approach

also has its limitations. Above all, its recommendations are based on historical data, without any guarantee that the future will be the same as the past. Also, because the data are self-reported by a large number of different firms, they are subject to reporting biases. Finally, the respondents have flexibility in defining a business unit which makes the model compare entities that are not consistently defined.

For more information about the PIMS Study, please refer to the following articles:

Robert D. Buzzell and Bradley T. Gale,

"The PIMS Principles: Linking Strategy to Performance," The Free Press, 1987.

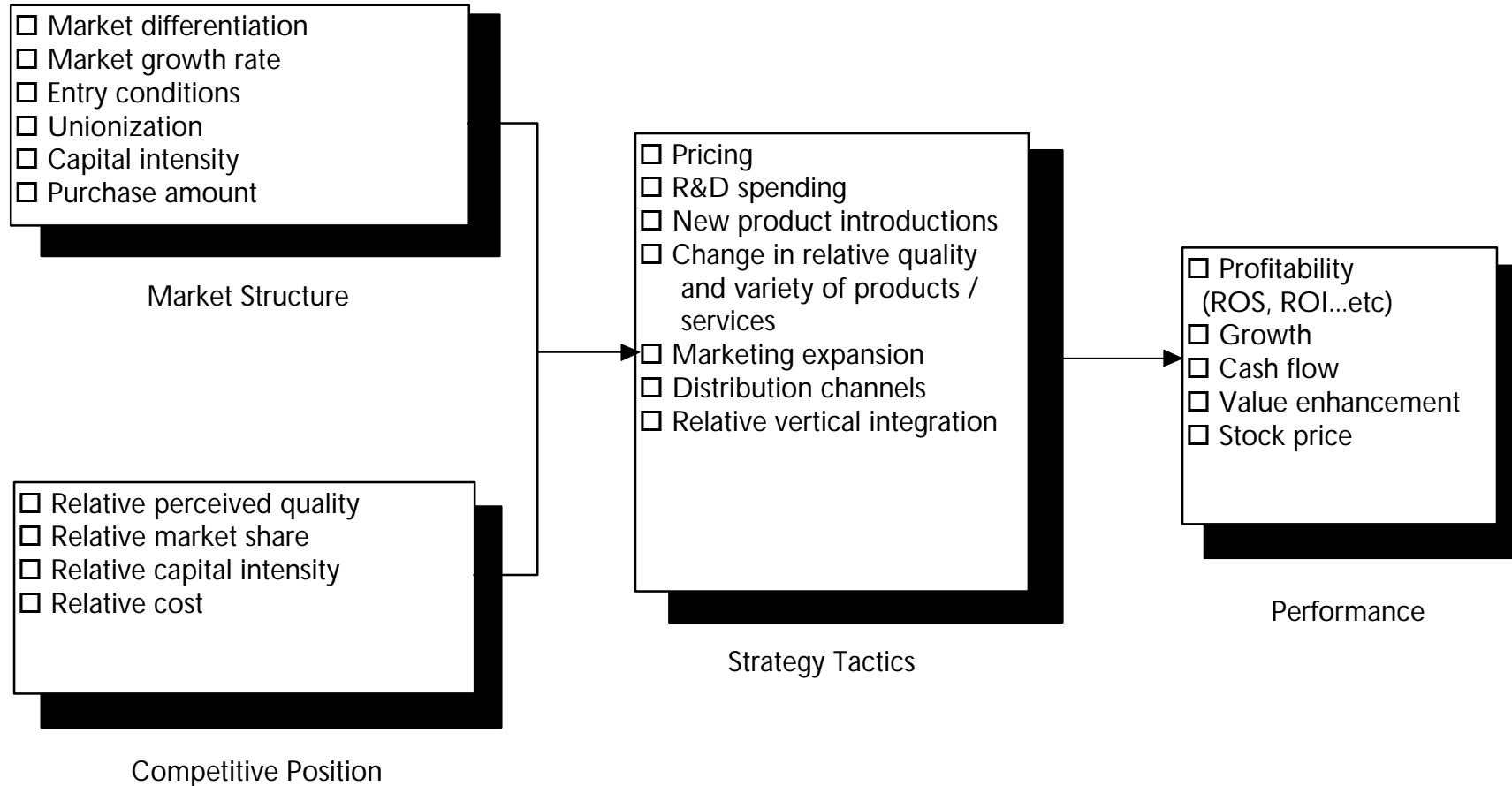
9.2 THE PIMS FINDINGS

The PIMS Study **focuses** mainly on **linkages** between strategy and performance at the business unit or SBU level. It is suggested that business performance depends on three major kinds of factors: market conditions, competitive position and the strategy it pursues. The linkages among these factors are summarized in (**Exhibit 9-1**).

