

CUSTOMER SERVICES IN WESTERN EUROPE

1988 ANNUAL REPORT

INPUT

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Customer Service Programme—Europe

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1989 Annual Report***

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Abstract

This report presents and summarises data relating to user perceptions of service performance and needs in the customer services market of the computer industry throughout Western Europe.

The data presented has been collected by INPUT during 1989 in a survey of computer users in the following countries:

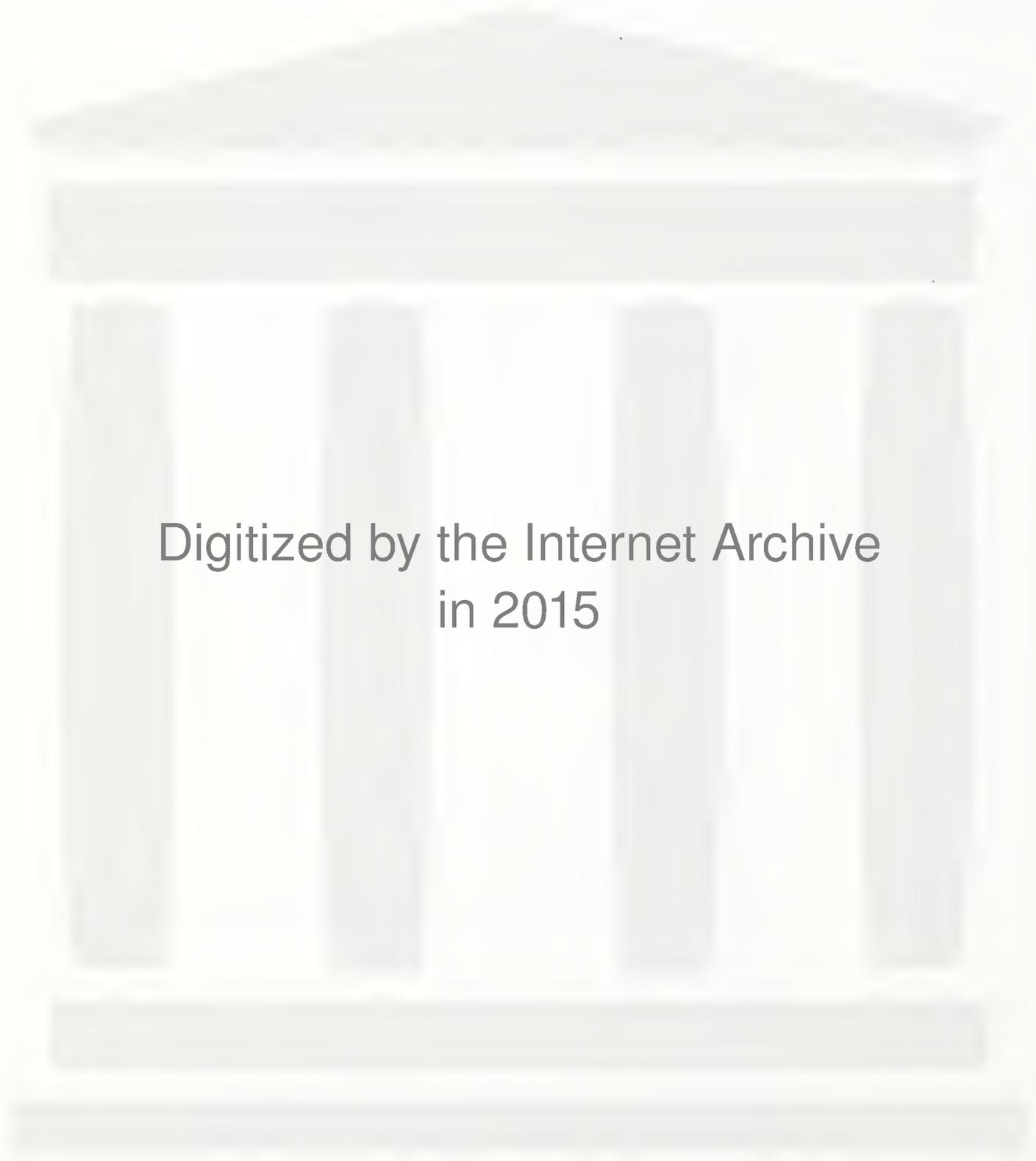
- Belgium
- France
- West Germany
- The Netherlands
- Italy
- Norway
- Spain
- Sweden
- Switzerland
- The United Kingdom

The report will help service and marketing directors and managers assess their company's performance against that of their competitors on key aspects of support and compare various performance factors in the individual countries.

In addition, the report relates trends between 1988 and 1989 for defined aspects of customer service. This data allows the comparison of user needs with actual service performance and provides guidance for the shaping of future service strategies.

The report can also be used to prepare company responses to surveyed customer views and opinions in order to address issues related to customer satisfaction.

This report contains 422 pages including 413 exhibits.



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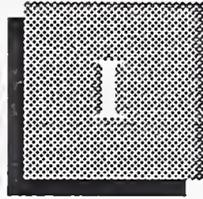
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Introduction





Introduction

A

Objectives and Scope

This INPUT 1989 annual report on the customer services market in Western Europe presents the computer user's view of many aspects of computer system service and support.

The report is intended to provide service vendors with the information needed to assess the performance levels achieved by their service organisations. The report indicates levels of user satisfaction and the perceived value of service; it identifies the relative strengths and weaknesses of service performance, in a number of related service aspects, by assessing how well user needs are being met. In particular, the report identifies major service issues and aspects of service that are potential causes of concern to users.

The views presented in this report were derived from 1,626 user interviews, representing users of all the major equipment vendors' computer systems, with significant cell sizes in the major Western European countries. Details of the distribution of user interviews are provided in Appendix D.

The analysis contained within this report is intended to be used by service directors and managers as a gauge of current performance and as a barometer of future needs.

B

Methodology

The data presented in this report was compiled from interviews with 1,626 computer users throughout Western Europe. Users were chosen at random and interviewed by telephone in their native language. The basis of the interview was a questionnaire relating to some 150 aspects of service and support, compiled in discussion with major service vendors. The questionnaire is included as Appendix F.

In order to take full advantage of some aspects of the data, the analysis has been concentrated primarily on companies and secondarily on countries.

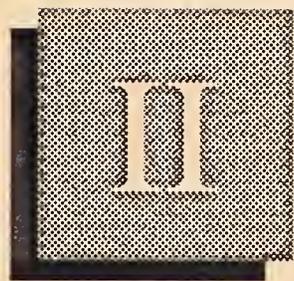
A guide to the interpretation of the statistics contained within this report is provided in Chapter II. In order to maximise use of the data contained in the report, it is essential to read this chapter first.

C

Report Structure

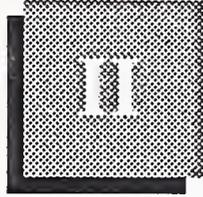
The remaining chapters of this report are as follows:

- Chapter II explains the basis of the statistics, the correct method of interpretation and ways of doing simple comparisons.
- Chapter III is an Executive Overview of Western European customer service and presents the data in condensed form.
- Chapter IV contains analysis relating to user satisfaction with vendor hardware service and software support, presented in the form of individual vendor performance data.
- Chapter V presents analysis of vendor hardware service and software performance trends between 1988 and 1989.
- Chapter VI provides an analysis of user satisfaction with hardware service and software support in Western Europe overall and in ten European countries.
- Chapter VII presents analysis of service performance trends between 1988 and 1989, in Western Europe overall and in ten European countries.
- Appendixes A, B and C contain user data for Western Europe as a whole, for individual countries, and for individual equipment vendors.
- Appendix D contains additional statistical data.
- Appendix E provides customer service definitions.
- Appendix F contains the questionnaire used for user interviews.



Interpretation of the Data





Interpretation of the Data

A

Definitions

- Hardware: any computer system or peripheral system.
- Software: operating systems software, NOT applications.
- Large system: a system that is considered by the vendor as forming part of that vendor's large system product range, for example IBM 309X and 308X, Bull DPS 8, or Digital VAX 8XXX.
- Medium system: a system that is considered by the vendor as forming part of that vendor's medium systems product range, for example IBM 43XX, S38, Bull DPS7, or Digital VAX 6XXX.
- Small system: a system that is considered by the vendor as forming part of that vendor's small system product range, for example IBM S36 and S34, Bull DPS 6, or Digital Microvax.
- Population: the full sample of 1,626 user interviews.
- Population mean: the average of all the values against a specific question.
- Standard error: (of the mean) is the standard deviation (SD) of the sample divided by the square root of the sample size—for example, the square root of 1,626 is 40.3.

B

Population Means and Standard Error

Throughout this report, mean values are used and presented for comparison against the mean values of lesser samples, so that impressions can be gained of deviations from the norm.

- Population: the mean value of the total population sample of 1,626 interviews.

- Population (L): the mean value of the large systems portion of the population (441 interviews with large systems users).
- Population (M): the mean value of the medium systems portion of the population (784 interviews with medium systems users).
- Population (S): the mean value of the small systems portion of the population (401 interviews with small systems users).

Overall vendor sample means are listed in Exhibits D-5 and D-6 in Appendix D.

Graphical presentation of data is used extensively in the presentation of trend data in this report; the interpretation of these presentations is as follows:

- In comparison of vendor or country satisfaction rating trends for a list of service items, decline in user satisfaction is highlighted by shading.
- In charts relating 1988 and 1989 importance ratings for a total vendor or country sample, increases in importance are highlighted by shading.

In addition, the standard error for the total sample is given separately in order for a more exacting test of significance (of deviations from the norm or average) to be applied. These are listed in Exhibits D-7 to D-12 in Appendix D.

In general, the collection of values from a large sample follows a normal distribution; readers of this report can accept that a deviation of their own means of company data, of more than four times the standard error from the population sample mean, is very unlikely. Hence the deviation would indicate a significant difference. In statistical terms, the probability of the mean for the total of all users in Europe being more than three times the standard error of the mean of the sample (1,626) away from that sample mean, is about 0.3%.

However, in certain instances there is a skew towards the "ten" value, mostly in the importance ratings, but separate analysis may be necessary for specific cases. In some of the data (for instance, that relating to response in repair times), there are a number of respondents who (due to gross dissatisfaction) have put in very long times which are not representative of the general performance levels. This can lead to a distribution skew that needs to be taken into account when interpreting means and standard deviations.

The standard guide to skew is where the model minus the mean values are greater than three times the mean minus the median values. This can be detected in the INPUT data where the standard deviation encompasses zero, i.e., the SD must be displaced from the mean above zero.

