1981

# Study of Great Falls retail goods and their utilization by surrounding counties

Thomas J. Whitacre
*The University of Montana*

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A STUDY OF GREAT FALLS RETAIL GOODS AND THEIR

UTILIZATION BY SURROUNDING COUNTIES


By

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B.A., Washington State University, 1976
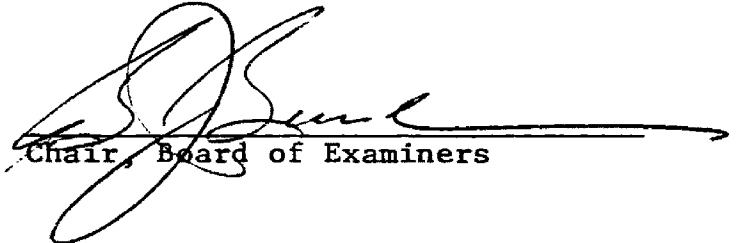

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# CHAPTER I

## INTRODUCTION

The economic potential of the Great Falls, Montana, market area has been studied many times over the years. These continuing studies for present and future economic development provide the City/County Planning Board of Great Falls with essential guidance in making timely and accurate policy decisions.

The last several decades have witnessed major changes in the local industrial base of Great Falls. Several research studies show that the city now relies heavily on Malmstrom Air Force Base and the surrounding agricultural areas for its economic base. These same studies emphasize the economic potential of the area encompassing the northern and central counties of Montana. Several of their recommendations indicate that the best source for increasing future market revenue is the potential "retail sales" customer from outside the city's primary market area of central Cascade County. Although they provide a detailed analysis of the economic potential of Great Falls, specific information regarding current and potential customers outside of the primary market area—their characteristics and needs—are not identified. This study represents an in-depth review of those characteristics and needs as they relate to shopping in Great Falls.

This paper has assumed that the surrounding communities within fifteen miles of Great Falls are almost totally identified with that

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city for their commercial and business services needs. Thus they represent little potential as _additional_ customers. Conversely, those customers residing outside the counties listed on page 7 lacked potential as significant customers to the Great Falls market area due to the distances involved.

The cooperation of the Great Falls Area Chamber of Commerce was provided in the selection of a cross section of retail goods and merchandise stores, automobile and recreational vehicles, furniture, apparel and accessory goods, department store merchandise, building materials and lumber, farm equipment and implements, and goods from miscellaneous retail stores. The study was not designed to aid any specific group of local businessmen in developing market strategies, and its intention has been to identify generalized tendencies rather than statistical measures. These tendencies can be used by the Chamber of Commerce in the development of future city strategies to increase the participation of potential retail customers.

# CHAPTER II

## PROBLEM STATEMENT

The primary purpose of this study was to determine how to increase the participation of potential retail customers, thus increasing retail sales and revenue for the city of Great Falls. Previously identified as a potential source for significant city growth, these customers need to be identified according to their personal characteristics and needs.[1] Formally, the central hypothesis is that the city of Great Falls can increase its retail market sales after identifying why potential customers do not presently shop in the city. To support this hypothesis, individual questionnaires were mailed to a selection of Montana residents to determine which outside customers visit Great Falls, which goods are bought by these customers, and most importantly, why other potential customers do not presently shop in Great Falls. With the results of this study, city and county planners will be able to identify which factors appear to inhibit sales to potential customers.

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[1]Real Estate Research Corporation, Great Falls Central Business District Market Study (Chicago: 1974), p. 31.

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# CHAPTER III

## REVIEW OF BACKGROUND

Members of the City/County Planning Board of Great Falls, Montana, have been responsible for commissioning several outside agencies to explore the economic potential of the Great Falls market area. Since Great Falls relies so heavily on the military base and the surrounding agricultural activities for a major portion of its economic livelihood, these studies have emphasized such factors as income, employment, population, and retail sales figures.

The Great Falls Central Business District Market Study, June 1976, represents one of the latest market estimates available for the Great Falls market area. It indicates that retailing, wholesaling, and financial and health services represent the future cornerstone for the local economy. However, it focuses primarily on recommendations for the future redevelopment of the downtown Central Business District.[2] Even so, it provides a great deal of invaluable background information. Background examples include employment by industry for the Great Falls Standard Metropolitan Statistical Area (SMSA), recent retail sales trends in the trade areas by sector, and recent retail sales trends in trade area cities of 2,500 or more population.

The Central Business District study used a variety of research

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[2]Ibid., p. 1

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methods to determine present Great Falls facilities, products, and

services. Besides historical and trend analysis, two especially useful

methods were used to establish the geographical boundaries of the Great

Falls market area. The first involved personal interviews of the local

business merchants, while the second combined a license plate survey

with newspaper circulation routes.[3] The information from these studies

provided substantial background data for follow-on research projects.

Cross classification of these data provided a descriptive analysis which

highlighted the retailing and service sectors as holding the greatest

potential for long-term growth.[4]

Other background literature for this study included the following

city, county, state, and federal records and statistics, as well as other

research studies:

> County Profiles, Montana Department of Community
>       Affairs, 1976.
>
> Economic Base Study, 1974, City of Great Falls and
>       County of Cascade, THK associates, Inc., 1974.
>
> Area Statistics Montana, U.S. Department of
>       Commerce, 1973.
>
> County and City Data Book, U.S. Department of
>       Commerce, 1977.
>
> County Business Patterns, 1976, U.S. Department
>       of Commerce, 1977.

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[3]Ibid., pp. 40-42.

[4]Ibid., p. 31.

# CHAPTER IV

## METHODOLOGY

Because the primary purpose of this project was to determine the basis for describing customer attitudes and preferences, pre-experimental rather than experimental, historical, or statistical methods of investigation have been utilized. The pre-experimental method provides adequate procedures and techniques for analyzing and interpreting the descriptive data of the mail questionnaire.[5] Analysis of the data was not for quantitative, predictive purposes, but rather to provide general guidelines to increase retail sales through increased customer satisfaction. The implicit assumption was that increased customer satisfaction would lead to an increase in the number of customers shopping in Great Falls.

### Type and Design of Study

In terms of the type and design of the study, it consisted of a cross-sectional, two-page questionnaire mailed at one point in time. As previously described, it utilized a pre-experimental design which means that it involved questioning a single group of respondents only once, subsequent to their experiences as Great Falls consumers/nonconsumers.

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[5]Vernon Clover and Howard Balsley, Business Research Methods (Ohio: Grid, Inc., 1974), p. 3.

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The general site under investigation included the northern and central counties of Montana (Exhibit 1): Blaine, Cascade, Chouteau, Fergus, Glacier, Hill, Judith Basin, Lewis and Clark, Liberty, Phillips, Pondera, Teton, and Toole.

## Subjects

All test subjects were selected on a random basis from local telephone directories, using a random numbers table to insure randomness as a control of validity for the study.[6] Eventually, one thousand households were selected from within the north central counties making up the Great Falls Standard Metropolitan Statistical Area.

## Procedures for Gathering Data

During the month of July 1979, a pre-test of one hundred questionnaires was mailed to randomly selected households. This pretest attempted to verify the randomness of the selection process and the validity of the original questions. Analysis of this pre-test indicated that some questions needed revising while others needed to be discarded entirely. A final return rate of approximately 35 percent was achieved with this first pre-test.

During the month of August 1979, a second pre-test of one hundred questionnaires was mailed to a separate selection of similar households. Besides incorporating the revisions from the initial pretest, this one tested the effect of enclosing an unstamped return envelope with the questionnaire. Although the second pre-test had

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[6]Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1963), p. 2.
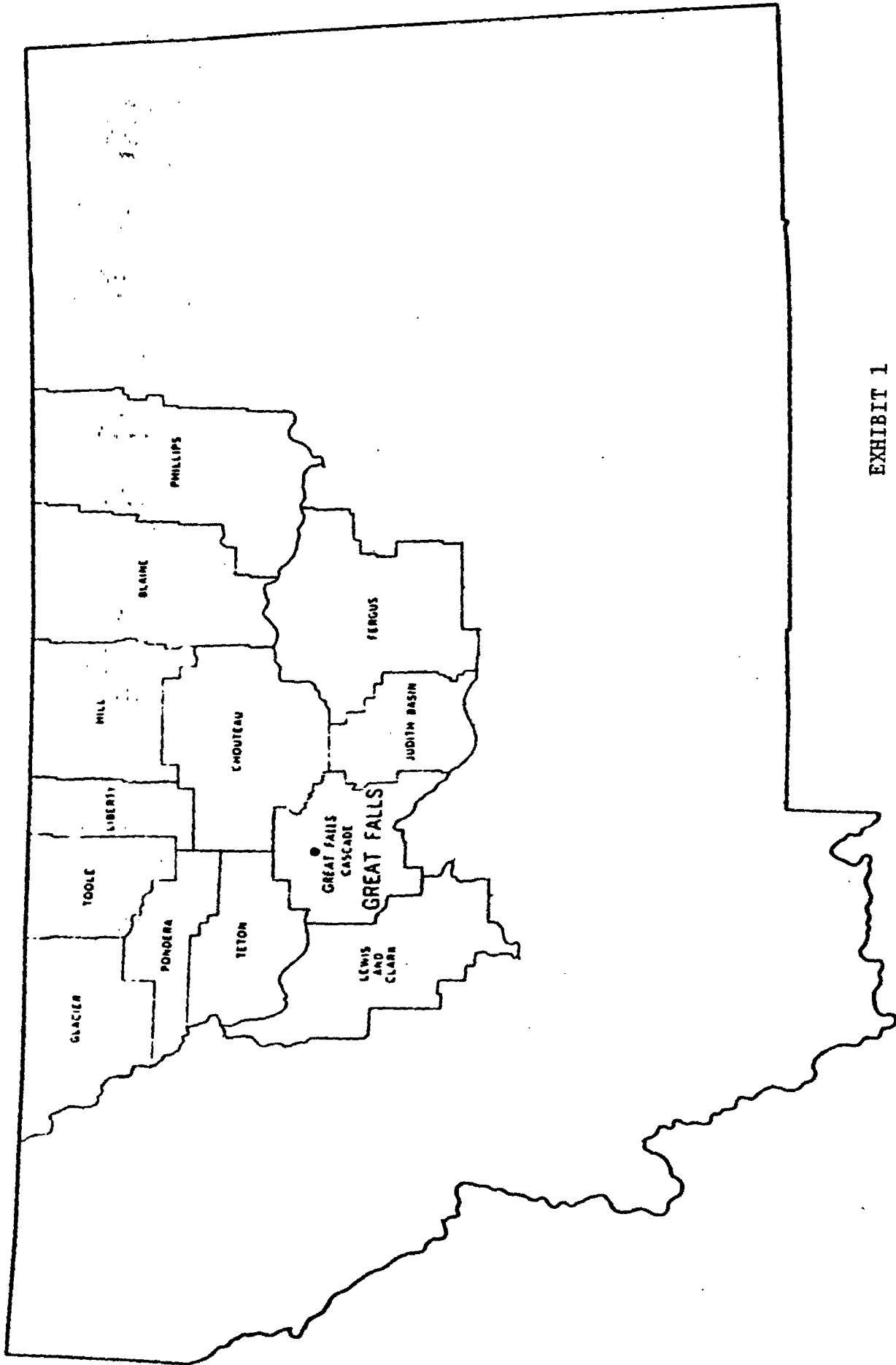
EXHIBIT 1
Map of Survey Area,
(taken from U.S. Department of Commerce,
Bureau of Census)
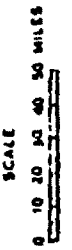
better individual responses to the revised questionnaire, the response rate fell to an unacceptable level of 18 percent. Consequently, even though the subsequent cost nearly doubled, the return envelope did include return postage for the final questionnaire.

Final analysis of these two pre-tests provided the data to determine an expected return rate of 30 to 35 percent. Therefore, during the month of August 1979, one thousand questionnaires were mailed to a random selection of households with 315 returned for a total rate of return of 31.5 percent.

Both the pre-tests and the final questionnaire were accompanied by a letter of introduction showing an endorsement of the project by the University of Montana School of Business, Missoula, Montana (Exhibit 2). The letter briefly explained the purpose of the questionnaire and attempted to induce the respondent to assist in the participation of the survey.

The questionnaire used a three-part format (Exhibit 3). The first section located on page 1 of the questionnaire dealt with respondent characteristics and a revised number of general questions. Classification and validation questions such as occupation, age, and income were developed in addition to questions regarding customer preferences, such as shopping habits and personal impressions of the city of Great Falls.

The second section, located on page 2 of the questionnaire, dealt exclusively with retail sales of goods and merchandise. Seven specific categories of merchandise were identified and the respondent was instructed to (1) identify which city he preferred shopping for each item [Great Falls versus his hometown] and (2) identify for what

# UNIVERSITY OF MONTANA

### SCHOOL OF BUSINESS ADMINISTRATION
### AFIT MBA PROGRAM
### MALMSTROM AIR FORCE BASE, MONTANA 59402
### (406) 731-3428

Dear Area Resident:

The attached questionnaire has been sent to you as part of a study being done by the signers of this letter who are University of Montana graduate students of business.

The purpose of this study is to determine the types of goods and services that are provided to area residents by businesses in the city of Great Falls and to learn how well the area needs are being met by Great Falls businesses. The outcome of the study would provide direction to businessmen on how they might improve the types and quality of service.

In order to analyze the situation accurately and completely, we need the response of everyone to whom a questionnaire has been addressed. You will notice that we do not ask for your name or for any identification, and you can be assured that the information received is totally confidential and will be developed only in an aggregated form.

Your cooperation will be most sincerely appreciated, so please take the few minutes that will be required to complete the questionnaire and return it to us in the self-addressed stamped envelope at your earliest convenience.

Sincerely,

Frank Reynolds, graduate student

Tom Whitacre, graduate student

EXHIBIT 2
Letter of Introduction

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## CONSUMER PREFERENCE SURVEY

INSTRUCTIONS: Please complete this survey as thoroughly as possible. Fill
in the blanks or check the appropriate spaces as necessary. All answers are
completely confidential.

1. In what town/county do you currently live?

   Town _____  County _____

2. What is the occupation of your head of household? _____

3. Into which age bracket do you fall:  __1%__ under 20     __36%__ 40-59

                                          __34%__ 20-39      __29%__ 60 and over

4. Do you attend the Great Falls State Fair:

   __12%__ Annually     __8%__ Every other year     __40%__ Seldom     __40%__ Never

5. On the average, how many shopping trips do you make each year to Great Falls?

   __(0) 17%__   (1-5) 45%   (6-10) 13%   (11-15) 7%   (16 and over) 18%

6. What is the primary reason for most of your visits to Great Falls?

   __55%__ Shopping     __30%__ Business     __38%__ Services (medical, legal, etc.)

   Other (please specify) __30%_____

7. For what special events do you travel to Great Falls:

   __24%__ Conventions     __15%__ Sports          __6%__ Racing (stock car/horse)

   Other (please specify) __20%_____

8. When you visit Great Falls, do you attend any of the following?

   __25%__ Movies     __17%__ Museums     __82%__ Restaurants/Nightclubs

   Other (please specify) __8%_____

9. Into which annual __family__ income bracket do you fall?

   __35%__ Under $15,000               __10%__ $30,000-$44,999

   __47%__ $15,000-$29,999              __5%__ $45,000 and over

10. Circle the following words that describe Great Falls:

    30%            11%            25%            12%            45%            9%
    Progressive   Inexpensive    Attractive     Decaying       Friendly       Unattractive

    Dirty         Fun Place      Stable         Tourist Trap   Rude           Clean          Expensive
    6%            8%             30%            1%             5%             18%            22%

11. Which area(s) of Great Falls do you prefer shopping?
    28%            11%            65%                5%                 15%
    Downtown      Westgate       Holiday Village    Agrivillage        No preference

    I don't shop in Great Falls 12%

## EXHIBIT 3
### Questionnaire

12. The purpose of this question is to determine where you obtain various merchandise and services and why you prefer shopping where you do.

| | CITY OF PREFERENCE Mark the most frequently visited city per item | | | REASON FOR CITY PREFERENCE | | | | |
|---|---|---|---|---|---|---|---|---|
| | Great Falls | Home Town | Other (Specify) | Price | Select-ion | Quality | Distance | Other (Specify) |
| Example:Furniture | X | | | | X | | | |
| **MERCHANDISE:** Auto & Recreation Vehicles | | | | | | | | |
| Furniture | | | | | | | | |
| Apparel & Accessory Stores | | | | | | | | |
| Department Stores | | | | | | | | |
| Building Materials and Lumber | | | | | | | | |
| Farm Equipment & Implements | | | | | | | | |
| Misc. Retail Stores | | | | | | | | |
| Other, Please Specify | | | | | | | | |
| **SERVICES:** Medical: Routine Physical | | | | | | | | |
| Surgery | | | | | | | | |
| Outpatient Treat. | | | | | | | | |
| Financial: Investment | | | | | | | | |
| Loans | | | | | | | | |
| Accounting | | | | | | | | |
| Legal | | | | | | | | |
| Other, Please Specify | | | | | | | | |

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reason(s) he selected that city. Four reasons for city preference were clearly identified: price, selection, quality, and distance. This section of the questionnaire (Exhibit 3) provided the primary information for this research project.

The final section, also located on page 2 of the questionnaire, dealt primarily with medical, financial, and legal services. These areas, although similar to the previously described retail goods and merchandise section, constituted a separate research proposal.

A frequency distribution and cross-classification were used to analyze the data. The data had been reduced to percentage figures rounded to the nearest tenth of one percent for ease in making comparisons. The cross-tabulation program of the PDP-11 computer was used for this purpose. Analysis of the data lead to a description of the sample population in terms of customer characteristics, customer attitudes, and customer preferences. Customer preference variables (e.g., quality, price) were identified according to their tendency to influence customer use of a specific town.

# CHAPTER V

## RESULTS

The following sections provide a descriptive summary of the information as compiled using the PDP-11 computer. Each question of the survey questionnaire was summarized according to percentage distribution based upon either the entire sample consisting of 315 questionnaires, or based upon a sub-categorization (Exhibit 3). These sub-categorizations have been identified as (1) respondents who do shop in Great Falls versus respondents who do not shop in Great Falls, or (2) they were divided according to reasons [price, selection, quality, or distance] for shopping in Great Falls versus the respondent's hometown.

### Summary Data

#### Question 1

This question identified the respondent's town and county. The two largest towns of the surveyed area, Havre and Lewistown, each provided 25 percent of the total sample of 315 returned questionnaires. The total distribution consisted of forty-four towns and thirteen counties (Table 1).

