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A MARKETING STUDY OF THE FOREIGN CAR OWNER
IN GREAT FALLS, MONTANA

By

Robert S. Baldassano

B.A.E., New York University, 1960

Presented in partial fulfillment of the requirements
for the degree of

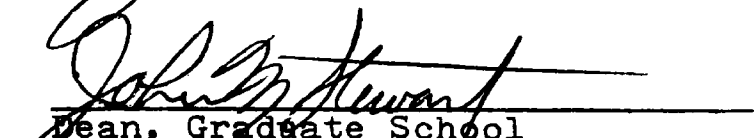
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CHAPTER I

INTRODUCTION

The Growth of Foreign Import Sales in the United States

The Fifties and Sixties

Today one can hardly pick up a newspaper without reading some article about the rise in foreign car sales in the United States. This is not the first time that foreign cars have taken an important share of the U.S. auto market. In 1956 import sales made up less than two percent of the market, and Western United States accounted for thirty-six percent of total U.S. foreign car registrations.¹ By 1959 foreign car sales had increased to ten percent of the market or 614,131 units.²

But this surge in sales was on a shaky foundation. The cars that poured into the U.S. market were for the most part unsuitable for the highways. They were merchandised

¹Joan Walsh, "High Tide for Foreign Cars," Federal Reserve Bank of San Francisco Monthly Review, September, 1970, pp. 182-185.

²David L. Lewis, "Automobile Industry," Collier's Encyclopedia, 1967, III, 357.

poorly, and financing and inventory requirements for dealerships were marginal. Jack E. Reese, Vice-President of U.S. operations for Renault, made this statement about that period, "Renault grew too fast. We had a car which wouldn't hold up on the Pennsylvania turnpike, and we didn't accept the responsibility for parts and service, both as a company and in our dealerships."¹

The Big Three, General Motors, Ford and Chrysler, introduced their compacts in 1959 - 1960, and by 1962 total registrations for imports fell from ten percent to less than five percent² with the exception of Volkswagen, which had a fifteen percent increase in new registrations that year.³ U.S. market penetration by foreign cars was still only 339,160 units or 4.9 percent by 1964. Volkswagen continued to set sales records and by 1965 sold 383,978 units--sixty-seven percent of all foreign cars sold in the U.S.⁴

After the onslaught of the Big Three compacts, foreign car manufacturers regrouped. They looked to Volkswagen as an example and rebuilt their organizations. Toyota pulled its cars off the U.S. market and did engineering

¹"Detroit Races to Meet Challenge of Imports," Business Week, March 29, 1969, pp. 104-106.

²Walsh, "High Tide for Foreign Cars," p. 182.

³"Detroit Races Imports," p. 106.

⁴Lewis, "Automobile Industry," p. 357.

studies of American roads. Renault tightened requirements for new dealerships, paring the dealer list from 900 to 400. Importers invested in new warehouses, parts inventories, distribution and dealer organizations. They then started producing cars for the U.S. market. In 1965 Toyota introduced the Corona which was designed for the U.S. auto buyer.¹

Sales continued to increase, and by 1966 sales had risen to 754,000 units or a nine percent share of the U.S. market, topping the 1959 level.² By the end of 1969, Toyota had increased its investment in parts inventory to \$5 million, up from \$900,000 in 1966. A minimum capitalization of \$50,000 was required to start a Renault dealership and delivery of parts to distributors in 48 hours was assured.³ Foreign car sales reached 1,117,700 units or 11.7 percent of the market in 1969. The Volkswagen accounted for 50.7 percent of foreign sales (down from 57.2 percent the year before) and Toyota replaced formerly second place Opel in sales.⁴ Ford introduced the Maverick and AMC the Hornet in an attempt to stem the sales increase of the imports.

¹"Detroit Races Imports," p. 106.

²David L. Lewis, "Automobile Industry," Collier's Encyclopedia 1968 Yearbook Covering the Year 1967, 1968, p. 142.

³"Detroit Races Imports," p. 110.

⁴David L. Lewis, "Automobile Industry," Collier's Encyclopedia 1970 Yearbook Covering the Year 1969, 1970, p. 131.

The Seventies

Just prior to the start of the seventies, importers started to extend their market into the \$3,000 and up range. The International Auto Show in New York, saw most of the new imports in this category.¹ The import's share of the market continued to increase reaching approximately twelve percent by September 1970, with 903,143 units sold during the January to September period, for a twenty ^vpercent increase over 1969.²

The Pinto, Vega, and Gremlin were brought out in late 1970 in hopes that they would finally stem the rising foreign auto sales. At the same time, the importers introduced even smaller, less expensive cars, such as the Datsun 1200 and Toyota Corolla. Stuart Perkins, President of Volkswagen of America, said, "It's very reassuring that Detroit is entering the small-car market and telling people they are an 'O.K.' thing--at last, they are endorsing our point of view."³

Some Detroit executives were apprehensive. One said "I'm afraid these new sub-compacts may put a bigger dent in

¹"High Hope on Wheels for Imports," Business Week, April 12, 1969, pp. 34-35.

²Theodore D. Ellsworth, "Retail Business," Collier's Encyclopedia 1971 Yearbook Covering the Year 1970, 1971, p. 458.

³"Battle of the Small Cars: The Imports Fight Back," U.S. News & World Report, October 5, 1970, p. 63.

our own profits than they do in import sales." Others felt that the captive imports (autos produced abroad by wholly owned subsidiaries of U.S. manufacturers) would be the biggest losers in that many foreign car buyers would rather buy from dealers who dealt in foreign cars exclusively.¹

The portent came true. The January - February 1971 sales figures for Maverick showed a slip of 20,000 units from the same period in 1970. GM's Nova dropped 6,500 units and AMC's Hornet fell 3,400 units. Robert Link, U.S. Chief of Nissan said, "As we had anticipated since the introduction of the Gremlin, Pinto and Vega, /our sales increased considerably."²

By late March 1971, U.S. auto sales were up 24.1 percent, but foreign car sales were even better, Foreign dealers sold 138,000 cars in March 1971 for a new record.³

That record did not stand long, for in April 1971, foreign imports reached a record level of 144,000 units, or sixteen percent of the 880,220 foreign and domestic cars sold in the United States that month.⁴

¹Charles B. Camp, "Little-Car Clash," Wall Street Journal, September 10, 1970, p. 1.

²D. N. Williams and James Beizer, "Auto Rules: A Blessing in Disguise," Iron Age, March 25, 1971, p. 41.

³"Sales of U.S. Cars Soared in Late March, But Foreign Makes Set Record in Month," Wall Street Journal, April 5, 1971, p. 1.

⁴"Import Car Sales Gained in April to Another High," Wall Street Journal, May 6, 1971, p. 2.

The import's share of the U.S. market from 1956 to 1969 has been depicted in Figure 1.

Apparently sub-compacts have not stemmed[✓] the growth of the foreign imports. How long they will continue to grow at the present rate is not known.

The strict government safety regulations in future production could increase costs of foreign cars enough to reduce their sales. But opinions are mixed on this point depending upon whether you ask Detroit or import executives.¹

Need for the Study

Summary of Current Studies

There has been only a limited amount of current information published to date on foreign car owners and their behavior. A summary of pertinent information from various studies published since 1968 has been presented here.

The U.S. automobile industry had made many studies of why Americans buy foreign cars. John Naughton of Ford Motor Company said, "It's 85% economics and 15% mystique," "as the price difference between small imports and American cars goes up, the mystique increases." The importers have said more than price was involved. People who bought

¹Williams and Beizer, "Auto Rules," pp. 39-41.