The major findings of the PIMS study are as follows:

1. In the long-run, the most important single factor affecting a business unit's performance is the 'quality' of its products and services relative to those of competitors. A quality edge boosts performance in two ways. In the short run, superior quality yields increased profits via premium prices. In the longer term, superior or improving relative quality is a more effective way for a business to grow, leading to both market expansion and gains in the market share.
2. Market share and profitability are strongly related. Business units with very large shares **Ä** over 50 percent of their served markets

Exhibit 9-1 : The PIMS Competitive Strategy Paradigm



Ä enjoy rates of return more than three times greater than small-share business units (those that serve under 10 percent of their markets). The reason for the market share-profitability link, apart from the connection with relative quality, is that large-share businesses benefit from economies of scale. They simply have lower per-unit costs than their smaller competitors.

3. High investment interests act as a powerful drag on profit-ability. Investment-intensive businesses are those that employ a great deal of capital per dollar of sales, per dollar of value-added or of per employee.
4. Contrary to the predictions of the well-known Boston Growth-Share Matrix of the Boston Consultant Group, many so-called "dog" and "question mark" businesses generate cash, while many "cash cows" are dry. The guiding principle of the growth share matrix approach to planning is that cash flows largely depend on market growth and competitive position (market share relative to that of the largest competitor). However, the PIMS-based research shows that, while market growth and relative share are linked to cash flows, many other factors also influence this dimension of performance. As a result, forecasts of cash flow based solely on the growth share-matrix are often misleading.
5. Vertical integration is a profitable strategy for some kinds of businesses, but not for others. Whether increased vertical integration helps or hurts depends on the situation, quite apart from the question of the cost of achieving it.
6. Most of the strategic factors that boost ROI also contribute to long-term value. Businesses with high ROIs usually also perform well on the long-term value enhancement idea. The value enhancement index is defined as the ratio of total value (DCF plus future market value) to an SBU's beginning market value.

9.3 QUALITY AND BUSINESS PERFORMANCE

The **PIMS Study** traces the different ways by which market-perceived quality and conformance quality drive business performance. Key linkages from superior market-perceived quality (relative quality) to higher profitability and faster growth are spelled out in (**Exhibit 9-2**).

The **market-perceived quality** is defined as the company's relative quality in terms of the key quality attributes, relative importance weights and performance scores comparing to competitors in each key business segment. To identify the quality attributes (performance availability, responsiveness, reliability, brand image, etc.), a firm can ask people in the market served **Ä** both its customers and competitors **Ä** to list the factors that are important in their purchasing decisions.

The **conformance quality** is defined as the capability of meeting product specifications and service standards. Achieving superior conformance quality yields two benefits. First, it means a lower cost of quality (defects, scraps, reworks, inspection, and customer complaints etc.) than that of competitors and thereby a lower overall cost. Second, conformance quality is often one of the key attributes that counts in the market-perceived quality.

So, achieving superior conformance quality can also impress the market-perceived quality.

The first dimension of the **quality and business performance issue** is: To what extent are customers willing to pay extra for higher quality products?

PIMS study shows that businesses that have achieved a superior quality position earned prices 8 percent higher than businesses that have been shown into an inferior quality position (**Exhibit 9-3**).