The evaluation of skew distributions for individual vendors is not within the scope of the INPUT annual survey, but that data may be analysed as an additional service if required.

In analysing the data presented in this report, INPUT has carefully scanned all the answers given during the interviews; when these answers were considered to be a gross departure from the norm, the data was discounted. The objective of this exercise was to eliminate the worst effects of skew on distributions, due to gross distortions.

Statistically, small sample sizes create difficulties, due to the fact that they may not be totally representative of the population they represent. INPUT has therefore adopted the following guidelines on sample sizes:

- Sample sizes of less than 15 have in general not been fully analysed. Exceptions to this exist in cases where the sample was considered to form an important part of a larger sample. An example of this would be a vendor sample that was comprised of ten large systems in a vendor population of thirty total systems.
- The minimum sample size of 15 has been applied flexibly, depending on the circumstances—i.e., a sample size of 14 would be included in the analysis.
- Where deemed appropriate, results for sample sizes of less than 15 have been included in the interest of completeness.
- Where results are not shown in individual data, they have been included in overall averages as a representative portion of the total sample.

C

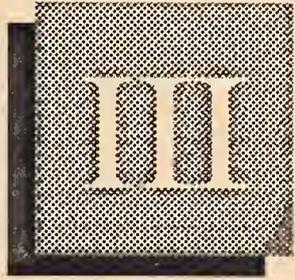
Ratings and Satisfaction Index

Except where otherwise stated, ratings for importance and satisfaction are on a scale of 0 to 10, where:

- Importance
 - 0 = of no importance whatsoever
 - 5 = of average importance
 - 10 = extremely important
- Satisfaction
 - 0 = total and absolute dissatisfaction
 - 5 = average satisfaction
 - 10 = total satisfaction

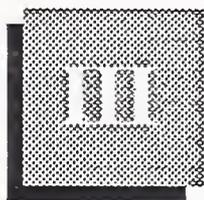
The satisfaction index throughout this report is based on the difference between the importance and satisfaction ratings for specific aspects of service. The questions concerning importance and satisfaction were asked at the same time and the answers therefore reflect the respondents' value judgement at that time.

- Figures of 10 and 10 or 6 and 6 etc., give a difference value of zero, indicating that the importance needs are completely satisfied.
- Figures of importance 8 and satisfaction 9 would indicate overfulfillment of the importance needs and would give a satisfaction index of -1. In INPUT's analysis, an overfulfillment of -1 is represented as (1).
- Figures of importance 6 and satisfaction 5 indicate underfulfillment of the importance needs, the degree of underfulfillment being related to the magnitude of this difference.
- Satisfaction index can thus be interpreted as follows:
 - (1) = overfulfilled or oversatisfied
 - 0 = completely satisfied
 - 1 = concerns and worries
 - 2 = real dissatisfaction
 - 3 = pain level



Executive Overview of Western Europe





Executive Overview of Western Europe

A

Major Issues and Trends

The major issues and trends in user satisfaction with vendor service that emerge from INPUT's survey of 1,626 computer system users in Western Europe are listed in Exhibit III-1. These major issues and trends can be summarised briefly:

EXHIBIT III-1

Major Issues and Trends

- Declining user satisfaction
- User concern with software support
- Hardware service concern
 - Spares availability
 - Engineer skills
 - Documentation
- Increasing system failure rate
- Vendor software support quality image

- User satisfaction with vendor service is indicated as having declined over the last three years, 1987 to 1989. For example, user satisfaction with hardware service over this three-year period has declined from a satisfaction index (Δ SI) of 0.2 in 1987 to 0.9 in 1989.
- User satisfaction with software support has also declined over the three-year period 1987 to 1989. More importantly, user ratings for

satisfaction with software support have reached a level where the satisfaction index (Δ SI) is suggesting a degree of concerns and worries with the overall level of software support provided.

- Three aspects of hardware service—spares availability, engineering and documentation—suggest a degree of concern and worry among users with the level of service received. For example, user satisfaction with documentation has declined from a satisfaction index (Δ SI) of 0.5 in 1988 to 1.2 in 1989. User satisfaction with spares availability indicates a marginal decline over the three-year period 1987 to 1989, but more importantly, in both 1988 and 1989 user satisfaction levels were suggesting a degree of concerns and worries with this aspect of hardware service.
- User response indicates that system failure rates have increased over the three-year period 1987 to 1989. The reliability of system hardware components is claimed by vendors to be continually improving; however, as the overall complexity of systems increases, user feedback suggests that these component-level improvements are not being realised by users.
- Consistent with a decline in user satisfaction with software support, the vendors' software support quality image also indicates a decline. In 1989, INPUT surveyed users of fifteen vendors' computer equipment. Of these fifteen equipment vendors, user data indicates that thirteen vendors retain a software support quality image that suggests a degree of user concern and worries. This level of decline in vendor software support quality image compares with user data collected in 1988 by INPUT, in which only seven vendors out of fourteen were indicated as having a quality image at the concern level.

Based on user data that indicates an overall decline in user satisfaction with service, particularly in the area of software support, INPUT recommends that vendors review and assess user requirements of service. Data obtained from user surveys indicates that the primary user need is for quality service.

B

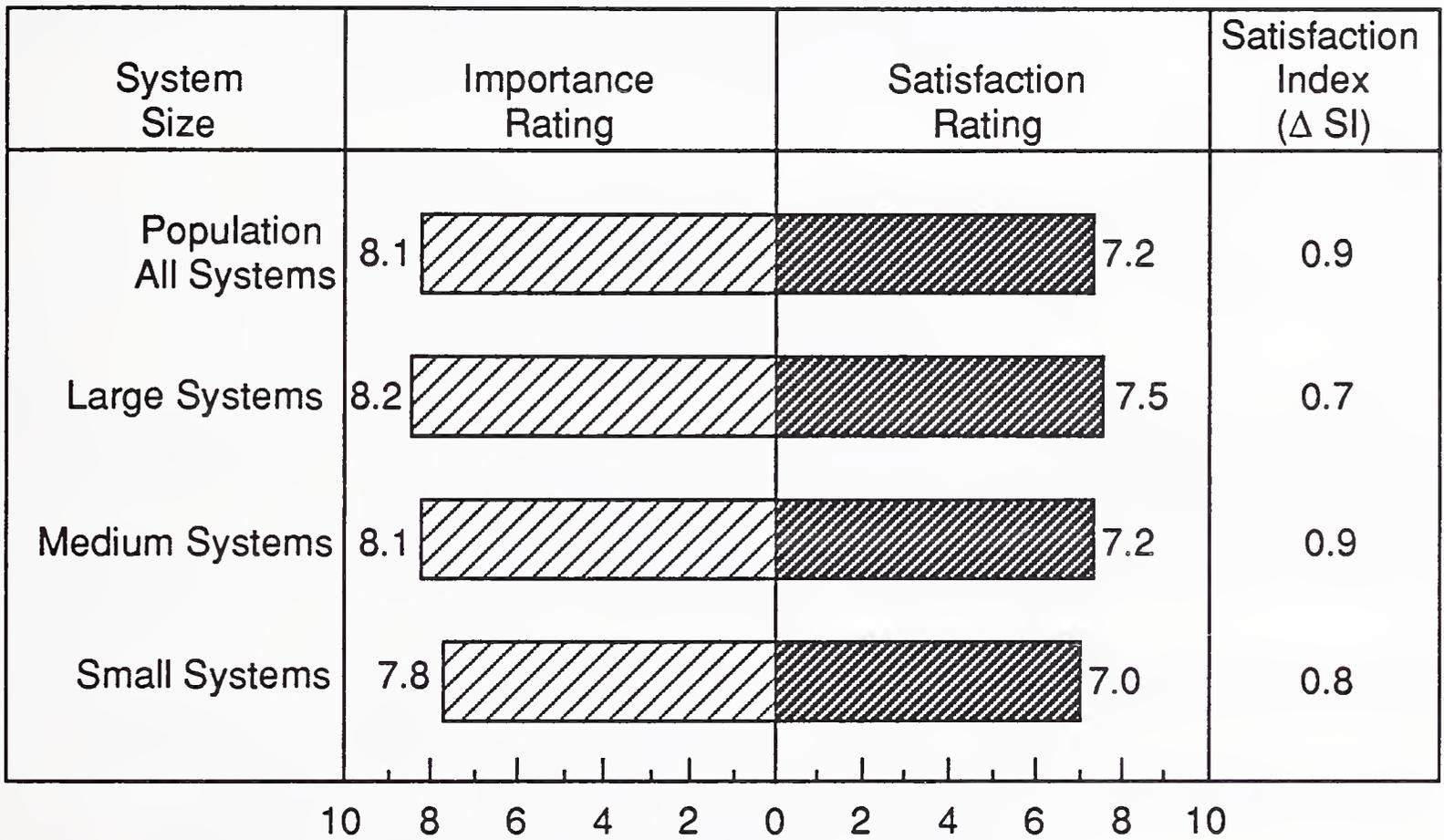
1989 Service Performance

1. Western Europe—Overall Hardware Service Performance

Overall hardware service performance in Western Europe is illustrated in Exhibit III-2. This exhibit compares the performance ratings of the overall user sample with those of the three system size segments. A relatively high degree of similarity exists between user satisfaction levels in the three system size segments; differences of less than 0.2 are generally considered insignificant in this report.

