Practical Implementation of the 80-20 Principle in Business

2 ways to leverage the power law of Pareto Distribution
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What is the Pareto Principle or the 80-20 rule?

The Pareto Principle is known as the 80-20 Rule and also the 80-20 Principle. This is because over a century ago, while studying the wealth and income distribution in different European societies, the Italian engineer Vilfredo Pareto discovered this rule by which 20% of the population accounted for 80% of income, land ownership and wealth.

Pareto's Rule describes that large events are rare, but small ones are very common; like the fact that there are very few multi-billionaires, but most people have only modest wealth.

![Diagram showing the Pareto Principle]

The principle is easier to visualize as the relationship between two separate sets of data where the first one is a categorical dimension like, customers, products, competitors, etc.; and the second is a quantitative measure - or number - like, sales Dollars, profit, cost, etc. A relationship of the type input/output, effort/reward or cause/effect can be established, where for example, only 20% of all products generate 80% of a company's sales.

Some typical everyday examples of the Pareto Rule are:

- 20% of drivers cause 80% of accidents.
- 20% of patients use 80% of health care resources.
- 20% of criminals commit 80% of crimes.
- 20% of competitors account for 80% of a given market share.
- 20% of city streets get 80% of the traffic.
- 20% of a portfolio holdings account for 80% of its returns.
- 20% of all employees create 80% of the value.
- 20% of all defects generate 80% of customer complaints.

The 80-20 Principle has wide application in economics, market analysis and business strategy, where 20% of the effort delivers 80% of the results. On the flipside, businesses are usually surprised to find that 80% of their customers, products, activities or programs are generating only 20% of sales or profit.

It’s also important to notice that the top 20% of customers or products are 16 times more profitable than the bottom 80%.

While the Pareto Rule is widely known, many companies do not exploit its power to grow profitability. This is not difficult. The key is to identify those **vital few** activities, brands, customers or actions (the 20%) that yield high profit and expand on them, while getting rid of those **trivial many** activities, actions, products or programs (the 80%) that waste everybody’s time and effort.
Why is it important for business?

If a business is large enough to be significant, its sales, cost and profit data usually respond to a non-linear statistical distribution that contains the 80-20 Rule.

Looking through the famous 80-20 principle one usually finds that the top five percent of the customers, products or business units generates close to 50% of the profits while the bottom 50% of customers, products or markets generates only 5% of the total profit. In this case, the top 5% of customers are 100 times more profitable than the bottom 50%.

The story gets worse as the bottom 40% usually generates no profit at all. Within this group some customers or products are slightly profitable, some are profit neutral and some are true cash drainers. All these reasons make it imperative for a business to analyze its performance with the help of the Pareto Principle to increase profitability.

How to Analyze Business Performance through the 80-20 lens

The key to effectively deploying the 80-20 rule is a periodic data driven review of products, brands, sales-reps, distributors, markets, or business units. The objective is to identify those vital few activities, brands, customers or actions that yield high profit and expand on them, while getting rid of those trivial many activities, actions, products or programs that waste everybody’s time and effort.

This sort of analysis can be performed very simply using a spreadsheet and minimal resources or one can get a little more sophisticated and build business analytics dashboards to regularly monitor the business performance.

The next section describes how a spreadsheet can be set up for performing this type of analysis on a very simple and commonly available business dataset.

Preparing the data for a Pareto Chart

Using a spreadsheet, the business data needs to be arranged in three columns: Category (products, customers), Value (sales revenue, profit) and Cumulative Percentage of the values; all sorted in decreasing order of value.

Graphing a Pareto Chart

The graph has three axes. The horizontal axis represents the categories (customers, products). The vertical axis on the left displays the value (sales $, cost or profit). The vertical axis on the right side shows the cumulative percentage of the value.

The categories are displayed as bars while the cumulative percentage is an ascending curve.
Two ways to leverage the Pareto principle in practice

In this whitepaper we will discuss two basic practical applications of the 80-20 principle: maximizing profits from products and from customers. Automating the Data Visualization in an Interactive Dashboard will greatly help in clarifying and communicating the insights from data to busy executives.

1. Product Profitability

In many companies the objective of Product Management is to improve the profitability of the product line, across business units, through portfolio management, product consolidation and cost reduction initiatives. Many businesses struggle to measure profitability of products, brands or SKUs in their portfolio. This is not difficult as even small businesses can use the 80-20 strategy to increase the profitability of their product or service lines.

When the accuracy of the allocation of fixed cost and operating expenses is not clear, variable profitability measures like Sales Throughput or Contribution Margin should be used to preserve the quality of the analysis and prevent misleading results. Only if one agrees with the allocation criteria is that measures like Gross Profit (GP), Margin after Distribution (MAD) Operating Profit (OP) or EBIT can be used in the analysis.