Exhibit 9-2 : How Quality Drives Profitability Growth and Shareholder Value

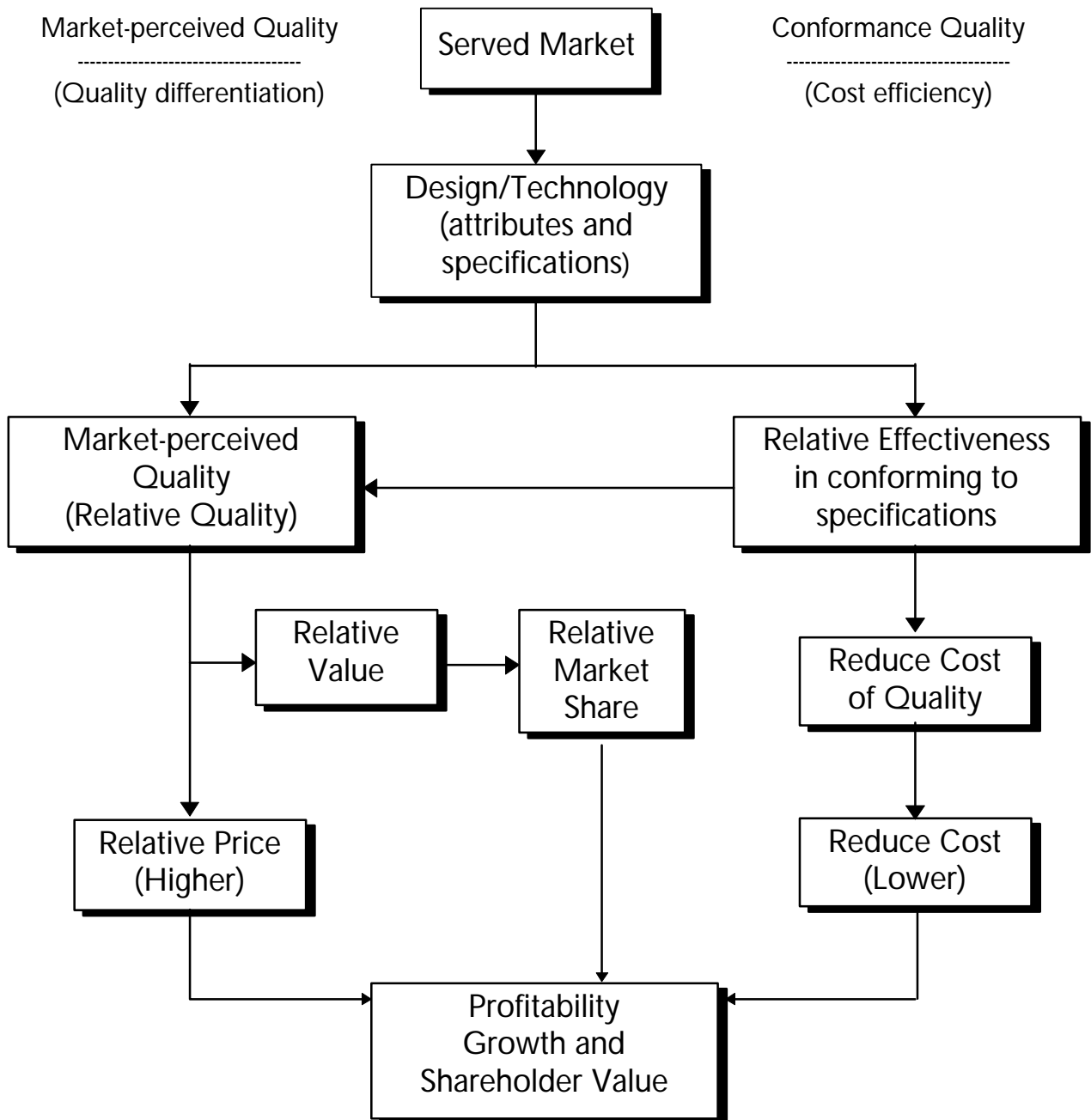
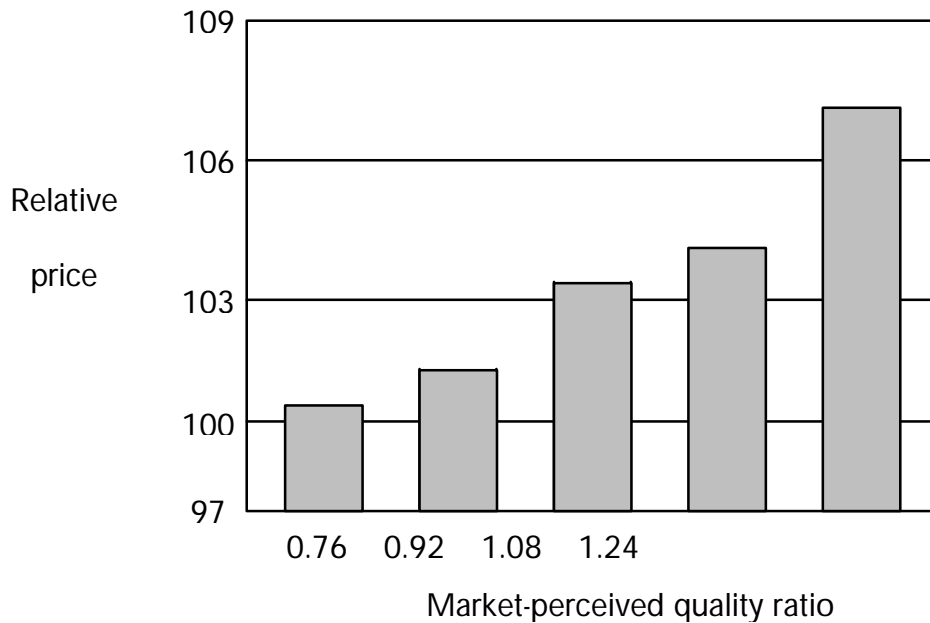
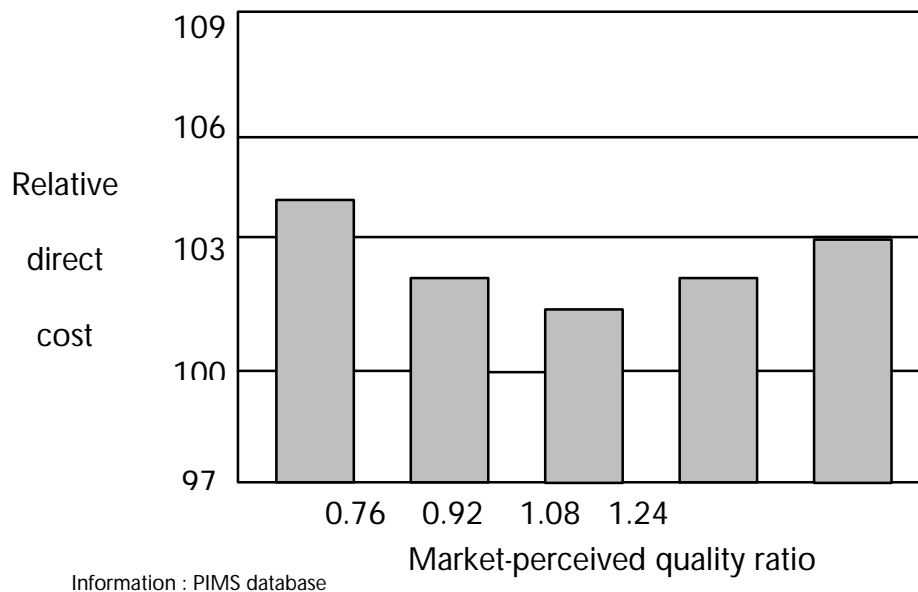


