

The Industrial Divide in the History of the US Motorcycle

Jun Otahara

Introduction

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Summary

This paper explores the history of the American motorcycle industry from the end of the 19th century to the early 20th century. Studies on the history of the US motorcycle industry during this period are limited, except for a few company histories. However, we want to emphasize its importance because, at the beginning of the 20th century, events in the industry were critical in determining how the global motorcycle industry developed over the next hundred years, and studying it can help us answer two research questions: why does the motorcycle industry exist? and why did it become what it is today? At the turn of the century, the US motorcycle industry developed as motorcycles became an economical substitute for automobiles; however, its advantage was soon disrupted by the continuous, radical price reduction of the Ford Model T. The reaction of the motorcycle industry was notably intense around 1920 when the volume of production was half the previous year's. Developing distinctive new products with more speed and power along with racing activities diminished this industry and its consumer base. Meanwhile, attempts to widen the market by introducing the "two-wheel Model T" failed, but were realized after 40 years by Honda's arrival. Now, only a small part of the modern motorcycle industry produces large and medium-sized products, and an enormous majority of the industry is devoted to small motorcycles under 125 cc. These characteristics are the result of the bitter struggle for survival of many motorcycle businesses.

Introduction

Today's motorcycle industry is a growing sector centered in the Asian market, which produces 45 million units worth 65 billion dollars per year.¹ The industry leader is Honda Motor Company (Honda), which has held one-third of global market share.² Currently, about

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¹ *Market Line Industry Profile*, 8.

² *Ibid.*, 12.

97 percent of units produced are small motorcycles under 125 cc, so-called “commuters,” while large and medium-sized motorcycles comprise a minor portion of production.³

Yet, the history of the US transportation market in the early 20th century indicates that the motorcycle industry was not inevitable, even though the motorcycle seems to hold a secure position as a personal mode of transportation today. Automobiles and bicycles could have been sufficient for our personal transportation needs. In fact, Chinese megacities like Beijing and Shanghai prohibited the use of motorcycles or restricted the number of plates issued for over fifteen years. Yet, almost all over the world motorcycles are very common. Why are motorcycles so popular?

The purpose of this paper is to explore the history of the US motorcycle industry from the 19th century to the early 20th century to derive the answer for the following two fundamental questions: why does the motorcycle industry exist? and why did the motorcycle industry become what it is today?

This article is divided into five main sections. The first section provides statistical data of the actual conditions of the US motorcycle industry in the beginning of 20th century. It shows changes of production volume, market size, and motorcycle manufactures, as well as the number of Ford Model Ts, which came to have a decisive influence on the destiny of the motorcycle industry. The following section examines how motorcycles was sold and used in the early 20th century. This analysis could illustrate why the motorcycle industry was beaten and pushed into corner by the Ford Model T. The third part will examine how the industry responded to this industry crisis. Among the three reactions of the industry to the crisis, the third one, which failed to be achieved, will be the focus of this paper because the consequences of its failure became evident 40 years later. The fourth section reevaluates Honda’s success in the US motorcycle market in the early 1960s. We review the controversy around this case study found in business school textbooks, and strategic management literature, and then offer a new interpretation of the case study based on the facts presented in this article. In the concluding section, we answer the two fundamental research questions and discuss their implications for strategic management scholarship.