EXHIBIT III-2

Western Europe Overall Hardware Service Performance



Sample Sizes: Total = 1,626
 Large = 441
 Medium = 784
 Small = 401

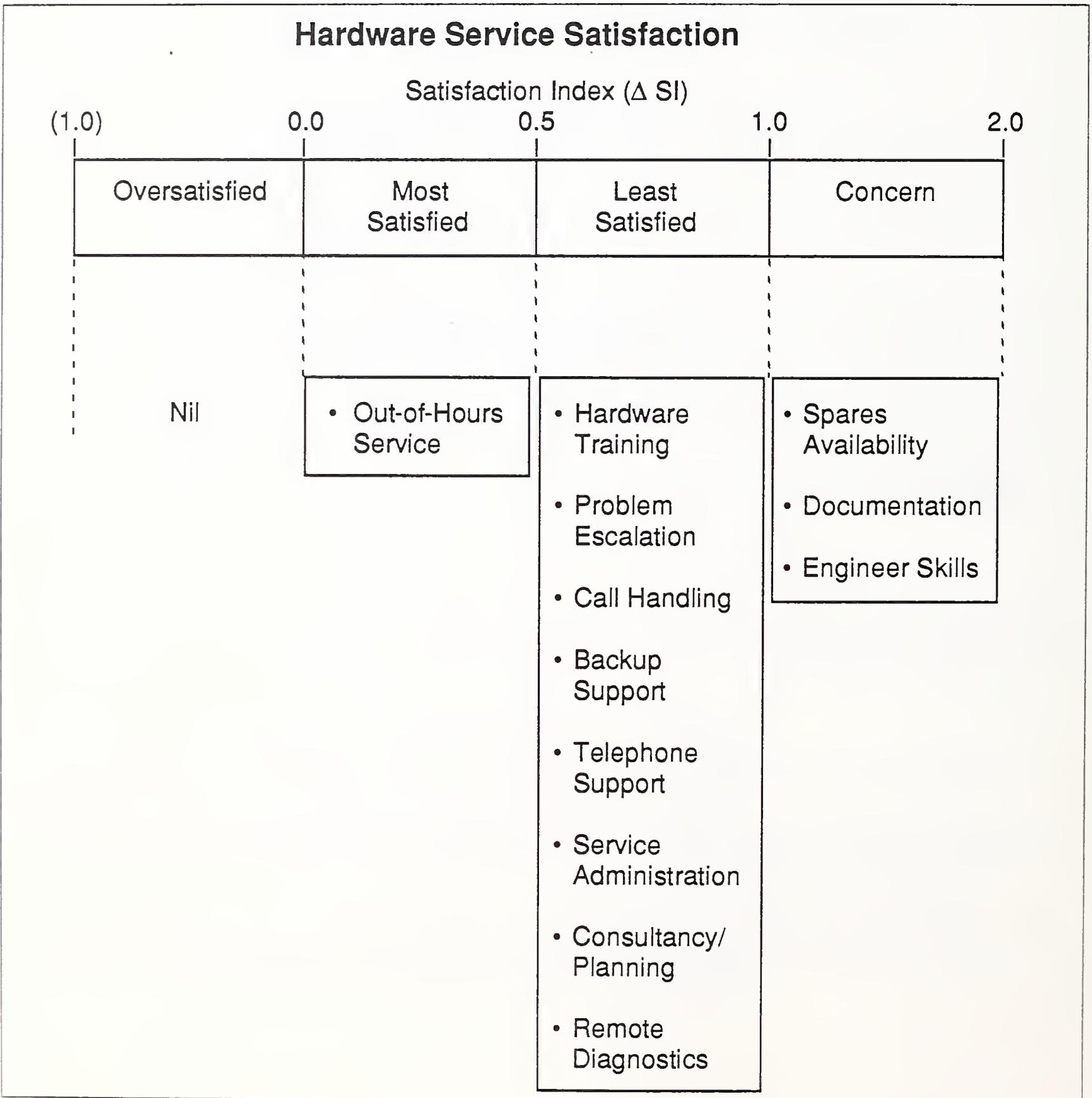
A significant decline in user satisfaction with hardware service occurred between 1988 and 1989. The satisfaction index (Δ SI) indicates a decline from 0.4 in 1988 to 0.9 in 1989. This level of user satisfaction is close to that at which user concerns and worries become apparent. The medium systems segment user satisfaction rating of 0.9 represents the greatest decline.

Vendors are recommended to review hardware service policies and strategies and to reassess user requirements in order to prevent further decline in user satisfaction with hardware service.

2. Hardware Service Satisfaction

Data contained in Exhibit III-2 results from the mean value of user satisfaction with twelve aspects of hardware service. Exhibit III-3 provides details of how user satisfaction levels within the overall mean are distributed related to the twelve aspects of hardware service surveyed in 1989. In Exhibit III-3 the twelve aspects of hardware service are banded into related categories of user satisfaction levels:

EXHIBIT III-3



- The aspects of hardware service considered to be best satisfied by vendor performance are those indicating satisfaction levels between 0 and 0.4. Exhibit III-3 lists one aspect of hardware service in this category.
- Aspects of hardware service that are least adequately satisfied by vendor performance are those indicating satisfaction levels between 0.5 and 0.9. Exhibit III-3 lists eight aspects of hardware service in this category. Items listed under this least satisfied category need careful study and monitoring by vendors. For example, engineer skills and call handling are rated close to the level at which dissatisfaction becomes a subject of user concern. Further examination of subsets of the population sample, at either the vendor or the country level, indicates that within these smaller samples, some aspects of hardware service are rated at the concern level by users.
- Three aspects of hardware service—spares availability, engineer skills and documentation—are rated by users as being subject to a degree of concerns and worries. The degree of user dissatisfaction varies within the smaller subset samples, and these three aspects of hardware service performance warrant further investigation by vendors.

The overall decline in user satisfaction with hardware service is apparent from studying comparative 1988 user data. In 1988:

- Six aspects of hardware service were listed in the most satisfied category, compared with one aspect in 1989.
- Five aspects of hardware service were listed in the least satisfied category, compared with eight aspects in 1989.
- One aspect of hardware service was rated at the concern level compared with three aspects in 1989.

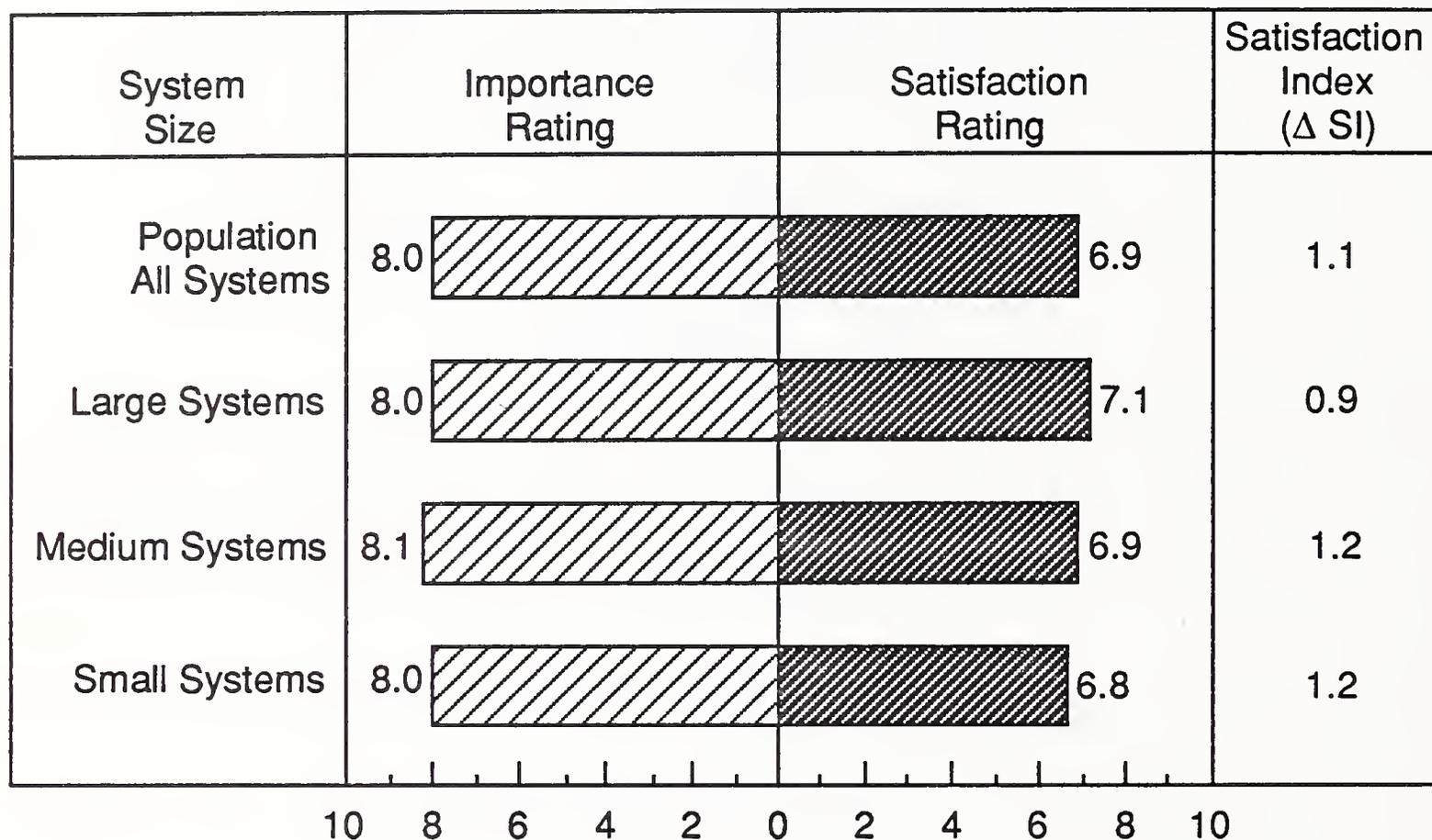
3. Western Europe—Overall Software Support Performance

Overall software support performance in Western Europe is illustrated in Exhibit III-4. This exhibit compares the performance rating of the overall user sample with those of the three system size segments.

Data contained in Exhibit III-4 indicates that overall user satisfaction with software support has reached the level at which degrees of concern and worry become apparent. The level of dissatisfaction is indicated by a satisfaction index (Δ SI) of 1.1. Large system users are marginally more satisfied with software support than medium and small systems users. However, the satisfaction level achieved in the large systems segment is still very close to the concern level.

EXHIBIT III-4

Western Europe Overall Software Support Performance



Sample Sizes: Total = 1,626
 Large = 441
 Medium = 784
 Small = 401

User satisfaction with software support indicates a relatively significant decline between 1988 and 1989. This decline is represented by a satisfaction index (Δ SI) rating of 0.6 in 1988, compared with 1.1 in 1989.

