



Brent Sheather's RESEARCH

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CAR STUFF : PART 4 – ENGINES THAT MOVE MARKETS

When I started this four-part series on the car industry I assumed that my main resource would be "Engines That Move Markets" by Dr Sandy Nairn, former associate and fund manager of noted value investor, Sir John Templeton. Whilst value investing has gone out of fashion the history of the investment world remains popular, especially amongst people like this writer. Nairn devotes a chapter to the early days of the automobile industry which, amongst other things, documents the rise of Henry Ford. But, as is the way, one thing led to another, and parts 1-3 are done and we haven't even touched on Dr Nairn's research. So today we will look at the early years of the automobile, courtesy of Engines That Move Markets, with a particular focus on the importance of economies of scale.

The book starts with an introduction by the author setting out the purpose of the research: *This book is the product of an in-depth study of the impact that the great technological inventions of the past 200 years, from railways to the internet, have had on financial markets and investor's fortunes. The research was begun in 1999 just as the great market bubble of 1999-2000 was coming to its head and it seemed that any company connected with the internet, however remotely, could do no wrong. The original aim of the research was to satisfy my curiosity, as a professional investor as to how and why new technologies can create such apparently irrational stock market bubbles like the recent internet mania. It got me wondering: what happened in the past when new technologies with similar transforming potential had arrived on the scene? How did investors and the media react at the time? Who ended up as the winners and losers from these episodes? In every case the media has played a prominent role in first building up the impact of a new technology and then in chronicling the painful denouement for most*

investors. In every episode, alongside the genuine entrepreneurs there have been examples of unscrupulous investors, dishonest stock promoters and earnings-fiddling corporate executives.

In his book, Dr Nairn observes that most motor manufacturers emerged from industries that were competitors of, or related to, cars, including railroads (William Chrysler), bicycles (Alexander Winton), companies operating in the electrical generation industry (Henry Ford and James Packard) and of course the horse carriage industry (Studebaker family). At that early time, around 1900, gas powered cars were the exception rather than the rule with 40% of cars powered by steam, 38% electric and only 22% via petrol. Back then the industry was unstable with lots of hopefuls entering and leaving the industry, not least because it wasn't clear which power source was going to become dominant. Nevertheless, by 1905, just 20% of producers sold 80% of the cars with Cadillac, Oldsmobile, Rambler and Ford pre-eminent.

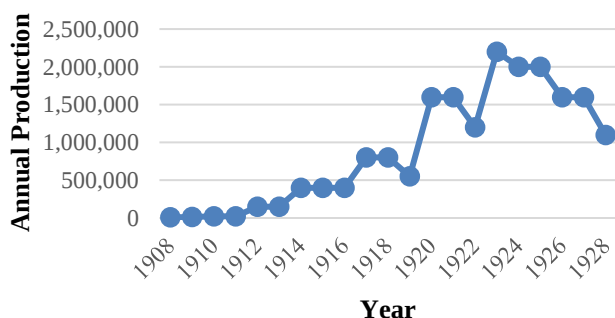
Not surprisingly, a good part of the chapter on automobiles is devoted to the impact of a certain Mr Henry Ford. Dr Nairn records that Henry had an engineering background, firstly with steam engines at Westinghouse and, latterly, at Detroit Edison. Those were his day jobs but he was fixated on automobiles, particularly due to encouragement from Thomas Edison. After a number of mis-starts and companies folding, the Ford Motor Company got underway in June 1903, with funding from a coal merchant and the Dodge brothers, with the latter being a prominent supplier of chassis, engines and transmissions. The first Model A retailed at US\$850 (US\$55,000 in today's money) but it didn't move the dial for the company much in terms of market share. Ford was convinced that in order to increase its penetration of the local market he needed to improve technology and at the same

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time lower the cost of production. This is what he achieved with the famous Model T. Nairn writes *"In 1908 when the Model T was unveiled, total US auto production stood at roughly 65,000 vehicles per annum. In 1907 Ford's production was just over 8,000 vehicles. Subsequently the success of the Model T saw production double in 1909 and rise by another 50% in 1910. But that was just the beginning."*

As the graph below shows Ford's output of cars increased from 8,000 in 1908 to a high of about 2.2m in 1923, largely due to the introduction of the Model T.

Ford's Production: The Impact of the Model T



Source: *Engines that Move Markets*

Due to the large economies of scale from the increased production Ford was able to reduce the price of the Model T from US\$800 a car in 1908 to about US\$400 per unit in 1926, and this was despite US consumer prices, as per the database of The Minneapolis Federal Reserve, virtually doubling over that period. It is pretty extraordinary that the price of the Model T was reduced by about 75% in real terms over that period. How did Ford do it and why was the company's strategy so successful in terms of market share? Dr Nairn writes *"For the industry, there was now a new reality to be grappled with. No longer was the structure going to be one of a large number of small producers. Ford had been the first to produce a low cost, commercially viable and reliable vehicle. As production rose sharply unit costs fell allowing prices to continue to fall and increasing the pressure on competitors putting the Ford Motor Company, almost overnight, in a virtually unassailable position."* That comparative advantage translated into massive returns for Ford's narrow shareholder base – a compound rate

of return of 56% pa for the 23 years ended calendar 1926. That rate of return turned US\$1,000 invested in 1903 into US\$2.77m in 1926. Nevertheless the risks of investing in the early days were manifest – around half of the car companies doing business in the USA in the period 1903-1926 survived for less than six years.

Now compare Ford's "unassailable position" back then with the reality confronting Western carmakers today: China is the world's largest car market, according to the Centre for Strategic and International Studies, the Chinese government has spent around USD \$230 billion on cementing the industry's competitive advantage in the EV sector and whilst the Chinese car makers are many the suspicion is they are managed by the CCP as one entity with market dominance and economies of scale the overriding objectives. The long game being played here is that, in the car industry, one of the biggest barriers to entry is economies of scale. If you don't have scale you aren't going to last long but if you do have scale, and deep pockets, a strategy to increase margins in the long run is to, initially anyway, freeze out the competition by keeping prices low. We won't speculate on any political motivations except to note that Chinese companies have an overarching responsibility to the Communist Party that dominates those to shareholders, employees and other stakeholders.

Brent Sheather is a Financial Advice Provider. A disclosure statement is available upon request. Brent Sheather may have an interest in the companies discussed.