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FOREIGN INVESTMENTS IN THE UNITED STATES

MOTORCYCLE INDUSTRY

By

William R. Squires

B. B. A., Valdosta State College, 1976

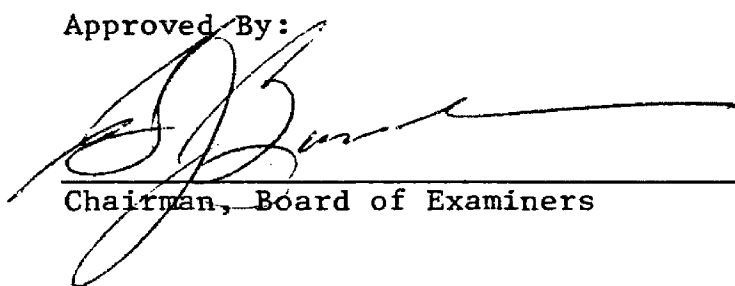
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1982

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## PREFACE

The primary objective of this study is to show how the Japanese have gained domination of the motorcycle industry in the United States. Also, this paper compares the American motorcycle industry to the Japanese motorcycle industry with regard to basic industry data and financial information, as well as import and export data of American and Japanese motorcycles. Secondary data previously produced on the topic was used to prepare the comparisons between the U. S. and Japanese motorcycle industries.

The conclusions reached by this paper are that the Japanese dominate the motorcycle industry in the United States because they produce efficient and extremely maneuverable motorcycles which have both price and qualitative advantages over motorcycles produced by American manufacturers. Also, this study finds that the motorcycle industry is highly competitive in both production and marketing. Manufacturers in both the U. S. and Japan are striving to gain dominance.

## ACKNOWLEDGMENTS

Dr. B. J. Bowlen, as my advisor through this entire program, inspired me to complete this study.

Sincere gratitude goes to my friends and especially to my wife, Kay, whose clerical assistance and sincere criticisms guided me over the rough spots.

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Last, but certainly not least, I wish to express love and sincere dedication to my parents, Mr. and Mrs. Edgar B. Squires, who never doubted my ability to accomplish this study. To them, I dedicate this work!

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## CHAPTER I

### INTRODUCTION

#### Scope and Purpose

Six companies currently produce motorcycles in the United States. Three of these firms only produce mopeds. The other three firms produce larger vehicles. Two of the large vehicle producers are Japanese subsidiaries that have established assembly plants in the United States during the past few years.

The objective of this paper is to compare the American motorcycle industry to the Japanese motorcycle industry with regard to basic industry data and financial information, as well as import/export data of American and Japanese motorcycles. This paper does not attempt to prove which country produces the best overall motorcycle in performance terms.

The dominant portion of the United States motorcycle market is made up of millions of private individuals, while a very small part consists of commercial and government users. Foreign producers, especially the Japanese, dominate the American domestic motorcycle market. This domination by the Japanese industry has been detailed in this study.

From 1976 to 1980, United States' purchases of motorcycles and parts increased from \$784 million to an estimated \$1.7 billion. Of this increase, motorcycles accounted for about 92 percent, while parts accounted for the remaining 8 percent. The import ratio of motorcycles

and parts to domestic production increased from 68.0 percent in 1976 to 74.4 percent in 1980. United States shipments of motorcycles and parts followed the same upward trend as consumption, increasing from \$273 million in 1976 to an estimated \$525 million in 1980.<sup>1</sup>

Japan has been by far the leading supplier of motorcycles to the United States, accounting for approximately 90 percent of the imports in 1980. The value of United States' imports of motorcycles and parts from Japan increased from \$533 million in 1976 to about \$1.3 billion in 1980. Motorcycles represented about 91 percent of the imports.<sup>2</sup> Typical of a new class of durable products, the demand for parts will increase as the machine population and use increases.

The market for motorcycles has spread throughout the world, with the heaviest concentration in Japan, North America, Western Europe, and Southeast Asia. For the purposes of this paper, Japan has been found the main location for production. The value of United States exports of motorcycles and parts, although small in contrast to United States' imports, rose from \$22.4 million in 1976 to \$91.7 million in 1980.<sup>3</sup> Japan was the principal market.

A description and the use of the three different motorcycle classes used is reported in Chapter II. The on-highway motorcycle, the dual-purpose motorcycle and the off-highway motorcycle are described.

The main points of contrast between the United States motorcycle

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<sup>1</sup>United States International Trade Commission, Summary of Trade and Tariff Information Motorcycles, Publication 841, (1981).

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

industry and the foreign motorcycle market is discussed in Chapters III, IV, and V. This includes such information as current manufacturers, basic industry data, financial reports, and import/export data between the United States and Japan.

The conclusion will restate and summarize the findings of this paper.

## CHAPTER II

### DESCRIPTION AND USES OF MOTORCYCLES

Motorcycles are two-wheeled motorized vehicles powered by internal combustion engines having piston displacements greater than 90 cubic centimeters (cc).<sup>4</sup> The term "motorcycle" includes small vehicles such as motorized minicycles, motor/pedal bicycles or mopeds, and motor scooters. These low powered smaller vehicles are usually different in design from the less versatile larger motorcycles. For example, a moped is a low performance vehicle with maximum speed ranges from 18 to 28 miles per hour (MPH). Mopeds usually weigh from 60 to 100 pounds and handle like an ordinary bicycle. All mopeds have engines of 50 cc's or less, which is smaller than the engine on an average sized power lawn mower. Minibikes and cycles are also lighter and smaller than regular motorcycles. Because of their shorter wheel base and smaller tires, they are difficult to see on highways and are often unstable at highway speeds. Minibikes are used mainly for recreation and as training vehicles for new riders. Most minibikes have engines of 90 cc or less; however, there are a few models with engines larger than 90 cc. Scooters are usually heavier and more powerful than mopeds and minicycles. Typically, scooters weigh from 150 to 250 pounds and have engines of 50 cc to 200 cc.

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<sup>4</sup>United States International Trade Commission, Motorcycles from Japan, Publication 923, (1978).

Motorcycles are used for a variety of purposes including touring, recreation, commuting to and from work, and on and off road racing. The numerous variations, within the general category of motorcycles are based largely on the principal use for which it is intended. The differences in use dictate what is required in the characteristics of the motorcycle.