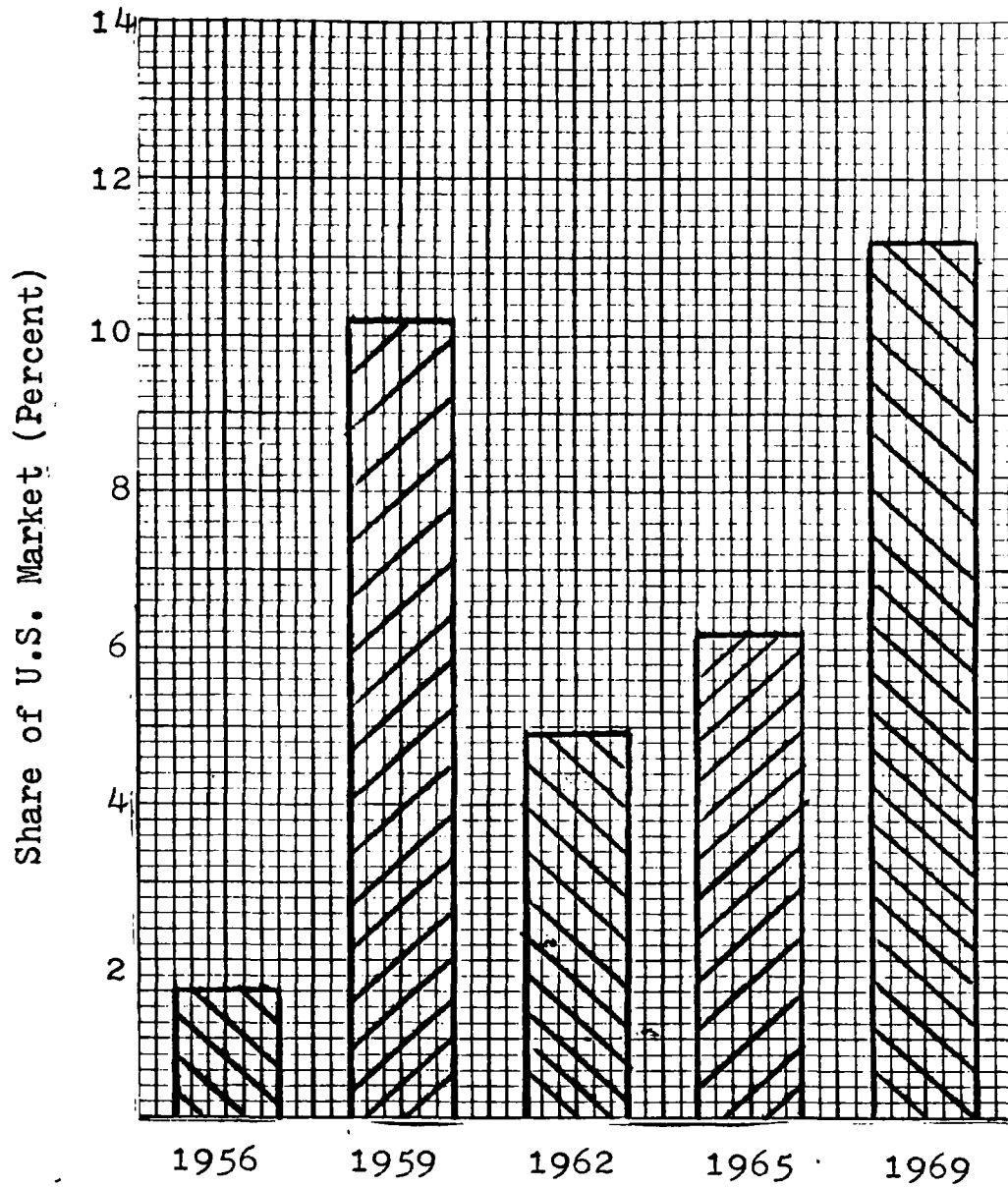


Fig. 1.--Import penetration of U.S. market

Source: Walsh, "High Tide for Foreign Cars,"
p. 185.

new foreign cars/were better educated, better paid, more sophisticated, and younger than the average new car buyer.¹

A University of Southern California clinical psychologist, Chaytor D. Mason, believed foreign cars to be "a rejection of this tinsel world of ours. There is a need to be different. That is why their popularity started out in such places as Hollywood and New York, where there is less conformity." One industry expert feels, "It's a love affair between car and owner which American manufacturers are hard-pressed to imitate."²

Individuality, economy in initial price and upkeep and reliability have been further reasons for higher import sales. Still unknown was the exact size of the "hard core" foreign car market. How many people bought foreign cars because of style, engineering, or handling was also unknown.³

In the past two years, the decline in all new car sales has been concentrated in households with incomes above \$8,000. Lower-income family sales held firm. "Less than one-third of all households receive incomes over \$10,000 a year, but these families account for around three-fifths of all new car sales."⁴

¹"Detroit Races Imports," p. 110.

²Ibid.

³Ibid., p. 111.

⁴"What Really Shakes the Money Tree," First National City Bank Monthly Economic Letter, February 1971, p. 8.

Some interesting points and conclusions were made by Frederick E. May in an article on "Adaptive Behavior in Automobile Brand Choices." Apparently many buyers preselected the brand of car they would buy by consulting either buying guides such as Consumer Reports or friends about the proposed purchase. The conclusions drawn indicated that if a person considered a new car purchase, the brand first considered had an influence upon whether more alternatives were considered. If the brand that he considered first was the one that he currently owned, the probability of further search was significantly lower than expected. If some other brand was considered first, the inverse was true. The number of feasible alternatives to the present car also influenced repurchase plans. The probability of repurchase was higher than expected if only one other brand was considered.¹

John R. Stuteville in his article, "The Buyer as a salesman," made some observations about "deviating buyers" or people who purchased uncommon brands of foreign cars. His study revealed that these people sought justification of their purchase by securing approval from their friends, associates and even complete strangers. They also tried to reduce dissonance by reading favorable ads and searching out consensus. They became aware of all the other cars on the road

¹Journal of Marketing Research, VI (February, 1969),

of the same brand. They became great boosters of their car, ready to argue its good points to an extreme. Because they went to such lengths to reduce their anxiety about their purchase, they increased the probability of more sales of that automobile.¹

Use of Multiple Classification Analysis (MCA) was discussed by William H. Peters in his article, "Using MCA to Segment New Car Markets." He studied the new car market of the mid-1960's and found young buyers (25-34) had a higher frequency of ownership for foreign economy cars. If they had a Bachelor's degree the frequency increased. The incidence of foreign car ownership increased as the number of cars in the family increased, leading to the conclusion that many foreign cars were bought as second cars.²

Since the size of the 18-24 year old group in our population is expected to increase, it was most interesting that the study showed that young people wanted smaller cars and that this might foreshadow a trend toward smaller cars.³

Need for the Study in Great Falls

As businessmen know, business decisions are made under uncertainty. Marketing Research provides a businessman

¹Journal of Marketing, XXXII (July, 1968), 14-16.

²Journal of Marketing Research, VII (August, 1970), 363.

³Ibid.

with more information so that he may reduce the uncertainty in his decision making process and increase probability of profit. Bernard Baruch once said "Every man has a right to his own opinion, but no man has a right to be wrong in his facts."

✓ Great Falls is a growing city with a population of 60,091 people. There are sixteen new car dealers in Great Falls. Foreign cars are sold by eight of them, two of which sell captive imports. The twenty foreign car brands available in this city are thought to provide adequate competition for the foreign car buyer. If a dealer could better identify his target customer, he would be able to make better allocation of his advertising funds and time spent in locating new prospects. There has not been a published study identifying the foreign car buyer in Great Falls, but the need is obvious.

The primary objectives of this study were (1) identify, (2) describe, and (3) analyze the demographic features and attitudes of foreign car owners in Great Falls, Montana. ✓

CHAPTER II

PROJECT ORGANIZATION

Discussion of Questionnaire Design

Prior to constructing the questionnaire used in this study, the literature¹ was researched to determine the significant factors to include in a survey of foreign car owners.

A preliminary set of questions was formulated, using accepted format² designed to insure maximum response from the sample population. Where possible, classifications were made to conform with those found in compilations of national data,³ to allow direct comparison.

The resulting preliminary set of questions was then pre-tested on students selected at random. Where difficulty was found in understanding the question or directions, changes were made to improve clarity.

¹Refer to the sources listed in the footnotes of Chapter I.

²Harper W. Boyd and Ralph Westfall, Marketing Research, (rev. ed.; Homewood, Ill: R. D. Irwin, 1964), pp. 286-353.

³1970 Automobile Facts and Figures, (Detroit, Mich.: Automobile Manufacturers Association, Inc., 1970).

The final set of questions was then screened for relevance and reduced in number to keep the questionnaire to a minimum length for a more favorable response rate.

A cover letter was designed to give those surveyed a quick overview of the intent and hopefully motivate the recipient to return the questionnaire. The final form of the questionnaire and cover letter has been attached as an Appendix. A discussion of each question follows:

Question 1

Question 1 was intended to gather information as to the age, brand and number of foreign cars owned by respondents. An open question format was decided upon to allow for the representation of a maximum number of foreign car brands. The compiled data would give an indication of brand popularity in Great Falls, and supply parameters for cross tabulations.

Question 2

Question 2 was open similar to question 1, but was designed to gather information about domestic cars. Tabulation of these data with information gained from question 1 yielded information on multicar families.

Question 3

A multiple choice format was decided upon in question 3 to speed tabulation of the data and simplify the task of answering. A frequency distribution of mileage driven was obtained from the results.

Question 4

In question 4 the percentage of mileage driven in foreign cars was directly referenced to question 3 to simplify response. A frequency distribution was obtained from the results.

Question 5

Question 5 was designed to gather information as to the priority of foreign car usage. A multiple choice format was used to limit responses to a manageable number.

Question 6

Household size, age and sex of drivers were compiled from data obtained from question 6. Comparison with national data was used to test the hypothesis that foreign car owners are younger than the average car owner.

Question 7

A multiple choice form was used in question 7 to limit the number of categories and simplify answering. Categories were chosen similar to those used in national data. Besides providing variables for cross-tabulation, brand preference by occupation may be investigated.

Question 8

Question 8 yielded data for a frequency distribution that permitted skewness in the education level of foreign car owners in the city to be studied.

Question 9

Question 9 was a multiple choice with carefully

chosen income fields. A frequency distribution was compiled from the data generated.

Question 10

Simplification in answering and tabulation was the reason for the dichotomus format used in question 10. The results indicated the number of respondents who were first time owners.

Question 11

A determination of the frequency of repeat foreign ownership and the time span of ownership was obtained from the data gathered in question 11.

Question 12

A combination of dichotomus and open question was used in question 12 to determine whether or not a foreign car owner shopped around before deciding on the car he bought. An indication of trends in next best choice could also be determined.

Question 13

Ordinal ranking within a multiple choice format was used in question 13 to define reasons for foreign car ownership while maintaining answering and tabulation ease.

Question 14

A dichotomus format was used in question 14 to gather information on dwelling ownership while keeping the task of answering simple.

Question 15

Information gathered in question 15 was used in determining advertising dollar allocation. The dichotomus format was used for simplicity.

Question 16

An open format was decided upon in question 16 to allow for a maximum number of radio station choices.