#### Question 2

This question provided background information on the occupation of the head of household. The industry group, instead of the job title,

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# TABLE 1

## TOWNS/COUNTIES SURVEYED

| Town | County | Town | County |
|------|--------|------|--------|
| Augusta | Lewis & Clark | Hobson | Judith Basin |
| Belt | Cascade | Lewistown | Fergus |
| Billings | Yellowstone | Malta | Phillips |
| Brady | Pondera | Moccasin | Judith Basin |
| Bynum | Teton | Moore | Fergus |
| Chester | Liberty | Oilmont | Toole |
| Chinook | Blaine | Pendroy | Teton |
| Choteau | Teton | Power | Teton |
| Conrad | Pondera | Raynesford | Judith Basin |
| Cut Bank | Glacier | Roy | Fergus |
| Danvers | Fergus | Sand Coulee | Cascade |
| Denton | Fergus | Shelby | Toole |
| Dupuyer | Pondera | Simms | Cascade |
| Dutton | Teton | Stanford | Judith Basin |
| Fairfield | Teton | Stockett | Cascade |
| Fort Benton | Chouteau | Sunburst | Toole |
| Fort Shaw | Cascade | Sun River | Cascade |
| Geyser | Judith Basin | Sweetgrass | Toole |
| Grassrange | Fergus | Tracy | Cascade |
| Harlem | Blaine | Utica | Judith Basin |
| Havre | Hill | Whitlash | Liberty |
| Helena | Lewis & Clark | Other | |

was used to identify employment categories. One in five respondents

worked in agriculture, while the other major grouping consisted of

20 percent who were retired (Table 2).

TABLE 2

OCCUPATION OF HEAD OF HOUSEHOLD

| Occupations by Industry | Frequency | Percentage |
|---|---|---|
| Agriculture, forestry, fisheries | 61 | 19.4% |
| Business, repair services | 29 | 9.2 |
| Entertainment, recreation services | 4 | 1.3 |
| Finance, insurance, real estate | 8 | 2.5 |
| Manufacturing | 9 | 2.9 |
| Mining, construction | 19 | 6.0 |
| Personal services | 17 | 5.4 |
| Professional and related services | 32 | 10.2 |
| Public administration | 12 | 3.8 |
| Transportation, communication, utilities | 17 | 5.4 |
| Wholesale, retail trade | 17 | 5.4 |
| Industry not reported | 22 | 7.0 |
| Retired | 60 | 19.0 |
| No Response | 9 | 2.5 |
| | 315 | 100.0% |

Question 3

Age brackets identified the respondents according to four cate-

gories. One percent was less than twenty, 34 percent were between twenty

and thirty-nine, 36 percent fell between forty and fifty-nine, and

29 percent were sixty years of age or over (Figure 1, Appendix).

## Question 4

Respondents were asked whether they visited the Great Falls State Fair. Four choices were available with "seldom" and "never" consisting of 40 percent each. "Every other year" had 8 percent and "annually" drew 12 percent (Figure 2, Appendix).

## Question 5

This question was written to determine how many annual shopping trips were made to Great Falls. Highlighted responses, by category, were 17 percent who never shopped in Great Falls, 45 percent who visited between one and five times a year, and 18 percent who visited more than sixteen times a year (Figure 3, Appendix).

## Question 6

Respondents were asked to identify their primary reason for visiting Great Falls. Of the four choices available, 55 percent came to shop, 30 percent came for business, 38 percent came for services such as medical and legal, and 30 percent responded in the "other" category (Table 3 and Figure 4, Appendix).

## Question 7

Next, respondents were asked to identify which special events, if any, brought them to Great Falls. Four choices were available: conventions had nearly 24 percent, sports included 15 percent, and racing brought in 6 percent. Twenty percent selected the "other" category. (Table 4 and Figure 5, Appendix).

## TABLE 3

### WHAT IS THE PRIMARY REASON FOR MOST OF YOUR VISITS TO GREAT FALLS?

| Write-Ins for "Other" Category | Frequency |
|---|---|
| Social | 45 |
| Airport | 15 |
| Entertainment | 6 |
| Pleasure | 4 |
| Passing Through | 4 |
| Recreation | 3 |
| Rodeo | 1 |
| Church | 1 |
| Education | 1 |
| Honeymoon | 1 |

## TABLE 4

### FOR WHAT SPECIAL EVENTS DO YOU TRAVEL TO GREAT FALLS?

| Write-Ins for "Other" Category | Frequency | Write-Ins for "Other" Category | Frequency |
|---|---|---|---|
| Meetings | 7 | Rodeo | 1 |
| Concerts | 4 | Dog Show | 1 |
| Fair | 4 | Circus | 1 |
| Church Function | 3 | Showcase Theatre | 1 |
| School Function | 2 | Banquet | 1 |
| Weddings | 2 | Ice Show | 1 |
| Bowling Tourney | 2 | Opera | 1 |
| Western Art Show | 2 | Lectures | 1 |
| Stock Market | 2 | Heritage Inn | 1 |
| Car Shows | 2 | Cattle Shows | 1 |
| Bridge Tourney | 1 | | |

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## Question 8

This question determined which activities were most frequently attended by those respondents visiting Great Falls. Twenty-five percent view the movies, 17 percent visit museums, 82 percent dine in the restaurants or nightclubs, and 8 percent come for other reasons. (Table 5 and Figure 6, Appendix)

### TABLE 5

#### WHEN YOU VISIT GREAT FALLS, DO YOU ATTEND ANY OF THE FOLLOWING?

| Write-Ins for "Other" Category | Frequency |
| --- | --- |
| Giant Springs | 2 |
| Rodeo | 1 |
| Ice Skating | 1 |
| Motels | 1 |
| Senior Citizen Center | 1 |

## Question 9

Income categories identified respondents according to four brackets. Thirty-five percent earned less than $15,000, 47 percent earned $15,000 to $29,999, 10 percent earned $30,000 to $44,999, and 5 percent earned over $45,000. Approximately 3 percent of the respondents did not answer this question. (Figure 7, Appendix)

## Question 10

This question identifies individual perceptions of Great Falls according to positive or negative adjectives. Thirteen words are

provided and the respondent chose which ones he felt "described" the city. The results indicated that the sum of the percentages of the positive adjectives totaled 167 percentage points while the sum of the negative percentages equaled 55 points. Of the positive adjectives, "friendly" had the most responses with 45 percent. Negatively, "expensive" (as opposed to "inexpensive") had a 22 percent response rate. (Figures 8, 9 and 10, Appendix)

Question 11

Next, respondents were asked to identify which areas of Great Falls they preferred to shop in while visiting the city. Four areas were described with Holiday Village showing a 65 percent response rate and the Downtown area with the next highest figure of 28 percent (Figure 11, Appendix).

Question 12

This question provides two kinds of data. First, it divides the 315 respondents according to which place they prefer to shop-- Great Falls, their hometown, or a town of their own selection. Secondly, question 12 divides the reasons that each respondent prefers shopping in the town previously selected, according to price, selection, quality, distance, or some other of their own choice.

This question requires additional cross-tabulation for accurate comparisons. At this time, a brief summary indicates that of the seven types of merchandise listed in the question, "apparel/ accessory stores" and "department stores" had the most favorable percentages for Great Falls with 46 and 42 percent, respectively,

while "farm equipment and implements" had the most unfavorable with

9 percent (Tables 6 and 7 and Exhibit 3).

## TABLE 6

### CITY PREFERENCE WRITE-INS FOR "OTHER" CATEGORY

| City | Frequency | City | Frequency |
|------|-----------|------|-----------|
| Billings | 38 | Hobson | 1 |
| Lewistown | 18 | Laurel | 1 |
| Choteau | 13 | Libby | 1 |
| Conrad | 11 | Lincoln | 1 |
| Havre | 11 | Livingston | 1 |
| Fairfield | 5 | Malta | 1 |
| Chinook | 5 | Miles City | 1 |
| Chester | 4 | Roundup | 1 |
| Cut Bank | 4 | Valier | 1 |
| Shelby | 4 | Mail Order | 6 |
| Stanford | 3 | Malmstrom | 3 |
| Dutton | 2 | Seattle | 2 |
| Helena | 2 | Spokane | 2 |
| Belt | 1 | Ellensburg, WA | 1 |
| Big Sandy | 1 | Rochester, MN | 1 |
| Fort Benton | 1 | Minneapolis | 1 |
| Glasgow | 1 | | |

## TABLE 7

### REASON FOR CITY PREFERENCE

| Write-Ins for "Other" Category | Frequency |
|-------------------------------|-----------|
| Local Loyalty | 24 |
| Service | 17 |
| Personal Friend | 12 |
| Convenience | 11 |
| Unavailable in Hometown | 11 |
| Prefers a Specific Doctor | 8 |
| More Available in City of Preference | 7 |
| Credit Available | 4 |
| Captive Customer | 3 |
| Trust/Honesty | 2 |
| Familiar with Town | 2 |
| Friendly People | 1 |
| Better Facilities | 1 |
| More Dependable | 1 |

# CHAPTER VI

## DISCUSSION OF IMPLICATIONS FOR HYPOTHESIS

The preceding chapter provided a descriptive summary of the information obtained from the questionnaire. As a summary, it has emphasized only a brief review of each section of the questionnaire. This chapter discusses the implications that this information has for the central hypothesis, and contains a more detailed analysis of the data.

Restating the central hypothesis: It is believed that the city of Great Falls can increase its retail market sales by identifying why potential retail customers do not presently shop in the city. Researching this hypothesis required a determination as to which customers visit Great Falls, which goods are bought by these customers, and which reasons inhibit potential customers from visiting Great Falls.

The following discussion provides a three-step analysis of the data: (1) analysis of customer characteristics, (2) analysis of customer attitudes, and (3) analysis of customer preferences. An attempt has been made in each step to differentiate "current" customer data from "potential" customer data. Comparisons of the two types of data in each area provide the basis for identifying generalized observations for this study. These observations may then assist the members of the Chamber of Commerce in the development of future

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strategies by the city to aid in increasing the participation of potential retail customers.

## Analysis of Customer Characteristics

The survey sample appears to present a fairly good distribution in terms of customer characteristics such as geographical residence, head of household occupation, age, and income. Fifty percent of the returns came from the most heavily populated counties of Fergus (Havre) and Hill (Lewistown). This percentage corresponds roughly with the number of questionnaires originally mailed to these areas. Questionnaires were mailed in accordance with a total available population estimate derived from area telephone directories.

Comparing occupational figures, it was found that approximately 20 percent of the total respondents were working within agriculture. This figure seems reasonable since the predominant occupation of the surveyed area involves ranching and farming. Another 20 percent consisted of retired individuals while professional and related services equaled business and the repair services category with approximately 10 percent each. Table 2 indicates that the remainder of the sample was fairly evenly distributed by occupation.

Due to the original categorization of the age and income brackets, additional cross-classification was needed to clarify the results. In addition, two assumptions were made regarding age and income. First, it was felt that individuals less than twenty years old normally would not visit Great Falls very often and therefore would not represent likely prospects as potential customers. Secondly, it was similarly considered that individuals with household incomes of less than $15,000

would also represent unlikely prospects as potential customers.

Exhibit 4 illustrates a graphical illustration of the type of computer cross-tabulation matrix used throughout this study. It provides a frequency distribution of total respondents according to both their age and income level. Whereas simple distributions of the data would indicate that more respondents were aged forty to fifty-nine years old than any other group (112 respondents for a percentage of 35.6 percent) and that more respondents had incomes in the $15,000-$29,999 income bracket than any other group (149 respondents for a percentage of 47.3 percent), cross-tabulation provides a more precise analysis of the data. Cross-tabulations indicate, for example, that of the 112 respondents who were forty to fifty-nine years old, fifty-three of them had income levels of $15,000-$29,999. Similarly, of the 149 respondents who had incomes in the $15,000-$29,999 level, the sixty-five respondents in the twenty to thirty-nine age bracket represented the largest number in this part of the sample.

## Current Versus Potential Customer
## Characteristics for Age
## and Income

The age levels of current customers is illustrated in Figure 12 while Figure 13 illustrates the age levels of potential customers. Two observations are most noteworthy. First, the age level with the greatest apparent potential for increased sales may be the "over 60" age group. Apparently, 25.3 percent of the "over 60" age group currently shop in Great Falls while 36.1 percent do not. The other observation indicates that in both the twenty to thirty-nine and the forty to fifty-nine age levels, current customers represent nearly 5 percent more than

QUANTA CROSSTABULATION PROGRAM          PART1

CROSSTABULATION OF INCOME  BY  AGE

|  | | AGE | | | | |  |
|---|---|---|---|---|---|---|---|
| COUNT | I | | | | | | |
| ROW PCT | INO RESPO | UNDER 20 | 20-39 | 40-59 | 60 PLUS | | ROW |
| COL PCT | INSE | | | | | | TOTAL |
| TOT PCT I | 0 I | 1 I | 2 I | 3 I | 4 I | | |
| **INCOME** | | | | | | | |
| **0** | 0 I | 0 I | 1 I | 3 I | 6 I | | 10 |
| NO RESPONSE | 0.0 I | 0.0 I | 10.0 I | 30.0 I | 60.0 I | | 3.2 |
| | 0.0 I | 0.0 I | 0.9 I | 2.7 I | 6.5 I | | |
| | 0.0 I | 0.0 I | 0.3 I | 1.0 I | 1.9 I | | |
| **1** | 0 I | 3 I | 27 I | 33 I | 46 I | | 109 |
| UNDER $15,000 | 0.0 I | 2.8 I | 24.8 I | 30.3 I | 42.2 I | | 34.6 |
| | 0.0 I | 100.0 I | 25.2 I | 29.5 I | 49.5 I | | |
| | 0.0 I | 1.0 I | 8.6 I | 10.5 I | 14.6 I | | |
| **2** | 0 I | 0 I | 65 I | 53 I | 31 I | | 149 |
| $15,000-$29,999 | 0.0 I | 0.0 I | 43.6 I | 35.6 I | 20.8 I | | 47.3 |
| | 0.0 I | 0.0 I | 60.7 I | 47.3 I | 33.3 I | | |
| | 0.0 I | 0.0 I | 20.6 I | 16.8 I | 9.8 I | | |
| **3** | 0 I | 0 I | 11 I | 14 I | 6 I | | 31 |
| $30,000-$44,999 | 0.0 I | 0.0 I | 35.5 I | 45.2 I | 19.4 I | | 9.8 |
| | 0.0 I | 0.0 I | 10.3 I | 12.5 I | 6.5 I | | |
| | 0.0 I | 0.0 I | 3.5 I | 4.4 I | 1.9 I | | |
| **4** | 0 I | 0 I | 3 I | 9 I | 4 I | | 16 |
| $45,000 PLUS | 0.0 I | 0.0 I | 18.8 I | 56.3 I | 25.0 I | | 5.1 |
| | 0.0 I | 0.0 I | 2.8 I | 8.0 I | 4.3 I | | |
| | 0.0 I | 0.0 I | 1.0 I | 2.9 I | 1.3 I | | |
| COLUMN | 0 | 3 | 107 | 112 | 93 | | 315 |
| TOTAL | 0.0 | 1.0 | 34.0 | 35.6 | 29.5 | | 100.0 |

25

**EXHIBIT 4**

Example of Cross-Tabulation Matrix:  Income by Age

the potential customers. It appears that of ninety-three respondents in this group, forty-six respondents had incomes of less than $15,000 per year for a figure of 50 percent. Also, besides lower income, these respondents are possibly less likely to travel because they lack a car or have an aversion to weather conditions in the winter months.

The income levels of current customers is illustrated in Figure 14 while Figure 15 illustrates the income levels of potential customers. The most apparent difference is that current shoppers at the $15,000-$29,999 income level represents 6 percent more respondents than those in the non-shoppers group. Exhibit 4 indicates that of the 149 total respondents, over 50 percent of the sample comes from this income bracket. Thus, Great Falls is apparently penetrating its market area in terms of income. The other income levels are all fairly low according to the survey data, generally reflecting a lower potential for significantly increasing retail sales.

## Analysis of Customer Attitudes

The reason for exploring customer attitudes is to determine whether current or potential customers find significant factors affecting their desire to shop in Great Falls. In the survey questionnaire, question 10 attempts to identify both favorable and nonfavorable impressions of Great Falls.

Of the thirteen adjectives describing the city, several reflected pairings of opposite meaning. This arrangement provided some useful observations. First, of the five pairs of positive/negative adjectives, respondents selected only one adjective which

represents a nonfavorable impression of Great Falls. "Expensive" had a 22 percent response compared to "inexpensive" which had an 11 percent response rate. Otherwise, "friendly" had a 45 percent response rate compared to "rude" which had a 5 percent response rate; "progressive" had a 30 percent response compared to "decaying" which had a 12 percent response rate; "attractive" had a 25 percent response compared to "unattractive" which had a 5 percent response rate; and, "clean" which had an 18 percent response rate compared to 6 percent for "dirty."

While no statistical tests were used to indicate conclusive significance to these observations, nevertheless, they seem to suggest that current customers find no major complaints about Great Falls. The impression that Great Falls represents an "expensive" town might be useful to members of the Chamber of Commerce, but most larger Montana cities could probably be considered expensive in a similar situation. Other explanations might be made to explain consumers' attitudes towards the increasing expense of the marketplace, but overall, it seems apparent that negative impressions do not represent an inhibiting influence on potential customers.

## Analysis of Customer Preferences

This section discusses the area of customer preferences which encompasses three general topics. The first involves customer preferences for a particular shopping area within Great Falls. The next topic analyzes why customers prefer shopping in either Great Falls or within their own hometowns. The final topic is an analysis of customer preferences in terms of why they prefer shopping for specific goods or

merchandise in the towns they do shop in. This last discussion
assumes that hometown shoppers are basically similar to current Great
Falls shoppers in terms of characteristics and attitudes.

### Customer Preferences for a Particular
### Shopping Area Within Great Falls

Great Falls has four major shopping areas to attract current
and potential customers: the downtown area, Westgate, Holiday Vil-
lage, and Agri-Village. Figure 11 illustrates the percentage of
respondents preferring each of the four areas. A comparison with
Figure 16 which illustrates the percentage preferences of respondents
who do shop in Great Falls indicates a fairly standard drop in per-
centages for all four areas. This observation indicates that some
portion of the total respondents visit Great Falls for reasons other
than shopping, such as for business, services, or activities, as
reflected in earlier questions. The significance of this comparison
is that it illustrates how well Holiday Village has captured a fair
amount of business from those customers surveyed by the study.

### Customer Preferences for Shopping
### in Either Great Falls or
### Their Hometowns

Figure 17 illustrates why respondents preferred shopping in
Great Falls. The two most important reasons were for price (39.4 per-
cent) and selection (60.7 percent). Considering the position that
Great Falls enjoys as the primary retail outlet within the survey
area, few other areas within reasonable driving distances offer the
capacities to provide the same number of stores for purposes of
selection, or the same number of stores capable of lowering prices

and dealing in sales volume. Smaller, rural areas can usually provide quality, but not always selection or bargains.[7] Another interesting observation concerns the 14.5 percent who identified "distance" as a reason to shop in Great Falls. This must indicate that Great Falls is the closest in terms of distance to their home, compared to other possible alternatives.