Exhibit 9-3 : Superior Quality Earns Price Premiums



On the other hand, does higher quality mean higher costs? The PIMS study shows that superior quality doesn't mean higher costs (**Exhibit 9-4**).

Exhibit 9-4 : Superior Quality Doesn't Mean Higher Cost



The fact is that superior conformance quality reduces cost, due to fewer defects and less rework, or fewer other non-conformances, so the relationship between cost and quality of conformance is negatively correlated. It means that higher quality of conformance will lead to lower cost. On the other hand, quality of design is positively correlated with cost. For example, adding features can improve market-perceived quality which will have a higher relative cost in the design stage. These two opposing effects just about cancel each other out. Therefore, the relationship between quality and cost is almost flat.

For many years financial accountants have worked to show that the sole reliance is on profitability to measure success. Nowadays, companies tend to measure cash flows and shareholder values as the basis of success.

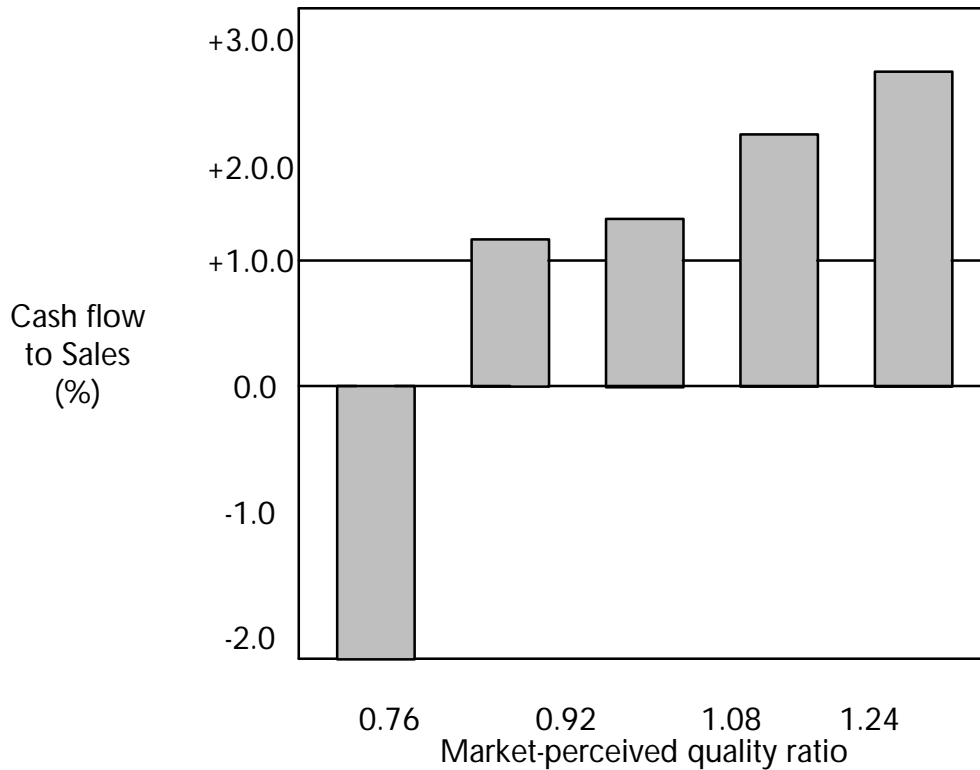
The PIMS study shows that businesses with superior perceived quality generate about 2.4 percent of sales as free cash flow. Businesses pushing themselves into inferior quality positions experienced negative cash flow rates that amount to fully 2 percent of sales (**Exhibit 9-5**). The operating cash flow here is measured as after-tax earnings minus the increase in net investment. This is equivalent to after-tax earnings plus depreciation, minus the increase in gross investment.

Shareholder value depends on the cash flow and the market value of a firm. To decide if a firm is creating value for shareholders, it needs to analyze not only the operating cash flows during a specific time period, but also a firm's market value at the beginning and end of that period.

To measure the market value of a business that is not publicly held, financial data including profitability, trend of profitability, rate of sales growth, rate of R&D spending, and degree of capital intensity are used to estimate the internal rate of return the business is achieving.