The real state of the US motorcycle industry in the early 20th century

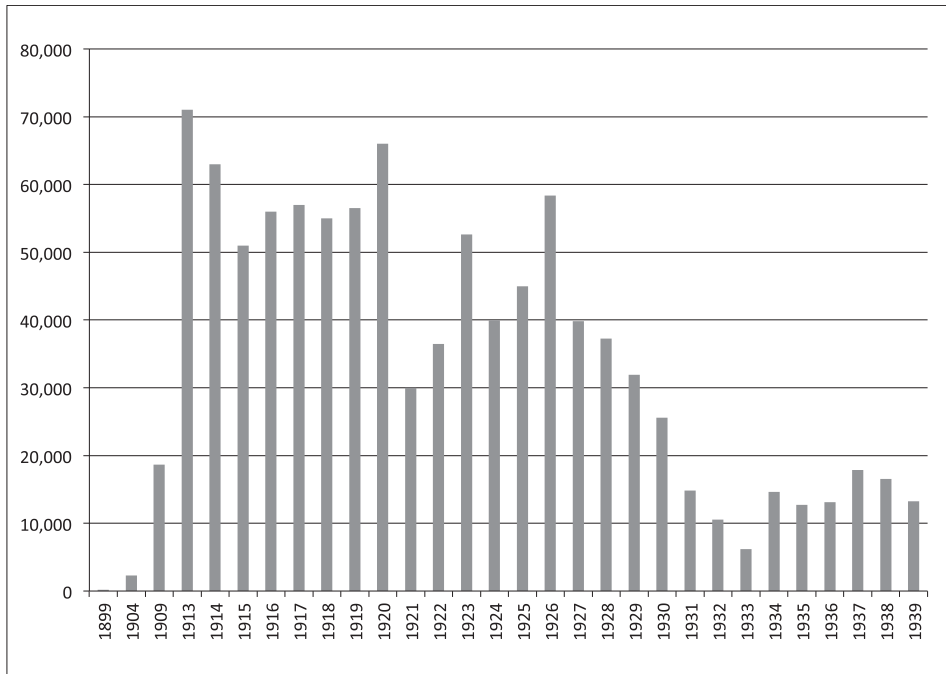
Figure 1 illustrates the development of US motorcycle production from 1899 to 1939. The oldest production data available suggest that 160 units were produced in 1899. The largest

3 *Mintel Market Sizes*, 6-9.

production volume occurred in 1913 ; then, volumes varied significantly. Production fell steeply in 1921. It later recovered but began to drop sharply after 1926. These numbers are for production volume ; therefore, they include motorcycles produced for military use and export. If we want to chart the progression of the real US market size, we have to subtract those numbers. Figure 2 divides total production into that intended for domestic consumption and for export. The additional line to the original domestic consumption indicates the real domestic market size, which is calculated by subtracting the number of motorcycles produced for military use⁴ from those destined for domestic consumption. Some studies insist that the US motorcycle industry was robust throughout the 1910s ;⁵ however, as you can see, the industry seems to have been sustained by military and export production. The US domestic market actually shrank steadily, from 71,000 units in 1913 to 13,238 units in 1939.

In addition, looking at the number of US motorcycle manufacturers in Figure 3, we can see that no sooner had the motorcycle industry begun to form around 1900 that it started to

Figure 1. US Motorcycle production (units)