Question 17

The intent of question 17 was to determine if a respondent would purchase another foreign car based upon present experience and the reason for his choice. Insights to potential problems in the foreign car market and areas where emphasis in sales efforts should be placed were sought in this question.

The second survey was sent out to a selected sub set of the population. It was an attitude survey consisting of eight questions in matrix with Likert scales. Likert scales are of the ordinal type and involve a list of statements related to attitude in a question, with each statement indicating a degree of agreement or disagreement with the statements.

Question 1

Question 1 was designed to determine attitude toward foreign workmanship.

Question 2

Question 2 probed attitudes about safety.

Question 3

Question 3 sought data for a measurement of satisfaction with dealer service charges.

Question 4

Question 4 was intended to indicate satisfaction with handling as compared to American cars.

Question 5

Question 5 sought to measure "snob appeal".

Question 6

An indication of attitudes about the uses of foreign cars was sought from question 6.

Question 7

Any problems with dealer service and image were measured from the responses to question 7.

Question 8

A measure of the attitude that foreign cars are fun to drive was determined by question 8.

Discussion of Sampling Techniques

The initial selection of the sample population was made from a listing of all new cars purchased in Great Falls from January through November 1970. This provided 269 names before correction. A second group of names was randomly selected by a search of one-thirteenth of the 1970 motor vehicle registrations filed at the Cascade County Motor Vehicle office. This group provided 302 names before

correction. Some of the registration slips were illegible, which resulted in thirty-five additional names being unusable although selected.

A sample of 400 names was selected from the population of 571 by use of a random numbers table. These names were checked for accuracy of address by cross reference with the current 1971 Great Falls telephone directory. If a name was not found in the telephone directory, it was still used so as not to bias the survey against non-telephone owners or people with unlisted numbers. An exception to this policy was made in the case of military personnel residing in government quarters at Malmstrom Air Force Base. Since Base personnel are required to have telephones, if they were not listed in the directory, it could be assumed that they had transferred.

From this final listing, the first 118 were sent both the demographic questionnaire, and the attitude survey. The remainder of the listing was sent only the demographic survey.

Questionnaires returned for incorrect address were remailed if correction of the error was possible. Fifteen additional questionnaires were mailed to replace questionnaires that could not be re-mailed due to incorrect address. A total of 294 questionnaires were returned, 230 of these with timely and usable replies for a valid return rate of fifty-five percent.

Problems Encountered in Gathering Data

The primary cause of data collection problems was the dated information and errors associated with the use of 1970 automobile registrations. Thirty-five questionnaires were undeliverable due to: (1) people moving and leaving no forwarding address and (2) errors in address that could not be corrected. Three people moved out of state during 1970, and although they responded to the questionnaire, their answers were not used. Nine respondents sold their foreign cars in 1970, and replaced them with U.S. makes. Their questionnaires were included in the tabulation as they still contained significant information.

The second problem encountered concerned answers to the questionnaire itself. Only three questionnaires were returned unanswered, but five were returned with only one side of the questionnaire completed. It appeared that respondents were not aware that the other questions existed. The probability was that they were obscured by the cover letter, as in most cases questions seven through seventeen were answered, while questions one through six were not. Since answers were received to the more personal type of questions, this would appear to have been the most valid conclusion.

Despite the fact that the questionnaire was pretested and corrected numerous times before final reproduction, some misunderstanding was evident in questions five, six, eleven,

thirteen, and seventeen. Some respondents to questions five and thirteen just checked the appropriate response, rather than ranking them ordinally. To avoid loss of valuable data, responses in question five that were checked instead of ranked as directed, were coded as a response with no ordinal preference. In question thirteen, the lack of ordinal rank was more of a problem. An attempt was made to determine the rank from comments made in question seventeen. Where this was not possible, they were ranked by their columnar order from left to right, i.e., price being (1), workmanship being (4). Some respondents to question six left out age and sex data. Where sex could be determined from relationship, it was coded in. In some cases it appeared that respondents erroneously omitted themselves in the tally of licensed drivers. In the cases where it was known that the respondent was a licensed driver, it was coded in. In other cases, no correction was made to the tabulation. Respondents who answered "yes" to question ten were not required to answer question eleven, as its intent was to determine the degree of repeat ownership of foreign cars. In cases where question eleven was answered when not required, the response was not tabulated. Question seventeen was interpreted by many respondents as an attempt to determine their next chronological purchase, rather than their intent to purchase another foreign car based on their present experience. This was a fault of the question, as it could have been worded

more clearly. In the case where an older domestic car was owned besides the foreign car, respondents stated that they would be replacing the domestic car next, due to wear and age. They therefore checked the U.S. response to the question. The data was adjusted where possible if an indication was made in the comments section that another foreign car would be purchased in the future. These answers were coded "Both."

Besides the difficulties encountered in collecting raw data, some difficulty was experienced in finding sources of secondary data. Letters sent to the National Imported Car Dealers Association, and the American Association of Imported Car Dealers, sought information but received no response. Only a small number of articles pertaining to foreign car ownership, were listed in the periodicals indexes. This was compounded by the fact that many of the listed articles were available in neither the Great Falls Public Library nor the Air Force Institute of Technology Library.

CHAPTER III

PRESENTATION OF THE SURVEY DATA

Analysis of the Answers to Each Question

Demographic Questions

Question 1

The foreign motor vehicles owned by respondents have been tabulated in Table 1. The mean model year for all foreign cars was computed to be 1968.6, with a standard deviation of 1.74 model years. An average age by manufacturer was also computed and is presented in Table 2. Volkswagen was the most popular brand making up 49.4 percent of the sample. The next most popular make was Datsun with 17.25 percent, followed by Toyota with 8.04 percent. These three makes, therefore, accounted for 74.69 percent of the sample. Other makes contributed less than 6 percent each to the total.

The Volkswagens were, on the average, older than either the Datsuns or Toyotas averaging 4.167 years. The Toyotas were the newest of the three, averaging 1.976 years.

Of the 261 foreign cars owned, 185 people owned one foreign car, 30 people owned two foreign cars, four people owned three foreign cars and one person owned four foreign cars.

Question 2

A tabulation of U.S. motor vehicles owned by respondents has been presented in Table 3. An average age by manufacturer is also presented in Table 4. The mean model year for American cars was computed to be 1964.68, with a standard deviation of 5.46 model years. This was 3.92 years older than the foreign cars and displayed a much greater variance.

General Motors automobiles were the best represented with 48.2 percent of the total. The next most popular cars were from Ford Motor Company with 28.1 percent of the total, followed by Chrysler with 13.09 percent. These three brands made up a total of 89.39 percent of the sample. The other makes each represented four percent or less of the total. Ford cars were the newest of the three averaging 5.375 years. Chrysler cars were the oldest of the three with an average age of 7.5 years.

Question 3

Since an open ended mileage field was used to determine mileage driven, a median instead of a mean was computed from the data represented by Figure 2. The median mileage was 15,095 miles with a first quartile of 11,391 miles and a third quartile of 20,832 miles. The interquartile range was 9,441 miles.

Question 4

To avoid inaccurate results, answers concerning

mileage driven in foreign cars were left in percentage form and were tabulated in three classes. The results are presented in Table 5. As would be expected, the percentage of mileage driven in foreign cars was higher for people who only owned foreign cars. People who owned both foreign and domestic cars averaged approximately an estimated 55 percent of their mileage in their foreign cars.

Question 5

A Chi-square contingency analysis was performed on the data collected on foreign car usage.¹ The total figures for all cars were compiled in Table 6. Business was ranked as the primary use for their foreign cars by owners. Shopping was ranked second, pleasure driving third and recreation fourth. The other category received only 4.72 percent of the possible responses.

Question 6

There were 235 respondents who answered the first part of question six about the number of people in the household. Figure 3 depicts a frequency distribution of their answers. The mean of this distribution was 2.925 persons per household with a standard deviation of 1.556 persons per household. Of the total list of licensed drivers, 378 gave

¹The computed Chi-square was 256.0495 which was much greater than the tabulated value of 31.4104 for 20 degrees of freedom and a significance level of 0.05. The results were therefore not random and there was a definite relationship between rank and car use.

both age and sex information. A histogram of the total distribution by age and sex was prepared as Figure 4. The mean age for male drivers of foreign cars was 35.30 years with a standard deviation of 15.75 years. For female drivers the mean age was 34.20 years with a standard deviation of 13.27 years. For the total sample, the mean age was 34.70 years with a standard deviation of 14.67 years. The women made up 52.2 percent of the distribution; the men 47.8 percent.

Question 7

The occupational distribution determined by question 7 has been tabulated in Table 7. From the data collected, it appeared that professional and managerial people made up a majority of foreign car owners in Great Falls.¹ The next largest group was military followed by craftsmen and laborers. These three occupation groups made up 66.82 percent of the sample.

Question 8

A median education level, for Great Falls foreign car owners, of 13.56 years was computed from the data collected in question 8. The first quartile was 11.53 years

¹Chi-square analysis was used to test the hypothesis that the distribution of answers was random and not dependent. Data from the 1960 census for Montana was used for expected frequencies. The computed Chi-square value was 80.91 which is much greater than the tabulated value of Chi-square at the 0.05 significance level of 14.06. This proves that occupation and foreign car ownership are not independent.

and the third quartile was 15.67 years. The interquartile range was 4.14 years. A further breakdown of the data is given in Table 8.

Question 9

A 97 percent response rate was obtained on the income question. The results are tabulated in Table 9. The median income of foreign car owners in Great Falls, was found to be \$10,237. The first quartile was \$7,174 and the third quartile was \$14,749. The interquartile range was \$7,575.