4. Software Support Satisfaction

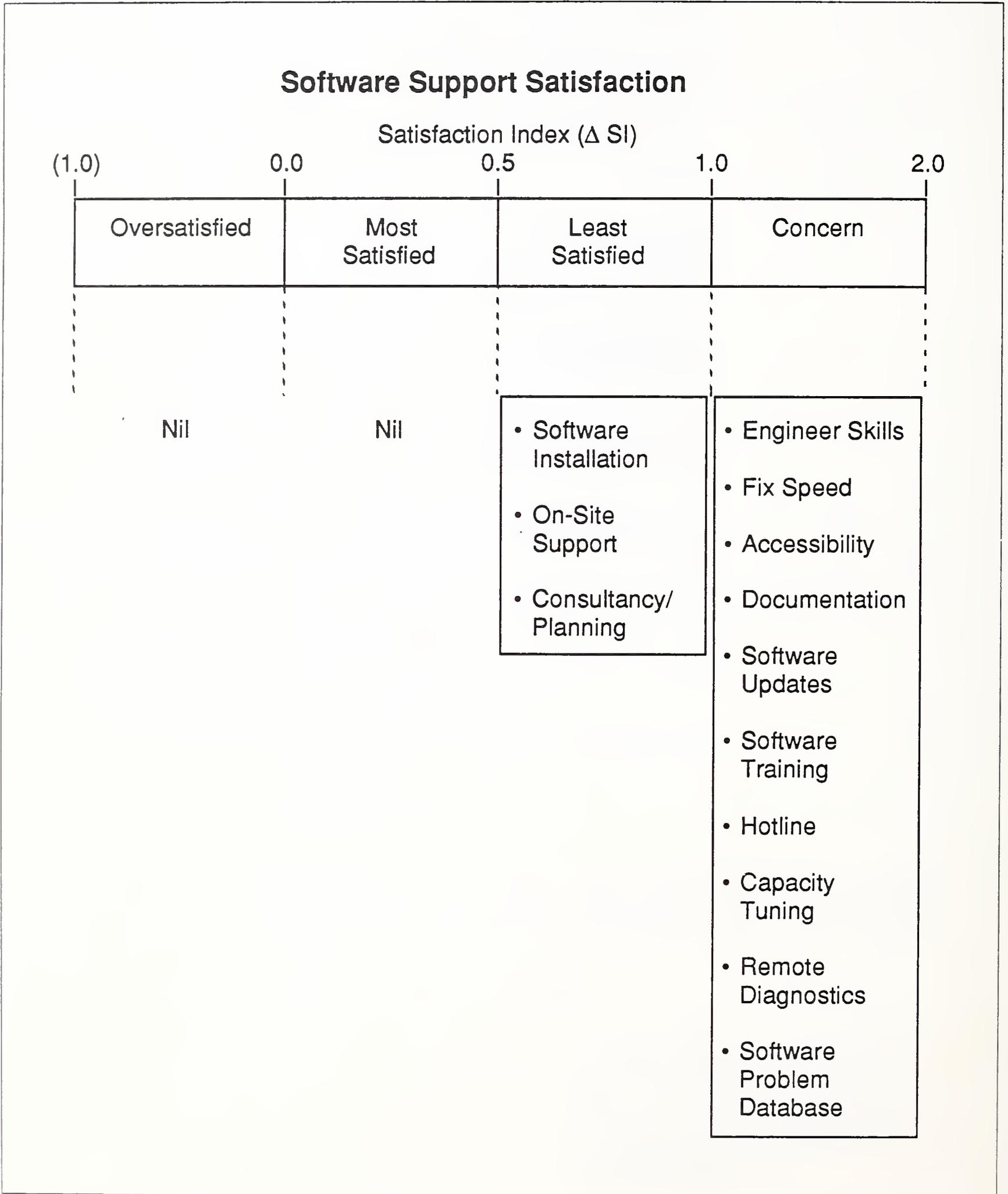
Data contained within Exhibit III-4 results from the mean value of user satisfaction with thirteen aspects of software support. Exhibit III-5 provides details of how user satisfaction levels within the overall mean are distributed among the thirteen aspects of software support surveyed in 1989. In Exhibit III-5 the thirteen aspects of software support are banded into related categories of user satisfaction levels:

- The aspects of software support considered to be best satisfied by vendor performance are those indicating satisfaction levels between 0 and 0.4. In 1989 none of the thirteen aspects of software support attained this rating category.
- Aspects of software support that are least adequately satisfied by vendor performance are those indicating satisfaction levels between 0.5 and 0.9. Exhibit III-5 lists three aspects of software support in this category.
- Ten aspects of software support are rated by users as being subject to some concerns and worries. The degree of user dissatisfaction varies within the smaller subset samples, at either the country or vendor level. The number of aspects of software support rated at the concern level warrants serious study and review by vendors. That ten out of thirteen aspects of software support surveyed in 1989 indicate user concern underlines the potentially serious nature of the decline in user satisfaction with software support.

The overall decline in user satisfaction with software support is apparent from studying comparative 1988 user data. In 1988:

- Six aspects of software support were listed in the most satisfied category, compared with 1989, when no aspect of software support achieved this rating.
- Five aspects of software support were listed in the least satisfied category, compared with three aspects in 1989.
- Two aspects of software support were rated at the concern level, compared with ten in 1989.

EXHIBIT III-5



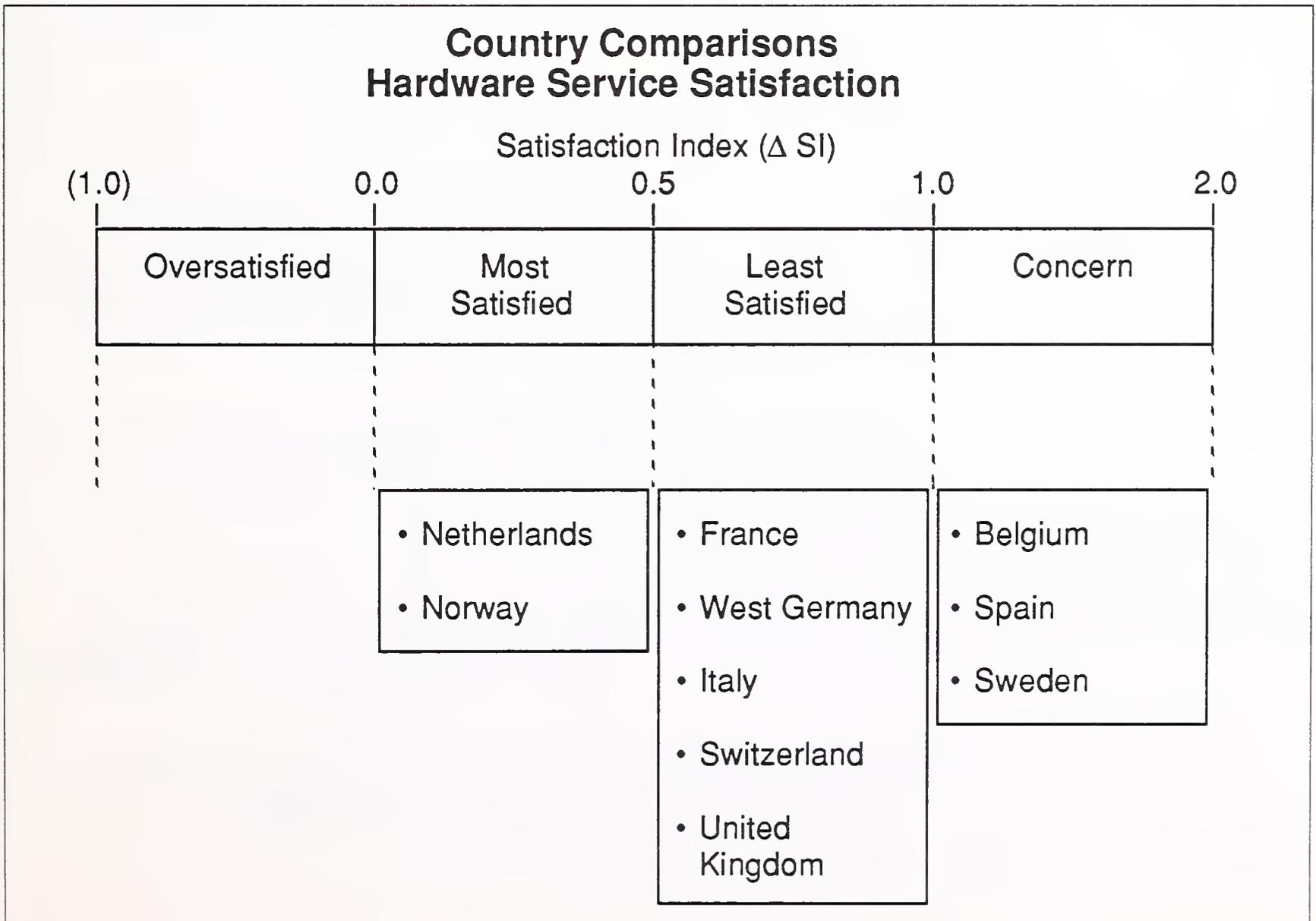
C
1989 Country Comparisons

1. Hardware Service Satisfaction

Exhibit III-6 provides data indicating user satisfaction with hardware service in the ten individual country markets surveyed by INPUT in 1989. This exhibit provides details of how user satisfaction levels within the overall mean are distributed at the country level. In Exhibit III-6, user satisfaction levels in the ten country markets surveyed are banded into related categories:

- The countries in which users are most satisfied by vendor hardware service performance are those countries indicating satisfaction levels between 0 and 0.4. Exhibit III-6 lists two country markets in this category.
- The countries in which users are least satisfied by vendor hardware service performance are those countries indicating satisfaction levels between 0.5 and 0.9. Exhibit III-6 lists five country markets in this category.

EXHIBIT III-6



- Users in three country markets—Belgium, Sweden, and Spain—rate vendor hardware service performance at the level of concerns and worries. Vendors are recommended to review user requirements of hardware service in these countries in order to reassess user needs and provide the level of service required by users.