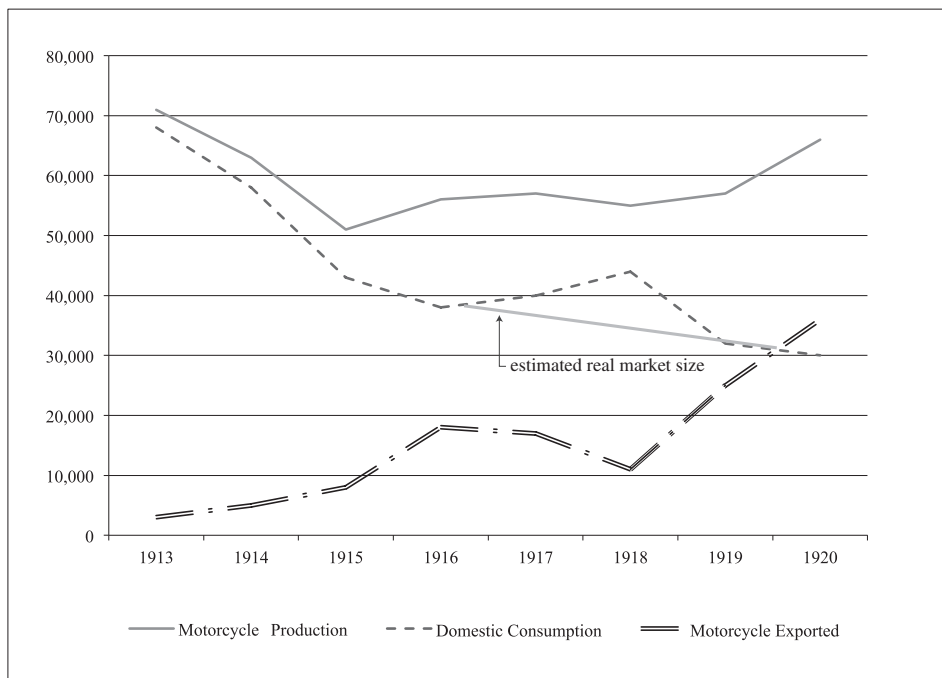


Source : United States Bureau of the Census, 1917 ; Shidle, 1921(a) ; United States, Tariff Commission, 1952 ; Wright, 1983 ; Koerner, 2012.

4 58,800 units were produced for Military use from 1916-1918. This figures are from Sucher, *Harley-Davidson*, 42.

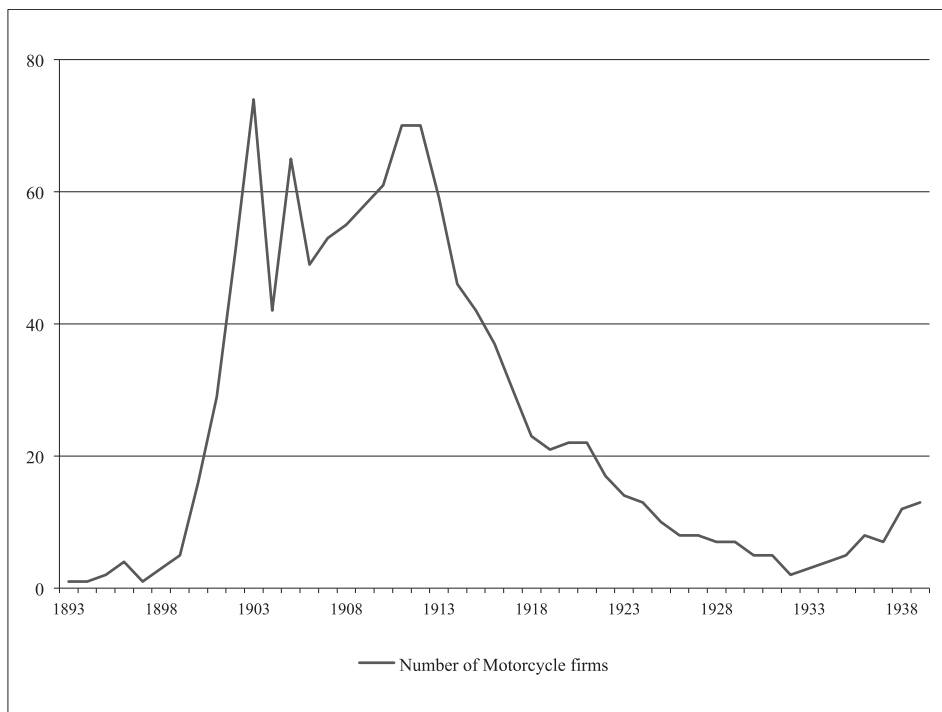
5 Koerner, *The Strange Death*, 24-26.