Question 10

The tally of responses to question 10 showed that first time owners of foreign cars made up 50.22 percent of the 227 respondents that answered it.¹ It can be said with 95 percent confidence that the proportion of foreign car owners in Great Falls who are first time owners is greater than 0.4367 and less than 0.5677.

Question 11

The information gathered on prior foreign car ownership was tabulated in Tables 12 and 13. The mean for the year of first purchase distribution was found to be 1963.2 with a standard deviation of 4.25 years. The distribution

¹A posterior probability distribution for the Great Falls foreign car owner population was computed from the sample data, assuming a prior beta distribution with parameters $r_0 = 1$, $n_0 = 2$. This distribution is shown in Table 10.

of the number of foreign cars previously owned had a mean of 2.52 cars, with a standard deviation of 1.45 cars. This showed that foreign car owners tended to be loyal and repeat purchasers.

Question 12

Question 12 was answered by 219 respondents, of which 139 said they had considered other cars before purchasing their present foreign car. Of these 139, 117 indicated their next favored choice. A tabulation of car considered compared with car owned was made in Table 13. Chevrolet was the choice most often considered as next best choice, with Volkswagen second and Ford third. In all, 60 American cars were considered, 23 of them Chevrolet and 12 Ford. The rest of the U.S. cars were never considered more than three times.

Question 13

The tabulation of reasons respondents bought foreign cars is found in Table 14. Because respondents were asked to make choices ordinally, no statistical analysis was performed on the data. Respondents considered price the main reason for their purchase of a foreign car. Economy was the second choice, and resale value was third. Of least importance to respondents was dealer availability, net-work and luxury.

Question 14

The response to question 14 showed that out of 226 respondents, 69.47 percent owned homes, as opposed to 30.53

percent who rented. It can be said with 95 percent confidence that the proportion of Great Falls foreign car owners who own homes is greater than 0.6347 and less than 0.7547.¹

Question 15

The "Teleprompter" Cable TV office in Great Falls, estimates that there are 8,000 subscribers to Cable TV in Great Falls. It is shown in 1970 census data that there are 20,744 year round housing units in Great Falls. This would indicate a subscriber rate of 38.7 percent. The 95 percent confidence limit for the proportion of the Great Falls foreign car owner population that subscribe to Cable TV is greater than 0.3973 and less than 0.5285.²

Question 16

Tabulated results of what radio stations are listened to most are shown in Table 17.

KMON and KARR radio had an equal share of 64.7 percent of the listening audience, with KUDI radio taking up

¹A 95 percent confidence limit and posterior probability distribution for the Great Falls foreign car owner population was computed from the sample data, assuming a prior beta distribution with $r_0 = 1$ and $n_0 = 2$. The distribution is presented in Table 15.

²A posterior probability distribution was computed first assuming a prior distribution in the form of a beta function with $r_0 = 1$ and $n_0 = 2$. A second distribution was computed using a prior probability of 0.4 as determined from the "Teleprompter" information and the United States census. The results are presented in Table 16.

a majority of the rest of the audience.¹

Question 17

The tabulated results of next automobile purchase and reasons for choice are presented in Tables 18 and 19. A greater percentage of Great Falls foreign car owners can be expected to buy another foreign car.² A very important segment of the population is the 19.28 percent that are undecided. They may be swayed by concentrated sales efforts on the part of both foreign and domestic car dealers.

Those who said their next choice would be a foreign car gave economy, value, reliability, workmanship and engineering, respectively, as their reason. Those who said that their next car would be domestic gave size, power, comfort, and poor parts and service availability for foreign cars as

¹Chi-square analysis was used to test the hypothesis that the distribution of answers was due to chance and not dependent. The computed value of Chi-square, assuming all choices equally likely, was 75.1, which was much greater than the tabulated value of Chi-square of 9.48 at the 0.05 significance level. Therefore the hypothesis was rejected and inference about the general foreign car owner population in Great Falls can be made.

²Chi-square analysis was used to test for chance distribution of the answers tabulated in Table 19 with all choices assumed equally likely. The computed value of Chi-square was 88.4 which is much greater than 7.814, the value of Chi-square at the 0.05 significance level. Therefore the answer distribution is not due to chance.

their reasons.¹ Parts and service was given as a second reason by many respondents in answer to question 17, but this was not tabulated as only the main choice was requested. This problem will be discussed further in the conclusion.

Attitude Questions

A tally of answers to the attitude questionnaire is given in Table 21.²

Question 1

Question 1 was answered by 65 respondents. The majority, 40 percent, agreed that foreign cars were better made than cars made in the United States. An additional 20 percent agreed strongly.

Question 2

There was slightly less agreement on question 2 than in question 1. The majority, 43.08 percent, neither agreed nor disagreed with the statement that U.S. manufactured cars are safer in a crash. There was 46.15 percent who agreed or agreed strongly with the statement.

¹A Chi-square contingency analysis was done on Table 10, the computed value being 257.3289. The tabulated value of Chi-square for 27 degrees of freedom at the 0.05 significance level is 40.1133, which is much lower than the computed value. This result proved that the answers were not due to chance and the choice and reasons were highly related.

²A Chi-square contingency analysis was performed on the data. The computed value of Chi-square was 97.1510. This was greater than the tabulated value of Chi-square at the 0.05 significance level, which was 41.3372. This proved that the distribution of the answers was not random.

Question 3

The discontent with dealer service charges that were found in other parts of the survey, were reinforced by the results of question 3. Those who agreed or agreed strongly amounted to 42.42 percent of the 66 respondents who answered the survey, of which only 12.12 percent agreed strongly. There were 33.33 percent who disagreed or disagreed strongly with the statement that foreign cars were cheaper to repair.

Question 4

The tally of question 4 showed 51.52 percent agreed or agreed strongly with the statement that foreign cars handled better than American cars. Of the 66 respondents, there were only 10.61 percent who disagreed with the statement. Therefore a general satisfaction with the handling of foreign cars was implied.

Question 5

The measurement of "snob appeal" in question 5 was not conclusive. Of the 66 respondents, 43.94 percent neither agreed nor disagreed with the statement that foreign luxury cars yield more prestige than American luxury cars. The difference between those who agreed and those who disagreed with the statement was only 13.64 in favor of agreement.

Question 6

It appears from the response to question 6 that most owners of foreign cars preferred them for city driving compared with highway use. Of the 66 respondents, 68.66 percent

were in agreement with the statement that foreign cars were better for the city than the highway. Only 14.93 percent disagreed.

Question 7

No strong attitude either way was determined from question 7. The majority of respondents, 62.12 percent, neither agreed nor disagreed with the statement that foreign car dealers were more reliable than American car dealers. Of those who had an opinion, a slight majority (1.52 percent) disagreed. This seemed to indicate foreign dealer image was not as good as it could have been, and may be tied to question 3.

Question 8

Again in question 8, a more definite attitude was found. Of the 65 respondents, 58.46 percent were in agreement with the statement that foreign cars were more fun to drive than American cars. There were only 7.59 percent who disagreed with the statement.

Overall the survey showed that foreign car owners were more favorably inclined toward foreign cars than American cars. The areas that were not found to be so, had to do with dealership and repair.

Cross Tabulations and Trends

A cross tabulation of foreign car ownership compared with use was made. As would be expected, since they represented the major part of the survey, Datsun, Toyota and Volkswagen owners ranked their car use in the same order as the total for the group.¹

Renault and Opel owners placed recreation usage third and pleasure driving fourth. Volvo owners ranked recreation second behind business with shopping third and pleasure driving fourth. The other car owners gave too few ordinal ranks to determine preference with any accuracy.

A cross tabulation was made by foreign car ownership compared with age and sex. In the sports car class such as Jaguar, Triumph, and Porsche, the average age was lower than the mean age computed in question 6. For Jaguar owners it was 26.00, for Porsche owners it was 29.50 and for Triumph owners it was 29.50. These sample sizes were extremely small; the largest contained five persons so no generalizations were attempted. The average age for Datsun drivers was 33.53 years out of a sample of 88. Toyota drivers averaged 32.95 years out of a sample of 37 and Volkswagen drivers averaged 34.86 years out of a sample of 213.²

¹See question 5 of the demographic questions and Table 6.

²When these values were tested against the hypothesis that they were equal to the total sample mean, the hypothesis was not rejected at the five percent significance level, so this variation could have been due to sampling error.

Income in relation to attitude was compared for all eight attitude questions. Chi-square contingency analysis was done to test the hypothesis that there was no difference between income groups and their attitudes about foreign cars. In every case the hypothesis was sustained; the computed Chi-square values being about one-half of the tabulated values at the five percent significance level.

An analysis was also done of income compared with foreign car ownership. The hypothesis that there was no difference between income groups and foreign car ownership was sustained although, the certainty in this case was not as strong as in the previous comparison.¹

Comparison With National Data

Not all information that was presented in this study was directly comparable to national, state or city data. Where possible, information was tested statistically; in many cases lack of information as to the variance of national data, age of data or differences in format prevented direct comparison. Only data that could be compared is presented in this section.

The average age of passenger cars in use in the United States in 1969 was 5.5 years and trucks 7.4 years.²

¹The tabulated value for Chi-square in this analysis was 101.879 for 80 degrees of freedom and a 5 percent significance level as compared with a computed value of 101.748.

²1970 Automobile Facts and Figures, p. 17.