The overall decline in user satisfaction with hardware service is apparent from studying comparative 1988 user data. In 1988:

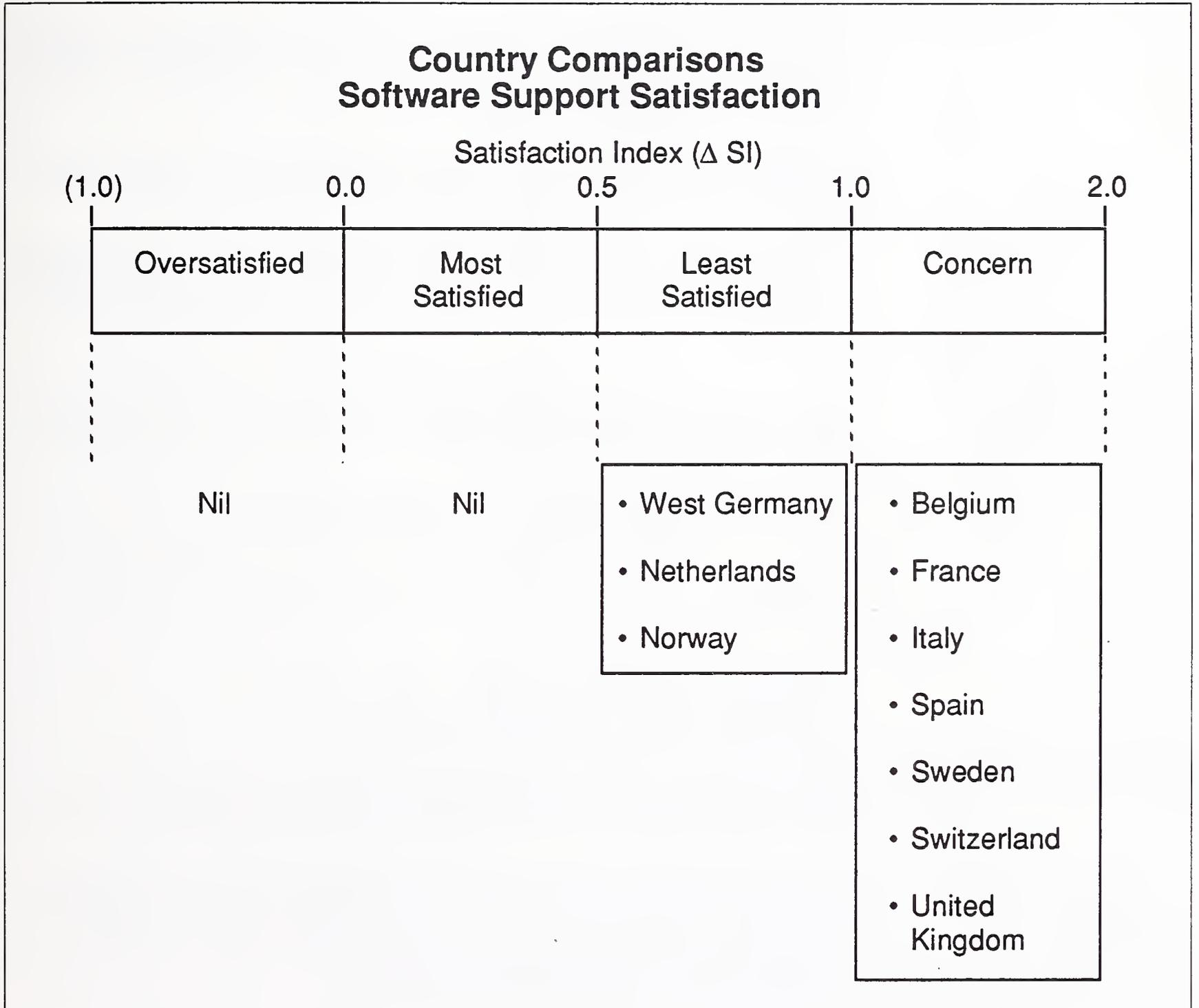
- User satisfaction in one country market, Belgium, indicated oversatisfaction of user hardware service needs. There were no country markets listed in this category in 1989. Further, users in Belgium indicated concern with the level of hardware service received in 1989.
- Two country markets were listed as being most satisfied with vendor hardware service performance; 1989 results are similar.
- Six country markets were listed as being least satisfied with vendor hardware service performance, compared with five country markets in 1989.
- One country market was listed in which users were concerned with vendor hardware service performance, compared with three country markets in 1989.

2. Software Support Satisfaction

Exhibit III-7 provides data indicating user satisfaction with software support in the ten individual country markets surveyed by INPUT in 1989. This exhibit provides details of how user satisfaction levels within the overall mean are distributed at the country level. In Exhibit III-7, user satisfaction levels in the ten country markets surveyed are banded into related categories:

- The countries in which users are most satisfied by vendor software support performance are those countries indicating user satisfaction levels between 0 and 0.4. No country markets are listed in this category.
- The countries in which users are least satisfied by vendor software support performance are those countries indicating user satisfaction levels between 0.5 and 0.9. Exhibit III-7 lists three country markets in this category.
- Users in seven country markets rate vendor software support performance at the level which suggests concerns and worries.

EXHIBIT III-7



The fact that user concern with vendor software support performance is subject to user concern in seven out of ten country markets surveyed confirms the serious nature of declining user satisfaction with software support. This data should assist vendors in focusing on key areas in need of review.

Overall decline in user satisfaction with software support is apparent from studying comparative 1988 data. In 1988:

- User satisfaction in one country market, Belgium, indicated oversatisfaction of user software support needs. There were no country markets

listed in this category in 1989. In addition, users in Belgium indicated concern with the level of software support received in 1989.

- Two country markets were listed as being most satisfied with vendor software support performance, compared with 1989, when no country markets were rated at this level.
- Four country markets were listed as being least satisfied with vendor software support performance, compared with three in 1989.
- Users in three country markets rated vendor software support performance at the concern level, compared with users in ten country markets in 1989.

D

Service Trends

Three key trends emerge from INPUT's 1989 survey of 1,626 computer users throughout Western Europe:

- Decline in user satisfaction with hardware service
- Decline in user satisfaction with software support, to the level of concern
- Increase in system failure rates

1. Hardware Service Satisfaction Trends

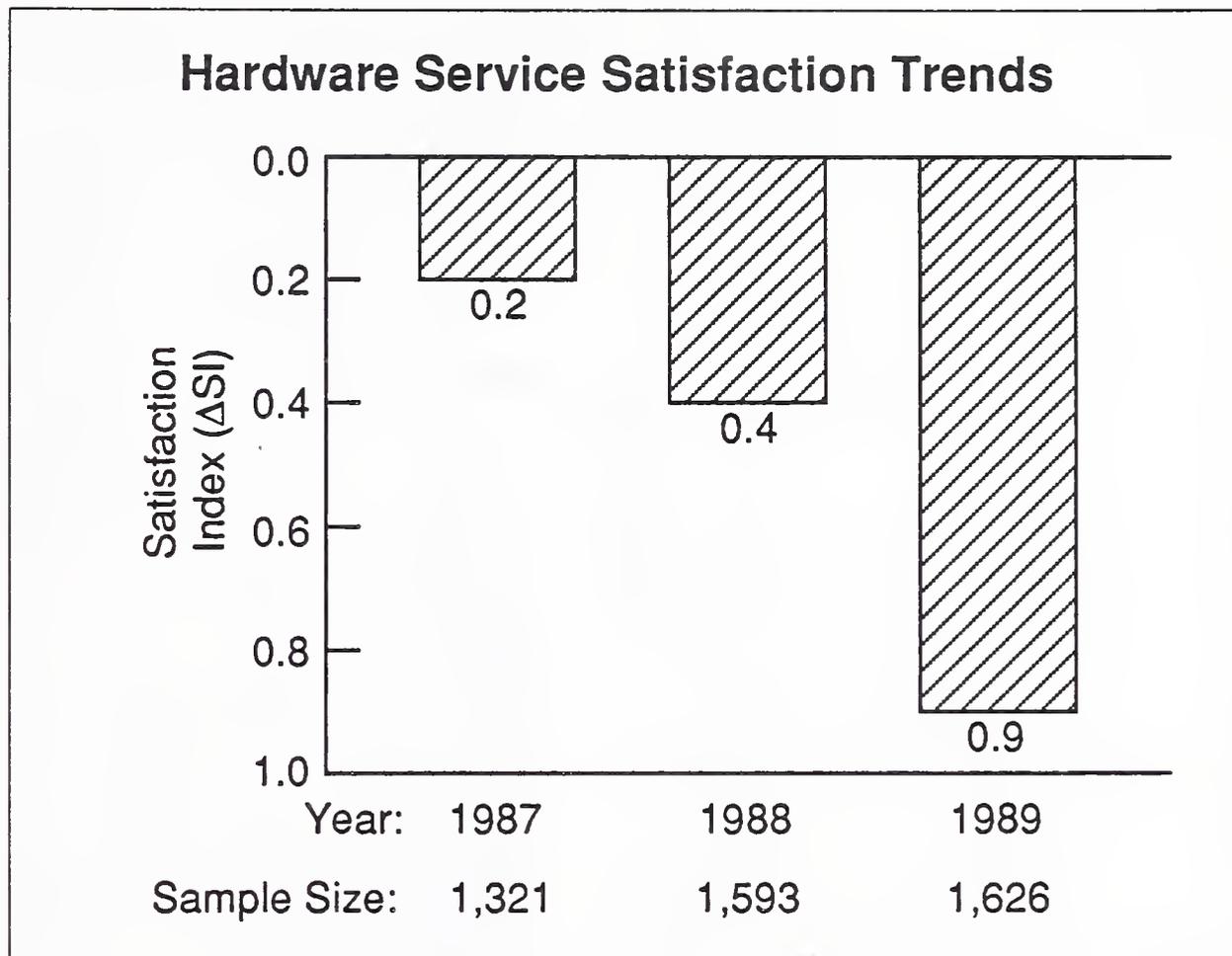
Exhibit III-8 illustrates trends in user satisfaction with hardware service in Western Europe, over the three-year period 1987 to 1989.

Differences in satisfaction index (Δ SI) of less than 0.2 are considered insignificant in this report. On this basis, the annual decline in user satisfaction is indicated as being marginal between 1987 and 1988, but more significant between 1988 and 1989.

Also of relative significance is the acceleration of the decline in user satisfaction with hardware service. Vendors are cautioned that should this trend continue in 1990, user satisfaction levels are likely to approach, or reach, the level where dissatisfaction becomes a subject of user concern.

User satisfaction varies within the subsets of data at both the country and vendor levels. Vendors are recommended to review hardware service strategies and policies, and to reassess specific user needs in order to combat this trend of increasing user dissatisfaction with hardware service.