Figure 2. The real US domestic market size



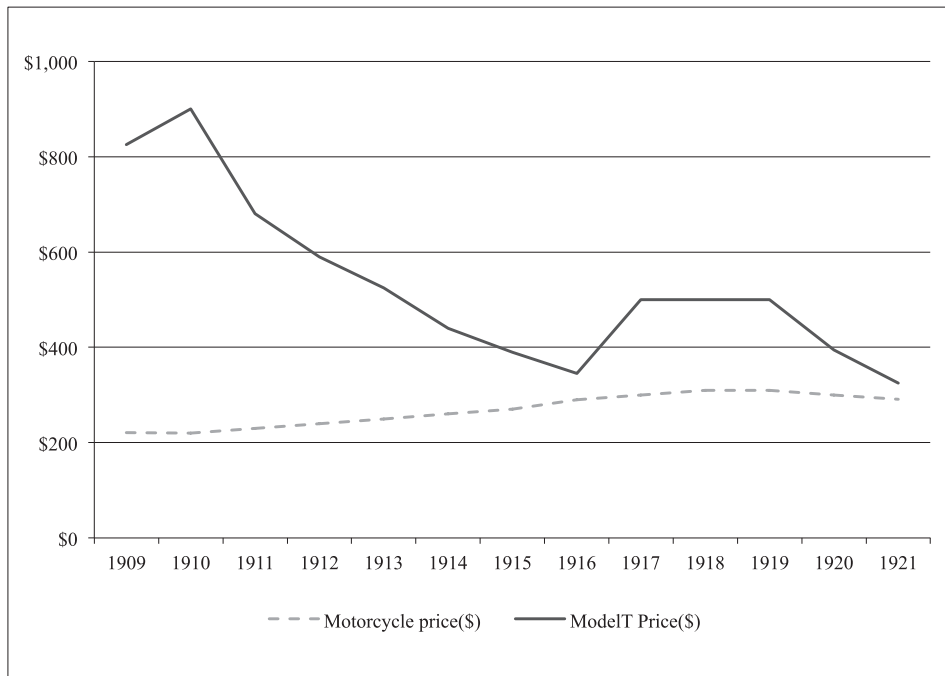
Source : Shidle, 1921(a).

Figure 3. The number of US motorcycle manufacturers



Source : Calculation from Tragatsch, 1964 and Rafferty, 1999.

Figure 4. Average price of a US motorcycle and retail price of a Ford Model T, 1909-1921



Source : Figures of Model Ts are from Model T Club of America (original figures by Ford Production department in 1927). Figures of Motorcycles are calculated from *Motorcycle, Motorboat and Automotive trade Journal*, July 1909, *Automotive Industries* v.45, Feb. 1922 and Rafferty, 1999.

decrease after 1911. This industry change was due not only to a sharp drop in the market demand, but also to severe competition. The number of motorcycle firms peaked at 70 in 1903 ; it then dropped to just two companies in 1932, 30 years later. The industry life cycle of the US motorcycle seems to be extremely short compared to that of other countries. Why is the lifecycle so short?

The impact of the Ford Model T explains the short lifecycle. Figure 4 compares the average price of a US motorcycle with the retail price of a Ford Model T. When the Model T was introduced to the market, it was four times as expensive as the average motorcycle. However, the Model T's retail price dropped dramatically when Ford introduced its mass production system with an innovative conveyer line. In 1921, a Model T cost \$325, while the average motorcycle cost \$291. If you wanted a sidecar with your motorcycle, its total price would exceed that of the Model T. However, the question remains as to whether motorcycles and automobiles were really competing against each other at that time. Therefore, we need to see how motorcycles were sold and used in the early 20th century.

How the motorcycle was used and sold in the USA

Charles Metz, a representative motor vehicle pioneer from New England and founder of the Charles Metz Company wrote an article emphasizing the motorcycle's economic advantages over the train and car.

I have been using an automobile, a four cylinder runabout 15 horse power since last April 14th, and up to date have covered 6453 miles. While I realize that auto is a good investment I am a little disappointed in the running cost for I find this is greater than I anticipated. As a basis of figure I will give you the items of cost so they can be compared with the motorcycle, the running cost of which I would like have you inform me, if you think it feasible for my business.⁶

According to his calculation, based on his practical survey, a company using a motorcycle as a sales person's travel method could gain a net profit of \$676 more than using train and \$110 and more than using car over a 6-month period.⁷

Figure 5. Sears Auto-Cycle in 1913



Source : Sears Auto-Cycle 1913, 1.