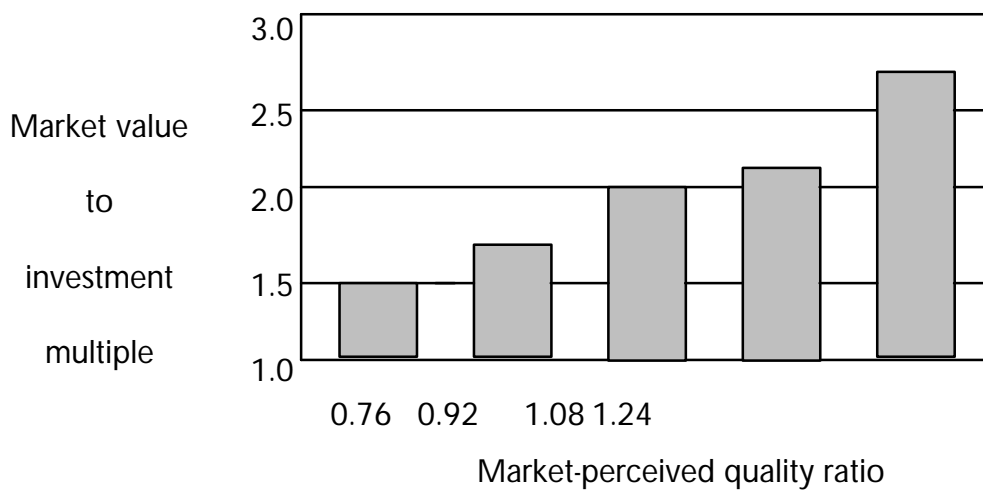
The result shows that businesses with **inferior quality** have an approximate market-value-to-investment multiple of about 1.5. By contrast, businesses that achieve superior quality have multiples of about 2.7 or 2.8 (**Exhibit 9-6**).

Exhibit 9-5 : Inferior Quality Cripples Cash Generation



Information : PIMS database

Exhibit 9-6 : Superior Quality Makes a Business More Valuable



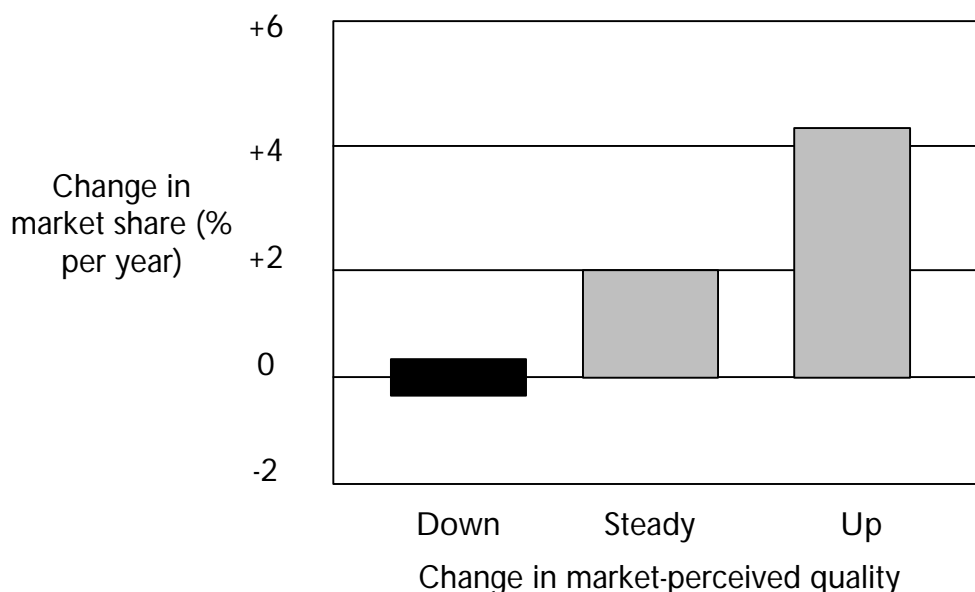
Information : PIMS database

If a firm moves from a position of inferior quality to a **superior position**, there will be an immediate 80 percent increase in market value because the market-value-to-investment multiple would move from 1.5 to 2.7. Merely pulling ahead from an "about the same" quality position to a superior position can improve market value by about 35 percent. If we take into consideration the increase in market share, such a move will have an even greater impact on market value.

9.4 MARKET-PERCEIVED QUALITY AND MARKET SHARE

The PIMS study shows that businesses that improved quality relative to competitors, and businesses that improved their overall market-perceived quality ratio gained market share at the rate of 4 percent per year (**Exhibit 9-7**). By contrast, businesses that did not change market-perceived quality managed to gain 2 percent per year, and those that declined in market-perceived quality did not gain any share at all.