EXHIBIT III-8

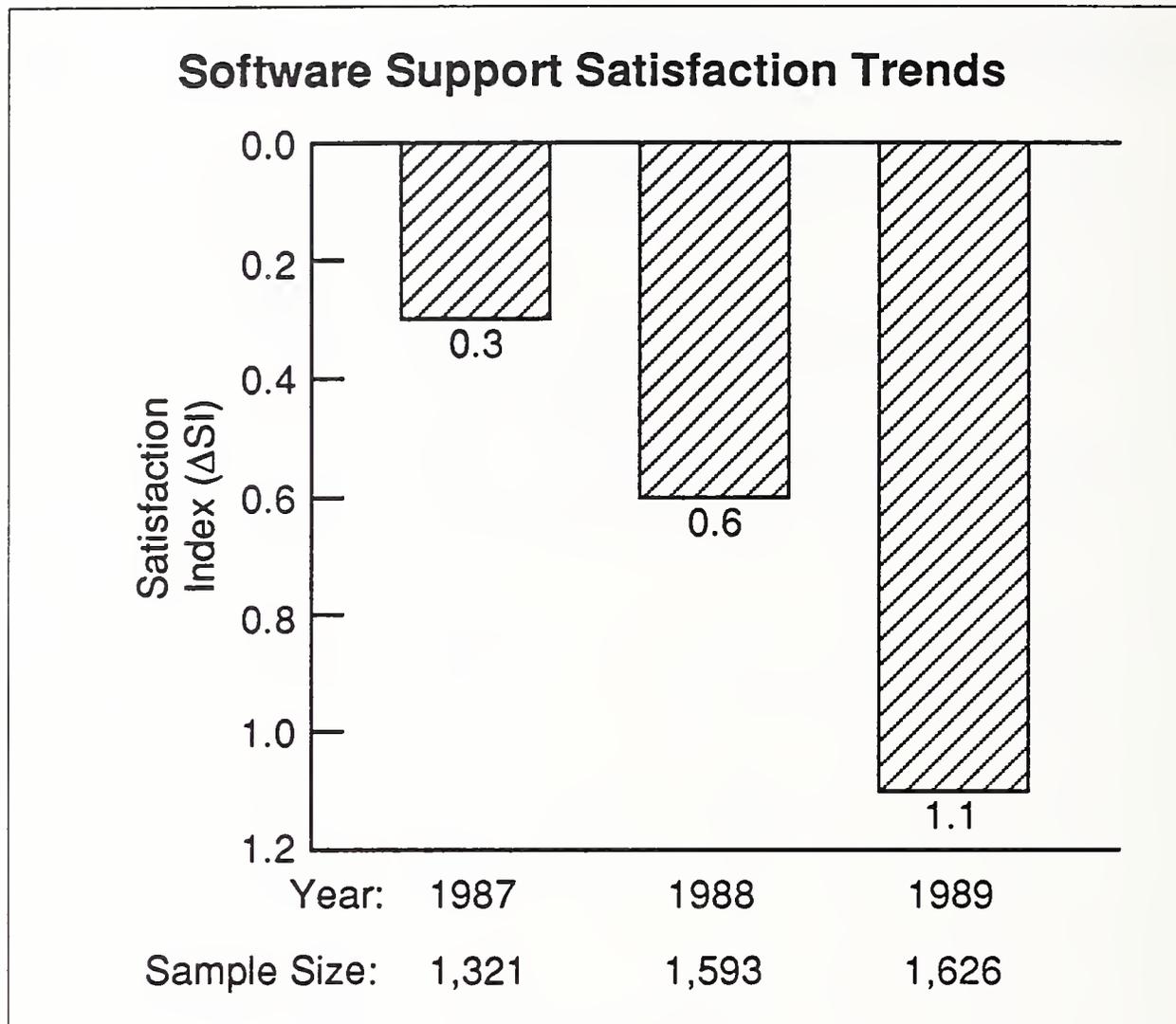


2. Software Support Satisfaction Trends

Trends in user satisfaction with software support are illustrated in Exhibit III-9. This exhibit shows user satisfaction with software support in Western Europe over the three-year period 1987 to 1989.

Exhibit III-9 indicates a marginal decline in user satisfaction with software support between 1987 and 1988. Changes in satisfaction index (Δ SI) of less than 0.2 are considered insignificant in this report. The change in user satisfaction between 1988 and 1989 is relatively significant, having reached a level where the satisfaction index (Δ SI) indicates overall user concerns and worries with software support.

EXHIBIT III-9



The level of user dissatisfaction with software support can be assessed from study of the subset samples of the data:

- Users in seven countries out of ten surveyed by INPUT in 1989 indicate dissatisfaction with software support at a level which suggests concerns and worries.
- Out of thirteen specific aspects of software support surveyed in 1989, users indicate dissatisfaction with ten aspects, at a level suggesting concerns and worries.
- Users of fifteen vendors' computer systems were surveyed in 1989. Of these, users of thirteen vendors' systems expressed dissatisfaction with software support at a level indicating concerns and worries.

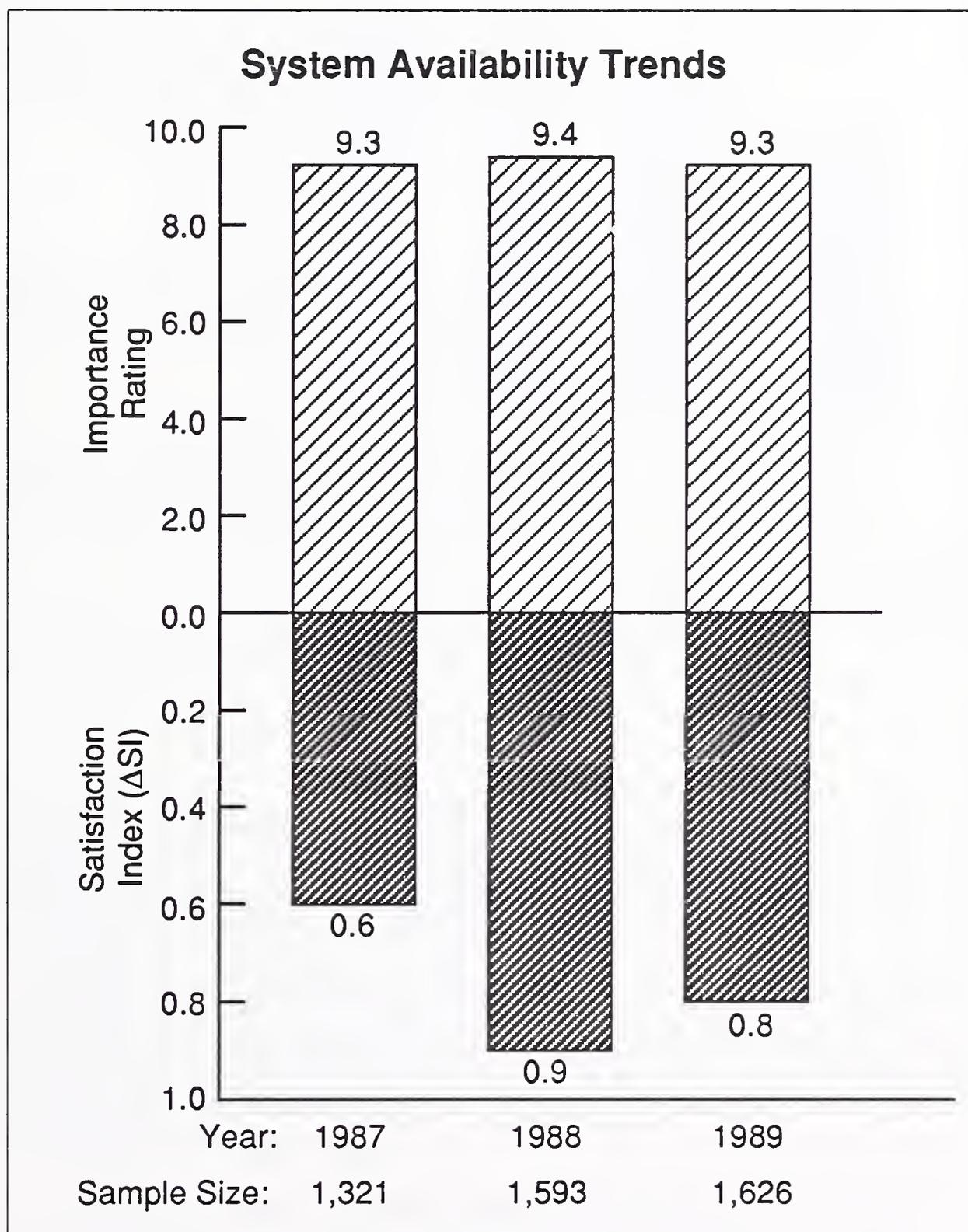
INPUT considers that user dissatisfaction with software support has reached a potentially serious level. Vendors are urged to reassess user requirements and needs for software support in order to reverse this potentially harmful trend.

INPUT user research indicates that the primary user need is for quality service.

3. System Availability Trends

Exhibit III-10 illustrates trends in user satisfaction with system availability in Western Europe over the three-year period 1987 to 1989. Also shown in this exhibit is the trend of user importance ratings for system availability.

EXHIBIT III-10



Over the three-year period, the importance rating that users have given to system availability has remained relatively constant.

User satisfaction with system availability indicated a marginal decline between 1987 and 1988. Changes in satisfaction index (Δ SI) of less than 0.2 are considered insignificant in this report. However, although user satisfaction with system availability has remained relatively constant between 1988 and 1989, satisfaction levels remain close to the point at which user concerns and worries become apparent.

Vendors are recommended to closely monitor system availability to ensure that further decline in user satisfaction levels is prevented. The importance users place on system availability indicates that this aspect is a primary factor of system performance.

4. System Failure Rate Trends

Exhibit III-11 illustrates the trend in user-perceived system failure rates in Western Europe over a four-year period, from 1986 to 1989. The causes of system failure over this four-year period are illustrated in Exhibit III-12.

Exhibit III-11 indicates a user perception that system failure rates are increasing, and the data in Exhibit III-12 indicates that the cause of system failure due to hardware is a decreasing trend.