6 Metz, "Sales man contemplate using motorcycle," 312.

7 Ibid.

Sears Roebuck sold its original Sears Auto-Cycle through its mail order catalogue with its usual 10-day free trial and one-year free repair guarantee.⁸ The price of the model in Figure 5 was \$179. A Ford Model T cost \$525 in 1913 ; therefore, the Auto-Cycle cost one-third of what a Model T cost. This catalogue advertised the utility of the side car, which could be used for both passengers and deliveries. An actual user, shown in the catalogue, praises its multi-purpose nature.⁹

On entering the 1920s, the price of a large-size motorcycle was already greater than the Model T, priced at \$395 in 1920. Indian Motorcycle Company (Indian Motorcycle), a pioneering manufacturer from Springfield, Massachusetts, and the most prominent motorcycle company during the 1910s, indicated that its products could be customized to match a customer's specific delivery needs.¹⁰ However, the price of Indian Scout was \$450, which was more expensive than that of Model T. So Therefore, Indian Motorcycle tried to emphasize its motorcycle's economic advantage over the automobile by comparing it to Ford's and Chevrolet's truck instead of the Model T. Of course, there is a big significant difference between a motorcycle and an automobile truck in terms of maximum loads, however, the information conveyed in Table 1 appeared in its product catalogue emphasized the Indian Scout's advantages by showing the delivery tasks that did not actually require a truck, such as laundry deliveries, department and grocery store deliveries, and tire service shop deliveries, based on a practical company survey.

These three examples illustrate how the US motorcycle was sold and used in the early 20th century. It was sold as a cheaper substitute for the automobile. Therefore, we can see how the Model T's radical price reduction ruined the motorcycle's economic advantages over the automobile. The Ford Model T changed not only the automobile industry but the motorcycle

Table 1 Cost comparison of the Indian Scout and automobile truck

	Indian	Ford Truck	Chevrolet Truck
Initial Cost	450	740	775
Operating Cost per 15,000 mile (1 year)	168	867	697
Total cost	618	1607	1472

Source : Indian Motorcycle Company, 1920.

⁸ Sears Auto-Cycle, 1-45.

⁹ Ibid., 23-28.

¹⁰ Indian Motorcycle Company, "Here are figures".

industry as well. The US motorcycle's extremely short product lifecycle was due to the Model T. The contrast between automobile and motorcycle production from 1913 to 1920 is stark. Motorcycle production fell from 65,000 to less than 15,000¹¹ while that of automobile increased 460,000 to over 1,880,000.¹²

Three forms of counteraction to cheap cars

For anyone wondering if the US motorcycle industry responded to this industry crisis, the answer is "Yes and no." The reaction to the cheap Model Ts took three forms around 1921, when the production volume dropped to half of the previous year's. First, motorcycle manufacturers marked down the retail prices of the existing models, which most manufacturers adopted. Second, distinctive and differentiated products were developed in order to offer more power and speed than automobiles could provide. This was accompanied by racing activities organized or supported by motorcycle companies. Harley-Davidson raised its market share significantly through this strategy.

The third reaction is the most crucial, although it seems to have been completely forgotten. This reaction is hard to imagine for those who are aware of only today's US motorcycle market. Significant attempts to revitalize the market were made in 1920 by Norman Shidle, an automotive engineer, journalist, and publisher of the trade journal *Automotive Industries*, together with the publicity managers of the "Big 4" motorcycle companies—Indian Motorcycle, Harley-Davidson, Reading Standard Motorsports (Reading Standard), and Excelsior Motorcycle (Excelsior). They became seriously concerned about the industry's future and tried to draw up another strategy of widening the market by introducing a "two-wheel Model T".