Figure 18 illustrates why respondents preferred shopping in their hometowns. The most important factor appears to involve "distance" which had a 56.7 percent response rate. This observation seems reasonable and comes as no surprise. Distance has usually been the overwhelming factor inhibiting retail sales. Potential customers consequently need to realize substantial benefits in terms of favorable prices or favorable selections before they can be compelled to travel any significant distance. With increasing gasoline prices and continuing levels of inflation, household budgets are continuing to suffer from reduced buying power. These factors inhibit potential customers from shopping in Great Falls and will have to be offset by local merchants in terms of price and selection.

## Why Customers Prefer Shopping for Selected Goods in Great Falls or Their Hometowns

Seven groups of selected goods and merchandise have been categorized to assist in determining why shoppers prefer shopping in either Great Falls or their hometown. Subsequent observations have considered each of these seven categories in terms of price,

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[7]THK Associates, Inc., Economic Base Study, 1974, City of Great Falls and County of Cascade, pp. 28-29.

selection, quality, and distance and percentage figures are based on the number of responses within each group. Figure 19, "Why Great Falls Shoppers Prefer Shopping for Selected Goods by Reason," illustrates the format used for percentage comparisons between the following merchandise categories: Auto and Recreation Vehicles, Furniture, Apparel and Accessory Stores, Department Stores, Building Materials and Lumber, Farm Equipment and Implements, and Miscellaneous Retail Stores.

Generally, it is known that shoppers visiting Great Falls consider price to be relatively important, as previously discussed from Figure 17. Using cross-tabulation, Figure 19 suggests that price is more important to respondents for selected categories of goods than for other categories of goods. Most apparent from the illustration is the category of building materials and lumber. It has a 67.9 percent response indicating that those respondents who do shop in Great Falls tend to find prices more favorable for this category of merchandise. Auto and furniture shoppers recognize the importance of price to a somewhat lesser degree.

A comparison of Figure 19 with Figure 20 provides a basis for discussing the preferences of "current" shoppers with the preferences of "potential" shoppers. Figure 20 represents those respondents who prefer shopping in their hometowns and illustrates their opinions about the importance of price. For hometown shoppers, the auto category has the highest ranking with 20.7 percent while farm equipment has the lowest percentage with 5.2 percent. Building materials has a much lower percentage ranking compared to the previous figure. This indicates that hometown shoppers, as potential Great Falls

customers, perceive the importance of price somewhat differently.
If it is assumed that hometown shoppers are basically similar to
current Great Falls shoppers in terms of characteristics and atti-
tudes, then the difference in perceptions of price may be explained
by outside influences such as the effect of advertising.

Figures 21 and 22 compare the importance of selection to
current and hometown shoppers. Current shoppers place a relatively
high importance to selection for most categories of goods, approxi-
mately 60 to 70 percent. Building material and farm equipment,
however, are somewhat lower with 44 percent. Apparently those people
who shop in Great Falls do so for reasons of both price and selection.

Conversely, Figure 22 indicates that hometown shoppers place
less importance on selection. Apparel and accessory merchandise had
the highest ranking of 13.4 percent. This may indicate that apparel
and accessory stores in the smaller towns provide the greatest source
of selection compared to the other categories of goods.

Figures 23 and 24 compare the importance of quality to current
and hometown shoppers. Both groups place less emphasis on the impor-
tance of quality of merchandise than on the price or selection of
merchandise. Current Great Falls shoppers indicate that building
supplies (16 percent) need to reflect quality more than the other
groups, but for autos and farm equipment there is less of a concern
(approximately 4 percent). This may indicate that autos and farm
equipment will have identical quality regardless of where they are
bought.

Likewise, hometown shoppers indicated very little concern for
quality. Overall, this suggests that quality is not a discernable

reason affecting customers' preferences for shopping in a particular location.

Figures 25 and 26 compare the importance of distance to current and hometown shoppers. The first figure indicates that current Great Falls shoppers place a relatively low importance on distance as a factor for visiting Great Falls. Farm equipment had the highest ranking with 22.2 percent. This may suggest that those people who do buy farm equipment in Great Falls do so because they are buying specialty items, thus the distance to other sources is equal or greater.

On the other hand, hometown shoppers preferred shopping in their own towns primarily because the distance to Great Falls is so important. Figure 26 indicates that all categories of merchandise fall very close to the 50 to 60 percent level. This observation parallels and substantiates the previous observations derived from Figures 17 and 18.

## Conclusion

A sample of the residents of north central Montana have been studied to discover how the city of Great Falls can increase its share of the potential market area. The characteristics, attitudes, and preferences of potential customers who do not presently shop in the city were analyzed. This study has identified which outside customers currently visit Great Falls, which goods are bought by them, and what reasons inhibit potential customers from shopping in Great Falls. Outside customers have been characterized as individuals living throughout the surveyed area, and engaged primarily in

occupations of agriculture, forestry, business, mining, construction, professional services, as well as retired. They also reflect an expected range within both income and age brackets.

Customer attitudes were surveyed to determine whether any specific attitudes appeared to influence decisions to visit or shop in the city. Generally, customers indicated a positive attitude about the city. The sum of the percentages of those adjectives describing Great Falls in a positive manner totaled 167 percentage points while negative adjectives were only 55 percentage points. In summary, customer characteristics and attitudes as provided by the questionnaire, indicate that both current and potential customers are similar and reflect no unexpected generalizations.

Customers were found to prefer shopping primarily in the Holiday Village shopping mall (42.2 percent) and the downtown shopping area (20.0 percent). Selected goods most often purchased were autos and recreation vehicles, furniture, and building materials and lumber. Apparel and accessory goods and department store merchandise were also important items sought by current shoppers. In summary, customer preferences for goods and merchandise indicated that both current and potential customers are interested in similar types of merchandise. This means that potential customers, if convinced that they should travel to Great Falls, would find as much satisfaction as the current customers.

Finally, customer reasons for shopping in Great Falls have been confirmed as emphasizing price and selection. Quality of the merchandise has a relatively low influence on whether current customers desire to visit Great Falls. As expected, distance appears to be the

primary reason why potential customers do not visit the city. This
implied that local merchants have to offset the limitations imposed
by distance through continued efforts emphasizing price and selection
opportunities available within the city. These efforts undoubtedly
center around advertising in the newspaper, radio, and television
media.

In conclusion, these findings provide substantiation for the
relationships that presently exist between the city of Great Falls
and the customers in the surrounding communities. The results clari-
fied who the potential customers are and why they do not presently shop
in the city. If the Great Falls Area Chamber of Commerce could actively
pursue programs which emphasize the positive value of pricing strategies
and the availability of wide-ranging selections, then the inhibiting
effects of distance would continue to decline in influence for poten-
tial shoppers.[8]

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[8]*Economic Base Study*, p. 7.

# CHAPTER VII

## LIMITATIONS OF STUDY

The pre-experimental nature of this study represents its greatest limitation. As described by Campbell and Stanley in Experimental and Quasi-Experimental Designs for Research, the pre-experimental research study utilizes a design in which a single group is studied only once with no control group or subsequent interviews with the original questionnaire.[9] This design, while useful for general observations, is inherently weak for quantitative or statistical purposes.

The pre-experimental design has the following types of sources of validity/invalidity.

### Internal Validity

Internal validity represents the first of two general classifications for design validity. Internal validity as defined by Campbell and Stanley exists when certain variables such as history, maturation, testing, instrumentation, statistical regression, experimental mortality, and selection maturation interaction are controlled to the extent that they do not produce effects interacting with the

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[9]Campbell and Stanley, Designs for Research, p. 6.

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effect of the experimental stimulus.[10]

Three of these internal variables are especially critical of the pre-experimental research study and consequently represent limitations to this particular paper.

First, the variable of history will be identified. Defined as "the specific events occurring between the first and second measurement in addition to the experimental variable," history as a variable incorporates those events such as time of day, day of week, the season, and so on.[11] The optimal solution is a randomization of experimental occasions, with restrictions to balance the representation of the previously mentioned sources of bias.

The history variable is important for this paper because no restrictions could be placed on a pre-experimental design which tests the respondents only at one point in time. This means that randomization was not achieved in terms of random day of the week or of the season. Consequently, when discussing the implications of the data, some bias may exist since experimental isolation was not achieved.

Secondly, the variable of maturation is important. Defined as "processes within the respondents operating as a function of the passage of time per se (not specific to the particular events), including growing older, growing hungrier, growing more tired, and the like," maturation can be psychological or biological processes.[12] Maturation should be controlled by insuring that it is represented

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[10]Ibid., p. 5.

[11]Ibid., pp. 5, 14.

[12]Ibid., pp. 5, 8.

equally in the experimental and control groups.

Maturation is a source of invalidity for this research effort because no control group exists for a pre-experimental design. No comparison exists to measure whether psychological or biological processes did or did not create unacceptable bias for the sample population. Therefore, again, when discussing the generalizations of the data, some bias may exist from maturation.

Thirdly, the variable of selection may apply. Defined as "biases resulting in differential selection of respondents from the comparison groups," selection may result in unequal weighting for a multitude of factors such as income, age, ethnic groups, etc. Randomnization is used to assure group equality during the selection process.[13]

The selection variable is important because although every effort was made to insure complete randomization during the selection of the sample, some people were excluded from consideration. Some bias may be induced from the use of telephone directories as the source of interviews. Not only did this preclude those individuals without telephones, but it also excluded those with unlisted telephone numbers. So the results of the data may contain this third internal limitation of selection bias.

### External Validity

External validity is the second of the two classifications of design validity. External validity is discussed in regard to

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[13]Ibid., pp. 5, 15.

generalizability: that is, "to what populations, settings, treatment variables, and measurement variables can this effect be generalized?" Factors such as the reactive or interaction effect of testing, the interaction effects of selection biases and the experimental variable, reactive effects of experimental arrangements, and multiple-treatment interference are all sources of external validity which a research design may or may not involve.[14]

Only one of these factors represents a definite weakness for this pre-experimental research study. The other factors simply do not apply to a single interview format.

For this study, the interaction effects of selection biases and the experimental variable may be a source for possible invalidity. This factor concerns the possibility that the effects demonstrated by the instrument hold only for that unique population from which the group was selected.

According to Campbell and Stanley, ". . . the greater the amount of cooperation involved, the greater the amount of disruption of routine, and the higher our refusal rate, the more opportunity there is for a selection-specificity effect."[15] Since the questionnaire consisted of two pages, with a somewhat sophisticated appearance to the second page, some potential respondents may have voluntarily eliminated themselves, thus creating a selective-specificity bias. This external invalidity represents another limitation for this research study.

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[14]Ibid., p. 5.

[15]Ibid., p. 19.

## Summary

The nature of these limitations represent potential sources of bias which could result in varying degrees of invalidity. Conclusions derived from a pre-experimental research design often reflect varying degrees of these kinds of invalidity. Consequently, the conclusions discussed in earlier sections of this study represent general observations based upon patterns discovered from tabulations and cross-tabulations of the data. Because no statistical tests were applied during the research, accurate measurements of validity and reliability were severely restricted. In the absences of statistical measures of influence, general observations cannot reflect concrete conclusions.

Because this research project has provided general guidelines for future projects of this nature, it is recommended that experimental designs be considered as the basis for expanded research regarding consumer preferences. The experimental model provides the necessary foundation for applying various tools which formalize and standardize the procedures for drawing statistical conclusions.

# APPENDIX

Fig. 1.—Percentage of respondents
by age groups.



Fig. 1.—Percentage of respondents by age groups.
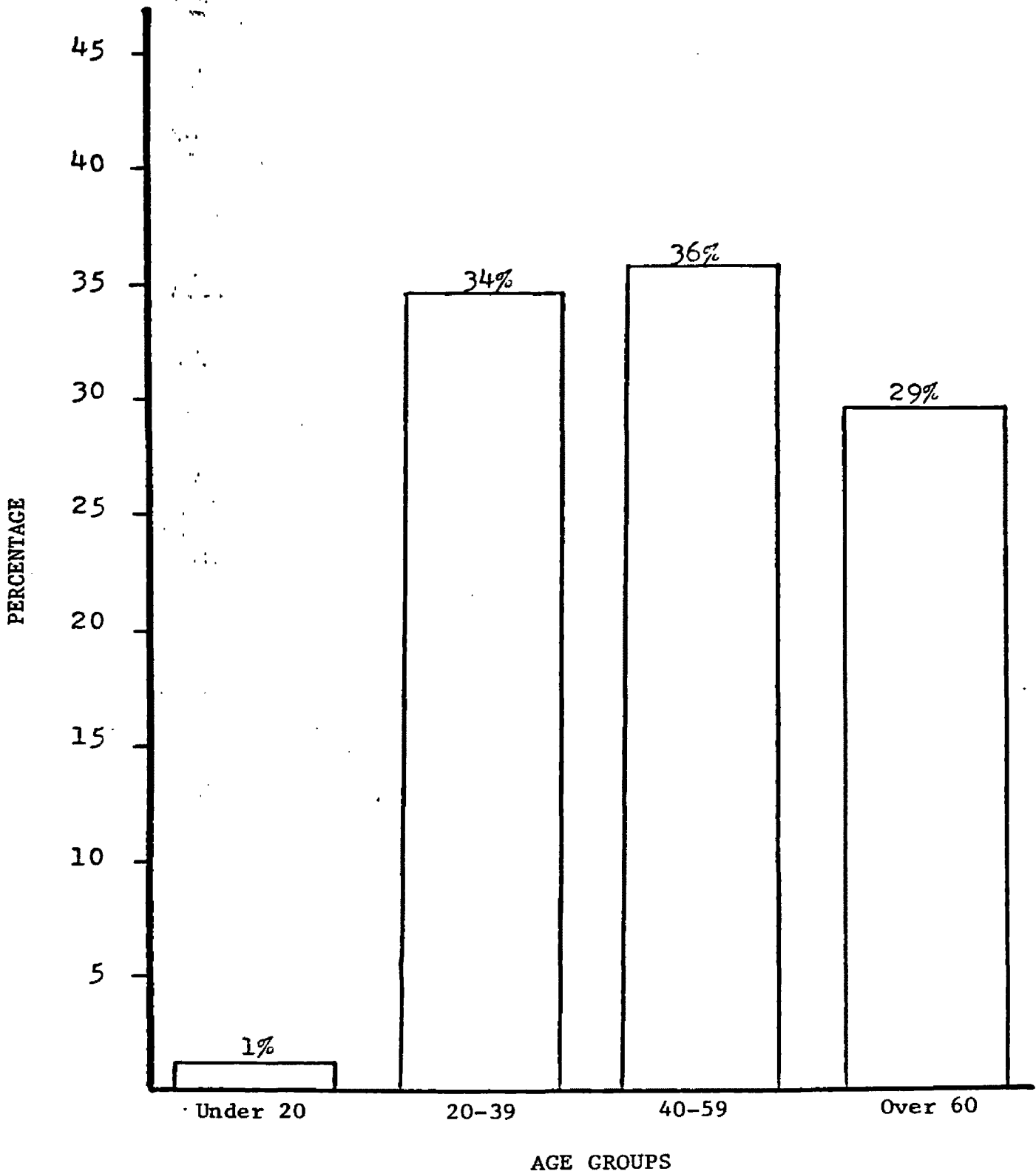
**Fig. 2.--Percentage of Great Falls State Fair attenders by frequency.**
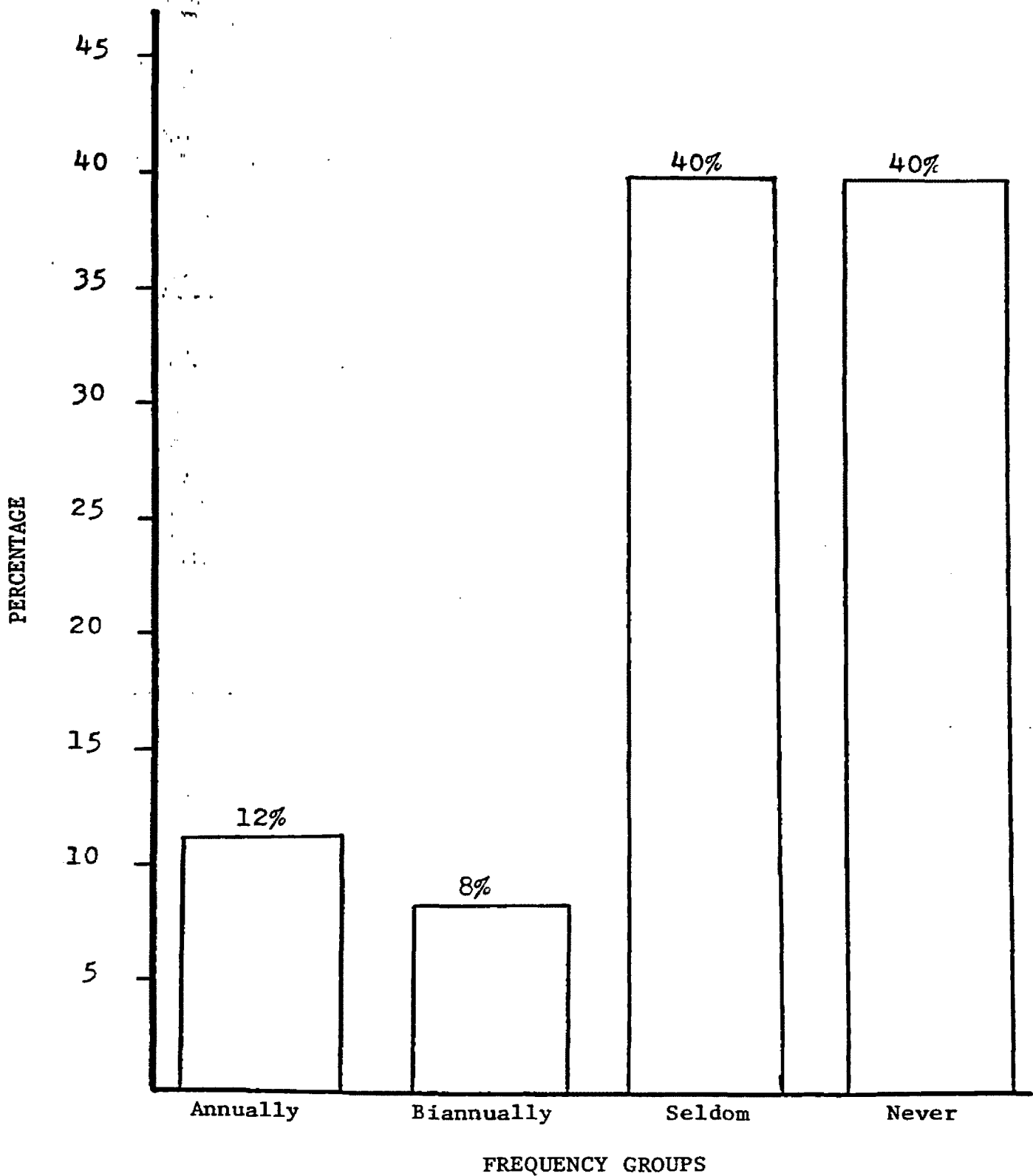
Fig. 3.--Percentage of respondents by number
of trips to Great Falls.