Using a spreadsheet, the business data needs to be arranged in three or four columns: Category (products, brands or SKUs), Value (sales revenue and profit) and Cumulative Percentage of the values; all sorted in decreasing order (of value). It’s not uncommon for the analysis to show that the top 20% of the products contribute 80% of the profit, the next 40% generate 20% of the profit and the bottom 40% usually has no contribution to profitability but still uses up inventory dollars and warehouse space.

Looking at the graph and having identified all products that fall in each of the three categories, the 80-20 Strategy becomes obvious.

1) How many of the bottom 40% products can we discontinue or rationalize? To answer this question we need to analyze more data to understand what customers are buying them, the reasons for the low profit and whether increasing price or switching them to a different product are viable options.
2) How can we grow the highly profitable products at the top? Again this requires of additional Strategic Analysis of business data to understand what makes these products stars.

If we could eliminate the bottom 40% of products and redirect the freed resources to duplicate the top 20%, the bottom line would increase by 80%!

2. Customer Profitability

Even for the most successful companies, some customers can be very profitable while others actually have a negative impact on the bottom line. Many companies struggle to measure the profitability of customers, distributors or agents. However this is not hard to do - even for small businesses - as they can use the 80-20 strategy to increase the profitability of their customer portfolio.

In a business that has more than twenty customers, the Pareto Principle will be evident: the top 20% of customers generates close to 80% of profit while the bottom 80% of customers generates only 20% of the profit.

As mentioned in the previous section, when the accuracy of the allocation of fixed cost and operating expenses is not clear, variable profitability measures like Sales Throughput or Contribution Margin should be used. Only if one agrees with the allocation criteria should measures like Gross Profit (GP) or Margin after Distribution (MAD) be used in the analysis.

As in the case of product profitability, the analysis of the 80-20 profit distribution by customer can be similarly done using a spreadsheet. The business data needs to be arranged in three or four columns: the Category (in this case is a) Customer or account location, Value (sales revenue and profit) and Cumulative Percentage of the values; all sorted in decreasing order (of value).

The horizontal axis represents the customers or accounts; the vertical axis on the left displays sales $, or profit and the vertical axis on the right side shows the cumulative percentage of the value (sales $, or profit). The categories are displayed as bars while the cumulative percentage is an ascending curve.
The Pareto analysis performed on profitability can show negative values for unprofitable customers, resulting in what’s called a whale shape curve; as pictured in this chart.

This is curve is more pronounced as the profitability measure is lower in the “profit and loss statement” (P&L). The more fixed cost and operating expenses are allocated, the lower the tail end of the whale shape curve would be, as negative profitability will affect more customers.

One usually finds that the top five percent of the customers generates close to 50% of the profits while the bottom 50% of the customers generates only 5% of the total profit. The story gets worse as the bottom 40% usually generates no profit at all. Within this group some customers are slightly profitable, some are profit neutral and some are true cash drainers.

This analysis is fundamental to understand who the strategic customers are, how they are different from key customers and standard accounts; and finally identify those in the cash drainer group. Customers in this last group should be persuaded to pay higher prices or buy from the competition - and let them enjoy the losses!

This exercise usually frees valuable resources to be re-deployed to support strategic customers, strengthening relationships as well as developing new profitable accounts.

References:

- Richard Koch - The 80-20 Principle
- Strat-Wise, LLC

Do you want step-by-step instructions with examples on how to implement this in your business? Find out more about our interactive learning module!
About the Author

Bill Cabiró has over twenty five years of experience in R&D, sales, business development, product management, strategic marketing and business systems management within the SC Johnson family of companies - the $10 billion privately held multinational – and BASF – the $80 billion global chemical company. Bill has successfully employed Strategic Analytics to obtain profitable growth through Market Driven Management, 80-20 Analysis & Strategy, Product and Customer Portfolio Management and Theory of Constraints Metrics. He is the founder and Managing Director of Strat-Wise LLC.

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About SimaFore

Our team of experts comes from different backgrounds but the analytical techniques each have applied in their experience have several common threads: using data to understand cause and effects, building models to simulate systems or processes, and using a combination of analytic tools for forecasting. Our team shares a common vision - to help businesses remove the complexity involved in applying and deploying analytics.

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About Strat-Wise

We help companies become more competitive. We show them how to exploit the most advanced Analytics Technology, in a strategic manner, to obtain sustainable and profitable growth. Our objective is to provide a strong analytic advantage so Marketing, Sales, R&D and Strategic Business Leaders can effectively use the business data they already have to beat the competition and increase market share, revenue and profit.

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