Harry Sucher, a well-known historian of transportation, wrote in detail about this third reaction in his book, based on interviews with Leslie Richard, a former Indian Motorcycle public manager.¹³ Richard was an eager reader of Shidle's articles about the motorcycle industry and sent him a letter about its serious decline. Shidle responded and arranged a secret meeting at a New York hotel during the National Motorcycle Show in 1920 with Richard along with Hap Scherer of Harley-Davidson, Charles Cleland of Reading Standard, and an Excelsior representative.¹⁴ Several additional meetings were held in various New York hotels.

11 These figures are production data subtracting military use, 58,800.

12 *Facts and figures of the automobile industry* 1920.

13 Sucher, *Harley-Davidson*, 57.

14 *Ibid.*

This group came to two conclusions. Shidle published these conclusions in a two-part article in *Automotive Industries*. The title of the first article series was “Where is the Motorcycle Going?”¹⁵ The title of the second article was “Marketing the Motorcycle.”¹⁶ His articles argued the following :

1. The motorcycle market for the young man with a love of speed and hard riding is limited.
2. Other fields must be opened up if the development of a machine more suited to the needs of a greater number of people is to occur.
3. The motorcycle is not for the man who is unable to buy a small car but for the man who desires a rapid means of individual transportation.
4. The motorcycle industry needs a Ford or a Dodge.
5. The main necessity is a radical change in manufacturing policy, but this will not come from within the industry. An outsider will have to come in with an open mind, disregard the past, and start production on the type of machine the public wants at a price that appeals to them.
6. The public prejudice against the motorcycle must be overcome. This will take a long time, along with new ideas and methods. However, once the upward swing is started, far more possibilities will appear than have thus far developed in the high-powered vehicle market.

He estimated the potential of the US motorcycle market using the case of a region with a population of 223,000, where only 500 motorcycles were registered.¹⁷ His estimation showed that this territory’s potential motorcycle market size was over 12,500 instead of the existing 500.¹⁸ This estimate meant a potential diffusion rate of one motorcycle per 17.8 people. If this rate were expanded to the entire US, the potential US motorcycle market would be over six million, while the actual registered motorcycle market was only 235,000 units in 1921. His estimation was 25 times the size of the existing volume.

However, the US motorcycle industry did not develop in the direction pointed to by Shidle and the Big 4 representatives. In 1933, The National Recovery Administration’s application to the motorcycle industry under the *Code of Fair Competition* summarized the industry’s past ten years.

It is, of course, patent, that the Motorcycle Industry, because of its competitive relations

15 Shidle, “Where is the Motorcycle going?” 612-614.

16 Shidle, “Marketing the Motorcycle Part 1,” 1028-1031 ; and “Marketing the Motorcycle Part 2,” 1123-1126.

17 Shidle, “Marketing the Motorcycle Part 1,” 1030-1031.

18 Sucher, *op.cit.*, *Harley-Davidson*, 55.

with the Automobile Industry, is a relatively declining one. From 1923 to 1929, when the production of the average industry was expanding rapidly, the production of motorcycles declined 25%. The industry apparently has attempted to meet the competition of the Automobile Industry by improving the quality and performance of its product rather than by producing a cheaper product, as is evidenced by the fact that the value of the average motorcycle changed little during this period.¹⁹

Why was the new direction plotted by Shidle and the Big 4 representatives not taken? The letters which Nobert Schickel, the founder and president of Schickel Motor, which produced two-cylinder lightweight motorcycles since 1911, wrote to some of the major motorcycle companies gives a good indication of the industry's situation in the early 1920s.²⁰ By 1923 Schickel had been looking for a company to take over his company's lightweight product line because he did not have the capital necessary to continue in the business. He wrote a letter to Frank Schwinn of Excelsior, P. J. Bailey of ACE Motorcycle (ACE), and F. J. Weschler of Indian Motorcycle. According to each reply, Excelsior did not authorize the use of its resources for small motorcycles in order to prioritize the development of new engines for automobiles and tractors.²¹ ACE thought that it needed to have other products lines with stable sales through all four seasons instead of entering the small motorcycle business.²² Indian Motorcycle decided that it should capture new markets by expanding its existing product line.²³ Moreover, historian Harry Sucher also observes that Hap Sherer, Harley-Davidson's publicity manager, was scolded and had his salary reduced by company president, Walter Davidson. He was eventually relegated to the position of sales manager at a Harley-Davidson dealership.²⁴ This evidence seems to imply that Shidle's article was not accepted by industry executives.