The results of question 1 and question 2 showed that the mean age for foreign cars in Great Falls was 2.4 years and for American cars owned by foreign car owners 6.3 years. Individual average ages by manufacturer or brand are presented in Tables 2 and 4. The hypothesis that the sample mean age for foreign cars was equal to the national average was tested against the alternate hypothesis that it was lower than the national average. The primary hypothesis was rejected at the five percent significance level. Therefore, foreign cars in Great Falls are newer than the average car in the United States. The hypothesis that the sample mean age for American cars owned by foreign car owners was equal to the national average was tested against the alternate hypothesis that it was higher. The primary hypothesis was not rejected at the five percent significance level. American cars owned by foreign car owners appeared to be no older than all passenger cars in the United States.

National figures for automobile use in 1967 showed that the purpose of automobile trips were distributed as follows: 39 percent for visits, 18 percent business, 16 percent for outdoor recreation, 13 percent for pleasure and 14 percent for other uses.¹ With the exception of Volvo owners, the owners of foreign cars in Great Falls did not follow this pattern but ranked business first, shopping second, pleasure

¹Ibid., 51.

driving third and recreation fourth. The fact that shopping was not made a separate category in the national data and visits were, made direct comparison impossible; but the ranking of the other categories could be compared.

In 1968 Montana had 392,000 licensed drivers, 57.6 percent were male and 42.4 percent were female.¹ The sample proportion was 47.8 percent male and 52.2 percent female. The hypothesis that the sample proportion of male drivers was equal to the Montana population proportion was tested against the alternate hypothesis that it was less than the Montana proportion. The primary hypothesis was rejected at the five percent significance level; and therefore, it could be said that in the Great Falls foreign car owner population, men make up a lesser proportion of the drivers than the proportion for the state as a whole.

A Chi-squared analysis was done to test the national age distribution of drivers for 1968² against the distribution determined in the study since the study figures seemed to indicate that foreign car drivers were younger than the national average. It could not be demonstrated that the proportions were unequal at the chosen significance level and therefore they were considered equal.³

¹Ibid., p. 45.

²Ibid.

³The computed Chi-square value was 8.9991, which was less than the tabulated value of 9.48773 at the five percent significance for four degrees of freedom.

The 1970 census data on education level completed in Montana were not available for comparison with the median of 13.56 years computed in the survey. The newest information that was available was from the 1960 census which showed a median education level of 11.7 years for the white population in Montana.¹

When tested, the hypothesis that the education distribution proportions were equal was rejected and the alternate hypothesis that they were not equal was accepted.² Because the data were so old, no real conclusions could be drawn. The median education level has increased an average of 1.4 years every ten years since 1940, so it may be implied that the median education level for Montana would be approximately 13.2 years. This would have been close to the figure computed from the sample.

Three studies had been done on personal income in Great Falls.³ A mean income of \$9,373 for a sample of 602 homeowners was shown by a 1971 study done by the State

¹University of Montana. Montana Economic Study Research Report Project No. P-31, (Missoula, Montana: 1970), p. 6.23.

²A Chi-squared analysis of the education distributions resulted in a computed Chi-square value of 25.6219, which was much greater than the tabulated value of 7.81473 at the five percent significance level with three degrees of freedom.

³Thomas Armour, State Department of Planning and Economic Development, Helena, Montana, telephone interview, April 1, 1971.

Department of Planning and Economic Development. A median income of \$8,524 was shown in another study done by National Planning Data Corporation. A mean income of \$9,350 was indicated by a third study completed by Sales Management. It could not be proven that the proportions of income distribution were not equal at the five percent significance level so they were considered equal.¹

¹A Chi-squared analysis was used to test the hypothesis that the proportional distribution of income in the Department of Planning and Economic Development study was equal to the proportional distribution from this study. The computed Chi-square was 3.4284. This was less than the tabulated value of Chi-square at 5.99147 at the five percent significance level with two degrees of freedom.

CHAPTER IV

CONCLUSIONS

What the Study Shows

At least half of the foreign car owners in Great Falls were found to be first-time purchasers. How to continue the trend of repeat purchases revealed in this study will be the foreign car dealer's main problem. Since economy, reliability and workmanship were found to be the reasons most often mentioned by respondents whose next car will be foreign, as opposed to no mention of these same factors by those who were going to buy a U.S. car, these factors should be stressed heavily by the foreign car dealers. Of more importance are the reasons people will make their next purchase American: size, power, comfort, parts availability, and service. Size, power and comfort are a function of manufacture and out of the dealer's control. A larger selection of more powerful and bigger cars has been evident from the foreign distributors in an effort to counter this problem.¹

Parts and service are more directly related to the dealership, thus gains in improved customer attitude can best be made here.

¹"High Hope on Wheels for Imports," Business Week, April 12, 1969, pp. 34-35.

It was found in the study that, with the exception of Chevrolet and Ford, foreign cars competed primarily among themselves for the buyers' dollars. Chevrolet was considered more than any other car as an alternative to a foreign car purchase. Foreign cars in Great Falls were newer than the average car in the United States, while American cars owned by these same foreign car owners were as old as the average car nationally. These foreign cars were primarily used for business and shopping and were preferred more for city driving rather than highway use.

The majority of the foreign car owners were found to be employed in professional and managerial positions with the military being the next largest group. Their average age was not found to be significantly different from the average age for drivers nationally, but the proportion of male drivers of foreign cars in Great Falls, was found to be less than the proportion of male drivers in the state of Montana.

Income of foreign car owners was not found to be significantly different from the average Great Falls resident. Since no current data were available on education levels in Montana, no conclusive comparison could be made about the education of the foreign car owner being above high school level.

The study has indicated that the dealer can best allocate his advertising and marketing funds through contacts with home owners, since the foreign car owner had a high

incidence of home ownership. Proportionally the foreign car owner was a more frequent Cable TV subscriber than the average and he usually listened to KMON, KARR and KUDI radio. A suggested marketing program would be concentrated radio advertising on the stations indicated with promotional mailings to areas in the city with high home ownership rates. A further study of programs and channels viewed on Cable TV would be warranted before advertising money was allocated to that source.

What the Study Does Not Show

Since the owners of domestic cars were not sampled in this study, no direct comparisons can be made with this group of car owners.

The lack of current statistical data in many cases prevented strong conclusions. When the complete 1970 census is available, more accurate comparisons will be possible. The median income level analysis was hampered by the need to group data to the point that significant differences between the survey distribution and the Department of Planning and Economic Development's study may have been eliminated.

Cross tabulations of income in relation to attitudes and income compared with foreign car ownership did not show any significant difference between income groups.

Areas Needing Further Study

A study of the domestic car buyer in Great Falls would be of primary interest. Information from such a study would add greatly to the conclusions presented in this study.

The problem of parts and service is another area where further information as to exact problems would be of assistance.

Finally, a study of Cable TV subscribers viewing preferences would aid greatly in the proper allocation of advertising funds to that medium.

APPENDIX

Dear Sir:

My name is Robert S. Baldassano and I am a student at the University of Montana's Graduate School of Business. As part of a requirement for my Master's degree, I am doing a survey of foreign car owners in Great Falls selected at random from a master listing. The results of the survey will be used to suggest ways to improve the services available to foreign car owners in the city.

Enclosed is a short questionnaire that can be answered with a check mark or a few lines at most. As I have no way to connect you with your answers, your identity will remain anonymous.

The printing and mailing costs are paid totally by me. Since I am on a limited budget, you can understand my interest in getting as many replies as possible. So won't you take a moment now, while this letter has your attention, and fill out the questionnaire? Return it to me in the self-addressed, stamped envelope provided.

Sincerely,

Robert S. Baldassano

1. What foreign motor vehicles (car, truck, van) does your household now own?

Year Make Model Type (sedan, wagon, etc.)

1.
2.
3.
4.

2. What U.S. motor vehicles does your household now own?

Year Make Model Type

1.
2.
3.
4.

3. How many miles do you estimate your family drove last year?

- () 1,000 - 4,999 () 15,000 - 19,999 () 30,000 & over
() 5,000 - 9,999 () 20,000 - 24,999
() 10,000 - 14,999 () 25,000 - 29,999

4. What percentage of that mileage was driven in your foreign motor vehicles? _____%

5. What are the main purposes for which you use your foreign motor vehicles? Number them in order.

	<u>Veh 1</u>	<u>Veh 2</u>	<u>Veh 3</u>	<u>Veh 4</u>
Business (including travel to and from work)	_____	_____	_____	_____
Shopping	_____	_____	_____	_____
Outdoor Recreation	_____	_____	_____	_____
Pleasure Driving	_____	_____	_____	_____
Other (write in) _____	_____	_____	_____	_____

6. How many members in your household? _____. Please list the ones that are licensed drivers.

Relationship (husband, wife, child, self, etc.) age sex

(OVER)

7. What is your occupation?
 Professional or Managerial Military Other
 Clerical or Sales Government
 Craftsman or Laborer Farmer
8. How much formal education have you had?
 No formal education High school graduate More than
 Elementary school 1-3 years college 4 years
 1-3 years high school College graduate college
9. What is the range that best represents your income level?
 Under \$3,000 \$5,000 - \$7,499 \$10,000 - \$14,999
 \$3,000 - \$4,999 \$7,500 - \$9,999 \$15,000 - Over
10. Is the foreign motor vehicle that you now own your first foreign car purchase? YES _____ NO _____. If yes skip to question 12.
11. How many foreign motor vehicles have you owned and when did you buy your first one? Number _____. Year of first purchase _____.
12. Did you consider other cars before you bought your present foreign motor vehicle? YES _____ NO _____. If yes what would have been your next best choice?