The use of motorcycles as police pursuit vehicles, (at one time a major use) has declined. Police departments have switched to the safer and more versatile patrol car. Although some law enforcement agencies still use heavyweight motorcycles, a significant number of motorcycles are small, lightweight units used more for transportation than pursuit. The three major model types of motorcycles are (1) on-highway; (2) dual purpose; and (3) off-highway.

#### On-Highway Motorcycles

As the name implies, on-highway motorcycles are intended for use only on hard-surfaced roadways. This type of motorcycle is required by the Federal Motor Vehicle Safety Standards to be equipped with items such as turn signals, rearview mirror, lights (front, tail, and brake), and a horn. The stiff suspension system allows for a firm ride and high resistance to steering drift. To protect the rider from water, stones, and other material thrown from the tire threads, fuel fenders are mounted close to the tread surface of the tire. The exhaust system is low-hanging, usually passing beneath the foot pegs and extending to the rear of the motorcycle. The wheel rims and tires are moderately narrow, and the tire tread is similar to that found on automobile tires.

On-highway motorcycles range in engine size from slightly over 90 cubic centimeters (cc) to 1340 cc.<sup>5</sup> Each size is designed to provide certain operating characteristics. For example, a 125 cc motorcycle might provide average speed, light weight, economy of operation, reliability, and maneuverability. A single motorcycle model may include many of these characteristics, but not necessarily all of them. Motorcycles of less than 250 cc (sometimes referred to as light weight motorcycles) are economical to maintain and operate, but are seldom powerful enough to cruise for extended periods at freeway or expressway speeds. Motorcycles with engine sizes of 250 cc to 700 cc are agile for city driving and are usually powerful enough to be driven safely for long periods of time on freeways and expressways. However, they are more expensive to operate and maintain than the smaller machines. Motorcycles with engine sizes greater than 700 cc are large and fast. They are intended mainly for use on the open highway since they are more difficult to operate in close traffic than are smaller motorcycles. These motorcycles are much more expensive to operate and maintain.

#### Dual-purpose Motorcycles

Dual purpose motorcycles, which are also referred to as "street-trail" motorcycles, comprise a class of motorcycles that meets the Federal Motor Vehicle Safety Standards for legal street operations and have characteristics that make them suitable for off-highway use such as riding on dirt trails. These motorcycles have greater ground clearance than on-highway motorcycles and in some cases will incorporate open-lug

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<sup>5</sup> Ibid.



pattern tread tires (knobby tires) which give improved traction and steering control on dirt surfaces. The fenders are mounted high off the wheel so that mud will not pack between the tire and fender. The exhaust system on dual purpose motorcycles sweeps upward from the engine and extends below and behind the seat. This design protects the exhaust system from damage caused by contact with low obstacles. Almost all dual-purpose motorcycles have an engine size of 400 cc or less, with the majority of the models ranging between 90 cc and 250 cc.

### Off-highway Motorcycles

Off-highway motorcycles are strictly intended for sporting or recreational use. These motorcycles are not in compliance with the Motor Vehicle Safety Standards for use on highways. They are used in a wide variety of activities such as cross-country competitive riding, closed course competition races, off-highway casual riding, and special types of competition, such as hill climbing and obstacle course maneuvering. With the exception of casual riding (trail) motorcycles, the off-highway motorcycles have special features in the area of seating, gearing, and tires that because of their intended use, limit the number of vehicles that are produced and imported. The large majority have engine sizes of less than 250 cc, but there are racing motorcycles that have engine sizes of up to 750 cc.

In addition to three use categories, the motorcycle market is also segmented by engine displacement size. For purposes of discussion and analysis, motorcycles are classified in three size categories, i.e.,

- (1) light weight motorcycles ranging from slightly over 90 cc to 250 cc,
- (2) middle weight motorcycles ranging from 251 cc to 700 cc, and (3)

heavy weight motorcycles with engines ranging from 700 cc to 1340 cc. These serve as a means of organizing the various motorcycles into similar classes for analysis and discussion purposes.

## CHAPTER III

### THE UNITED STATES MOTORCYCLE INDUSTRY

#### Basic Data and Information

Approximately fifty companies in the United States produce motorcycles and motorcycle parts.<sup>6</sup> However, of those fifty firms, only six are in the process of manufacturing motorcycles (including mopeds). Two of the three companies that produce the conventional type of motorcycle (Honda and Kawasaki) are Japanese firms that established assembly plants in the United States between 1975 and 1979.

Harley-Davidson began producing motorcycles in 1903, and is the only remaining, domestically-owned, company of its kind. Harley-Davidson has three domestic plants which produce motorcycles and parts. The engines and transmissions for all Harley products are manufactured in Milwaukee, Wisconsin. The York, Pennsylvania plant produces other motorcycle parts. The plant in Tomahawk, Wisconsin, produces fiberglass and other motorcycle components. Harley-Davidson produces on-highway motorcycles that range in size from 1,000 to 1,340 cc. A more thorough background of Harley-Davidson will be covered in a later chapter.

During the period from 1973-1978, four known domestic firms discontinued producing motorcycles. One firm, Kawasaki, entered the U. S.

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<sup>6</sup>Summary of Trade and Tariff Information Motorcycles, (1981).

industry as a producer. The following table shows the companies which discontinued operations, their principal offices and the year in which production ceased.

Table 1  
Discontinued Motorcycle Manufacturers

Company	Principal Offices	Year Production Ceased
Rupp Industries	Mansfield, Ohio	1973
Yankee Motor Corp.	Schenectady, N.Y.	1973
Fox Corp.	Janesville, Wis.	1974
Rokon, Inc.	Keene, N.H.	1978

An official of Rokon, which produced motorcycles from the period 1972 - 1978, stated that is was forced out of the domestic motorcycle market because of price competition with Japanese imports.<sup>7</sup>

Mr. John Taylor, president of Yankee Accessory Corp., and former president of Yankee Motor Corp., appearing at a public hearing held by the International Trade Commission testified that, "By the Fall of 1973, low Japanese pricing had made it all but impossible for us to operate profitably in this market."<sup>8</sup> As a result of this in late September 1973, Yankee Motor Corporation stopped the manufacturing of motorcycles.