Unlike the US motorcycle industry, the British industry grew during the 1920s. However, it soon declined after the Great Depression began, and then stagnated even though the price of the cheapest car, the Austin Seven, had been higher than that of the motorcycle. Steve Koerner has written that an attempt by industry outsiders to develop a new product called the "everyman's model" was ongoing in England 1935²⁵, however, industry leader BSA continued

19 United States National Recovery Administration 1934, *The Code of Fair Competition*, 142.

20 Anderson, *The Illustrated History of The Schickel*, Chapter 11.

21 Ibid, 176-178.

22 Ibid, 179.

23 Ibid, 181.

24 Sucher, *op.cit.*, 60.

25 Koerner, *The Strange Death*, 11-12.

Figure 6. Honda's "Nicest People" Campaign



Source : Honda Motor, 1999(a).

to focus on existing medium-weight sports models.²⁶ This development is interesting, as it resembles the approach taken in the US 15 years before.

Was Honda's success really so innovative?

The consequences of the failure to sell the motorcycle to the public became evident 40 years later, when Honda introduced the Suzuka plant to the motorcycle industry in 1960, which was a highly automated mass production system based on the Volkswagen's Wolfsburg plant to the motorcycle industry in 1960. Soon afterwards, a large number of small Honda motorcycles started to arrive in the US. Honda's strategy in the US market in the 1960s, particularly well known as "Nicest People Campaign" shown Figure 6, was very similar to what Norman Shidle and the others had suggested in 1920. Therefore, we need to focus on the controversy surrounding this case situation and reevaluate Honda's success in the US market by considering the available facts on this paper. Our question is this : "Was Honda's success

²⁶ Ibid.

really so innovative?”

The Boston Consulting Group (BCG) report entitled *Strategic Alternatives for the British Motorcycle Industry* ignited this controversy.²⁷ The business schools of Harvard, UCLA, and the University of Virginia used the report as a course text and stressed that Honda’s success exemplified the brilliant strategy of exploiting the cost advantages derived from home market production and the experience curve effect. Meanwhile, Richard Pascale’s famous article “Perspective on Strategy,” based on interviews with Honda executives, appeared in the *California Management Review*. It insisted on the importance of the trial and error process in forming Honda’s strategy.²⁸ According to him, Honda had originally planned to concentrate on selling medium-sized motorcycles; however, people who had seen American Honda staff members riding small motorcycles to work started to want their own. This observation showed Honda that there was a demand for small motorcycles in the US.²⁹ This story is different from BCG’s perspective. Honda had not developed its market strategy in advance, and its effectiveness only became evident afterwards.

Henry Mintzberg praised Pascale’s article, saying that “no other article published in the management literature has had quite the impact” and that it revealed the legitimacy of his new “learning school” view of strategy and the impracticality of the traditional “design school” strategy.³⁰ However, Ansoff argued that Mintzberg’s view was incoherent and had to be modified.³¹ Five years later, Mintzberg, Pascale, Michael Goold (a writer for the BCG report), and Richard Rumelt described the debate as rationality vs. instrumentalism, or planning vs. learning.³²

