

# Caterpillar essay



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With 2004 sales revenue in excess of \$30 billion and profits of \$2.03 billion Caterpillar is the world's leading manufacturer of construction, mining and earth moving equipment. Caterpillar operates in three key areas; machinery, engines and more recently financial products. Mature product markets are an aspect of all product lifecycles once the initial rapid growth stage is complete sales will continue to rise but however at a much slower rate.

Problems associated with mature markets include; slower cost recovery, increased risk of competitors capturing market share and the threat of products moving into the decline stages of the product lifecycle. When entire product markets go into maturity there is little room for growth through innovation as the market is already saturated and therefore even new product lines may struggle. However as in all technology based industries it is important to maintain research and development expenditure in order to keep up with competitors and maintain a competitive advantage.

Possibilities for growth become considerably limited, options include moving into new markets and strategies to attempt capture competitors market share. This puts an increasing importance on brand names; in the case of Caterpillar they have the advantage of an extremely well established and worldwide known brand name. In times of recession such as those of the 1980s it is often the construction industry and therefore those connected industries such as the construction equipment manufacture industries that are the first and often worst affected industries.

This coupled with the mature product market led to declining sales in the early 1980s. They therefore were required to find new markets for their

products or to diversify into new business areas. Another major problem faced by Caterpillar was their high labour costs; this was due to the majority of their manufacturing being carried out in the US where labour costs are high. Clearly due to the nature of the products being manufactured it would not be practical for them to carry out the entire manufacture process overseas then to have to import large construction vehicles at a high cost back to the US however the possibilities were resented for the smaller parts and components to be manufactured at a lower labour cost overseas.

Caterpillar's restructuring along side their "Plant with a future (PWAFF) programme" (Froud, et al. , 1998) has worked to transform the group into a cellular based manufacturer with a strong customer focus. The restructuring also assisted them in making significant cost reductions in labour and many other areas, it is now important to consider the forces behind this restructuring, firstly looking at the mature product markets that the organisation faced in the 1980s and 1990s then some of the other possible causes for the restructuring.

The 1980s recession and construction equipment market maturity caused considerable problems for Caterpillar, with domestic sales becoming stagnant and rising labour costs there was a need for change if the organisation was to maintain their market share. A key area of this restructuring was their diversification into finance, by moving into this new area they were able to offer more to their customers so whilst benefiting from the income of this additional business area they were also directly supplying customers of their core business area with a finance option to purchase equipment.

This diversification into new market which has occurred extensively in the motoring industry in recent years and is continuing to spread through other industries can be well described by the sector matrix, this describes how companies are starting to diversify into industries supporting their core industries and therefore the different areas act in unison and in theory act in unison to support each other This should therefore have a positive effect on sales.

This shift into finance where they also offer insurance and a range of other products, whilst now making up about 25% of profits, it does have a negative effect on the balance sheet as by increasing the levels of debtors will reduce the company's return on capital employed. This could have negative effects on investment due to shareholders perceptions of the information. Caterpillar have also made good use of their substantial brand name to diversify into clothing and other accessory goods, this was a considerable excess with their products becoming considerably fashionable allowing for them to charge higher prices.

They also made new attempts to move into foreign markets to increase export sales, this has been increasingly successful for them due to increased demand from countries such as China and Brazil where increased levels of construction have led to increased demand for Caterpillars product lines. This has also led to an increase in overseas production over the late 1990s which in some countries should have led to savings in labour expenses and higher profit margins. There are several other factors that could be said to have driven Caterpillars restructuring in the 1990s.

The first factor to examine is workforce relations, in the late 1980's and early 1990s Caterpillar was involved in a long five year industrial dispute. This need to control high labour costs and build company-employee relations could well have been one of the influencing factors in the caterpillars restructuring. The move to increased outsourcing of non-core activities would have helped to lower labour costs; this could be especially true as it may give them the opportunity to move away from the high costs of US labour.