Make	Model	Type
13. What were the three main reasons you bought the foreign motor vehicle you did? Number your choices in order.
 Price Workmanship Handling Individuality
 Style Reliability Luxury Dealer Network
 Engineering Economy Resale Value Other _____
14. Do you own or rent your dwelling? OWN _____ RENT _____.
15. Do you subscribe to Cable T.V.? YES _____ NO _____.
16. What radio station do you listen to most? _____.
17. Will your next car be U.S. or Foreign? U.S. _____ Foreign _____.
What is the main reason for your choice? Answer below.

Thank you for your time taken to fill out this questionnaire. May I remind you that your responses can in no way be connected to you. Your cooperation has been immeasurably helpful in this study. Please return your completed questionnaire to me as soon as possible in the self-addressed, stamped envelope provided.

HERE IS A LIST OF EIGHT STATEMENTS THAT I WOULD LIKE TO GET YOUR OPINION ABOUT. PLEASE PUT AN X OR A CHECK IN THE BLOCK THAT BEST REFLECTS YOUR AGREEMENT OR DISAGREEMENT WITH EACH STATEMENT.

Statement	Agree Strongly	Agree	Neither Agree nor Disagree	Disagree	Disagree Strongly
1. Foreign cars are better made than American cars.					
2. American cars are safer in a crash.					
3. Foreign cars are cheaper to repair.					
4. Foreign cars handle better than American cars.					
5. Foreign luxury cars have more prestige than American luxury cars.					
6. Foreign cars are better for the city than the highway.					
7. Foreign car dealers are more reliable than American car dealers.					
8. Foreign cars are more fun to drive than American cars.					

Thank you for your time taken to fill out this questionnaire. May I remind you that your responses can in no way be connected to you. Your cooperation has been immeasurably helpful in this study. Please return your completed questionnaire to me as soon as possible in the self-addressed, stamped envelope provided.

TABLE 1

DISTRIBUTION OF FOREIGN CARS OWNED,
BY YEAR AND BRAND

Brand	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Austin American	0	0	0	0	0	0	0	0	0	0
Austin Healy Sprite	0	0	0	0	0	0	0	0	1	0
Datsun	0	0	0	0	0	0	0	0	0	0
Fiat	0	0	0	0	0	0	0	0	0	1
Jaguar	0	1	0	0	0	1	0	0	0	0
Mazda	0	0	0	0	0	0	0	0	0	0
Mercedes	0	0	0	0	0	0	0	0	0	0
Morris Garage	0	0	0	0	0	0	0	0	0	0
Opel	0	0	0	0	0	0	0	0	0	0
Porsche	0	0	0	0	0	0	0	0	0	0
Renault	0	0	0	0	0	0	0	0	0	0
Saab	0	0	0	0	0	0	0	0	0	0
Sabara	0	0	0	0	0	0	0	0	0	0
Sunbeam	0	0	0	0	0	0	0	0	0	0
Toyota	0	0	0	0	0	0	0	0	0	0
Triumph	0	0	0	0	0	0	0	0	0	0
Volkswagen	0	0	0	0	0	0	1	0	2	0
Volvo	0	0	0	0	0	0	0	1	0	0
Total	0	1	0	0	0	1	1	1	3	1

*The years 1949 and 1950 were left out of this table, but they had zero values for all car brands, so that direct comparison can be made with data in Table 4.

TABLE 1--Continued

1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	Brand Total
0	0	0	0	0	0	0	0	0	1	0	1
0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	1	4	3	6	8	20	3	45
0	0	0	0	0	0	0	0	2	1	0	4
0	0	0	0	1	0	0	1	1	0	0	5
0	0	0	0	0	0	0	0	0	0	1	1
0	0	0	1	2	0	0	0	1	0	0	4
0	0	0	0	0	0	1	0	0	0	0	1
0	0	0	0	1	0	2	2	3	6	2	16
0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	1	0	0	0	1	2	5	1	10
0	0	0	0	0	0	0	0	1	0	0	1
0	0	0	0	0	0	0	0	0	1	0	1
1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	1	2	3	15	0	21
0	0	0	0	0	0	0	2	0	0	0	2
7	3	6	8	12	6	9	7	12	51	5	129
0	0	0	0	2	2	1	4	1	6	0	17
8	3	6	10	19	13	17	25	34	106	12	261

TABLE 2

AVERAGE AGE OF FOREIGN CARS OWNED BY RESPONDENTS

<u>Brand</u>	<u>Average Age (yrs)</u>
Austin American	1.50
Austin Healy Sprite	12.50
Datsun	2.54
Fiat	4.50
Jaguar	9.50
Mazda	0.50
Mercedes	5.75
Morris Garage	4.50
Opel	2.50
Porsche	5.50
Renault	2.40
Saab	2.50
Sabara	1.50
Sunbeam	10.50
Toyota	1.98
Triumph	3.50
Volkswagen	4.17
Volvo	3.97

TABLE 3

DISTRIBUTION OF U.S. CARS OWNED BY FOREIGN CAR OWNERS
IN GREAT FALLS, BY YEAR AND MANUFACTURER

Year	Manufacturer							Year Total
	AMC	GM	CRYS	FORD	JEEP	INT'L	CHECK	
1949	0	1	0	0	0	0	0	1
1950	0	0	0	0	0	0	0	0
1951	0	1	0	0	1	0	0	2
1952	0	2	0	0	1	0	0	3
1953	0	0	0	1	0	0	0	1
1954	0	1	2	1	0	1	0	5
1955	0	1	1	0	0	0	0	2
1956	0	1	1	1	0	0	0	3
1957	0	0	1	0	0	0	0	1
1958	0	2	0	2	0	0	0	4
1959	0	2	1	0	0	0	0	3
1960	0	0	0	0	0	0	0	0
1961	0	3	0	3	0	0	0	6
1962	2	4	2	3	1	2	0	14
1963	2	6	2	3	0	0	0	13
1964	0	8	1	4	0	1	0	14
1965	0	8	2	0	0	1	0	11
1966	1	8	3	7	0	0	0	19
1967	1	8	2	2	0	1	0	14
1968	0	16	1	4	1	0	0	22
1969	0	11	5	11	0	1	1	29
1970	0	12	2	11	1	1	0	27
1971	1	1	0	3	0	0	0	5
Mfg. Total	7	96	26	56	5	8	1	199

TABLE 4

AVERAGE AGE OF U.S. CARS OWNED BY RESPONDENTS

<u>Manufacturer</u>	<u>Average Age (yrs)</u>
American Motors	6.64
General Motors	6.23
Crysler Motor Co.	7.50
Ford Motor Co.	5.38
Jeep	10.90
International	7.38
Checker	2.50

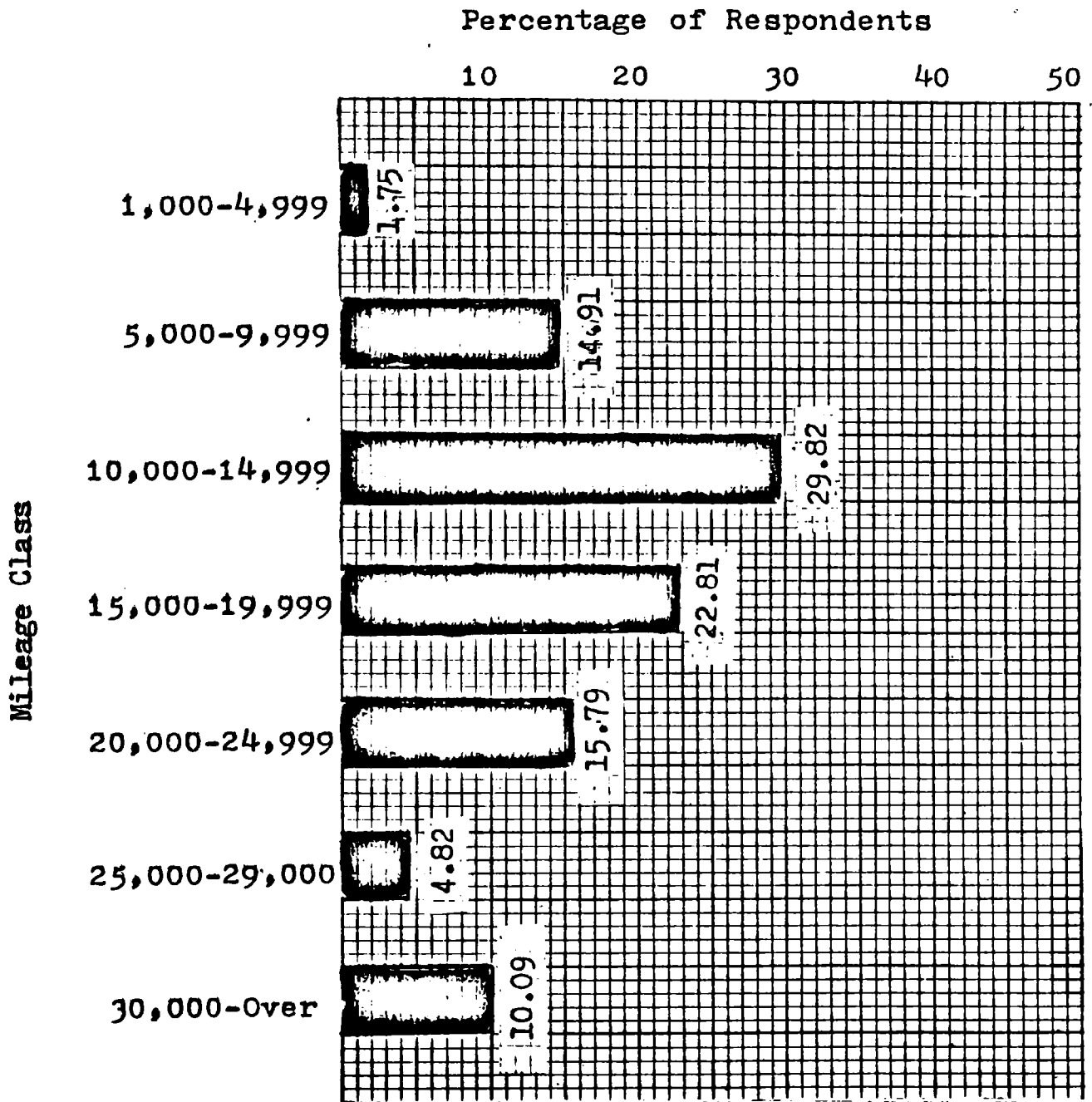


Fig. 2.--Miles driven in previous year.