As an aside, Jun Otahara wrote an article about this issue in 2000³³. This Otahara’s article points out that market research conducted by Forbes on behalf of the Japan Machinery Federation rediscovered the US low-cost utility motorcycle market (See Table 2)³⁴. It released its report “The Report of Overseas market research focused on small automobiles,” to Japanese motorcycle firms in 1958, and Honda recognized the business opportunities for the small motorcycle market in the US after reading it. An issue of Honda’s internal newspaper published in March 1959 (before American Honda was established) noted that its most in-

27 Boston Consulting Group, *Strategy Alternatives*, 1-249.

28 Pascale, “Perspectives on Strategy,” 47.

29 Ibid.

30 Mintzberg and Waters, “Of Strategy, Deliberate and Emergent,” 257-272.

31 Ansoff, “Critique of Henry Mintzberg’s the Design School,” 449-461.

32 Mintzberg, Pascale, Goold and Rumelt, “The Honda Effect Revisited,” 78-79.

33 Otahara, “International Rivalry,” 53-73.

34 The Japan Machinery Federation, *The Report of Oversea*, 3-4.

Table 2 US low-cost utility motorcycle market size by Forbes research

Country	1956	1957	1958 (Jan.-July)	Total
Italy	7,985	16,368	16,150	40,503
England	12,861	12,998	8,685	34,544
W. Germany	7,512	14,299	5,143	26,954
Austria	5,157	7,613	9,833	22,603
Japan	37	473	862	1,372
Check Rep.	236	578	536	1,350
France	253	0	610	863
Others	107	819	431	1,357
Total	34,148	53,148	42,250	129,546

Source : The Japan Machinery Federation, 1958.

demand product would be their its smallest motorcycle, called the “C 100,” because most US motorcycle dealers had reacted positively to it.³⁵ In addition, a marketing report of the Japan Machinery Federation endorsed the expansion into new markets for small motorcycles in the late 1950s even though the total volume of motorcycle registrations had not changed very much.³⁶ These facts were considerably different from what Pascale had heard from Honda executives. In our view, they overemphasized the accidental and emergent nature of Honda’s success. We can address this controversy by combining Otahara’s article with the facts shown above. It can be concluded that Honda succeeded because they pulled a trigger that had not been pulled by for 40 years. We must simply conclude that Honda just did what all other manufactures had neglected to do. Our conclusion also differs from what the BCG’s report claimed because Honda’s idea was not so innovative, as it had already been conceived in both the US and Britain. Honda’s actions are a case of “doing vs. not doing” rather than rationality vs. instrumentalism, or planning vs. learning.

Conclusion

The history of the US market tells us that when automobile prices fell low enough for the general public to be able to buy them, motorcycle companies had to change their posture. They had only two means of escaping their situation. One option was to distinguish the motorcycle from the automobile through power and speed. The other approach was to build a two-wheel Ford Model T that was far cheaper than an automobile, closer to the price of a

³⁵ The Public Relation of Honda Motor, “A Profile of American Honda Motor,” 16-17.

³⁶ The Japan Machinery Federation, *op.cit.*, 4.

bicycle. The motorcycle industry we see today precisely reflects the consequences of these two directions. Both the US and British motorcycle industries have been pursuing the first direction, after trying the second, which eventually sidelined the industry, together with its customers. By contrast, Honda expanded into new markets by introducing a small, cheap, but attractive two-wheel Model T. Finally, we will answer the research questions we asked at the beginning of this paper : why does the motorcycle industry exist? The industry exists because Honda adopted the strategy necessary for success. Why did the industry become what it is today? The industry has become what it is today because there were only two ways for the motorcycle industry to survive.

Finally, we discuss the implications and future research scope. The global history of the motorcycle industry would tell us that strategy does not matter, but capabilities matter. We also want to mention that Honda was not as innovative, at least in the US market, as the scholarship insists it was. However, we think that Honda ought to be considered as success because they had the capabilities to implement the necessary strategies for success. Therefore, an exploration of how Honda built its capabilities provides scope for future research. This subsequent research would be strongly related to the current discussion around dynamic capabilities and provide an important description of how capabilities generating competitive advantage emerge.

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