After the four domestic firms discontinued the production of motorcycles, industry employment declined slightly from 4,100 in 1973 to 3,800

<sup>7</sup>Motorcycles from Japan, (1978).

<sup>8</sup>Ibid.

in 1978.<sup>9</sup> However, due to the fact that Honda entered the industry as a domestic producer in 1979, employment in 1980 proved to be somewhat greater than in 1978. A large majority of the workers which make up the motorcycle work force are involved in assembly functions that do not require specific engineering skills. However, some operations performed in manufacturing such as drawing, stamping, welding, heat treating, and chrome plating do require operators who have had many weeks of intensive training.

The value added in United States motorcycle establishments increased from \$73 million in 1972 to \$122 million in 1977. The value added per motorcycle employee increased from \$17,800 in 1972 to \$32,200 in 1977. New capital expenditures increased greatly also from \$3.3 million to \$6.9 million during the same period. These substantial increases show that the motorcycle industry has become highly capital intensive.<sup>10</sup>

The motorcycle industry is constantly introducing new technology and design innovations in response to consumer preferences and governmental regulations on exhaust emissions and noise. Research and development expenses are directed toward making motorcycles more comfortable, reliable, and fuel efficient vehicles.

Japan in particular has been extremely innovative in the varieties of design and function for motorcycles which they produce. Thus, it has become by far the leading motorcycle producing nation of the world. Almost all of the research and development of the two Japanese companies with established manufacturing facilities in the United States are

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<sup>9</sup>Summary of Trade and Tariff Information Motorcycles, (1981).

<sup>10</sup>Ibid.

conducted in Japan. This is because of extremely high research and development costs in the United States.

### Financial Information

Due to the fact that most of the major motorcycle producers in the United States industry are subsidiaries of larger companies, financial data are not available publicly. However, more attention has been drawn to the motorcycle as a primary and secondary means of transportation because of increasing fuel cost, and the rising cost of owning and operating an automobile. These factors have yielded more favorable short- and long-term financial prospect for motorcycle manufacturers.

In 1978, the net operating profit margin for manufacturers of motorcycles, bicycles, and parts (which are reported as one figure in U.S. Commerce Department data) was 4.9 percent.<sup>11</sup> It is estimated that the profit margin for producers of motorcycles and parts alone was approximately the same. The capital investment in the research and development phase of motorcycle production is estimated to be about 3 to 4 percent of the value of sales.<sup>12</sup> This investment percentage would probably be slightly higher if only United States owned firms were examined, because almost all of the research and development of the Japanese owned firms is conducted in Japan. More financial information on the dollar value of imports and exports of motorcycles will be discussed below.

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<sup>11</sup>Ibid.

<sup>12</sup>Ibid.

Industry Marketing and Pricing

Basically, three marketing channels are used by motorcycle manufacturers. They are distributed, (1) directly to retail dealerships, or (2) wholesaled through independent distributors to dealers, or (3) through subsidiary owned regional warehouses to dealers. Except in the distribution of motorcycles from the manufacturer to subsidiary owned regional warehouses, ownership changes at each level in the marketing process ownership changes at each level in the marketing process. There are no consignment shipments.

In 1979, approximately 10,000 retail outlets were selling motorcycles and related products in the United States.<sup>13</sup> Most of these outlets were privately owned franchised businesses unrelated to United States manufacturers. The majority of these retail dealers often sell two or more makes of motorcycles. These dealers are called "dual" or "multi-brand" dealers. The reason these dealers market different makes of motorcycles is to offer a more complete line of different sizes and types of motorcycles to the consumer.

The price of a motorcycle is usually established by the dealer after the expenses (such as assembly and transportation costs) and the profit margin are computed. However, the actual price the consumer pays and pricing policies are determined by the competition in the market. Another factor affecting price is what is called "model year" discounts. In general, a manufacturer's "model year" runs from fall season to fall season. Prices may be cut on prior year models by the

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<sup>13</sup>Ibid.

distributor and the dealer, as the model year motorcycles become available from the manufacturer. A price reduction increase is more likely the longer a certain model year motorcycle remains in stock.



## CHAPTER IV

### THE UNITED STATES MOTORCYCLE MARKET

#### The Domestic Market Profile

Private individuals are the largest market for domestically manufactured motorcycles. A very small part of the market is made up of Government and commercial customers. The Motorcycle Industry Council estimated that in 1979, there were 5.3 million owners of motorcycles in the United States, with many individuals owning two or more motorcycles.<sup>14</sup> According to one market survey, most owners of motorcycles in 1977 were male, married, high school educated, and had an average annual household income of \$19,000.<sup>15</sup> This survey showed the average age of the motorcycle owner to be about 30 years.

The motorcycle market is spread throughout the United States, with the largest population of motorcycle owners located in the Midwest and the South. However, California, by a large percentage, leads the states in the number of motorcycle owners.

When an individual begins planning a motorcycle purchase, he is influenced by a variety of factors. For instance, his intended use of this motorcycle. Riding experience strongly influences his demand for a particular motorcycle. A person who buys a motorcycle for the first

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<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

time has a tendency to buy a smaller machine which has greater handling ease. Then, once a rider is accustomed to the smaller motorcycle, he/she will often trade it in for a larger model with higher performance. This market practice is called trading up. As a rider obtains further experience on his motorcycle, he often becomes more discriminating as to what he wants from a particular model. Instead of choosing a motorcycle which can be used for multi-purposes, an individual will, in many instances, search for a model which satisfies a particular need, whether it is highway touring, trail riding, or competition racing.

When purchasing a motorcycle, style, image, performance and price are very important factors. Sometimes, the style of motorcycle the potential buyer selects varies with the importance of each factor. For example, if a buyer has a preference for a smaller motorcycle, price could be a more important factor. In this case, the buyer could be interested in economy and ease of maintenance. Those individuals who prefer large, expensive motorcycles tend to be influenced more by style, image, and performance than by cost.