Fig. 4.--Percentage of respondents
by reason for visit.
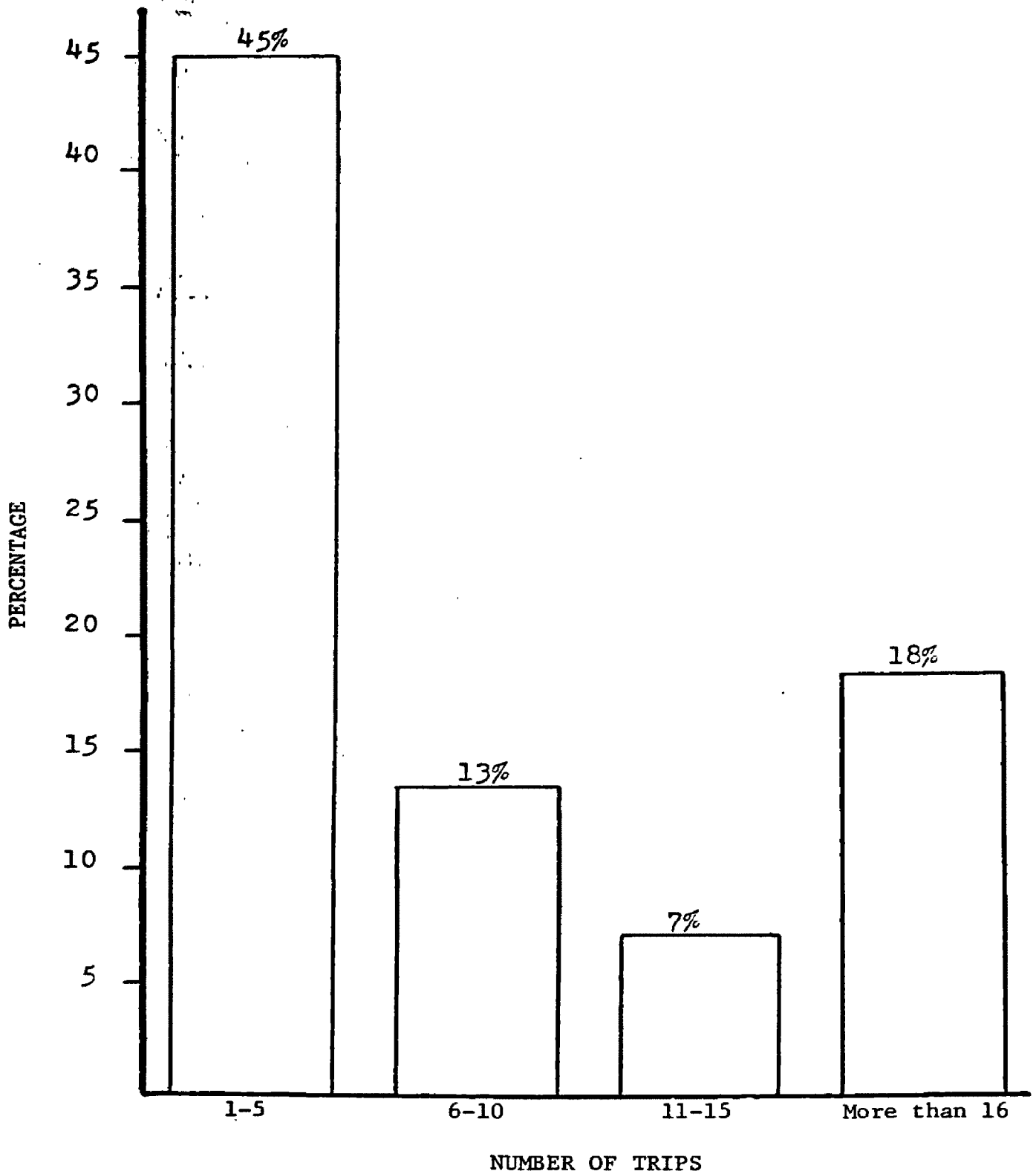


Fig. 4.--Percentage of respondents by reason for visit.
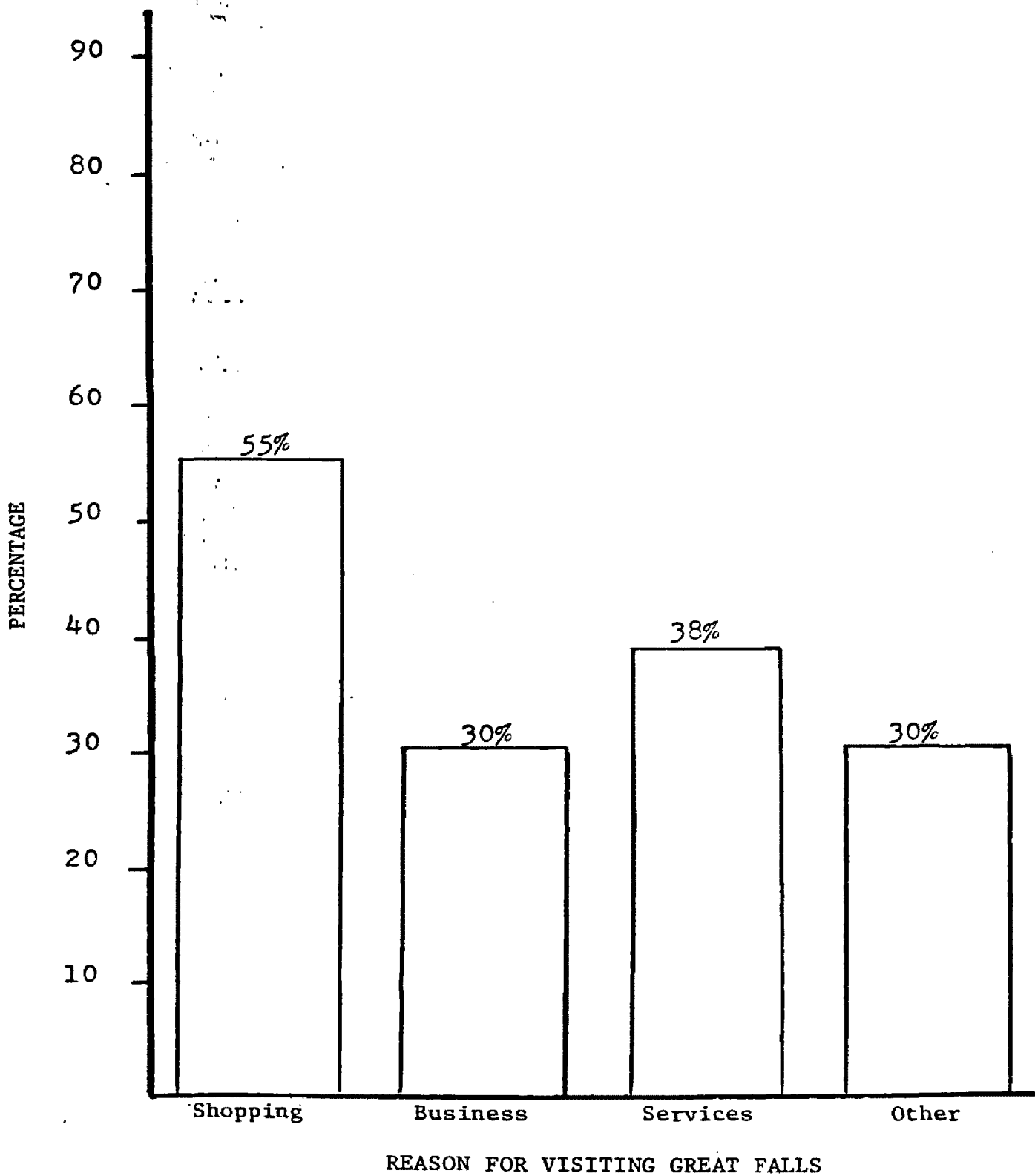
Fig. 5.--Percentage of respondents by
special event attendance.



SPECIAL EVENTS
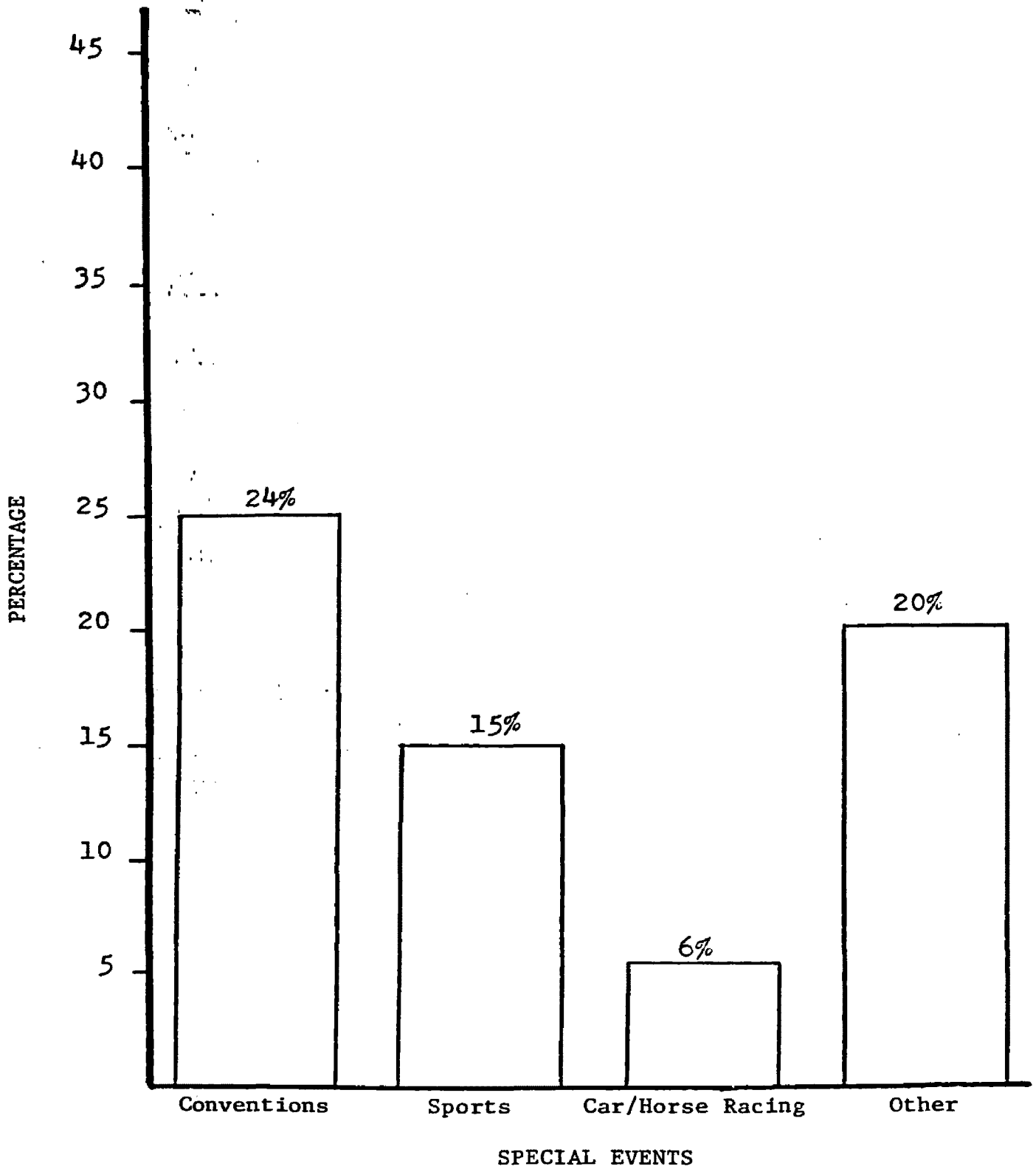
**Fig. 6.— Percentage of
respondents by activities.**

Fig. 7.--Percentage of respondents
by income.



*Bar chart showing percentage of respondents by income group. Y-axis labeled PERCENTAGE ranging from 5 to 45. Bars: Less than $15 = 35%; $15-$30 = 47%; $31-$45 = 10%; More than $45 = 5%. X-axis labeled INCOME GROUPS with "(dollars in thousands)".*

