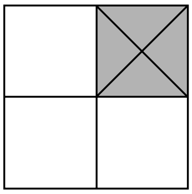
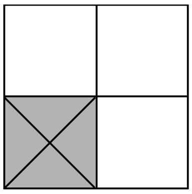
The Experience Curve - Reviewed

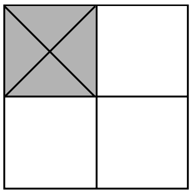
IV. The Growth Share Matrix or The Product Portfolio



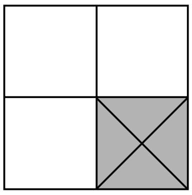
Many “businesses” require far more cash input than they can ever generate.



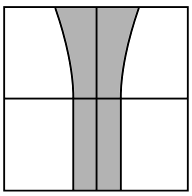
A few businesses generate far more cash than they can profitably reinvest.



A few businesses are self-sufficient in cash flow. Over time they will become much larger and also large net generators of cash.

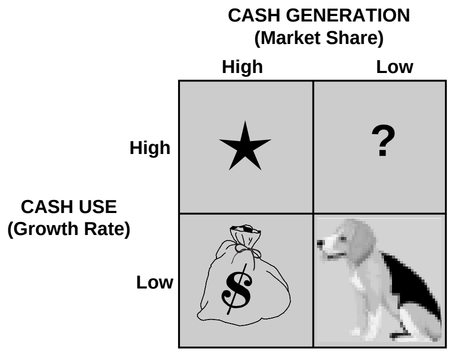


Most businesses, however, generate very little cash even though they use little. The reported earnings must be reinvested and probably always will. These businesses are “cash traps.”



Between these categories is an unstable situation that rarely persists for long. Competitors of equal size in a product-market segment rarely stay of equal size.

The use of cash is proportional to the rate of growth of any product. The generation of cash is a function of market share because of the experience curve effect.



The growth share matrix is a diagram of the normal relationship of cash use and cash generation.

Stars are in the upper left quadrant. They grow rapidly and therefore they use large amounts of cash. However, since they are leaders, they also generate large amounts of cash. Normally, such products are about in balance in net cash flow. Over time all growth slows. Therefore, *stars* eventually become *cash cows* if they hold their market share. If they fail to hold market share, they become *dogs*.

Cash cows are in the lower left quadrant. Growth is slow and therefore cash use is low. However, market share is high and therefore comparative cash generation is also high. *Cash cows* pay the dividends, pay the interest on debt and cover the corporate overhead.

Dogs are in the lower right quadrant. Both growth and share are low. *Dogs* often report a profit even though they are net cash users. They are essentially worthless. They are cash traps.

Question marks are the real cash traps and the real gambles. They are in the upper right quadrant. Their cash needs are great because of their growth. Yet, their cash generation is very low because their market share is low.

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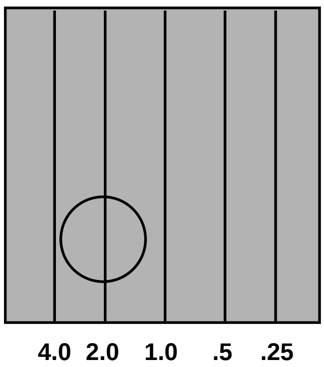
Left alone *question marks* are sure losers. They can require years of heavy cash investment. Yet, if they do not develop a leading market position before the growth slows, they become just big *dogs.*

Yet *question marks* are very difficult to convert into stars. Increase in market share compounds cash needs. The cost of acquiring market share doubly compounds the cash needs. *Question marks* are sometimes big winners if backed to the limit. But most *question marks* are big losers.

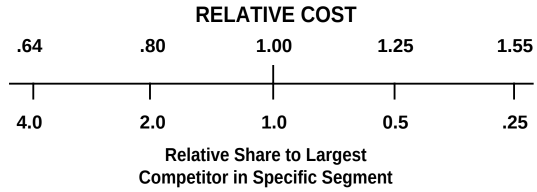
The growth share matrix is directly derived from the experience curve. The experience curve is the means of measuring probable competitive cost differentials. A difference in market share of 2 to 1 should produce about 20 percent or more differential in pretax cost on value added. This is equivalent to 5-25 percent and more after-tax differential on revenues depending on asset turnover and percent value added.