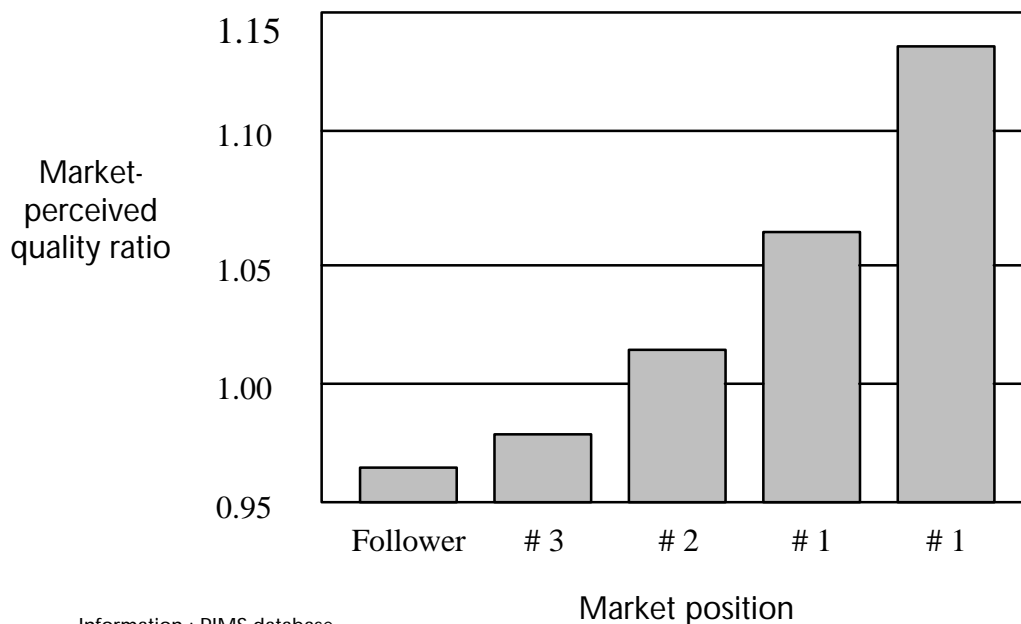
Exhibit 9-7 : Improving Quality- vs. Competitors- Boosts Market Share



Information : PIMS database

Strong market leader's performance scores on quality attributes are about 15 percent higher than their competitor's scores (**Exhibit 9-8**). Weak market leaders outperform their competitors' customer satisfaction scores by some 6 or 7 percent. Overall, market-perceived quality scores average just about 1.0. As we move down in market rank, businesses tend to fall further behind their competitors in perceived performance on key quality attributes.

Exhibit 9-8 : Market Leadership Is based on Superior Quality



Market-perceived quality and **conformance** quality are not the same. Market perceived quality is viewed from the customer's point of view (externally); conformance quality is viewed from the quality assurance perspective (internally).

Achieving **superior conformance** quality ultimately results in both lower costs and superior perceived quality.

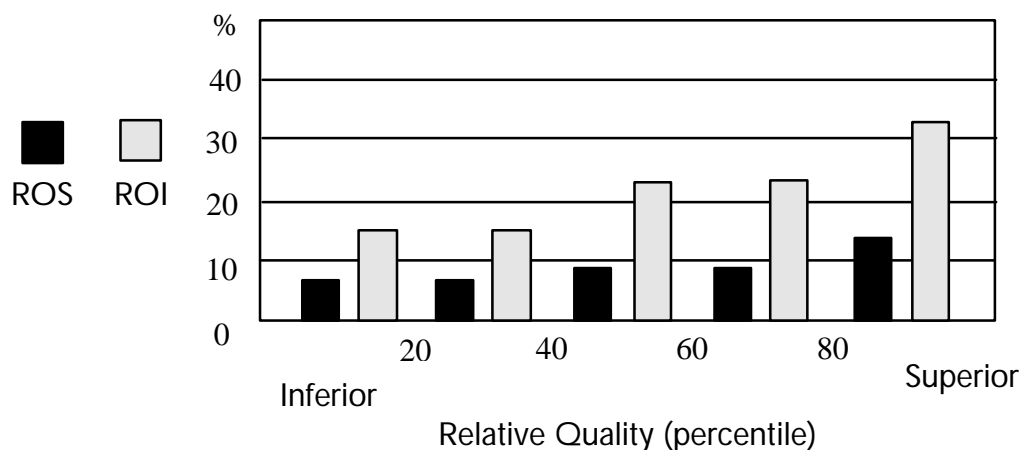
As firms move from inferior to superior quality positions, they typically trade the cost reductions of improved conformance quality (i.e. scrap and rework)

for the increased cost of improving product or service performance on key attributes that result in the customer's purchase decision (i.e. perceived quality).

9.5 QUALITY AND PROFITABILITY

According to the PIMS study, market-perceived quality and market share are **correlated** on profitability. Whether the profit measure is return on sales (ROS) or on investment (ROI), businesses with a superior product/service quality offering clearly outperform those with inferior quality (**Exhibit 9-9**).