INCOME GROUPS
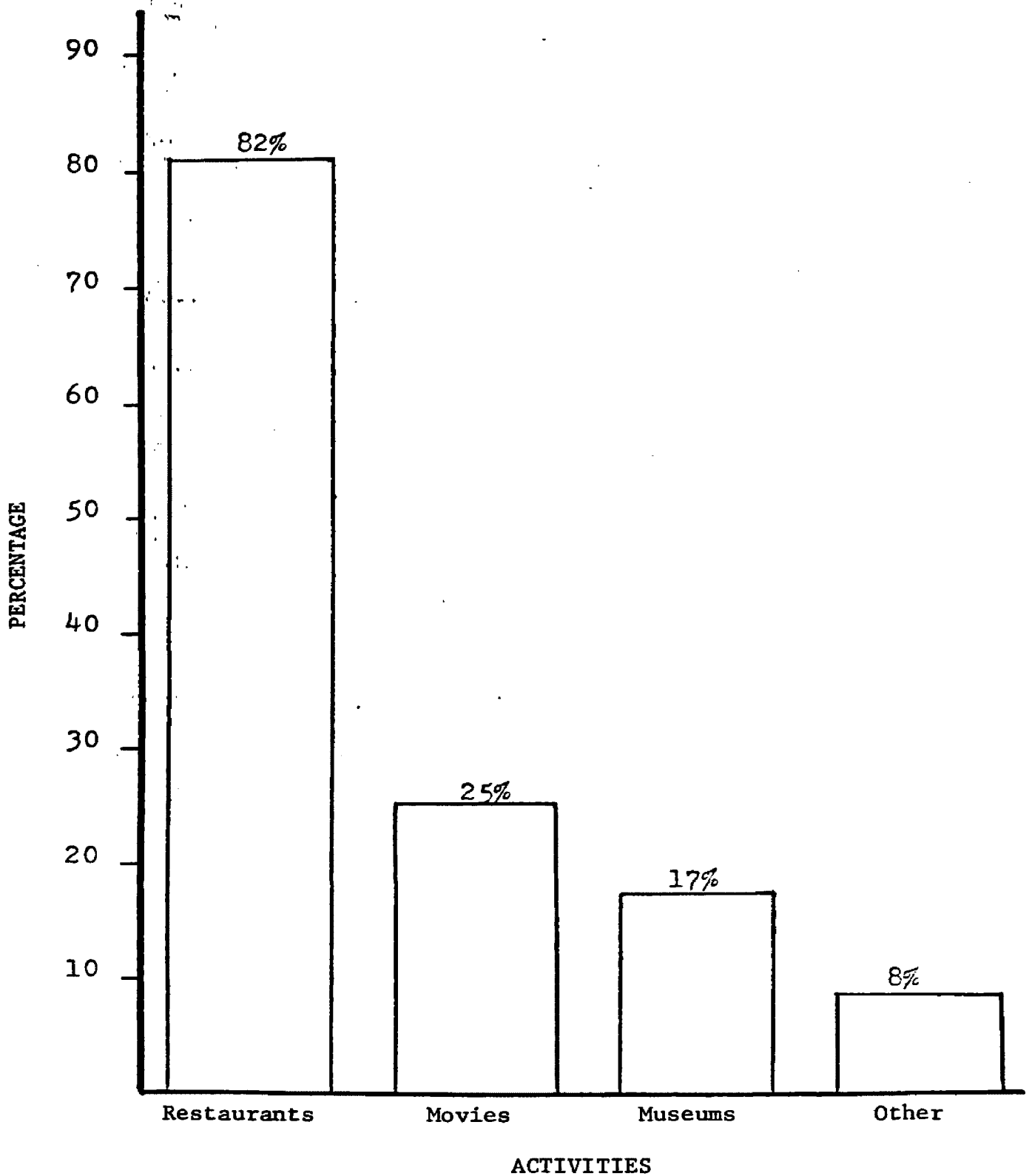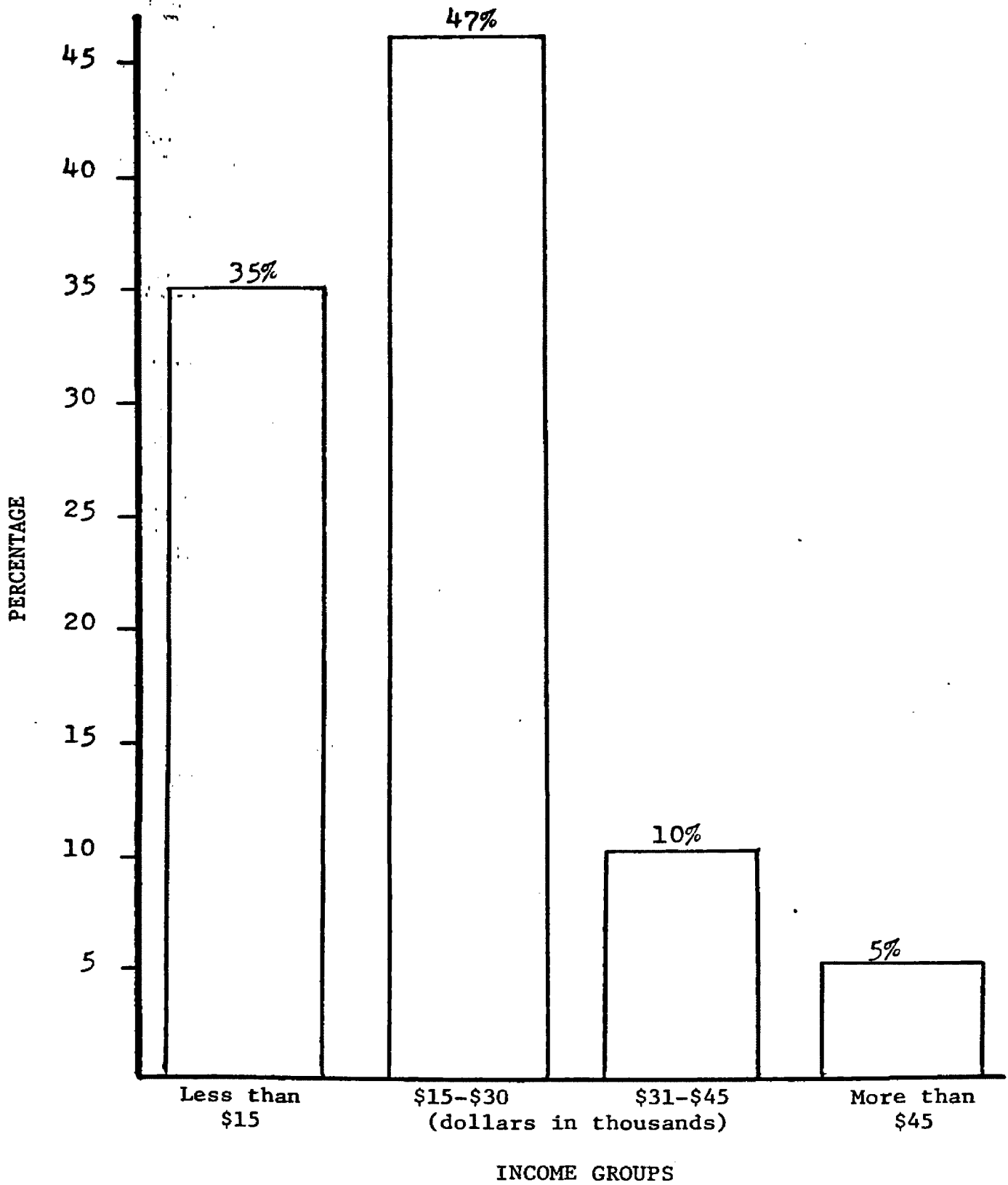
Fig. 8.--Percentage of
respondents by impressions.
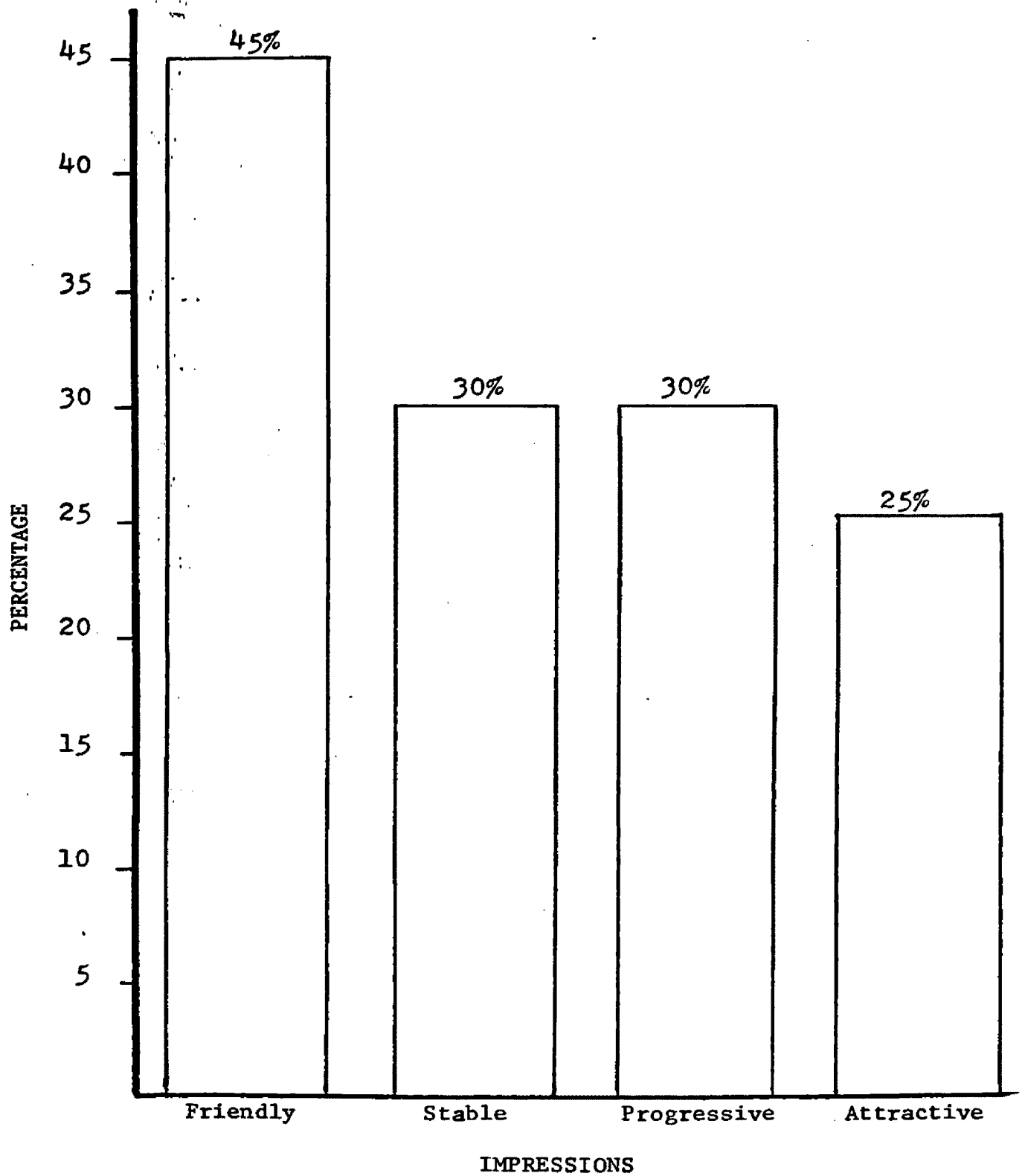
Fig. 9.--Percentage of
respondents by impressions.
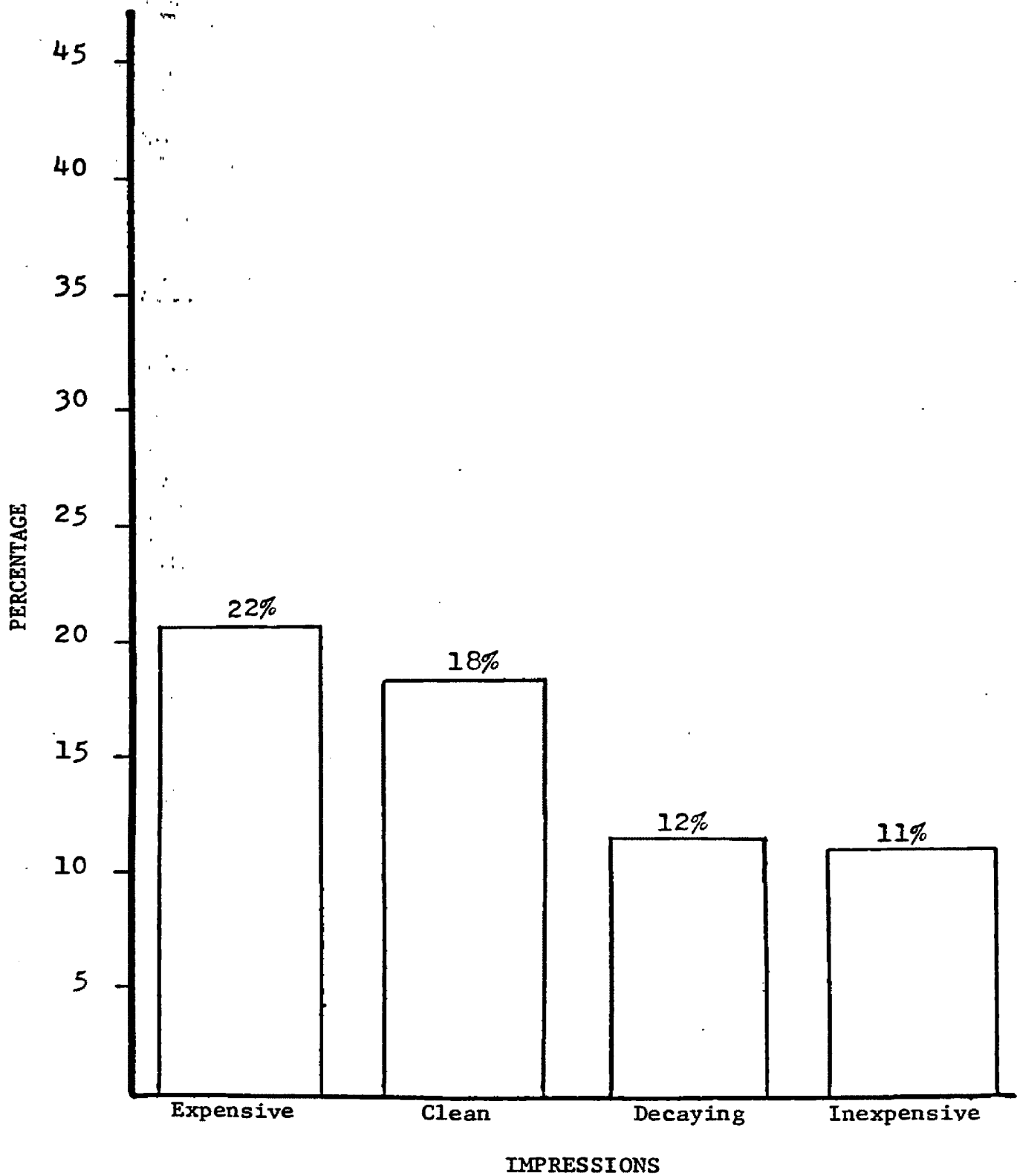
Fig. 10.--Percentage of
respondents by impressions.
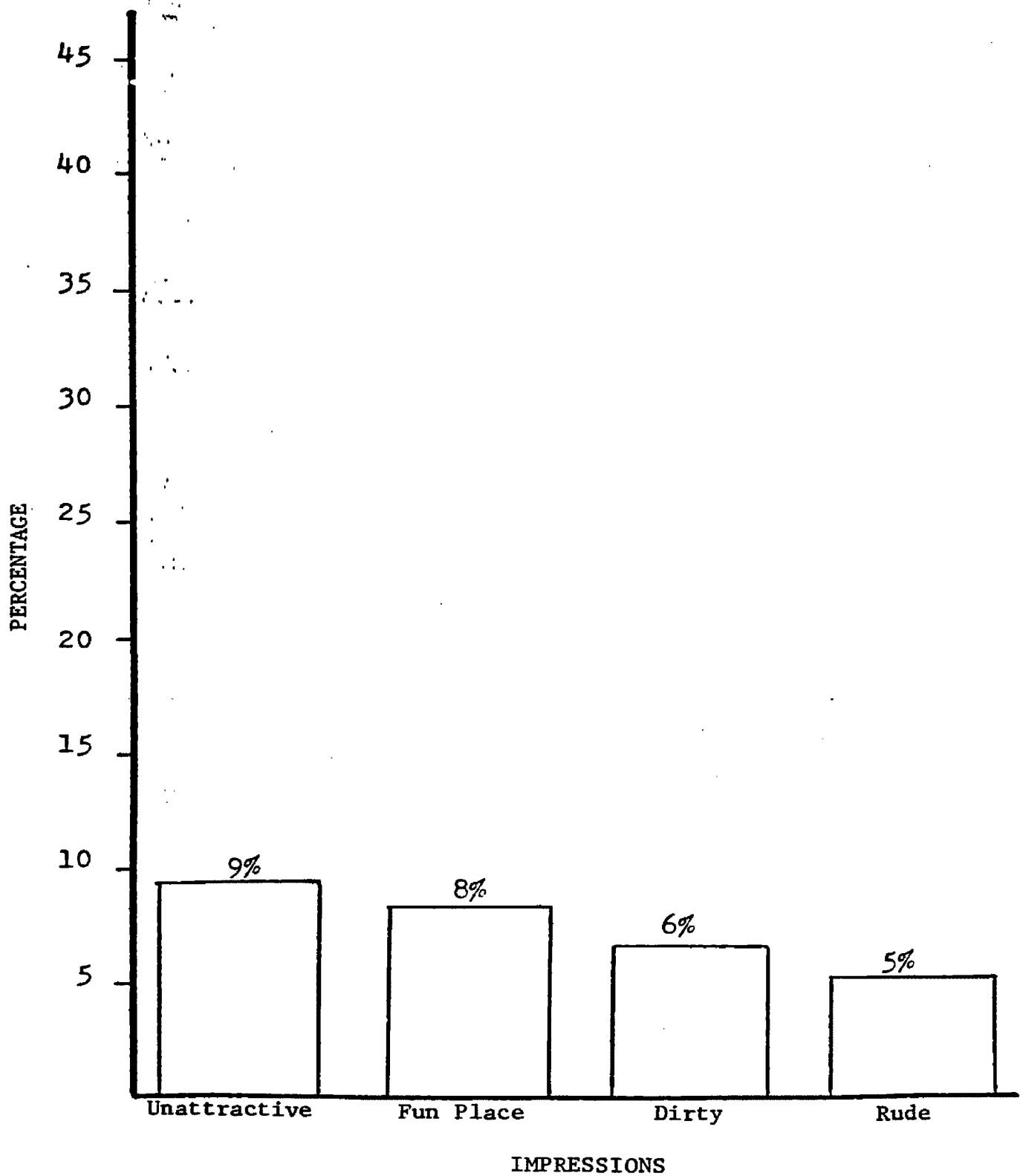
Fig. 11.--Percentage of respondents
by preferred shopping area.