The domestic manufacturers such as Harley-Davidson do not produce every style and size of motorcycle. However, with a combination of imported and domestically produced motorcycles, the consumer has an opportunity to select the features that satisfy his requirements. Providing access to a broad market is a function of the dealer or distributor's aggressiveness and financial capability.

The Japanese domination indicated above is due to the Japanese production efficiency and their development of extremely maneuverable motorcycles. They also produce a wide variety of styles and models that continue to have a price advantage over domestic and other foreign

manufacturers. In addition, product quality, perceived by users to be far superior, allows the Japanese to penetrate the United States market very effectively.

### American Manufacturers

Harley-Davidson is the only American motorcycle manufacturer to survive beyond the mid-20th century. The Harley-Davidson Motor Company was incorporated in 1907 with Walter Davidson as president. William Harley was chief engineer and treasurer and Arthur Davidson served as secretary and general sales manager. William Davidson had responsibility as works manager.<sup>16</sup> There were 150 motorcycles produced in the factory that first year, used mostly by police departments, establishing a relationship that exists today. The beginning of the company's marketing program was in 1907 with development of a catalog by a Milwaukee based advertising agency called Klau-Van Kietersom-Dunlap, Inc. By 1917, production of motorcycles totaled 18,000 units, although a significant proportion were for war use. It was also during World War I that many Harley-Davidson motorcycles came to be relied upon for dispatch work and as scouting vehicles. Product evolution and refinement continued as new uses were identified. The motorcycles which worked so well on the battlefields were greeted with interest by the soldiers upon their return to civilian life.

In 1909, there were thirty-five employees at the company, and production averaged around one thousand units. By 1911, the number of

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<sup>16</sup>The Beginning of Harley-Davidson, Motorcycle Products Group, May, 1981.

employees had grown to 481.<sup>17</sup> To answer a growing consumer desire for speed and power, the company took its standard single cylinder model, added another cylinder doubling the engine size, and gave birth to the famous Harley-Davidson V-Twin design. While Harley-Davidson would introduce numerous other engine designs over the years, the V-Twin still retains its position as the company's hallmark of design and performance.

The depression years took a toll on sales. However, due to Harley-Davidson's solid product reputation and its emphasis on a strong dealer network, it survived where other brands failed. This decade also witnessed the increased use of Harley-Davidson motorcycles by police. They were considered effective, highly mobile law enforcement tools. In fact, Harley-Davidson is to many people a generic expression for motorcycles.

During World War II, Harley-Davidson's entire production went into the war effort, for which the company received the prestigious Army/Navy "E" Award as a symbol of public gratitude from the government. The war years also marked a change in company management. Walter Davidson, president of the company since its development, died in 1942, William S. Harley passed away the next year. Soon after the death of Walter Davidson, William H. Davidson, whose career with the company began in 1928, became president. He served as president until being selected chairman in 1971. He retired in 1973. The only other founder, Arthur Davidson, died in 1950.<sup>18</sup>

The Sixties was an exciting decade for Harley-Davidson. In 1960,

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<sup>17</sup>Roger Hull, "History," Road Rider Magazine, 1976.

<sup>18</sup>The Beginning of Harley-Davidson, May 1981.

it entered into an arrangement with Aeronautica Macchi, S. P. A. (an Italian aircraft producer since 1912). The result was the establishment of Aer macchi Harley-Davidson S. P. A. in Varese, Italy, about 35 miles northwest of Milan. All light-weight motorcycles carrying the name Harley-Davidson were manufactured in this plant until the relationship dissolved in 1978.

The company entered an entirely new area of the leisure market in the early sixties. It began manufacturing gasoline and electric powered golf cars. The company was soon the world's largest manufacturer of gasoline powered golf cars.

Harley-Davidson established its Tomahawk (Wisconsin) Division in 1963. It became apparent that fiberglass was a versatile and useful component for vehicles. The plant, which manufactures fiberglass components, produced all the golf car and Utilicar bodies as well as windshields, saddlebags, and other motorcycle components carrying the Harley-Davidson name.

In 1965, to provide further capital expansion, stock was offered to the public for the first time. In 1969, the merger of Harley-Davidson with AMF, Inc., assured continued growth and resource availability. Harley-Davidson's gross revenue for the fiscal year ending September 30, 1969, was estimated at \$45 million. Ten years later revenue had soared to \$247 million.<sup>19</sup>

Despite the merger, Harley-Davidson continued to be a family company. The early 1970's brought the third generation of family leadership to the company. In 1973, John A. Davidson, whose father had served

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<sup>19</sup>Ibid.

as president until 1971, became company President, and William G. Davidson continued with his specialty as Vice-President of Styling.

As the seventies came to a close, Harley-Davidson cycle sales reflected increasing consumer preference in their size class. In 1979, United States sales alone were over the 50,000 mark, representing the 12th consecutive year of record sales.<sup>20</sup> Further, Harley-Davidson could claim ownership of nearly 40 percent of the heavyweight motorcycle market, with its closest competitor having less than 20 percent.

In 1981, Harley-Davidson became an un-merged group of internal company management personnel that bought the company back from AMF. At the time of purchase, production was up nearly four times what it was when the merger occurred, and revenues were up significantly, (\$45 million in 1969 versus \$289.9 million in 1981).<sup>21</sup>

Key persons in the repurchase of Harley-Davidson were Vaughn L. Beals, a former AMF executive who led the return of the company to private ownership, company President Charles K. Thompson, and Styling Vice-President, William G. Davidson.

#### United States Market for Motorcycles

The motorcycle industry profited by a substantial retail sales increase in 1979. New United States motorcycle registrations were up nearly eight percent from 1978. This increase was in sharp contrast to the drastically slumping sales trend of the United States automobile industry. The increase also reflected growing consumer awareness of

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<sup>20</sup>Ibid.

<sup>21</sup>Ibid.

heavy-weight motorcycles which achieve between 40 to 50 miles per gallon as a substitute for an automobile, thus, proving to be overall fuel efficient transportation.<sup>22</sup>

In 1979, dealers for Harley-Davidson achieved a domestic sales increase of about 16 percent with new registrations surpassing 50,000 units for the first time. This was the 12th consecutive year in which Harley-Davidson registered more heavy-weight vehicles in the United States than the year before. It also proved to be the second consecutive year in which its heavy-weight registrations exceeded those of its two largest Japanese competitors combined.