The cash flow reference is to the largest competitor in the product. The growth share matrix can be drawn with market share shown in this way.

Only *one* competitor can be on the left of 1.0. All others are smaller by definition.



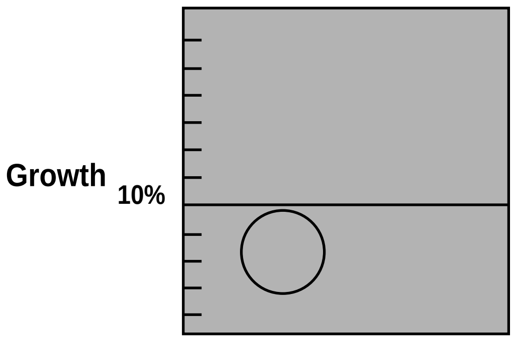
Ratio to market share of largest competitor



Characteristically, a normal experience curve slope will produce cost ratios to the largest competitor like these.

When the cost differential is less than this, it is usually because of shared experience. Failure to achieve this differential can also be caused by inadequate investment or poor management. Sometimes the segment itself has been improperly identified, and the market share being measured is not the relevant market.

Growth can be shown in terms of the capital opportunity alternatives.



Growth which is less than the company investment threshold cutoff rate means that the present cash generation is more valuable than the future equivalent. Growth which is more than this means the payoff grows faster than the available alternate investments.

All of the products of a company can be shown on a single growth share matrix as a product portfolio. Each product can be plotted on its own growth and share coordinates. The size of the product can be indicated by a circle in proportional scale.

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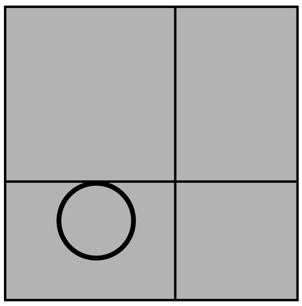
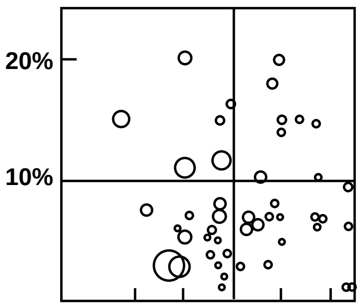
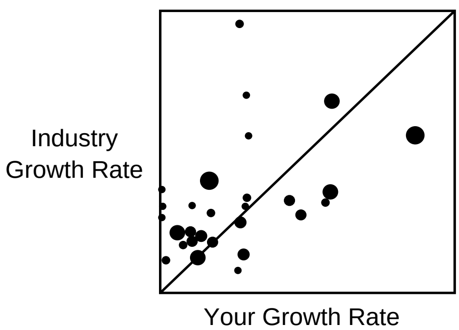


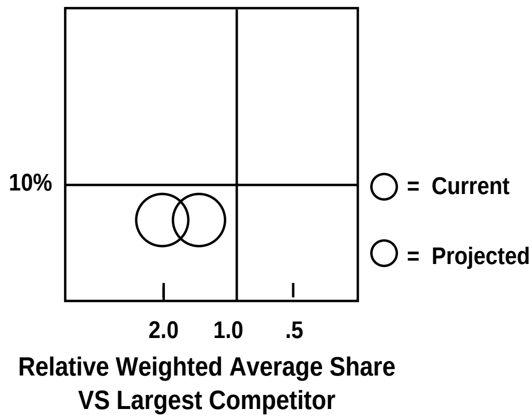
If all products are plotted on a single matrix, then the company's whole portfolio can be shown on a single display.

A TYPICAL SUCCESSFUL DIVERSIFIED COMPANY



This can be combined with a display to show the direction in which each product is moving.





Nothing should be in the upper sector in which industry growth exceeds your growth. This is death valley. Either manage for net cash flow and get out or gain market share.

Typically most products have less market share than the leading competitor. Yet, it is typical also that the weighted average market share of most companies exceeds 1.0 on such a display.

Such a single chart with a projected position five years out is sufficient alone to tell a company's profitability, debt capacity, growth potential, dividend potential and competitive strength.

However, great care must be taken in product-market segmentation before drawing such charts. It is quite possible for a company to be the largest in the industry and be a leader in no single segment.

Growth share matrices and related charts are very valuable tools for analyzing strategic positions and options.

Bruce D. Henderson