EXHIBIT III-11

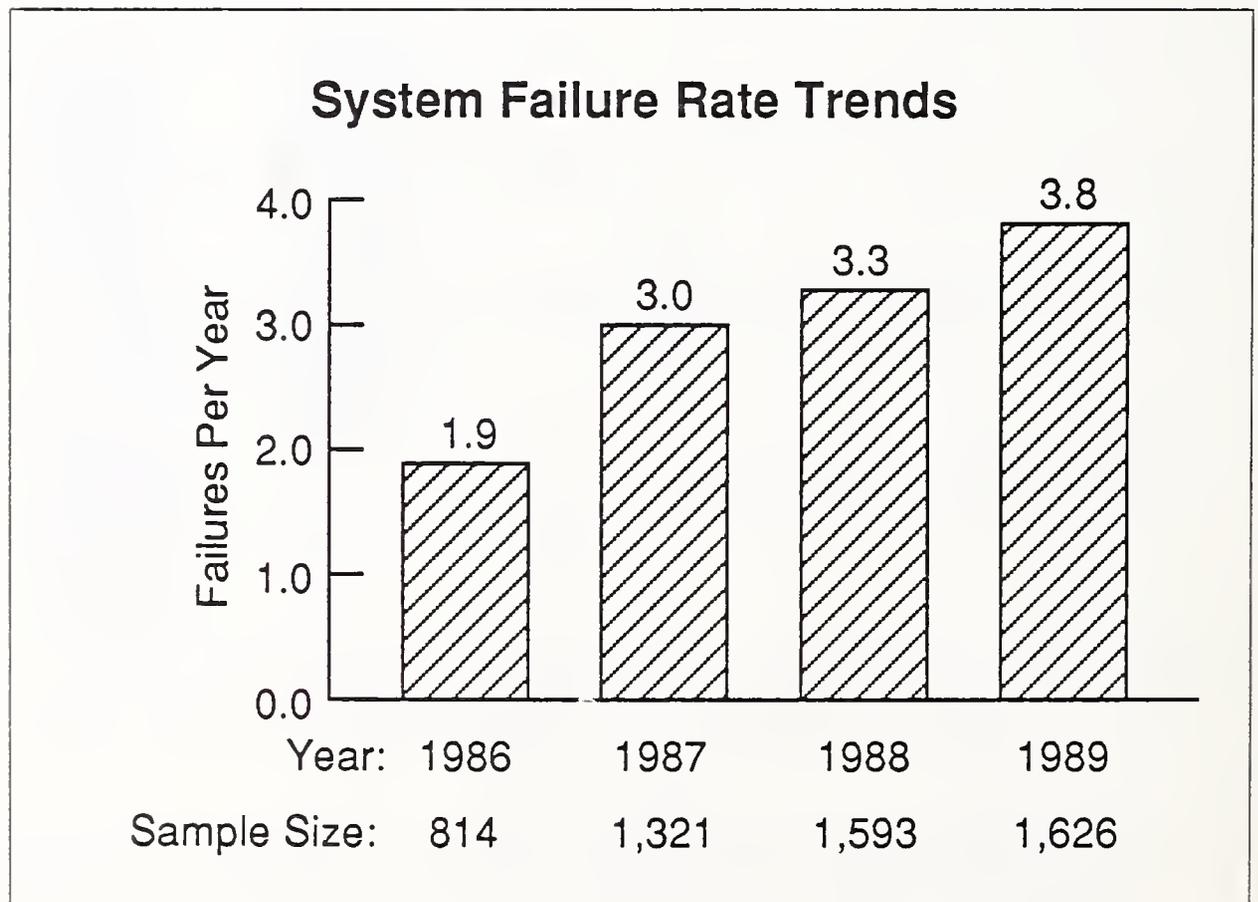
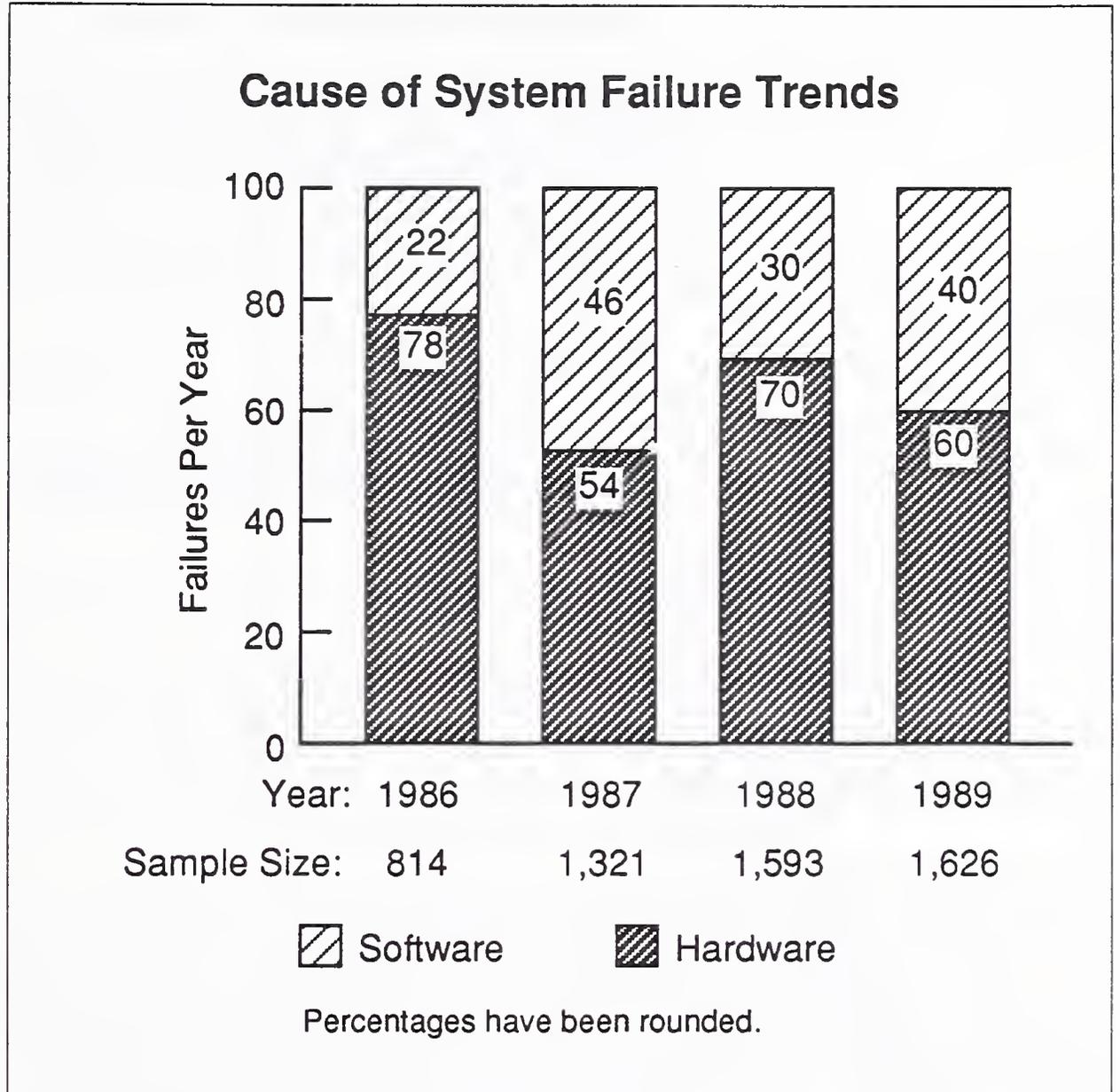


EXHIBIT III-12



User perception that the cause of system failure due to software-related problems is an increasing trend, in addition to the overall perceived increase in failure rates, is likely an influence on the decline in user satisfaction with software support.

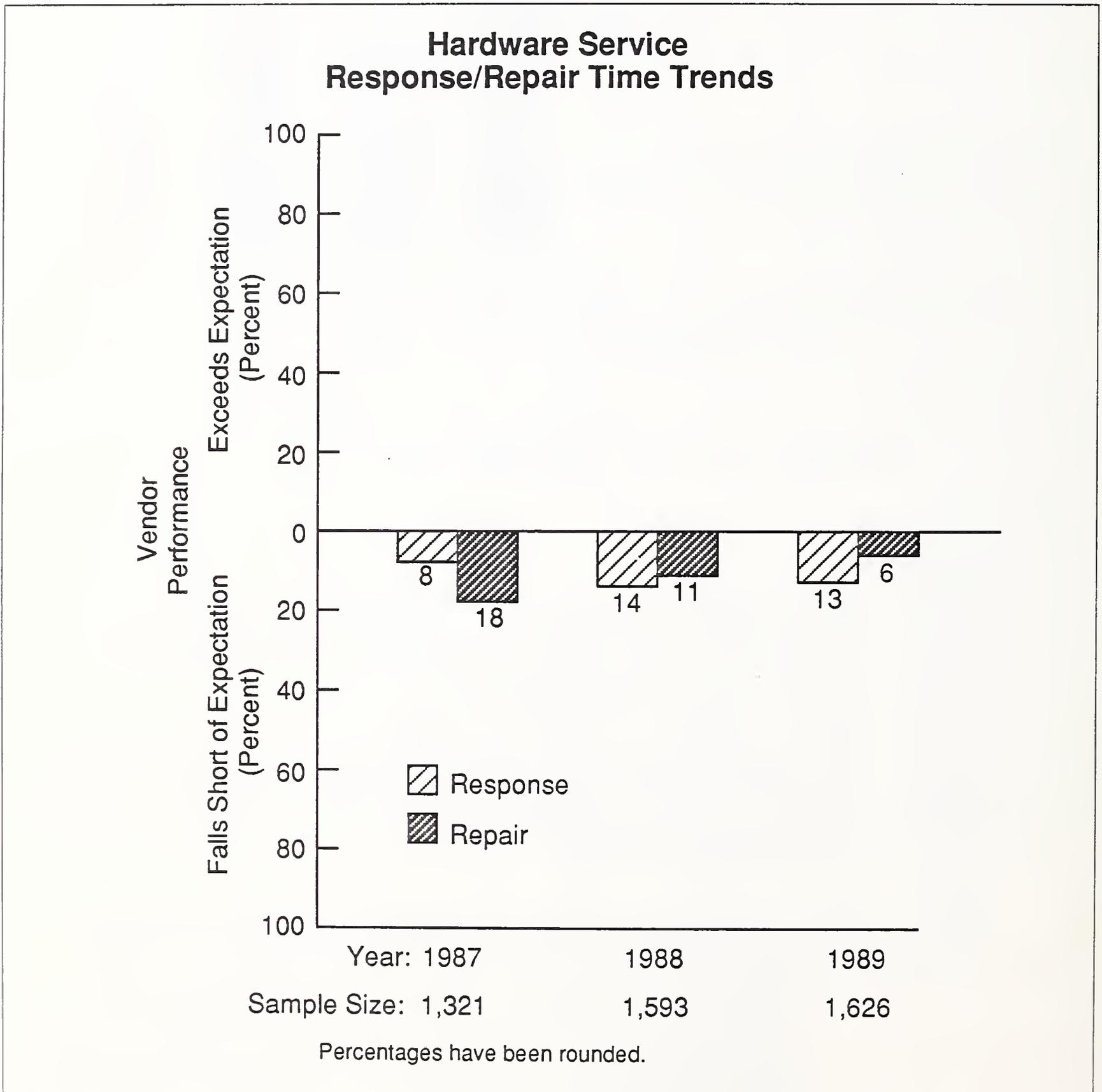
One further factor influencing system failure rate trends is that although individual hardware components are becoming more reliable, the complexity of systems and applications is increasing. The result of increasing system complexity and criticality is that users may not fully realise gains in hardware reliability.

One area where vendors can influence user perception is in the importance placed on resolution of noncritical system problems. Although most vendors are likely to respond quickly and effectively to critical problems, vendor response to noncritical problem resolution is likely much slower. Slower response to noncritical system problems can cause frustration and dissatisfaction among users. Also, vendor and user definitions of system failure may differ; this aspect suggests an opportunity for vendors to realign user perception.