Harley-Davidson's heavy-weight motorcycles have dropped in the last two years, after more than tripling between 1974 and 1979.

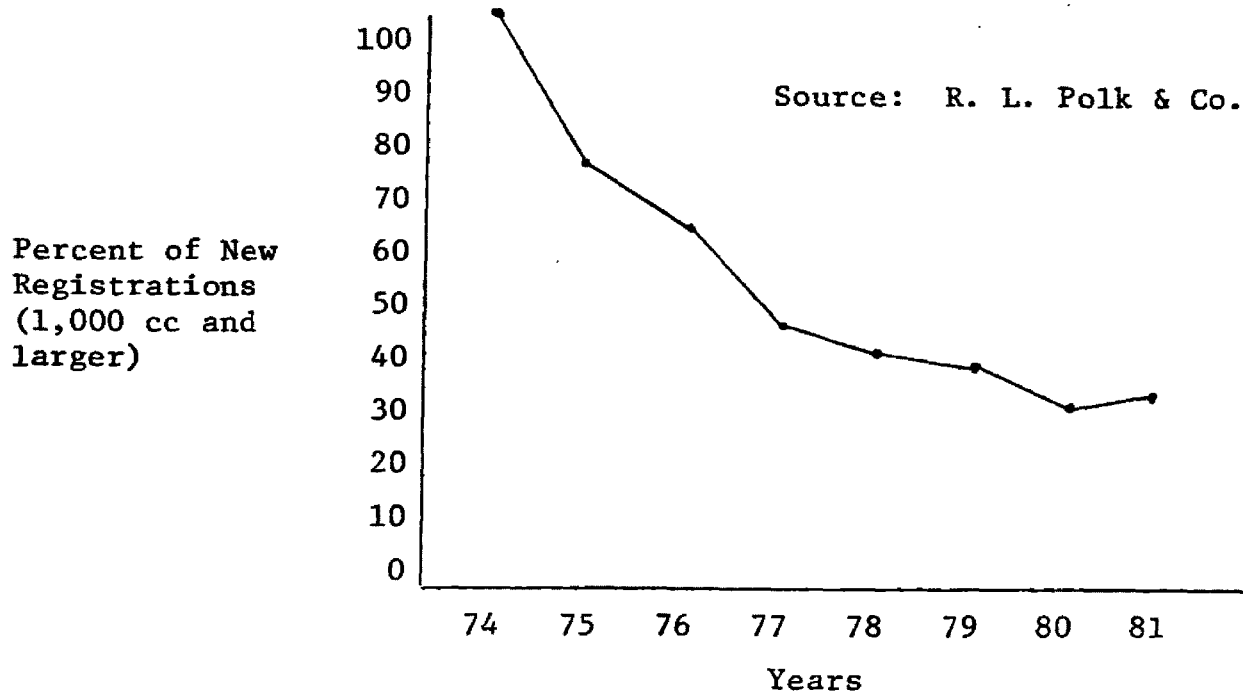


Fig. 1.--New registrations of Harley-Davidson's heavy-weight motorcycles, as percent of new registrations of all manufacturers.

<sup>22</sup>AMF Annual Report, 1979.

Harley-Davidson's near monopoly in the heavy-weight market skidded to a 35 percent share in 1981 (Fig. 1).<sup>23</sup> This decrease can be attributed to improved Japanese technology and development in the heavy-weight market. The Japanese heavy-weight machines now enjoy a substantial price advantage over Harley's. The latter range from \$4,500 to \$10,000.<sup>24</sup>

Harley-Davidson's biggest asset continues to be the strong customer loyalty. Most Harley owners buy Harley's because of the prestige associated with owning one. It has been shown that three out of four Harley owners buy Harleys the next time.

In hopes of doubling sales, Harley-Davidson, without AMF, plans \$70 million of capital spending over the next five years to develop a line of middle-weight machines.<sup>25</sup> Japanese manufacturers currently dominate the middle-weight class. The high technology and superior quality of their machines give them a competitive edge. It will be very difficult for Harley-Davidson to establish any market in this line of motorcycles, because of the quality of machines the Japanese have gained over the years.

In order for Harley-Davidson to obtain future profitability, it must invest more time and money in product development, long-term capital improvements and marketing. It is evident that Japanese technology and price advantages far outweigh Harley-Davidson in 1982.

The value of motorcycles and parts increased annually from

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<sup>23</sup> Heywood Klein, "At Harley-Davidson, Life Without AMF is Upbeat but Full of Financial Problems," Wall Street Journal, April 13, 1982.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.



\$784 million in 1976 to an estimated \$1.7 billion in 1980, representing an average annual growth rate of 21.2 percent. Motorcycles accounted for about 92 percent of total sales for motorcycles and parts during 1976-80 and increased from \$715 million in 1976 to \$1.6 billion in 1980.<sup>26</sup>

Table 2 shows that the value of motorcycles shipped increased each year during 1976-80.<sup>27</sup> The overall growth of the motorcycle industry increased substantially from 1976 to 1980. (Data prior to 1976 are not available for use in establishing a trend line.) This growth in the motorcycle market accounts for a growing demand for motorcycles as a transportation alternative to the automobile. This is a response to rapidly increasing transportation costs.

Table 2

Motorcycles and Parts Thereof: U.S. Shipments, Exports of Domestic Merchandise, Imports for Consumption, and Apparent Consumption, 1976-80.

Year	(1,000 dollars)				Ratio of Imports to Consumption (Percent)
	Shipments	Exports	Imports	Apparent Consumption	
1976	273,000	22,412	533,105	783,693	68.0
1977	286,000	29,385	705,164	961,779	73.3
1978	384,000	37,338	979,508	1,326,170	73.9
1979	475,000 <sup>a</sup>	54,716	997,625	1,417,909	70.4
1980	525,000 <sup>a</sup>	91,737	1,257,280	1,690,543	74.4

<sup>a</sup>Estimated by the U.S. Department of Commerce, 1981, U.S. Industrial Outlook.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

<sup>26</sup>Summary of Trade and Tariff Information Motorcycles, (1981).