Exhibit 9-9: Market-perceived Quality and Profitability



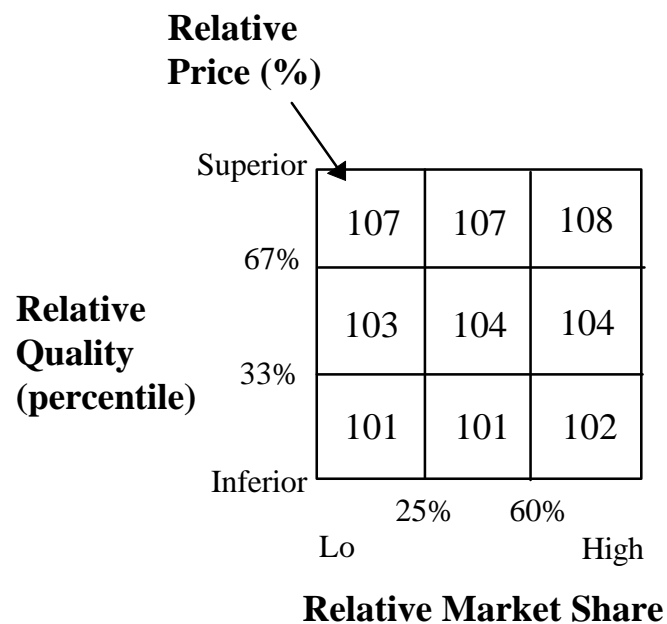
Several key benefits accrue to businesses that offer superior market-perceived quality:

- Stronger customer loyalty
- More repeat purchases
- Less vulnerability to price wars
- Ability to command higher relative price without affecting market share.

- Lower marketing costs
- Market share improvements

However, the PIMS study shows that quality **affects relative price**; but separated from quality, market share has little effect on price (**Exhibit 9-10**).

Exhibit 9-10 : Quality Affects Price: Separate from Quality, Share has Little Effect on Price



On the other hand, **market share affects relative direct cost** but market-perceived quality has little impact on cost (**Exhibit 9-11**). Internal costs can only be reduced by better conformance quality. The greater profitability of businesses with superior market-perceived quality is typically linked to their ability to perform superior conformance quality.

The relationship among market-perceived quality, performance (ROI) and relative market share can be illustrated by the following diagram:

Market perceived quality affects prices and drives market share. Market share affects relative direct cost and drives performance (ROI) to a higher

position. A model of these relationships can be beneficial in the following ways:

1. It provides a realistic and consistent method for establishing potential return levels for individual businesses.
2. It stimulates managerial thinking on the reasons for deviation from par performance.
3. It provides quality dimension into strategic moves that will improve the par ROI.
4. It encourages a more discerning appraisal of business unit performance.

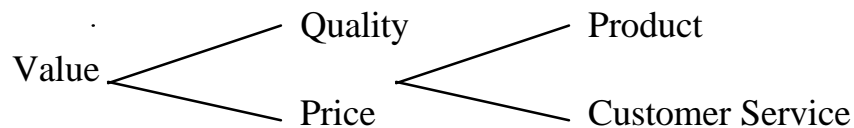
Exhibit 9-11 : Market Share Affects Cost; Market-perceived. Quality Doesn't

		Relative Direct Cost (%)			
		Superior	67%	33%	Inferior
Relative Quality (percentile)	67%	104	103	101	
	33%	104	102	100	
	Inferior	104	102	100	
		Low	25%	60%	High
		Relative Market Share			

9.6 QUALITY AND GROWTH

Quality is related not only to **profitability** but also to **growth** through the impact of customer value. Customer value is the relationship between quality and price, and customer's purchasing decision is highly related to customer value. The relationship of customer's purchasing decision and value are as follows:

1. Customer buys on value.
2. Value equals quality relative to price.
3. Quality includes all non-price attributes of a product and customer service.
4. Quality, price and value are relative, which can be expressed as:



A **customer** who gets superior quality at a low price gets better value; a customer who gets inferior quality at a high price obviously gets worse value. The customer's purchasing decision depends on the quality of a particular product or service and its price in comparison with the market offerings. Therefore, it is the perceived relative value of the total package of products and services that influences customer behavior.

Customer value is the market-perceived quality score of each key competitor versus price for each market segment. A customer value profile can compare a firm's performance with that of one or more competitors. This customer value profile usually has two elements:

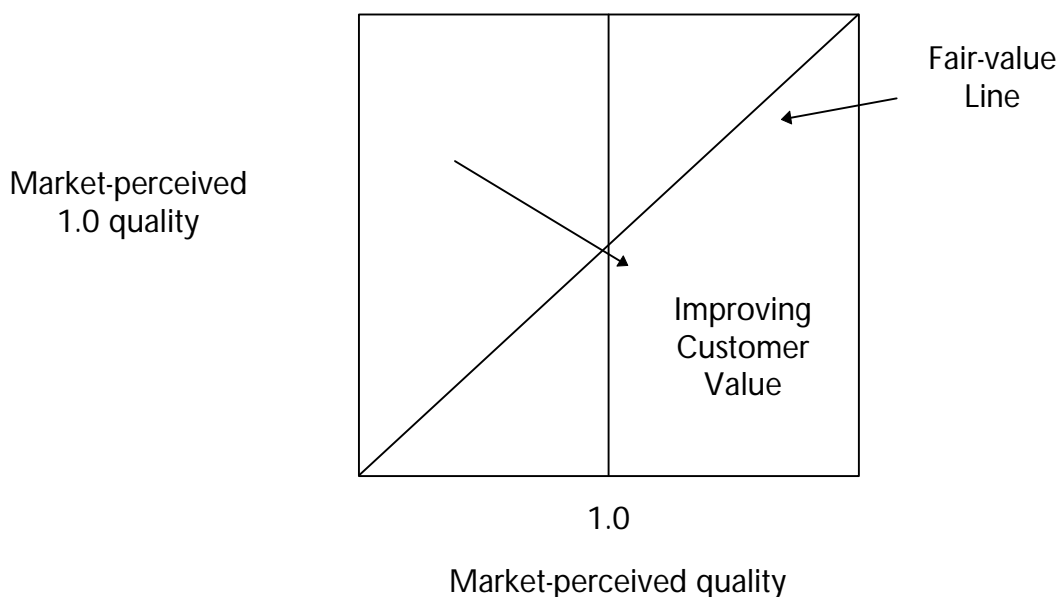
- A market-perceived quality (relative quality) profile.
- A market-perceived price (relative price) profile.

Based on the information from the customer value profile, we can calculate the customer value.

$$\text{Customer Value} = (\text{Market-perceived quality score} \times \text{quality weight}) + (\text{market-perceived price score} \times \text{price weight})$$

A **customer value** of 1.0 means that customers perceive the value of two competing products to be the same. If a customer value is 1.5, it means that customers perceive a firm's performance 50 percent better than those of its competitors. If a customer value is 0.8, it means that customers perceive a company's performance 20 percent less than its competitors. A firm can also use the customer value map to compare the value positioning with its competitors, or for a portfolio of business units (see **Exhibit 9-12**).

Exhibit 9-12 : Customer Value Map

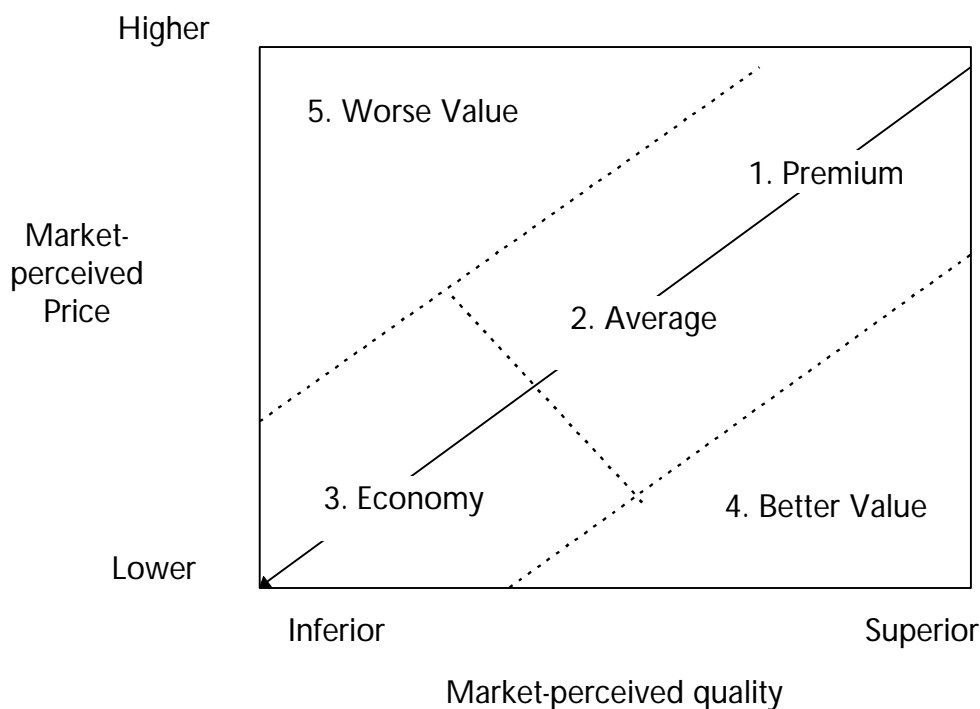


On the **fair-value line**, all the customer values are equal to one. Companies tend to gain market share when they are below and to the right of the Fair-value Line. In most markets, there are three value positions and five product/service positions that a firm may adopt (**Exhibit 9-13**).

A firm may adopt one of the following marketing strategies:

1. To offer average value by offering comparable quality at a comparable price (Average position)
2. To offer superior quality but charging a premium for it. (Premium position)
3. To offer discounted price for inferior quality (Economy position)
4. To offer superior quality at comparable price or to offer comparable quality at lower price (Better value position)
5. To offer comparable quality at higher price; or to offer inferior quality at comparable price (Worse value position)

Exhibit 9-13 : Value Map : Fine Generic Product/Service Positions



Most businesses fall along the diagonal line that stretches from the economy end to the premium position. A premium position means that a firm can

charge premium prices or increase its market share. The diagonal line offers the path of growth for companies which improve quality continuously to move from the economy end to the premium position.