PREFERRED SHOPPING AREA
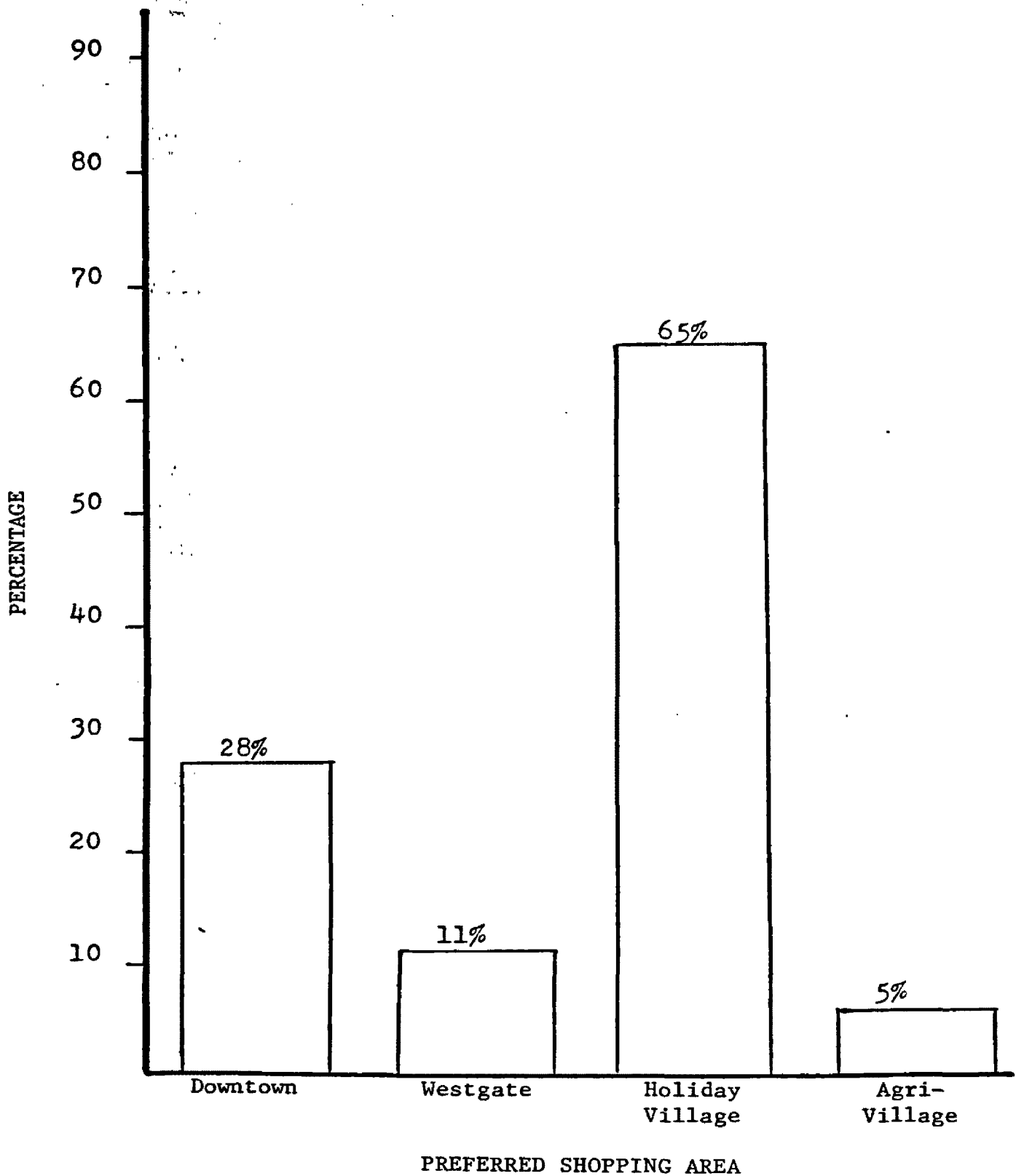
Fig. 12.--Percentage of respondents shopping
in Great Falls by age level.
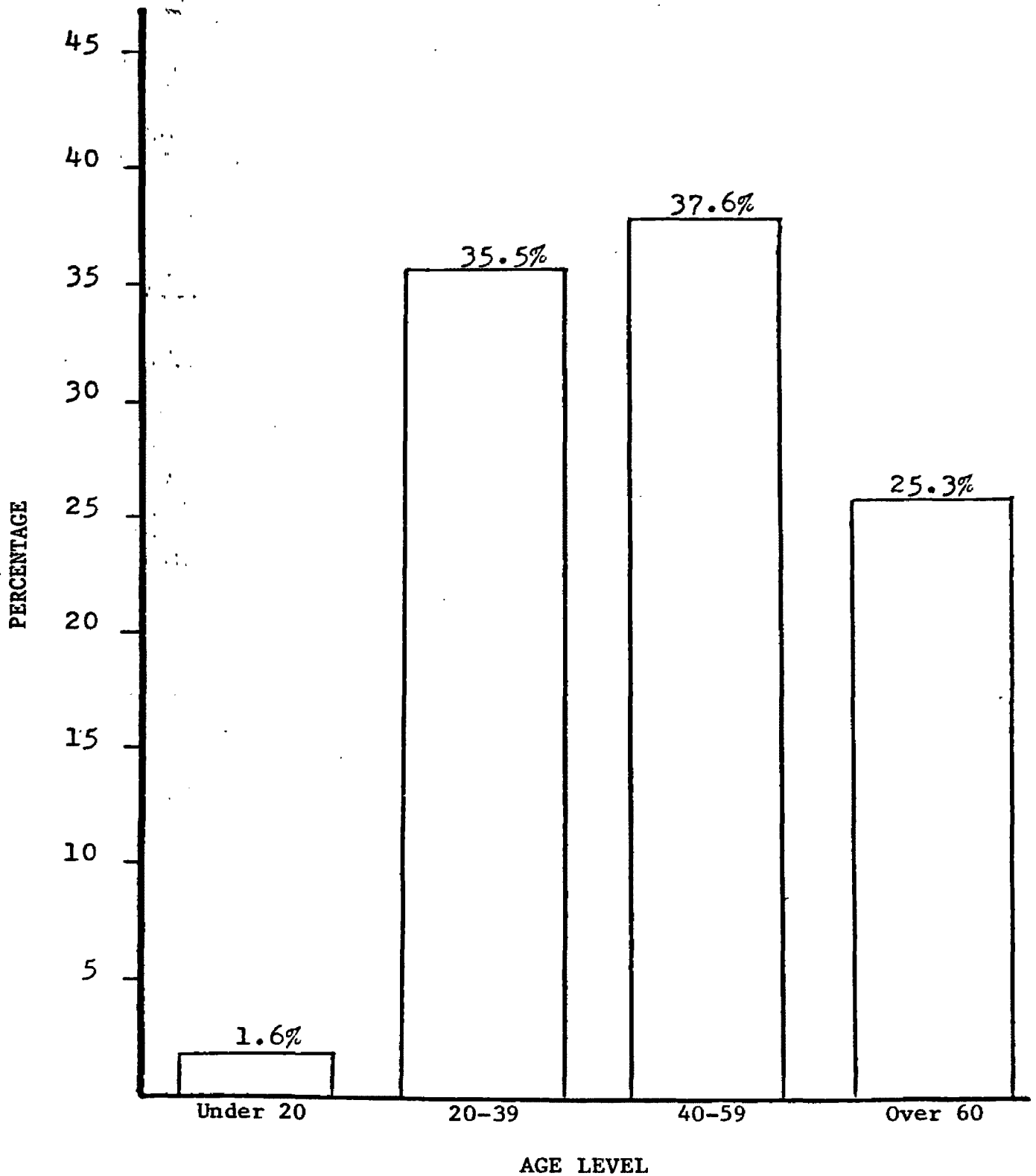
Fig. 13.--Percentage of respondents not
shopping in Great Falls by age level.
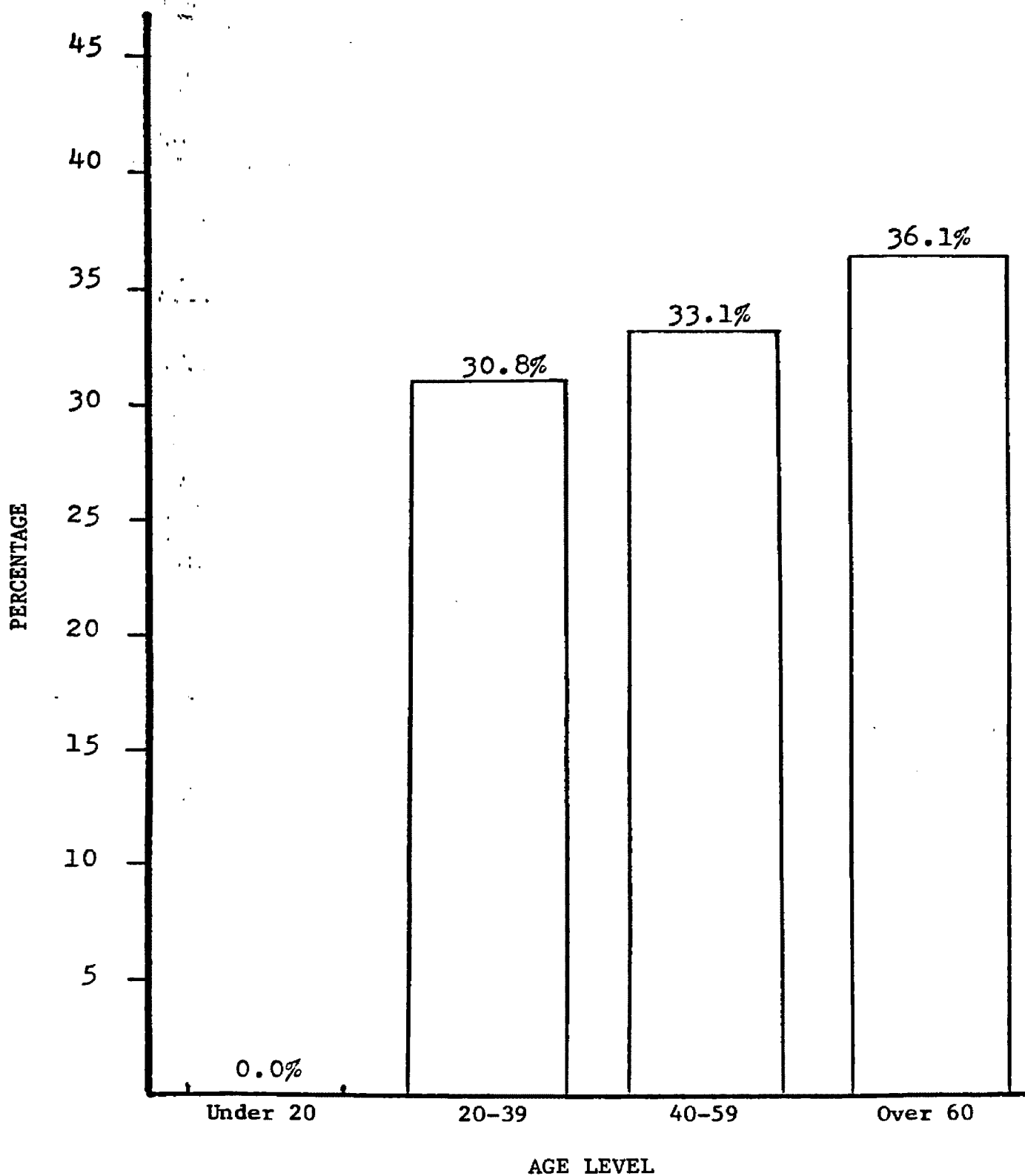
Fig. 14.--Percentage of respondents shopping
in Great Falls by income level.
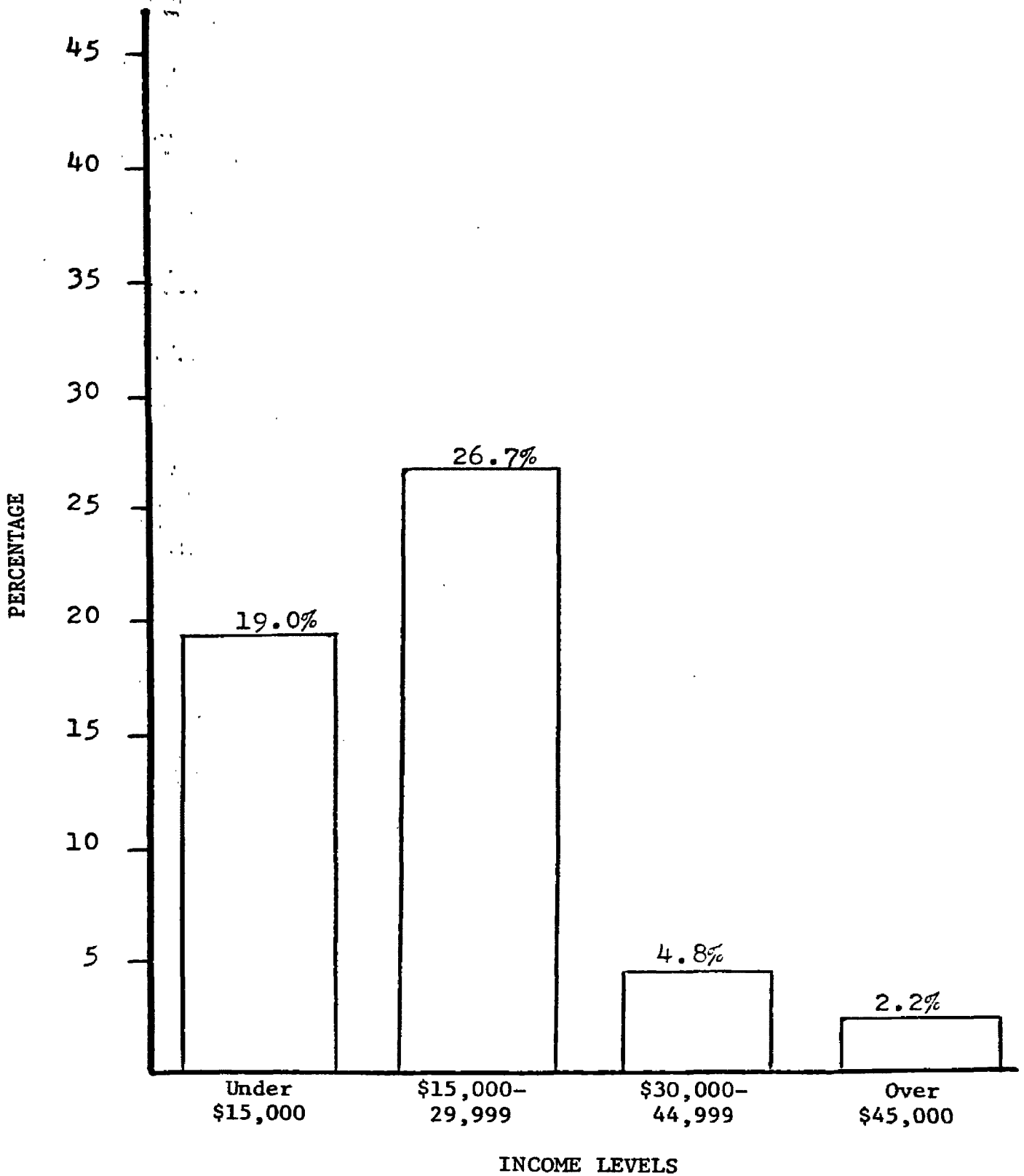
Fig. 15.—Percentage of respondents not
shopping in Great Falls by income level.
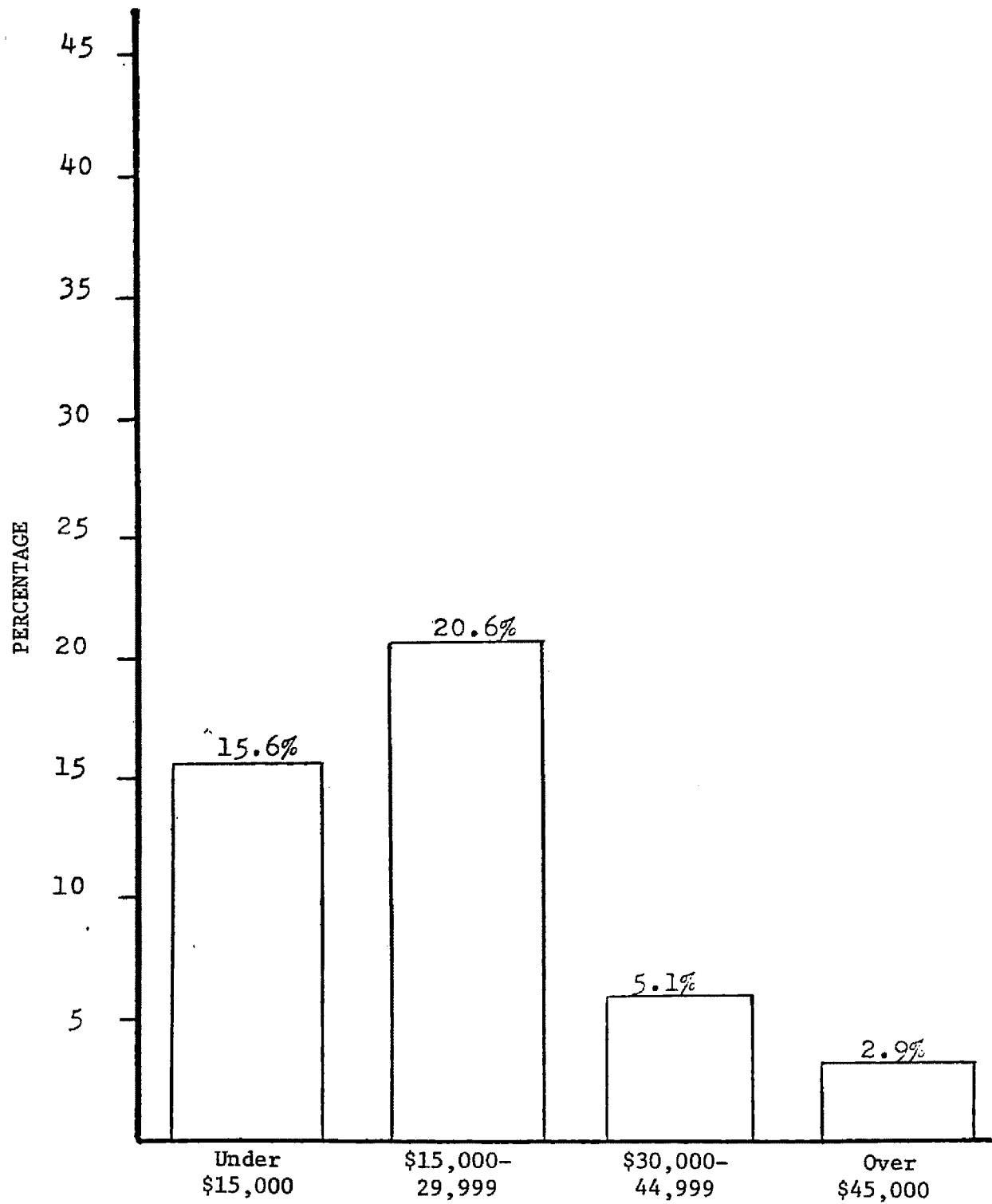
Fig. 16.--Percentage of respondents shopping
in Great Falls by preferred shopping area.



42.2%

20.0%

8.3%

3.2%

Downtown        Westgate        Holiday        Agri-Village
                                Village