TABLE 5

PERCENTAGE OF MILEAGE DRIVEN IN FOREIGN CARS

Mileage	Average percentage of mileage driven by		
	Owners of		All owners
	Foreign cars only	Both foreign and U.S. cars	
1,000 - 4,999	55.00	57.50	56.25
5,000 - 9,999	97.37	60.60	81.15
10,000 - 14,999	100.00	51.62	71.59
15,000 - 19,999	88.23	47.37	57.78
20,000 - 24,999	95.50	53.08	65.56
25,000 - 29,999	96.67	57.50	68.18
30,000 - Over	88.83	58.44	66.73
Total average for class	88.90	55.20	67.95*

*Based on 220 respondents.

TABLE 6

MAIN USE OF FOREIGN CARS BY RANK

Use	Number of times ranked as						Total
	1st	2nd	3rd	4th	5th	non-ordinal	
Business	83	8	3	7	1	107	209
Shopping	12	55	23	9	0	86	185
Recreation	4	22	19	26	1	77	149
Pleasure driving	10	19	42	17	4	84	176
Other	6	6	2	3	2	18	37
Totals	115	110	89	62	8	372	756

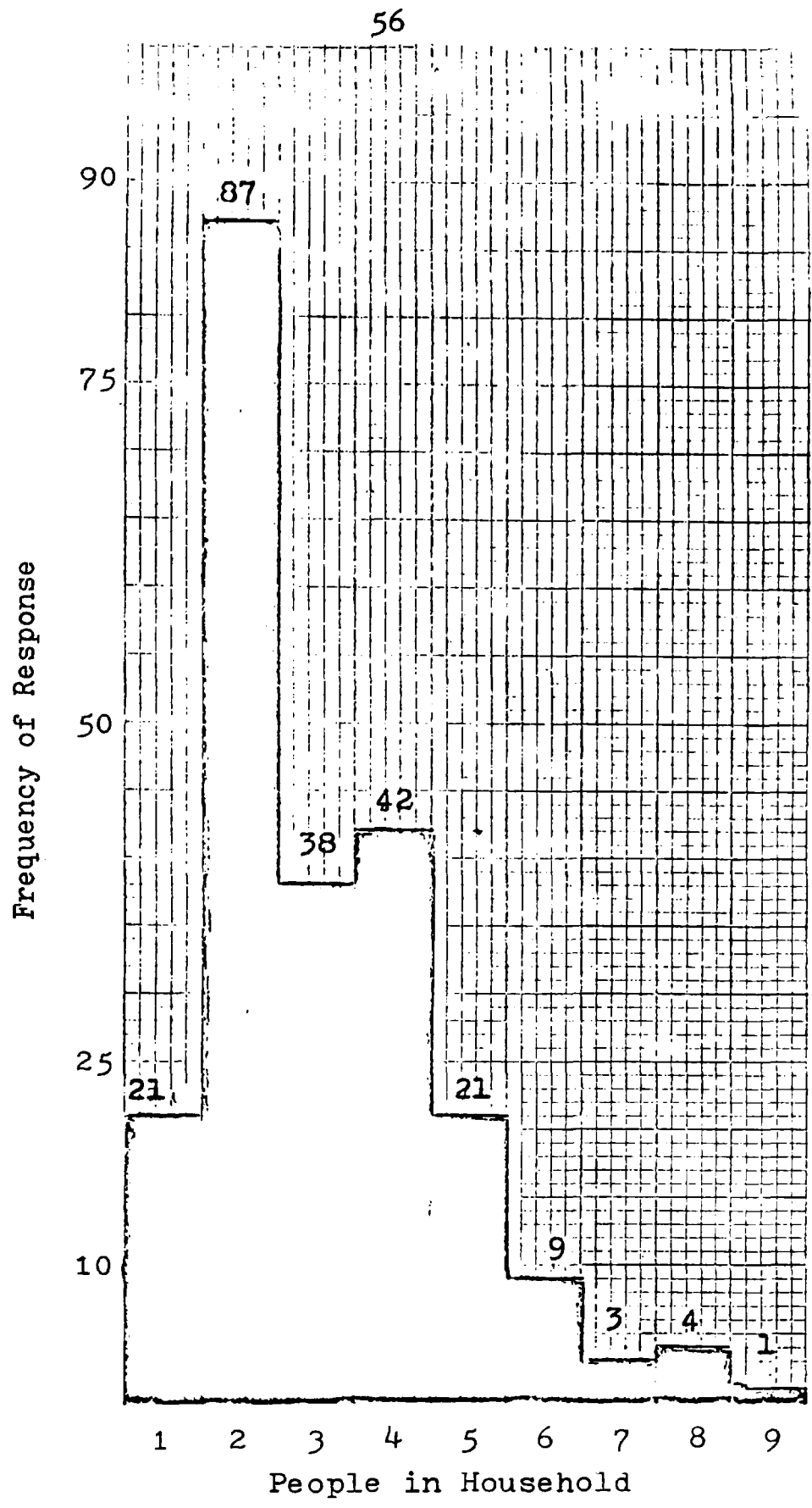


Fig. 3.--Frequency distribution of size of households.

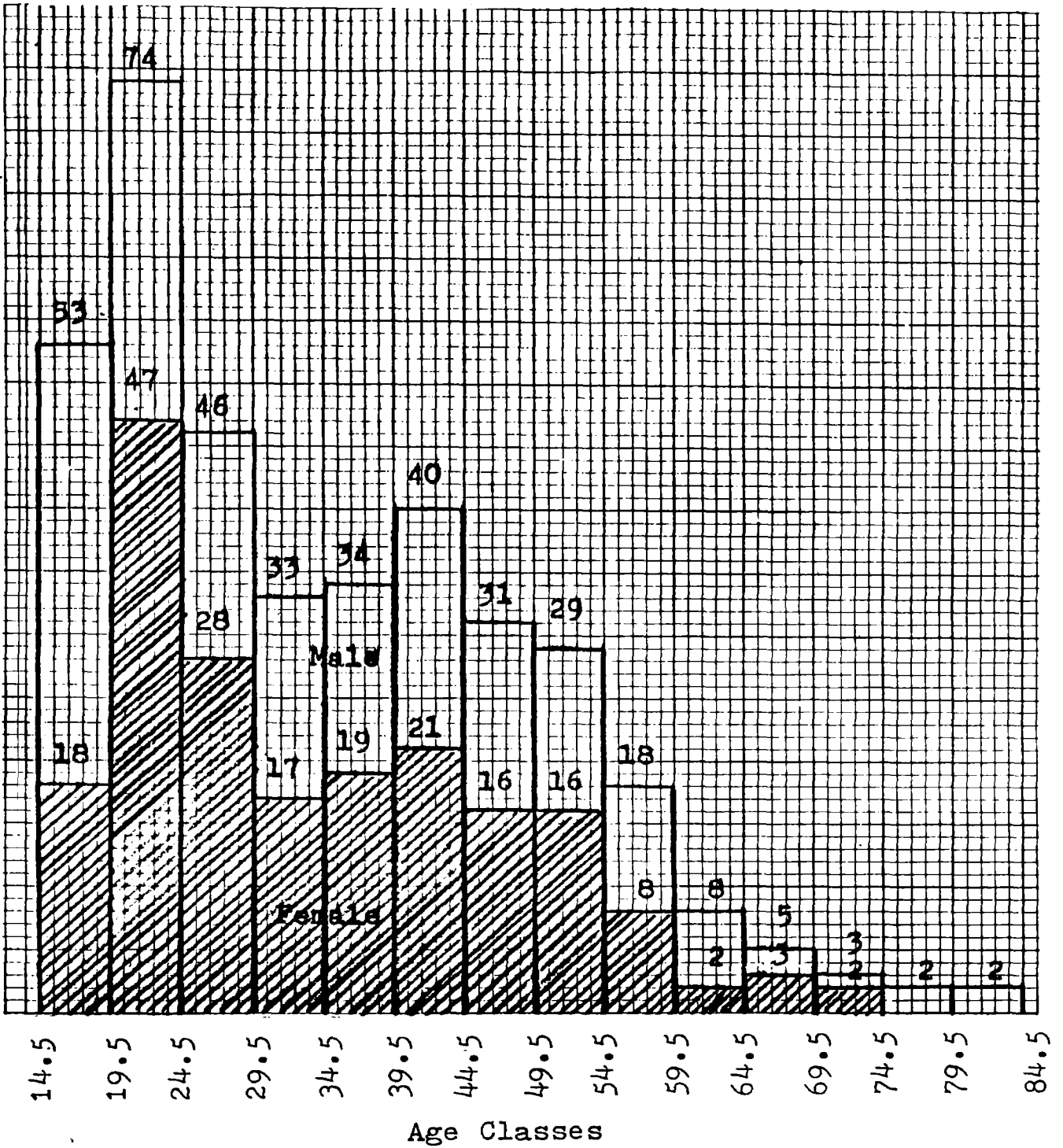


Fig. 4.--Histogram of Drivers' Ages.