<sup>27</sup>Ibid.

The growth in overall demand for motorcycles is expected to continue to grow beyond 1981, because of a reviewed appreciation of the motorcycles' capability for fuel economy, mobility, ease of handling, and dependability.

It is estimated that of the total number of motorcycles sold in 1979, 60 percent were on-highway motorcycles, 25 percent were off-highway, and the remaining 15 percent were dual purpose machines.<sup>28</sup>

Imports are shown in Table 2 as a percentage of consumption of motorcycles and parts. Imports increased from 68 percent in 1976 to 74.4 percent in 1980. It is shown in Table 3 that during the same period the import to consumption ratio for motorcycles increased from 67.5 percent to 73.8 percent.<sup>29</sup>

Table 3

Motorcycles: U.S. Shipments, Exports of Domestic  
Merchandise, Imports for Consumption, and  
Apparent Consumption, 1976-80

Year	(1,000 dollars)				Ratio of Imports to Consumption <sup>a</sup> (Percent)
	Shipments <sup>a</sup>	Exports	Imports	Apparent Consumption	
1976	246,000	13,931	482,979	715,048	67.5
1977	257,000	16,031	633,408	874,377	72.4
1978	346,000	23,016	887,738	1,210,722	73.3
1979	428,000	35,536	908,603	1,301,067	69.8
1980	473,000	65,957	1,148,539	1,555,582	73.8

<sup>a</sup>Estimated by the staff of the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.

Table 2 also shows the value of United States producers' shipments of motorcycles and parts increasing annually from \$273 million in 1976 to an estimated \$525 million in 1980.<sup>30</sup> The opening of a new United States assembly plant by a Japanese motorcycle manufacturer (Honda) helped boost shipment statistics in the later part of the 1976-80 period.

United States producers' inventories of motorcycles are usually high in March due to anticipation of the Spring selling season, and are low in September due to the introduction of new model-year motorcycles. Although it is difficult to determine the value of U.S. producers' inventories during 1976-80, it is estimated that inventories have decreased drastically from the excessively high levels that occurred in the later part of 1975 and 1976. Inaccurate calculation of consumer demand for motorcycles in 1975 led to the apparent high level of inventories.

#### United States Imports of Motorcycles

The value of imports of motorcycle units and spare parts increased annually from \$533 million in 1976 to approximately \$1.3 billion in 1980 (136%).<sup>31</sup> The leading supplier was, by far, Japan. The source accounted for nearly 90 percent of the imports in 1980. Table 4 shows a more complete breakdown by source of imports.

Motorcycle imports, which represented 91 percent of the combined import total of motorcycle units and parts during 1976-80, increased in

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<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

value from \$483 million in 1976 to \$1.15 billion in 1980, 139%. Table 5). Motorcycle unit imports increased more than 76 percent from 1976-80 (738,000 to 1.3 million units). This increase was less than the increase in the value of the units. Inflation and the increased manufacturing and transportation costs of the major foreign supplier (Japan) have caused the average unit price of imported motorcycles to increase from \$654 in 1976 to \$882 in 1980 (Table 5).<sup>32</sup> Since 1978, the market for the larger (over 90 cc) more expensive motorcycles has been filled increasingly by imports.

Table 4

Motorcycles and Parts Thereof: U.S. Imports for  
Consumption, by Principal Sources, 1976-80

Source	1976	1977	1978	1979	1980
(In thousands of dollars)					
Japan	454,378	591,751	816,894	902,653	1,127,122
Italy	19,431	26,139	33,559	15,739	34,619
FR. Germany	18,272	25,956	32,945	15,525	27,716
Austria	5,856	14,683	30,694	16,192	15,117
France	3,712	6,781	11,553	5,918	13,960
Taiwan	2,040	3,991	7,183	8,287	11,220
Canada	1,661	3,151	1,486	4,204	5,013
Sweden	5,063	6,117	6,182	7,533	4,988
All Other	<u>22,693</u>	<u>26,595</u>	<u>39,011</u>	<u>21,574</u>	<u>17,526</u>
Total	533,105	705,164	979,508	997,625	1,257,280

Source: Compiled from official statistics of the U.S. Department of Commerce.

<sup>32</sup>Ibid.

Table 5

Motorcycles: U.S. Imports for Consumption,  
by Principal Sources, 1976-80

Source	1976	1977	1978	1979	1980
Quantity (units)					
Japan	598,329	796,406	882,038	848,959	1,072,886
Italy	47,803	72,950	102,967	35,055	65,404
FR. Germany	10,296	21,283	28,797	9,700	24,901
Austria	14,925	50,440	102,979	42,793	33,745
France	16,784	31,025	42,314	18,318	39,426
Taiwan	4,799	12,448	21,808	17,073	21,631
Sweden	4,371	5,044	4,825	5,229	2,878
Canada	2,420	2,791	1,200	3,125	3,325
All Other	38,467	60,134	98,585	36,163	37,957
Total	738,194	1,052,521	1,285,513	1,016,415	1,302,153
Value (1,000 dollars)					
Japan	414,513	532,843	741,238	825,910	1,038,948
Italy	17,129	23,195	31,078	13,924	30,862
FR. Germany	16,044	22,260	27,486	13,425	22,982
Austria	5,473	14,096	29,626	15,331	13,815
France	3,554	6,580	10,753	5,678	13,473
Taiwan	1,074	2,337	4,611	4,693	5,691
Sweden	4,522	5,733	5,825	7,138	4,366
Canada	1,009	2,724	1,160	3,749	4,315
All Other	19,661	23,641	35,960	18,756	14,087
Total	482,979	633,408	887,738	908,603	1,148,539
Unit Value					
Japan	\$ 692.78	\$ 669.06	\$ 840.37	\$ 972.85	\$ 968.37
Italy	358.32	317.96	301.82	397.19	471.87
FR. Germany	1,558.31	1,045.88	954.48	1,384.02	922.92
Austria	366.68	279.46	287.69	358.25	409.40
France	211.72	212.08	254.13	309.96	341.72
Taiwan	223.75	187.72	211.45	274.87	263.11
Sweden	1,034.63	1,136.66	1,207.17	1,365.03	1,517.13
Canada	416.98	975.97	967.06	1,199.72	1,297.69
All Other	511.11	393.14	364.76	518.64	371.12
Average	\$ 654.27	\$ 601.80	\$ 690.57	\$ 893.93	\$ 882.03

Source: Compiled from official statistics of the U.S. Department of Commerce

Japan, by far, supplied the greatest number of motorcycles to the U. S. during 1976-80; accounting for 91 percent of the total in 1980. Motorcycles are also imported from many other countries including Italy, West Germany, Austria, France, Taiwan, Sweden, and Canada. Their volume is small when compared with the imports from Japanese companies. Imports from the Japanese have included all sizes and styles of motorcycles, and are directly competitive with motorcycles manufactured in the United States.