PREFERRED SHOPPING AREA
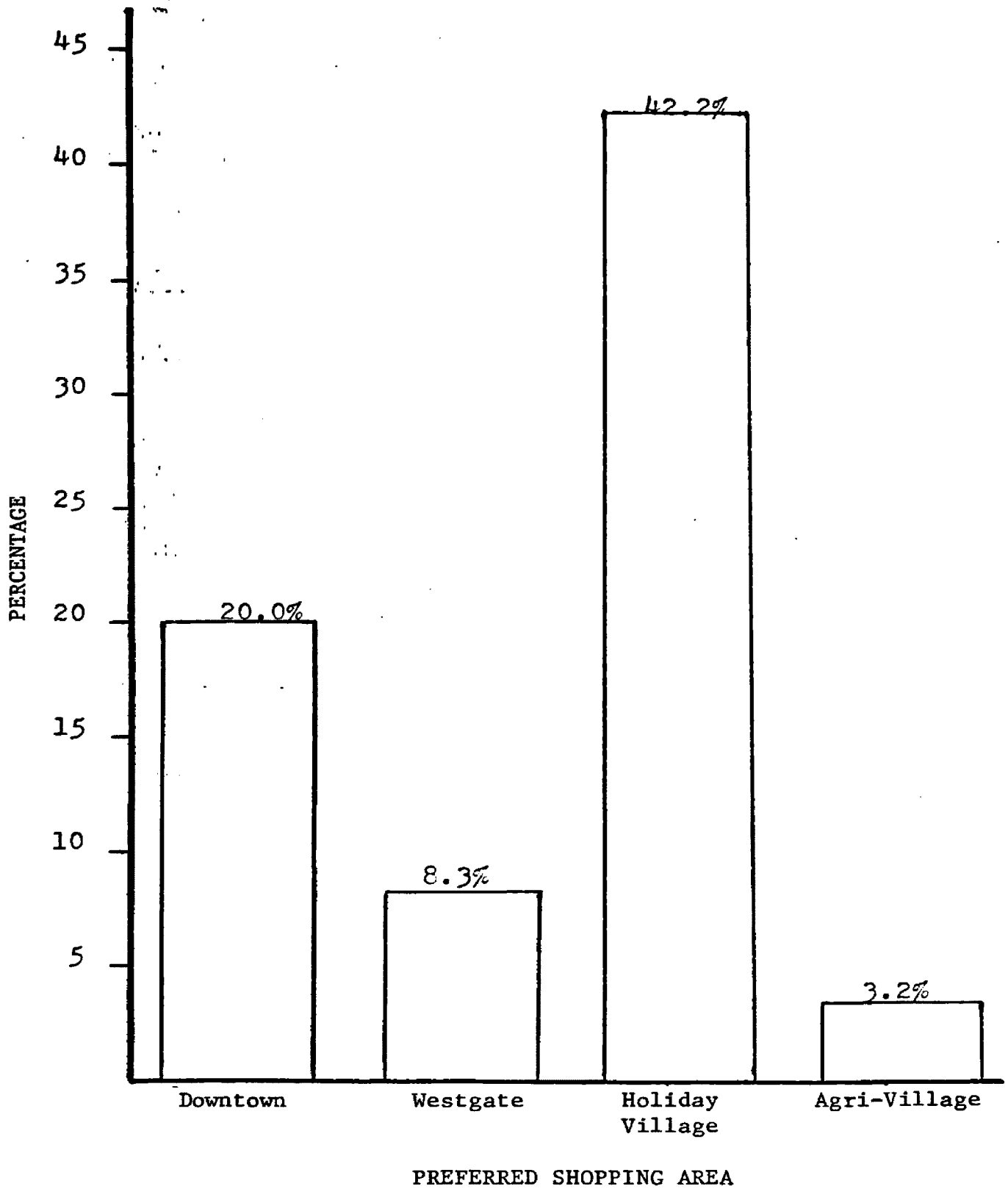
Fig. 17.--Percentage of respondents preferring
to shop in Great Falls by reason.
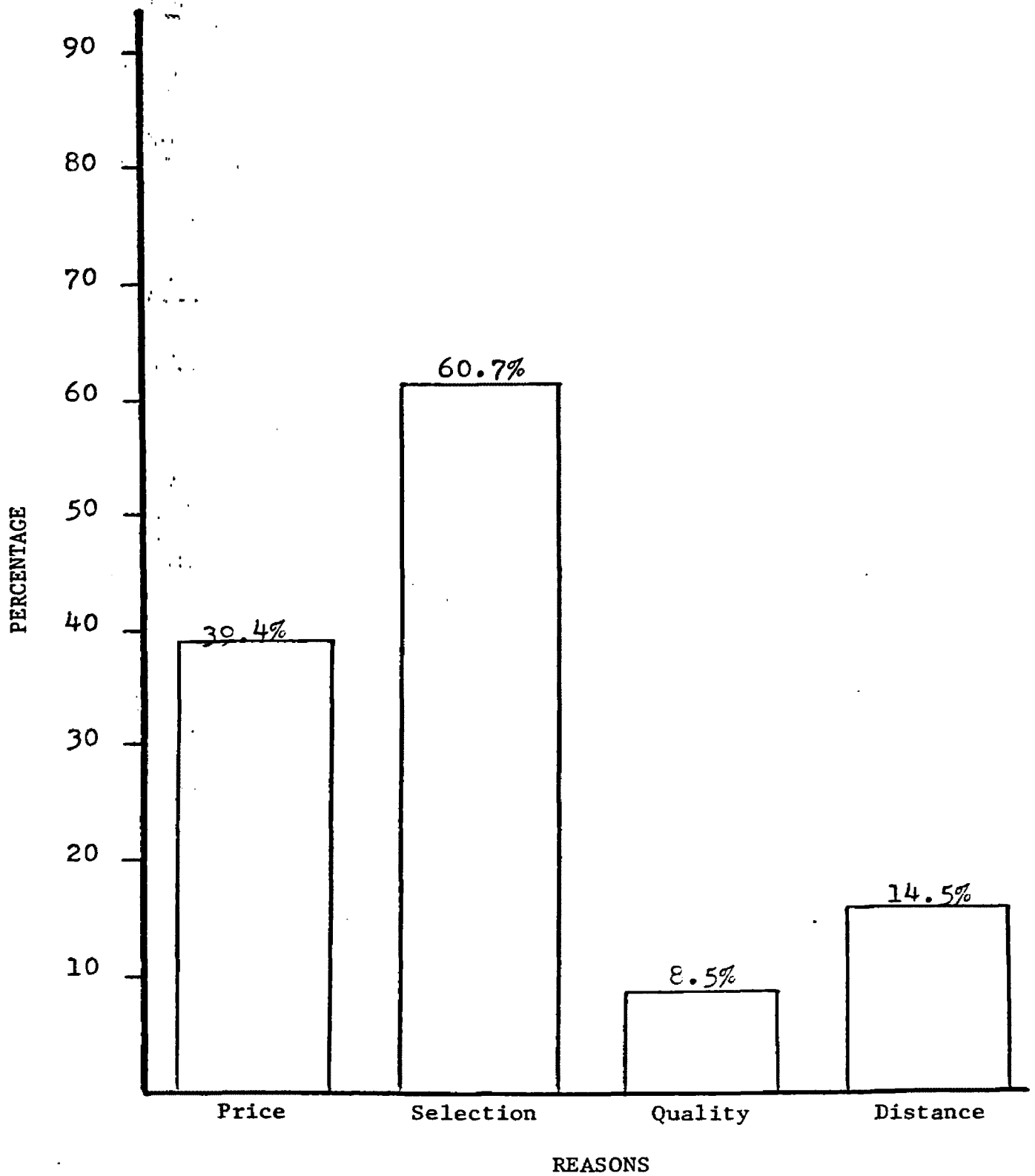
Fig. 18.—Percentage of respondents preferring
to shop in hometowns by reason.
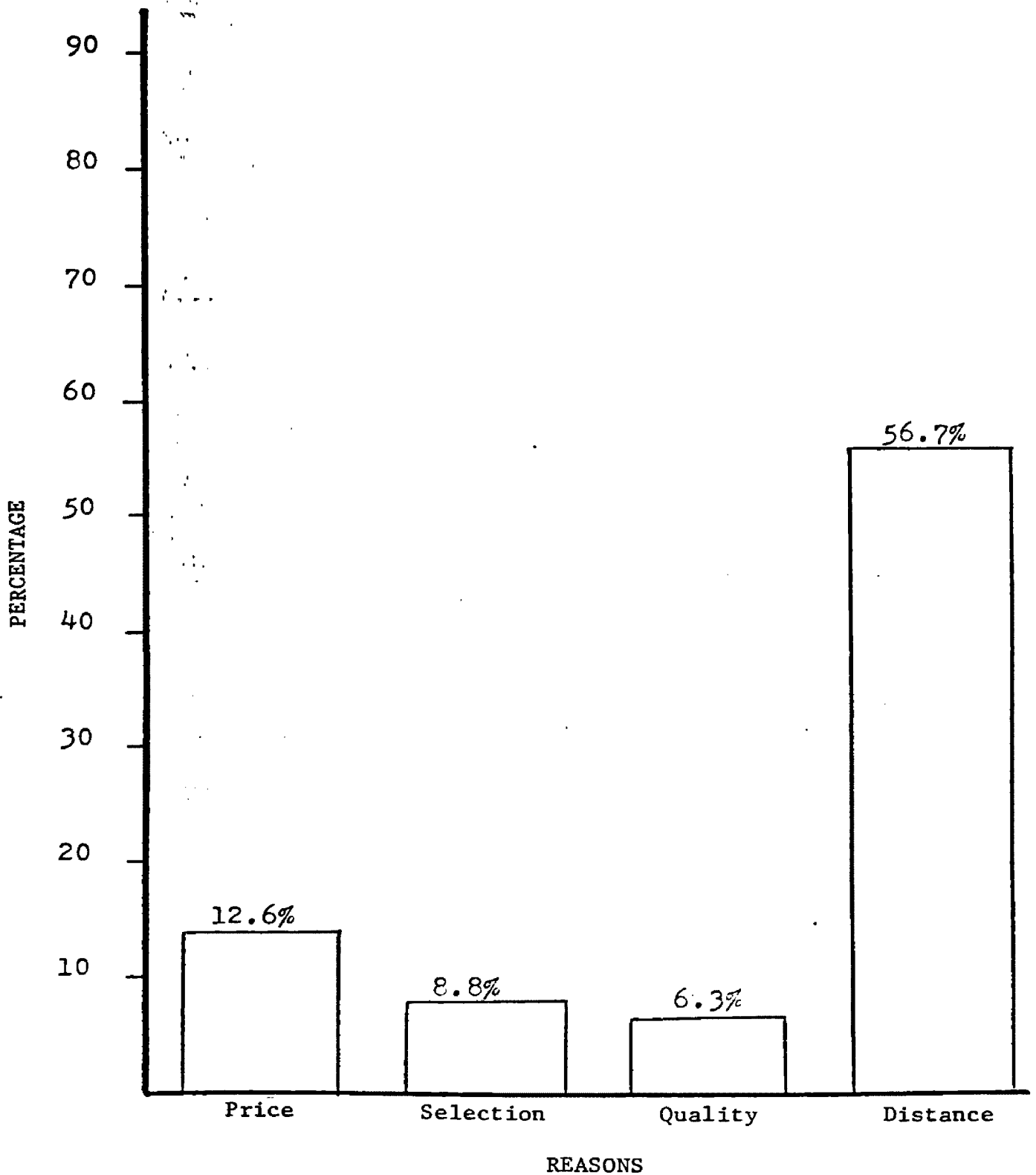


REASONS

Fig. 19.--Why Great Falls shoppers prefer
shopping for selected goods by reason.



PRICE IS IMPORTANT
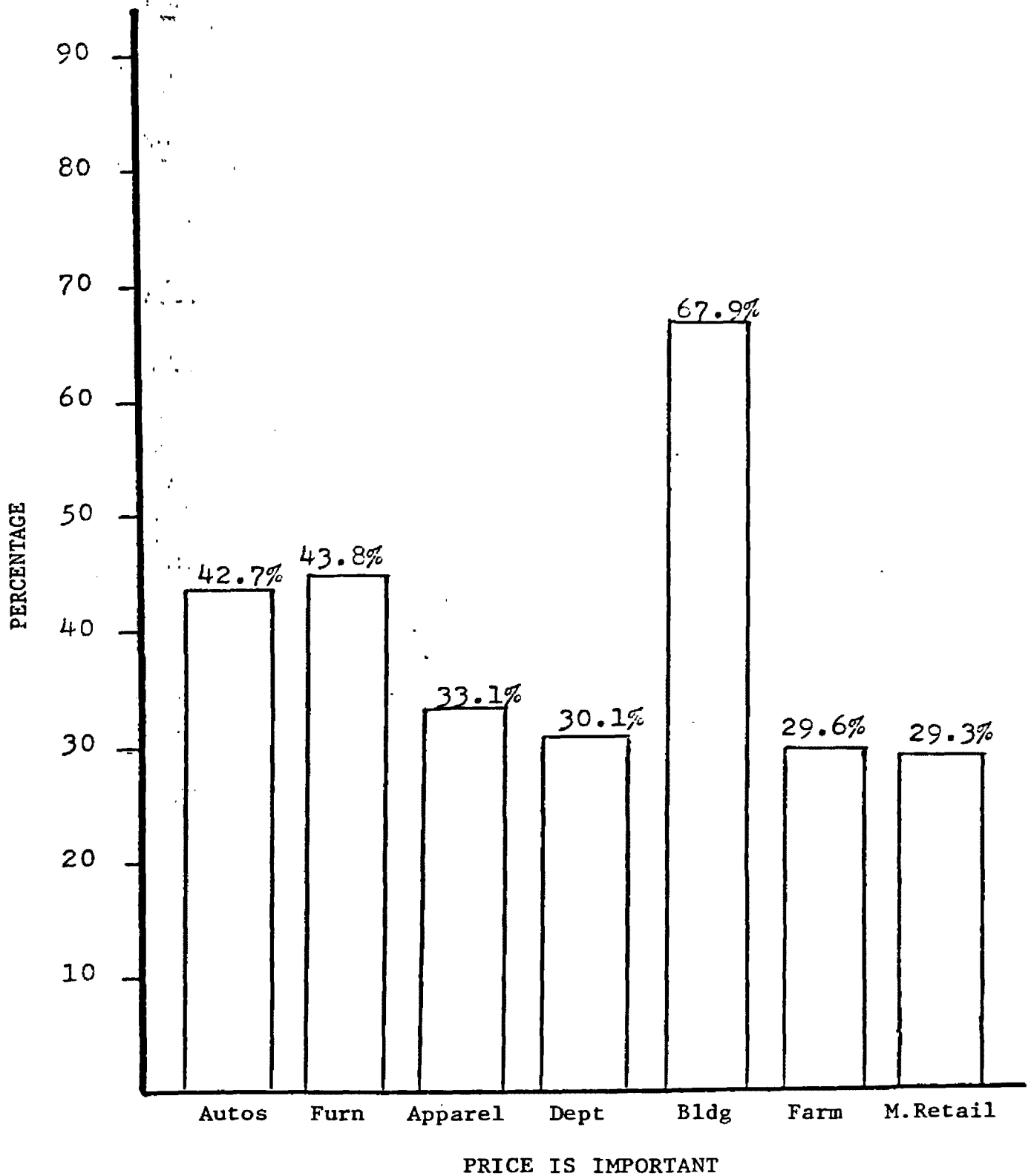
Fig. 20.—Why hometown shoppers prefer
shopping for selected goods by reason.
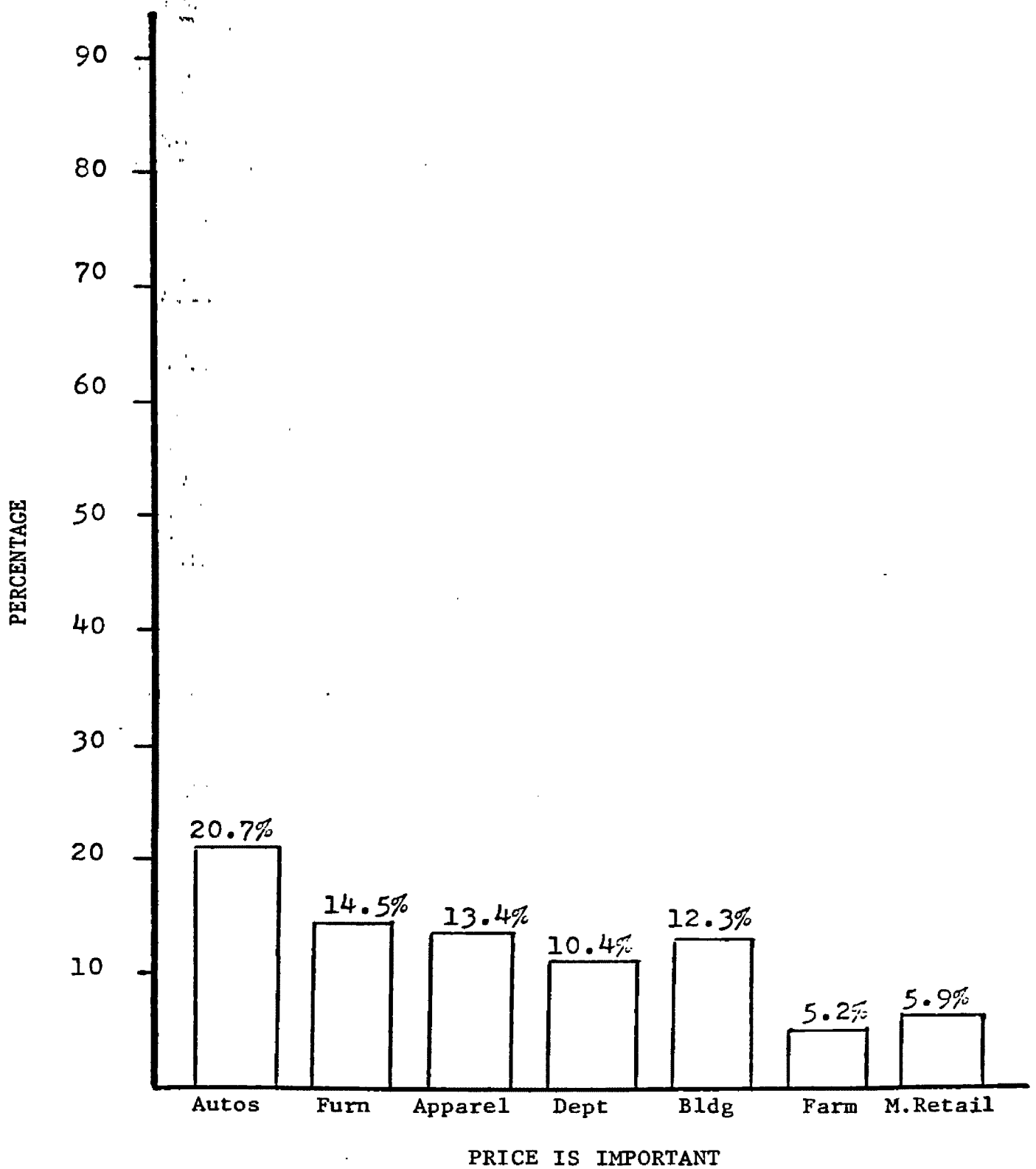


PRICE IS IMPORTANT

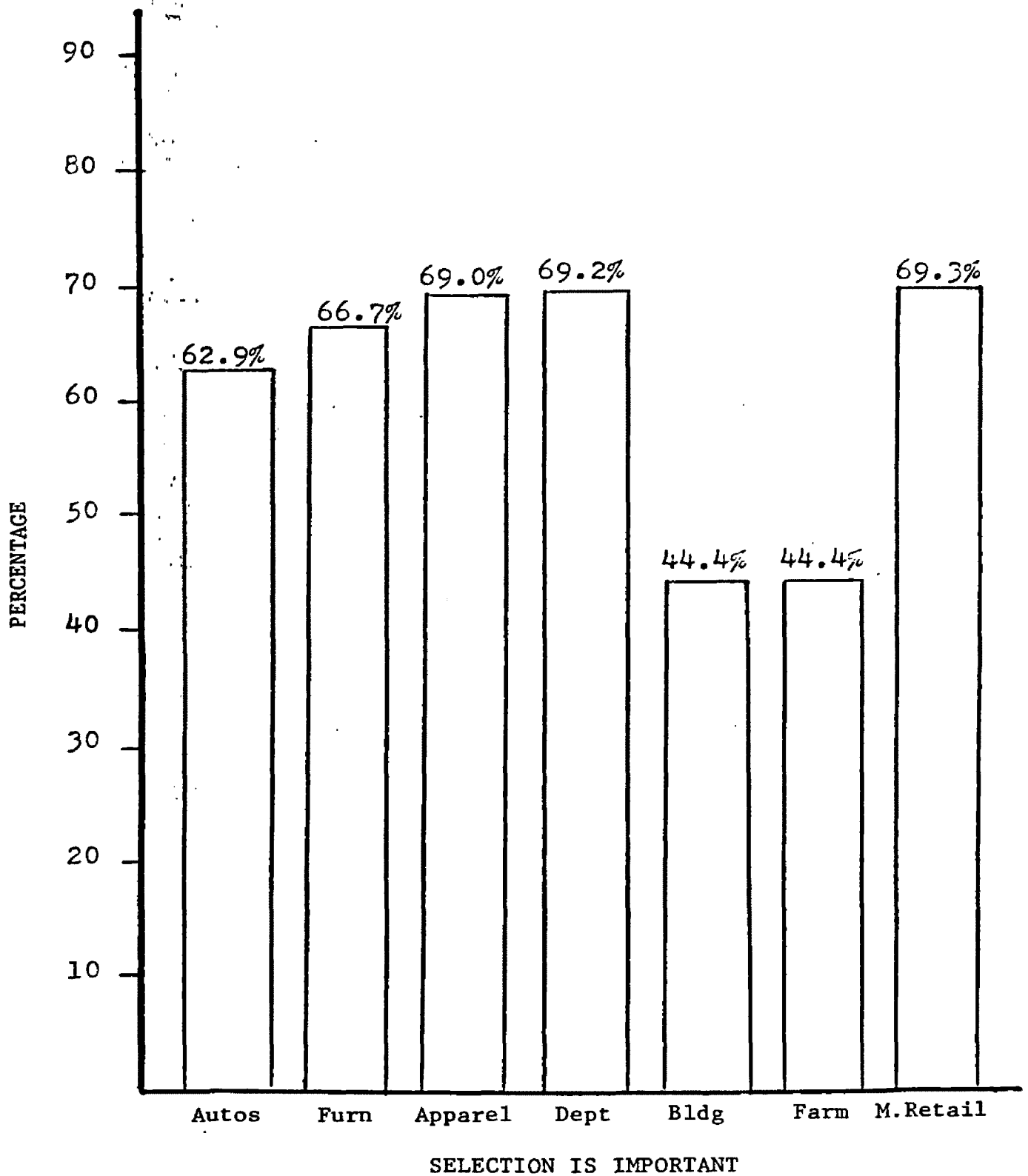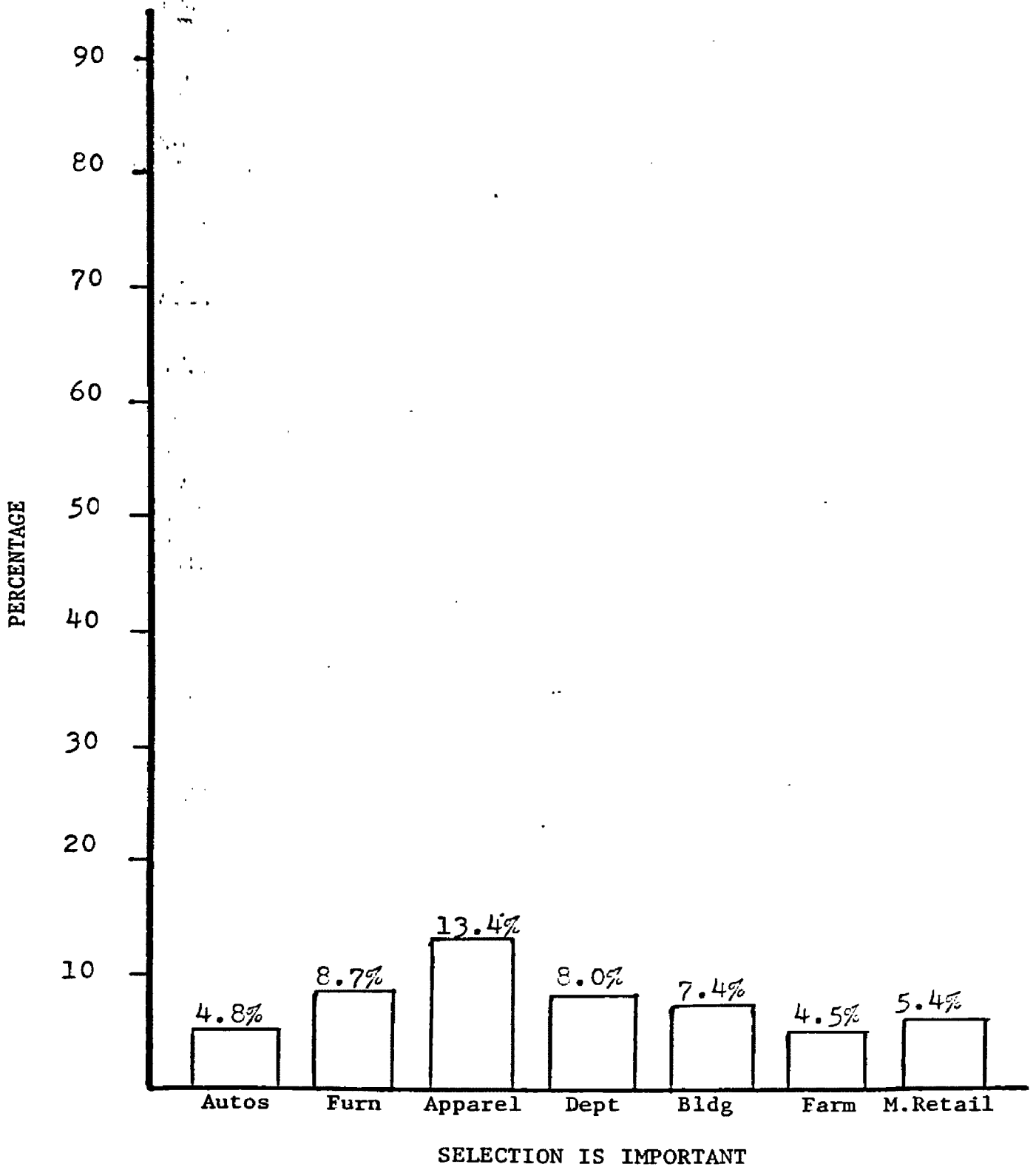Fig. 21.--Why Great Falls shoppers prefer
shopping for selected goods by reason.