TABLE 7

DISTRIBUTION BY OCCUPATION OF
GREAT FALLS FOREIGN CAR OWNERS

Occupation	Respondents	Percentage
No response	3	
Professional or managerial	74	31.90
Clerical or sales	22	9.48
Craftsman or laborer	35	15.09
Military	46	19.83
Government	18	7.76
Farmer	5	2.16
Retired	9	3.88
Other	23	9.91
Total responses	232

TABLE 8

DISTRIBUTION BY EDUCATION LEVEL OF
GREAT FALLS FOREIGN CAR OWNERS

Educational Level	Respondents	Percentage
No response	4	
No formal education	2	.87
Elementary school	10	4.33
1 to 3 years high school	12	5.19
High school graduate	64	27.71
1 to 3 years college	52	22.51
College graduate	50	21.65
More than 4 years college	41	17.75
Total responses	231	. . .

TABLE 9

DISTRIBUTION OF INCOME OF GREAT FALLS
FOREIGN CAR OWNERS

Dollar Income	Respondents	Percentage
No response	7	
Under 3,000	9	3.95
3,000 - 4,999	21	9.21
5,000 - 7,499	31	13.60
7,500 - 9,999	50	21.93
10,000 - 14,999	63	27.63
15,000 - Over	53	23.68
Total responses	228	. . .

TABLE 10

POSTERIOR PROBABILITY DISTRIBUTION OF GREAT FALLS
FIRST TIME FOREIGN CAR OWNERS

<u>Percentage of owners greater or equal to:</u>	<u>Probability</u>
40	0.99893
43	0.98257
45	0.92999
47	0.78698
50	0.50000
53	0.17619
55	0.06301
57	0.01618
60	0.00103

TABLE 11

DISTRIBUTION OF THE NUMBER OF FOREIGN
CARS PREVIOUSLY OWNED BY RESPONDENTS

Number Owned	Respondents	Percentage
1	26	21.31
2	48	39.34
3	27	22.13
4	11	9.02
5	1	.82
6	5	4.10
7	2	1.64
9	1	.82
37	1	.82
Mean 2.52*
S.D. 1.45

*Respondent with 37 cars previously owned was not included for mean computation.

TABLE 12

DISTRIBUTION OF YEAR FOREIGN CAR WAS FIRST
PURCHASED BY GREAT FALLS OWNER

Year	Purchases	Percentage
1946	1	.82
1953	2	1.64
1955	2	1.64
1956	2	1.64
1957	3	2.46
1958	5	4.10
1959	8	6.56
1960	13	10.66
1961	7	5.74
1962	5	4.10
1963	8	6.56
1964	11	9.02
1965	15	12.30
1966	8	6.56
1967	15	12.30
1968	6	4.92
1969	8	6.56
1970	3	2.46
Mean 1963.2
S.D. 1.45 yr.

TABLE 13
 FOREIGN CAR OWNED COMPARED TO NEXT BEST CHOICE

Car Considered	Austin	Datsun	Datsun Truck	Fiat	Mercedes	Opel	Porsche	Renault
Chevrolet	0	4	1	0	0	1	1	0
Volkswagen	0	5	0	0	0	1	0	1
Ford	0	2	0	0	0	0	0	0
Ford Bronco	0	1	0	0	0	2	0	0
Datsun	0	0	1	0	0	1	0	1
Toyota	0	1	0	0	0	1	0	0
Volvo	0	2	0	0	0	1	0	0
Mercedes	0	1	0	1	0	0	1	0
Opel	0	1	0	0	0	0	0	0
B.M.W.	0	1	0	0	0	0	0	0
Dodge	0	0	0	0	0	0	0	0
Gremlin	0	1	0	0	0	1	0	0
Plymouth	0	0	0	0	0	0	0	0
Porsche	0	0	0	0	0	1	0	0
Buick	0	0	0	0	0	0	0	1
M.G.	0	1	0	0	0	0	0	1
Renault	0	0	0	0	0	1	0	0
Audi	1	0	0	0	0	0	0	0
Austin	0	0	0	0	0	0	0	0
Chrysler	0	0	0	0	0	0	0	0
Fiat	0	0	0	0	0	0	0	0
Int. Scout	0	0	0	0	0	0	0	0
Jaguar	0	1	0	0	0	0	0	0
Jeep	0	0	0	0	0	0	0	0
Mazda	0	0	1	0	0	0	0	0
Rambler	0	1	0	0	0	0	0	0
Totals	1	21	3	1	0	9	2	4

TABLE 14

THREE MAIN REASONS RESPONDENTS BOUGHT FOREIGN CARS

Reason	Chosen			Total times chosen 1, 2 or 3	
	First	Second	Third	Number	Rank
Price	96	28	23	147	2
Style	9	10	4	23	8
Engineering	19	27	9	55	4
Workmanship	12	21	15	48	6
Reliability	21	36	27	84	3
Economy	57	68	45	170	1
Handling	3	13	28	44	7
Luxury	0	2	2	4	11
Resale value	3	11	35	49	5
Individuality	1	4	4	9	10
Dealer Network	0	0	4	4	12
Other	10	2	3	15	9
Total	231	222	199	652	...

TABLE 15

POSTERIOR PROBABILITY DISTRIBUTION OF GREAT FALLS
FOREIGN CAR OWNERS WHO OWN HOMES

<u>Percentage of owners greater or equal to:</u>	<u>Probability</u>
50	1.00000
55	0.99997
60	0.99728
65	0.89973
67	0.66276
69	0.52870
70	0.38591
75	0.02330

TABLE 16

POSTERIOR PROBABILITY DISTRIBUTION OF GREAT FALLS
FOREIGN CAR OWNERS WHO SUBSCRIBE TO CABLE TV*

<u>Prior probability of 0.5</u>		<u>Prior probability of 0.4</u>	
<u>Percentage of subscribers greater or equal to:</u>	<u>Probability</u>	<u>Percentage of subscribers greater or equal to:</u>	<u>Probability</u>
30	1.00000	30	0.8365
40	0.97008	41	0.4602
45	0.61409	45	0.3111
47	0.38591	47	0.2533
50	0.13179	50	0.1648
60	0.00103	60	0.0256

*Based upon a sample of 229 respondents, 106 of whom
subscribe to cable TV.

TABLE 17

RADIO STATION MOST LISTENED TO

Choice	Respondents	
	Number	Percentage
No response	48	. . .
KMON	61	32.62
KARR	60	32.09
KFBB	12	6.42
KUDI	33	17.65
KKGF	16	8.56
KGVO	1	0.53
KXLK	1	0.53
KGKL	1	0.53
KRTV*	2	1.07
Total Responses	187	. . .

*This is a television station but was included to give complete figures.

TABLE 18

CHOICE OF NEXT AUTOMOBILE PURCHASE

Choice	Respondents	
	Number	Percentage
No response	12	. . .
United States	74	33.18
Foreign	100	44.84
Both	6	2.69
Undecided	43	19.28
Total Responses	223	. . .

TABLE 19

REASONS FOR CHOICE OF NEXT AUTOMOBILE PURCHASE

Reason	U.S.	Foreign	Both	Undecided	Total	Percentage
No reason or infrequent choice	15	18	0	39	72	. . .
Economy	0	26	1	0	27	17.88
Size, power, comfort	21	3	0	1	25	16.56
Value	6	18	0	0	24	15.89
Parts and service	15	2	0	0	17	11.26
Use foreign for second car	8	0	5	3	16	10.60
Reliability	0	13	0	0	13	8.60
Workmanship	0	12	0	0	12	7.95
Buy American	9	0	0	0	9	5.96
Engineering	0	8	0	0	8	5.30
Totals	74	100	6	43	223	. . .

TABLE 20

TABULATION OF ATTITUDE SURVEY

Question	Attitude			
	Agree Strongly		Agree	
	Number	Percent	Number	Percent
Question 1	13	20.00	26	40.00
Question 2	11	16.92	19	29.23
Question 3	8	12.12	20	30.30
Question 4	17	25.76	17	25.76
Question 5	7	10.61	16	24.24
Question 6	11	16.42	35	52.24
Question 7	2	3.03	10	15.15
Question 8	13	20.00	25	38.46
Per Attitude Total	82		168	

TABLE 20--Continued

Neither		Disagree		Disagree Strongly		Total
Number	Percent	Number	Percent	Number	Percent	
20	30.77	4	6.15	2	3.08	65
28	43.08	7	10.77	0	0.00	65
15	22.73	18	27.27	4	6.06	66
26	39.39	6	9.09	1	1.52	66
29	43.94	14	21.21	0	0.00	66
11	16.42	10	14.93	0	0.00	67
41	62.12	7	10.61	6	9.09	66
22	33.85	4	6.15	1	1.54	65
192		70		14		526

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