The companies that have imported motorcycles include United States producers of motorcycles, United States subsidiaries of foreign producers, and independent distributors and dealers. Importers of motorcycle parts consist of United States producers of motorcycles, United States subsidiaries of foreign producers and independent distributors and dealers of motorcycles and parts.<sup>33</sup>

#### United States Exports of Motorcycles

The value of exports of motorcycles and parts increased annually from \$22.4 million in 1976 to \$91.7 million in 1980 (Table 6).<sup>34</sup> During 1976-1978, Canada was the principal market for United States exports of motorcycle units and spare parts. In 1979, Japan was the leading recipient of United States exports, replacing Canada as the most important market for motorcycles and parts. Japan received approximately \$17.5 million of total United States exports in 1980 and Canada received about \$15.9 million of U. S. exports in the same year. Mexico, Argentina,

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<sup>33</sup>Ibid.

<sup>34</sup>Ibid.

West Germany, South Africa, Australia, and the Netherlands were other important U. S. motorcycle export markets.<sup>35</sup>

Table 6

Motorcycles and Parts Thereof: U.S. Exports of Domestic Merchandise, by Principal Markets, 1976-80

Market	1976	1977	1978	1979	1980
(In thousands of dollars)					
Japan	1,456	2,388	4,856	12,645	17,562
Canada	8,845	8,603	9,622	10,951	15,882
Mexico	663	661	1,460	2,367	6,209
Argentina	60	487	739	3,481	6,075
FR Germany	610	1,753	2,059	1,899	5,437
Rep. So. Afr.	87	267	391	464	5,021
Australia	1,621	1,395	2,189	3,588	4,919
Netherlands	1,008	1,943	2,521	5,158	4,857
All Other	<u>8,063</u>	<u>11,887</u>	<u>13,501</u>	<u>14,163</u>	<u>25,776</u>
Total	22,412	29,385	37,338	54,716	91,737

Source: Compiled from official statistics of the U.S. Department of Commerce.

Motorcycle exports increased steadily from \$13.9 million in 1976 to \$66.0 million in 1980 (Table 7). Exports, based on units, increased from 13,400 to 28,100 during the same period. The largest quantity of motorcycle exports are on-highway type motorcycles larger than the dual-purpose and off-highway motorcycles. They are also more expensive. This increase is indicative of the average unit value more than doubling during the period 1976-80, rising from \$1,041 in 1976 to \$2,350 in 1980.

<sup>35</sup> Ibid.

Table 7

Motorcycles: U.S. Exports of Domestic Merchandise,  
by Principal Markets, 1976-80

Market	1976	1977	1978	1979	1980
Quantity (units)					
Japan	356	565	1,435	2,958	4,198
Canada	5,613	3,274	2,523	1,933	3,619
Argentina	61	441	567	2,099	3,994
Mexico	302	275	659	1,156	2,576
FR. Germany	218	628	632	341	1,508
France	26	200	224	339	1,413
Netherlands	335	620	721	1,633	1,123
Australia	869	150	362	725	1,150
All Other	5,597	5,607	5,726	4,054	8,484
Total	13,377	11,760	12,849	15,238	28,065
Value (1,000 dollars)					
Japan	726	1,021	3,885	10,960	15,282
Canada	6,169	5,668	5,066	5,529	10,614
Argentina	47	483	728	3,385	5,824
Mexico	497	346	1,218	1,996	5,579
FR. Germany	294	1,330	1,484	878	3,648
France	44	439	609	791	3,616
Netherlands	674	1,358	1,862	3,713	3,465
Australia	528	288	718	2,189	3,183
All Other	4,952	5,097	7,446	6,096	14,747
Total	13,931	16,031	23,016	35,536	65,957
Unit Value					
Japan	\$2,037.92	\$1,807.91	\$2,707.16	\$3,705.31	\$3,640.38
Canada	1,099.07	1,731.29	2,007.78	2,860.19	2,932.76
Argentina	770.49	1,094.34	1,283.72	1,612.59	1,458.21
Mexico	1,644.71	1,258.25	1,848.98	1,726.48	2,165.58
FR. Germany	1,349.34	2,118.16	2,348.26	2,575.63	2,419.08
France	1,707.31	2,196.24	2,716.95	2,332.21	2,559.05
Netherlands	2,012.81	2,190.32	2,582.39	2,273.64	3,085.25
Australia	607.03	1,919.30	1,984.14	3,018.88	2,767.45
All Other	884.77	909.10	1,300.40	1,503.73	1,738.25
Average	\$1,041.39	\$1,363.18	\$1,791.25	\$2,332.08	\$2,350.15

Source: Compiled from official statistics of the U.S. Department of Commerce.



Japan again replaced Canada in 1979 as the principal market for United States exports of motorcycles and received about \$15.2 million of total U. S. exports in 1980. Canada, Argentina, and Mexico, also proved to be major markets for United States produced motorcycles receiving a combined share of 33.4 percent of the total United States exports in 1980.<sup>36</sup>

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<sup>36</sup>Ibid.

## CHAPTER V

### THE FOREIGN MOTORCYCLE MARKET

#### The Foreign Market Profile

Japan is the leading producer of motorcycles in the world. That nation's manufacturers completely dominate the world motorcycle market.