PERCENTAGE

SELECTION IS IMPORTANT

Fig. 22.--Why hometown shoppers prefer
shopping for selected goods by reason.

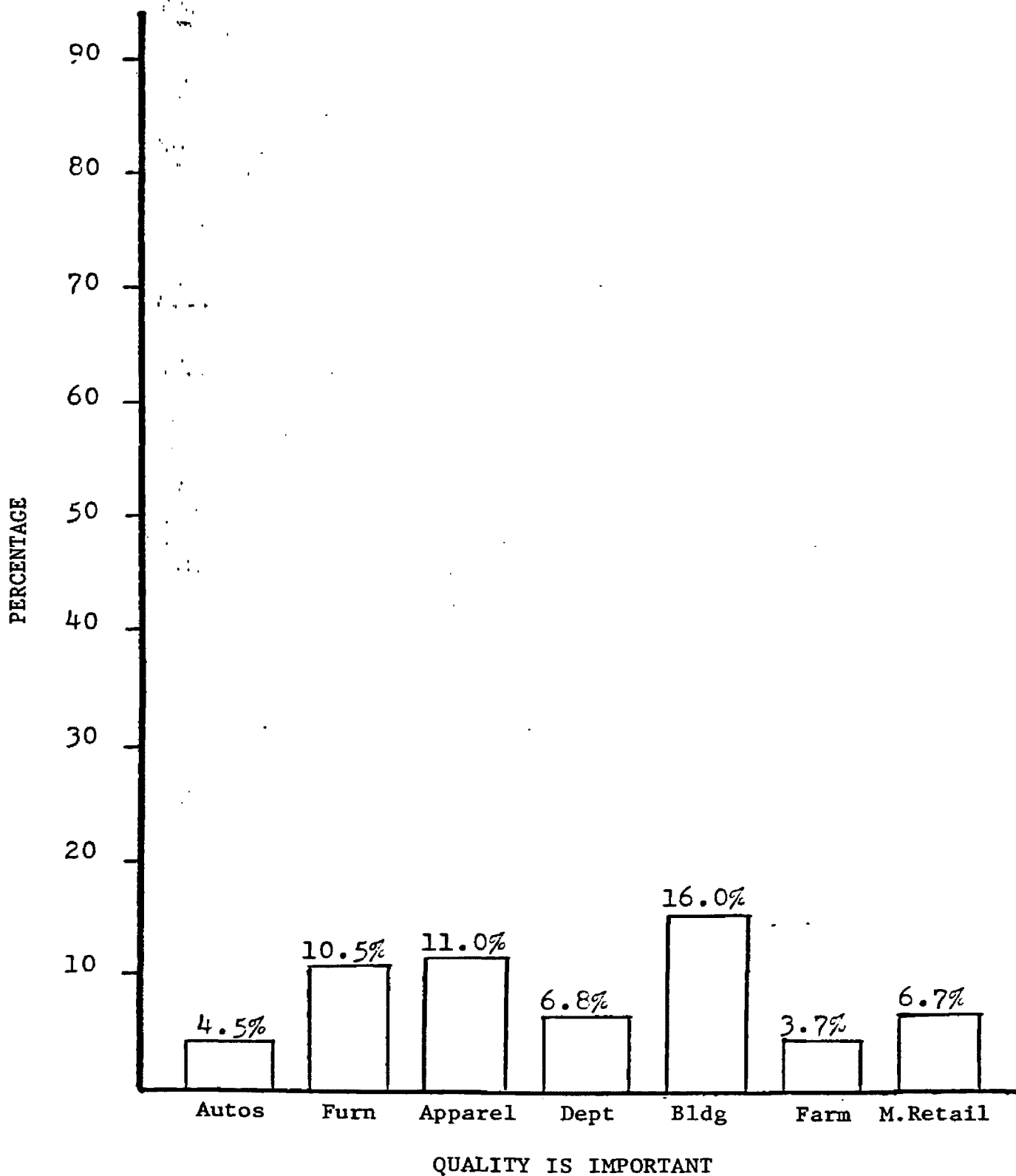Fig. 23.—Why Great Falls shoppers prefer
shopping for selected goods by reason.

Fig. 24.--Why hometown shoppers prefer shopping for selected goods by reason.
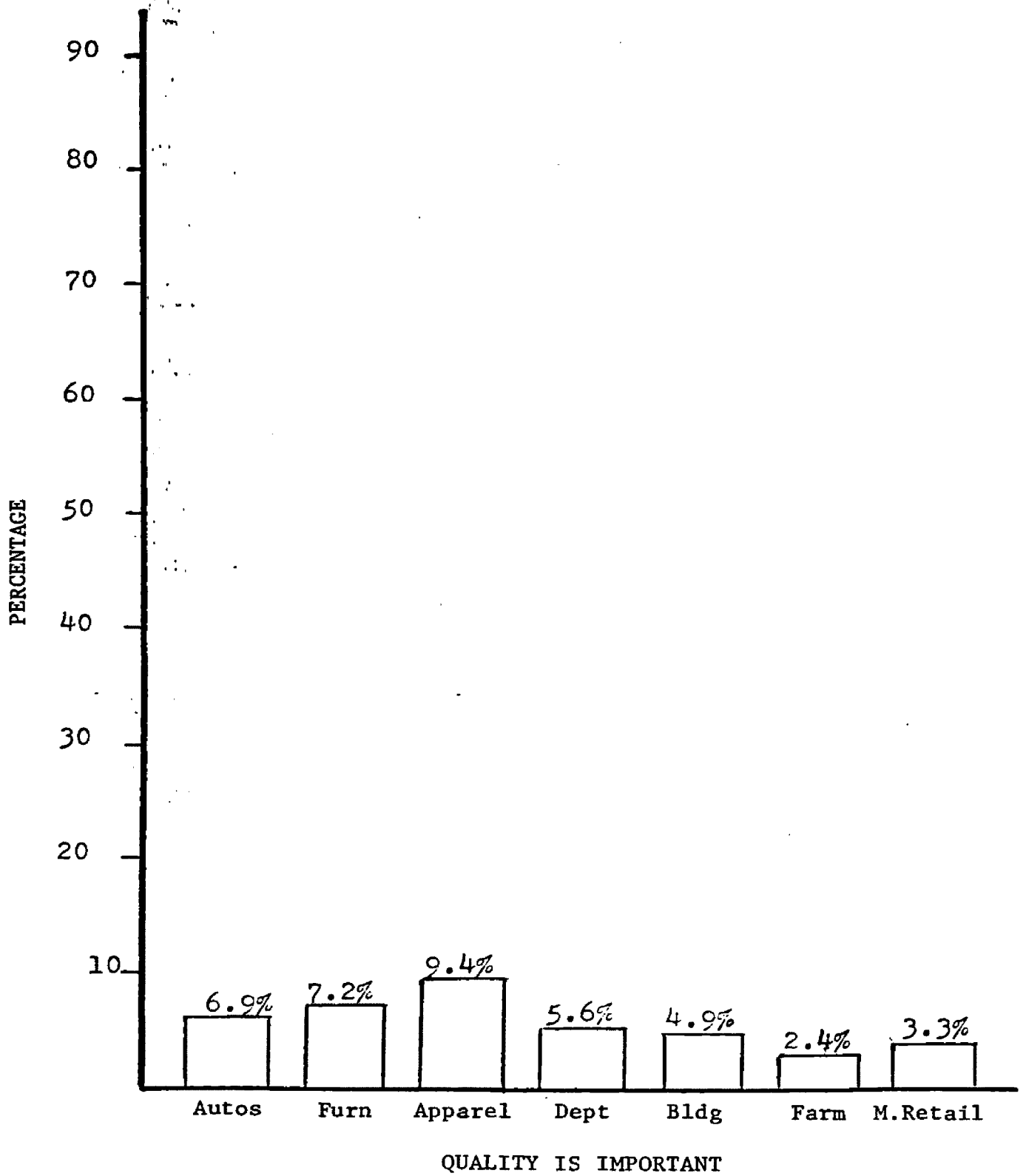
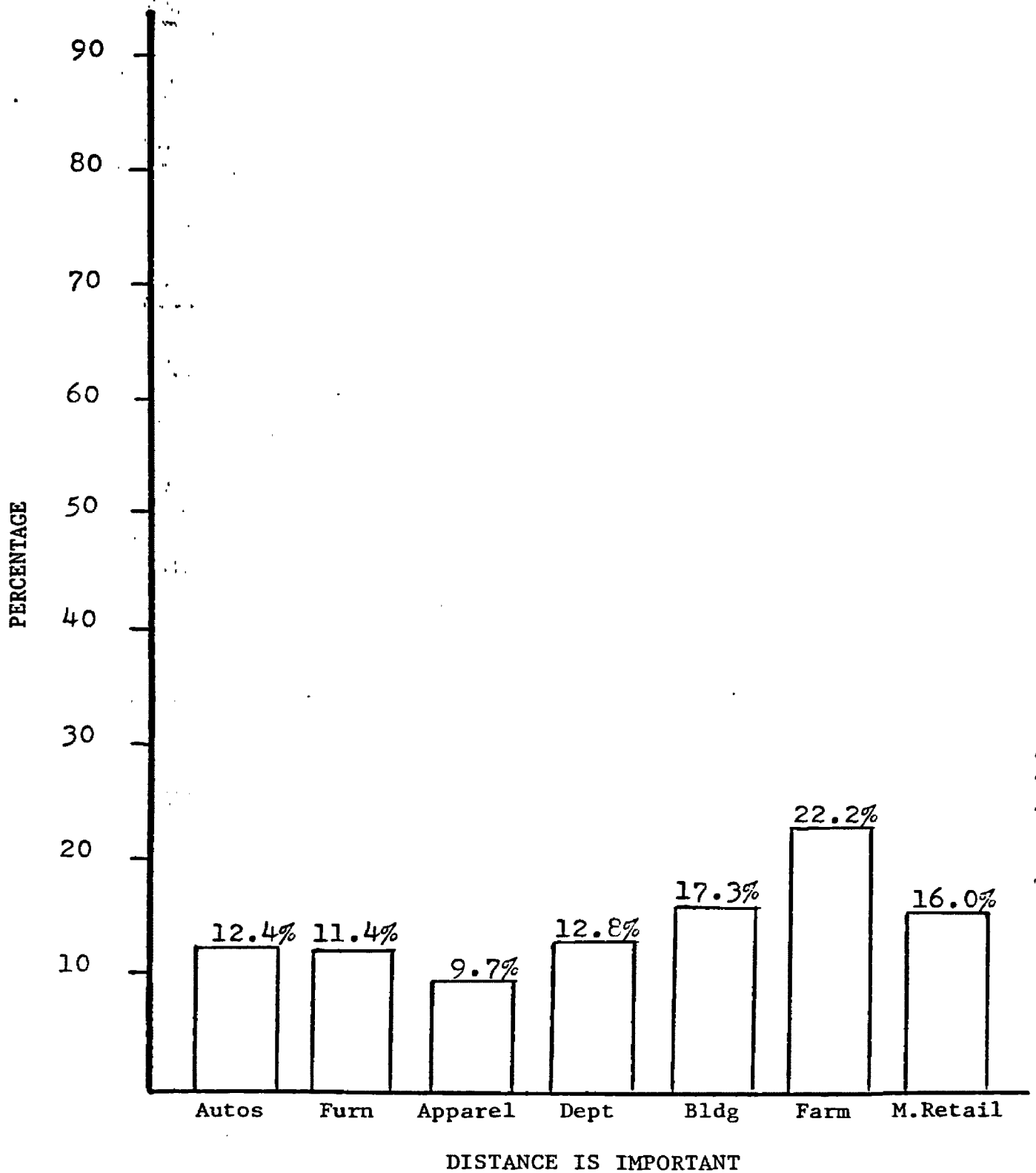Fig. 25.--Why Great Falls shoppers prefer shopping for selected goods by reason.
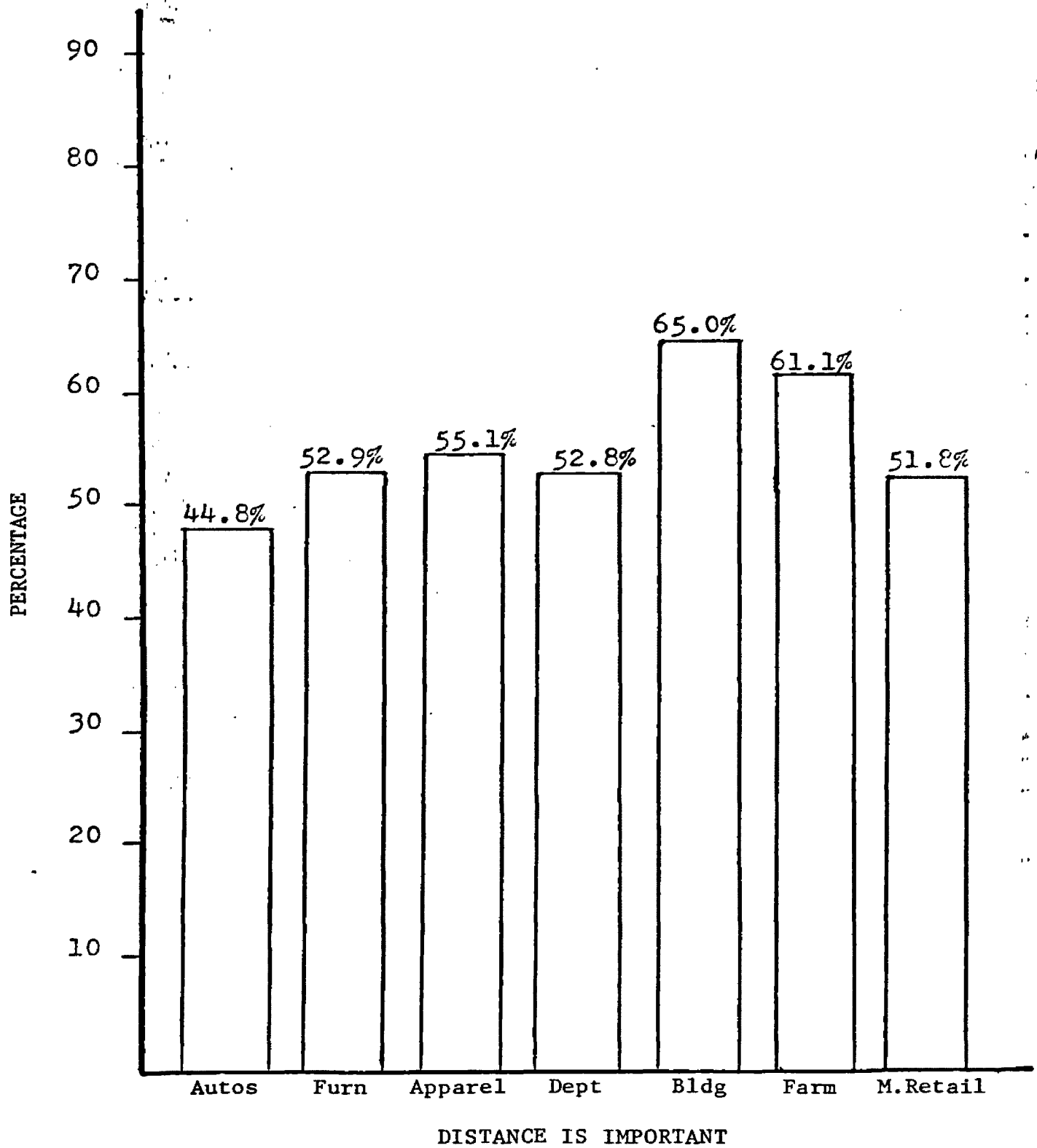
Fig. 26.--Why hometown shoppers prefer
shopping for selected goods by reason.



DISTANCE IS IMPORTANT

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