These high labour costs were behind one of the most important driving forces of restructuring. In the early 1980s these high labour costs coupled with falling levels of demand led to a massive increase in labour share of value added rising to 94% in 1991 whilst the recommended maximum is 70% (Froud, et al. , 1998). This meant that there was very little value added available to cover other expenses including research and development and share dividends etc. This was of critical importance to Caterpillar and required urgent action from management.

Therefore in response to this caterpillar reduced employment levels and stood their ground in the ongoing dispute with the union to eventually secure lower labour costs for the organisation. This was done partly through the increase in computerised technology which will be discussed shortly. The restructuring also involved the reduction of job classifications and an increasingly multi skilled workforce allowing further reductions in employee numbers and therefore costs.

Added long term fringe benefits of these employee reductions could be in increased levels of motivation and productivity as those remaining employees may feel a sense of greater job security and job enrichment from being more highly trained to be multi skilled. A second area to consider is the increasing levels of computer technology. Worldwide manufacturing is becoming increasingly automated and increasingly computer controlled.

The increasing addition of computers to the manufacturing industry in a variety of roles may often require some restructuring; of the workforce, design processes and organisational structure. This is due to computers changing people's roles, responsibilities, and the general processes of design manufacture and even methods of sales and marketing. An example of the benefits of this is put forward by Magnet and Hadjian (1994) in that after the implementation of extensive information technology, and restructuring one factory doubled its output of truck engines with the same number of workers.

Another driving force behind their restructuring was the rise of their closest rival the Japanese firm 'Komatsu', their increasing penetration of the US market required Caterpillar to become increasingly competitive on price. The effects of this Japanese competition were magnified by a favourable exchange rate for Komatsu and therefore making it easier for them to import their products at a competitive price. Komatsu were reasonably successful in penetrating the US market capturing a share of 22% by 1986 however possibly as a result of Caterpillar's restructuring this fell to closer to 10% in the early 1990s.

This could also be due to the fact that in the early 1990s the exchange rate of the yen to the dollar then changed and became favourable to Caterpillar. This weaker dollar to the Yen made it difficult for Komatsu to cost effectively export to the US and in contrast aided Caterpillar's exports to Japan, which in the past had been a more difficult area for Caterpillar's since their relatively unsuccessful joint venture with Mitsubishi back in 1963 (Froud, et al. , 1998).

Caterpillar therefore successfully became increasingly competitive in both domestic and foreign markets through a strategy of tighter cost control alongside increased focus on customers and their product range. In conclusion therefore it can be said that the mature product markets whilst very influential they were not the only factor driving the company's restructuring. Many other factors such as industrial relations, hugely increased levels of technology and increasing competition had a catalyst effect on their restructuring.

This new and improved organisational structure and lower labour costs has now allowed them to increase their workforce globally back towards that of pre-restructuring. Some of this growth has also been through the successful acquisition of some other related companies including UK based Perkins motors in 1997. Caterpillar now enjoys the benefits of an excellent dealer network for distributing their product lines and maintains its customer focus by supplying good after sale servicing. They pride themselves in the ability to replace any part in a maximum of 48 hours.

Continuous improvement and close relations between suppliers and the company in the design process helps to ensure they maintain a market

leading position. This good after sale service and their high quality manufacturing helps to build lasting customer relationships to encourage future purchases and therefore maintaining and protecting their market share. As Porter wrote this ability to now operate above average on a long term scale will aid them in creating a “ sustainable competitive advantage” (Porter, 1985, in Moore. J, 1992).

Caterpillar’s increasingly global company also now gives them extra protection from the effects of exchange rates that effected Komatsu in the 1990’s as they manufacturing and selling their product lines in a number of different companies around the world with over 100 manufacturing sites and close to 200 dealers. However importantly when you consider the recent financial results it is clear that caterpillars restructuring has been successful and through a variety of new working practices they have maintained and improved their domestic market share whilst expanding overseas operations and diversifying into new areas especially finance.