Motorcycles are also produced in many other countries. West Germany produces the BMW; Italy produces Benelli and Moto Guzzi; United Kingdom produces Triumph; Spain produces Buetaco and Montesa; Canada produced Can-Am; and Sweden produces Husquvarna. Although all of these countries export motorcycles to the United States, their volume is very small compared with the exports of Japan's largest four companies--Honda Motor Co., Ltd.; Yamaha Motor Co., Ltd.; Suzuki Motor Co., Ltd.; and Kawasaki Heavy Industries.

The Japanese produce nearly every type and size of motorcycle for world markets. As previously mentioned, the Japanese motorcycles are very efficient, extremely maneuverable and usually enjoy a price advantage over world competitors. The majority of Japan's motorcycle production is earmarked for export. In 1980, approximately 61 percent of the 6.4 million units produced were exported.<sup>37</sup> International demand for the larger size, more expensive motorcycles produced by United States

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<sup>37</sup>Ibid.

manufacturers such as Harley-Davidson has increased. However, world-wide consumption of the smaller more efficient and less expensive motorcycle is predominant. At the present time, there are no wholly or partially owned United States foreign subsidiaries producing motorcycles, mainly because of Japanese domination in the foreign motorcycle market.

#### Japanese Manufacturers of Motorcycles

Honda is the largest producer of motorcycles in Japan, with four large motorcycle manufacturing facilities. Sales of Honda motorcycles in 1981 totaled 2.9 million units worth \$2,203 million, representing 28 percent of the company's total gross sales. The company's total unit sales were up 279,000 or 10 percent above 1980, while sales revenue was up by \$486 million or 28 percent.<sup>38</sup>

Motorcycle sales in Japan showed a favorable improvement during 1981 totaling 994,000 units, worth \$479 million which was up 15 percent in unit sales from 1980. Domestic sales represented 34 percent of Honda's total motorcycle unit sales and 22 percent of total motorcycle revenue, including parts.<sup>39</sup>

Honda has a long-term program for expanding its total motorcycle market share through the introduction of various new models aimed at segments of the potential motorcycle market which previously have been under developed. For example, Honda introduced 28 new models during 1981 in the Japanese market as part of this long-term program.

Honda also enjoyed favorable increases in terms of unit sales

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<sup>38</sup>Honda Motor Co., Ltd., Annual Report, 1981.

<sup>39</sup>Ibid.

and dollar volume in its overseas markets. The number of Honda motorcycles sold overseas during 1981 was over 1.9 million units worth \$1,724 million (including spare parts). This represented an 8 percent increase in units sold over 1980. Overseas accounted for 66 percent of Honda's total motorcycle unit sales and 78 percent of the company's total motorcycle revenue.<sup>40</sup>

Yamaha is the second largest producer of motorcycles in Japan. Yamaha entered motorcycle production in 1955, and today is known for producing superior motorcycles for virtually every purpose. In 1962, Yamaha exported only 12,017 motorcycles, while other companies such as Triumph, BMW, and Harley-Davidson dominated the motorcycle market. By 1965, Yamaha was exporting more than 120,000 motorcycles a year, which was ten times the three years earlier figure.<sup>41</sup> In the process of changing consumer awareness towards the motorcycle industry, Japan's big four cycle companies came to dominate all aspects of motorcycling.

Yamaha began to build a complete selection of motorcycles to meet nearly every need and riding habit. Today, Yamaha operates on the philosophy that by offering the user wider choices and more selection the consumer is more likely to venture into the new model areas being produced.

All Yamaha's products are made in Japan and exported to the United States for nationwide distribution. They are sold through a network of franchised dealers, and promoted through aggressive national advertising and dealer support programs.

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<sup>40</sup>Ibid.

<sup>41</sup>Yamaha Motor Co., Ltd., Invitation to Yamaha, 1979.

In 1979, Yamaha sales reached \$1,540 million and employees numbered 9,928. These two figures reflect the size and scope of the Yamaha Company. In 1979, motorcycle sales represented 61.9 percent of the company's total sales. Yamaha produced a total of 1.6 million motorcycles and exported more than one million in 1979.<sup>42</sup>

Suzuki and Kawasaki are the other two motorcycle manufacturers in Japan. Suzuki has two manufacturing facilities in Japan and Kawasaki has one. Production and financial data for these two companies are very limited.

In Japan, all four manufacturers utilize subsidiaries of affiliated wholesalers to distribute all or a major part of their shipments to dealers. Kawasaki makes all of its sales to Japanese dealers through branch warehouses which are wholly owned by Kawasaki. The other three Japanese motorcycle companies utilize affiliated and independent wholesalers to distribute their motorcycles to dealers. Sales of motorcycles in the United States, by all four of the Japanese producers, are made through their respective wholly-owned subsidiaries.

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<sup>42</sup>Ibid.

## CHAPTER VI

### CONCLUSIONS

#### Objectives Restated and Summarized

The specific objectives of this professional paper were to compare the American motorcycle industry to the Japanese motorcycle industry with regards to basic industry data and financial information, as well as import and export data of American and Japanese motorcycles.

The findings of this study based on the information provided are:

(1) the motorcycle industry is a definite growth industry, both in the United States and Japan, (2) the Japanese completely dominate the world motorcycle industry, exporting about 90 percent of its motorcycle production to the United States, (3) Japanese market domination is largely a by-product of the efficient and extremely maneuverable motorcycles that are made there, (4) Japanese production is founded on a wide assortment of styles and models for consumer choices that have price and qualitative advantages over both United States and European motorcycles, (5) motorcycle retailing is a highly competitive market place where the Japanese strive for domination, and albeit with some foreign facilities. Only the United States provides some, but a small amount of competition in the large cycle area, (6) it has become very evident that the American manufacturer, Harley-Davidson, has to become very innovative and adaptable to changing market conditions in order to keep up with the many different styles of motorcycles and strong competition

provided by the four large Japanese companies, (7) the motorcycle industry has increased substantially from 1976 to 1980. This growth in overall demand for motorcycles should continue to grow beyond 1981, because of the variety of models and styles being produced, and the advanced technology being used in the manufacturing process, and (8) Harley's heavy-weight market has decreased to only a 35 percent market share. To obtain future profitability, Harley-Davidson, without AMF, must invest more time and money in product development, capital improvements and marketing. It is evident that current Japanese technology and price advantages far outweigh Harley-Davidson.

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