5. Hardware Service Response/Repair Time Trends

User perception of vendor hardware service response/repair time performance trends is illustrated in Exhibit III-13. This exhibit shows response/repair time trends for Western Europe over the three-year period 1987 to 1989. Data is presented in the form of a percentage by which vendor performance either exceeds or falls short of user expectation.

EXHIBIT III-13



Over the three-year period 1987 to 1989, vendor response time is perceived by users to have increased in terms of shortfall against user expectation. However, there is no indication of further deterioration in vendor response time performance between 1988 and 1989. Vendor response time performance falls short of user expectation by about 13%.

User perception of vendor repair time performance, although falling short of user expectation by around 6% in 1989, indicates a trend of improving performance over the three-year period 1987 to 1989. Vendor repair time performance improved from 18% shortfall against user expectations in 1987, to around 6% in 1989. If vendors could achieve similar improvements in response time performance, this would likely improve user satisfaction with hardware service generally.

6. Software Support Response/Fix Time Trends

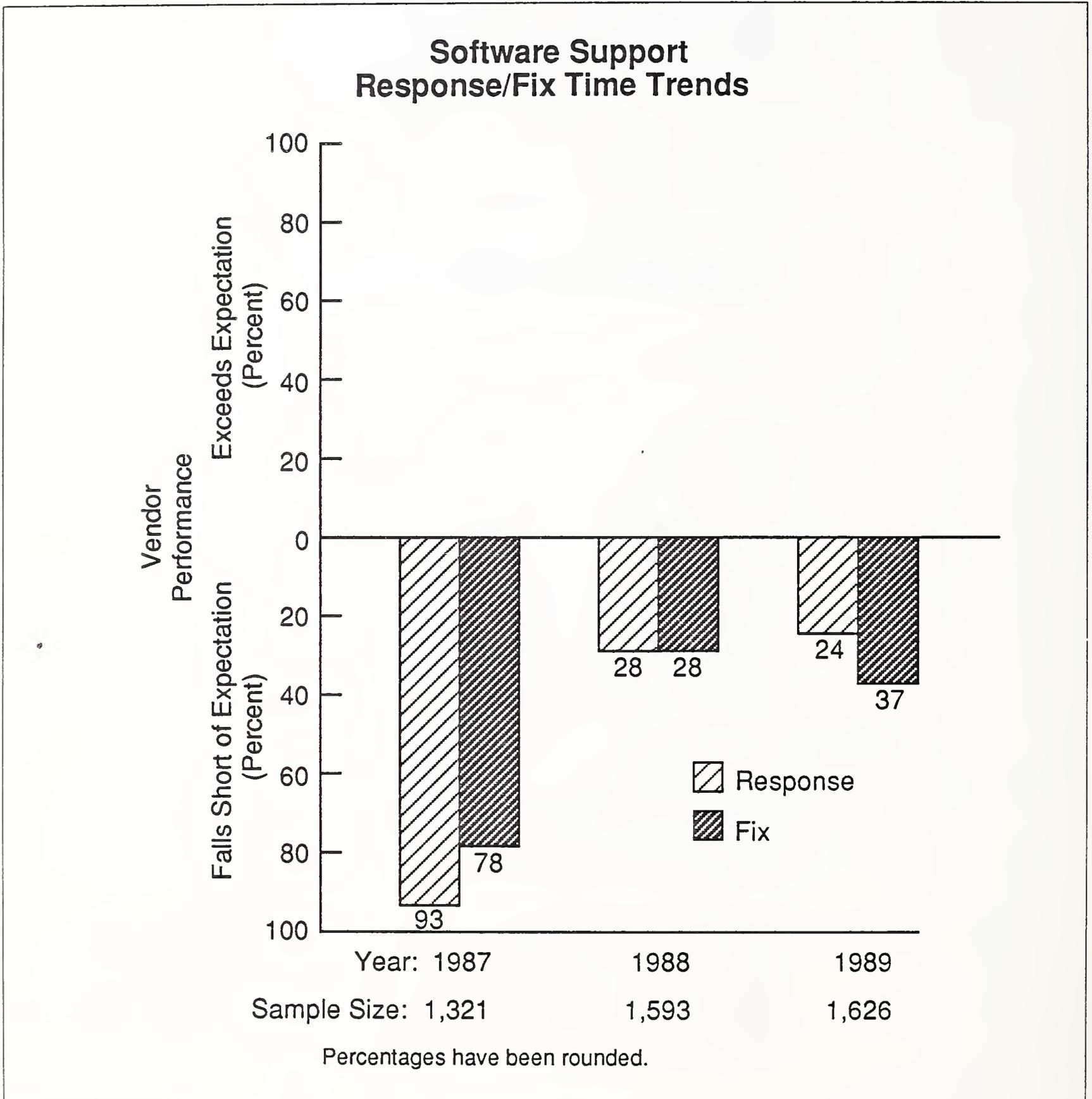
Exhibit III-14 illustrates user perception of vendor software support response and fix time trends for Western Europe, over a three-year period, 1987 to 1989. Data contained in Exhibit III-14 is presented in a form which indicates the percentage by which vendor software support performance exceeds or falls short of user expectation.

User perception of vendor software support response time performance indicates that shortfall against user expectations has improved by a relatively significant degree over the three-year period 1987 to 1989. Although this improvement in vendor performance is quite marked, it should be noted that vendor software support response time performance still falls short of user expectation by around 24%.

Vendor software support fix time performance, following a rather dramatic user-perceived improvement between 1987 and 1988, indicates a decline between 1988 and 1989. In 1989, vendor performance was perceived by users as falling short of expectation by around 37%.

Although some improvement in vendor response/fix times has been achieved, a shortfall against user expectation of around 30% overall has likely influenced the decline in user satisfaction with software support. Extended vendor software fix times in 1989 will likely further affect user satisfaction levels.

EXHIBIT III-14



7. Service Vendor Trends

Data relating to which vendor provides service to the user's computer system is illustrated in:

- Exhibit III-15—hardware service
- Exhibit III-16—software support

Data contained within these exhibits shows trends in Western Europe over the three-year period 1987 to 1989.

Exhibit III-15 illustrates which vendor provides hardware service for the user's computer system, and indicates that the percentage of systems serviced by the equipment vendor has remained fairly consistent over the three-year period 1987-1989. Although the third-party maintenance (TPM) sector of the customer services market is forecast to grow at a 16% compound annual growth rate (CAGR), the impact of this growth rate is to provide only a marginal reduction in the percentage of systems where hardware service is provided by the equipment vendor. Growth of the TPM market reduces the percentage of systems on which hardware service is provided by the equipment vendor by around 1% per annum.

EXHIBIT III-15

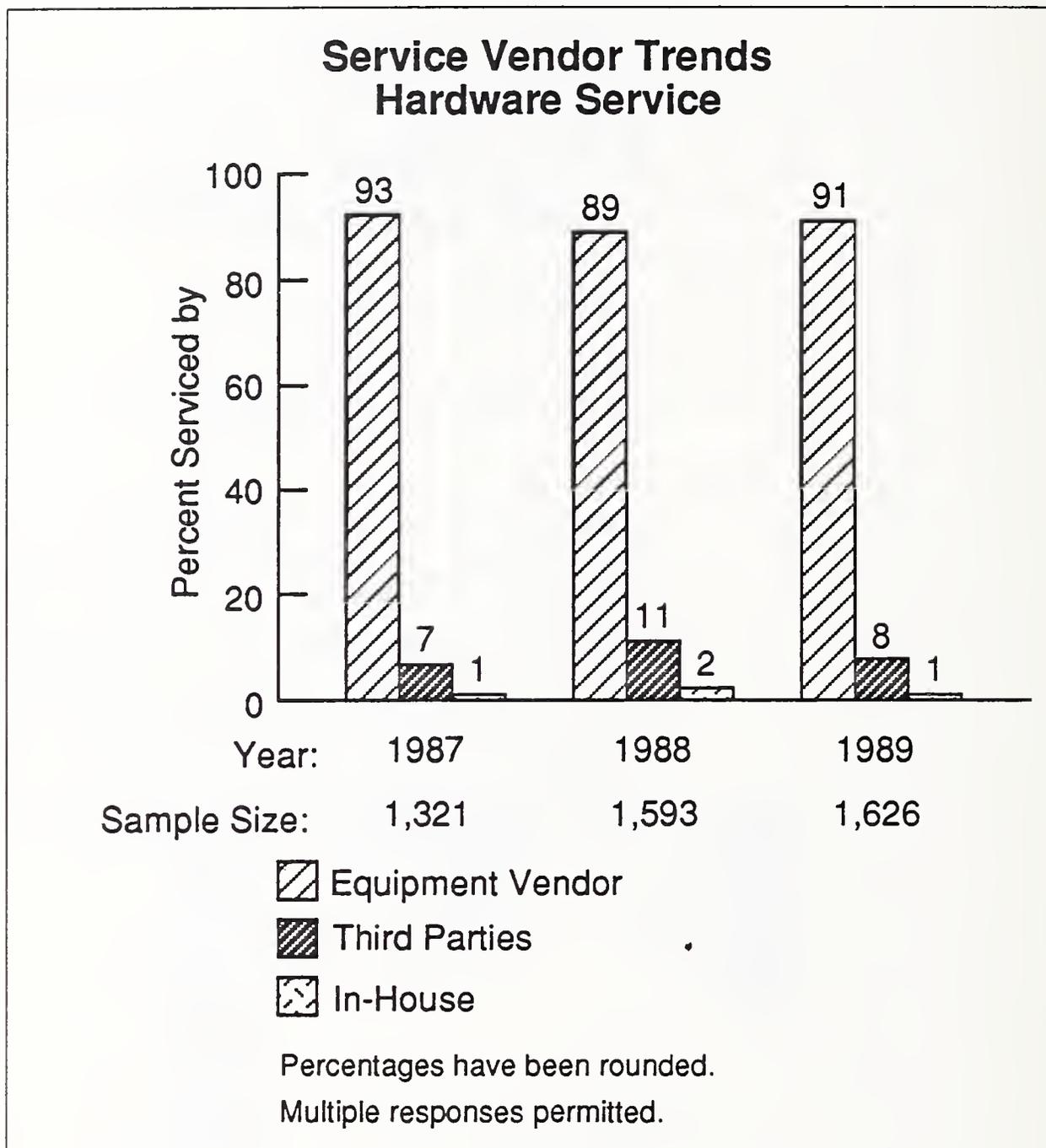
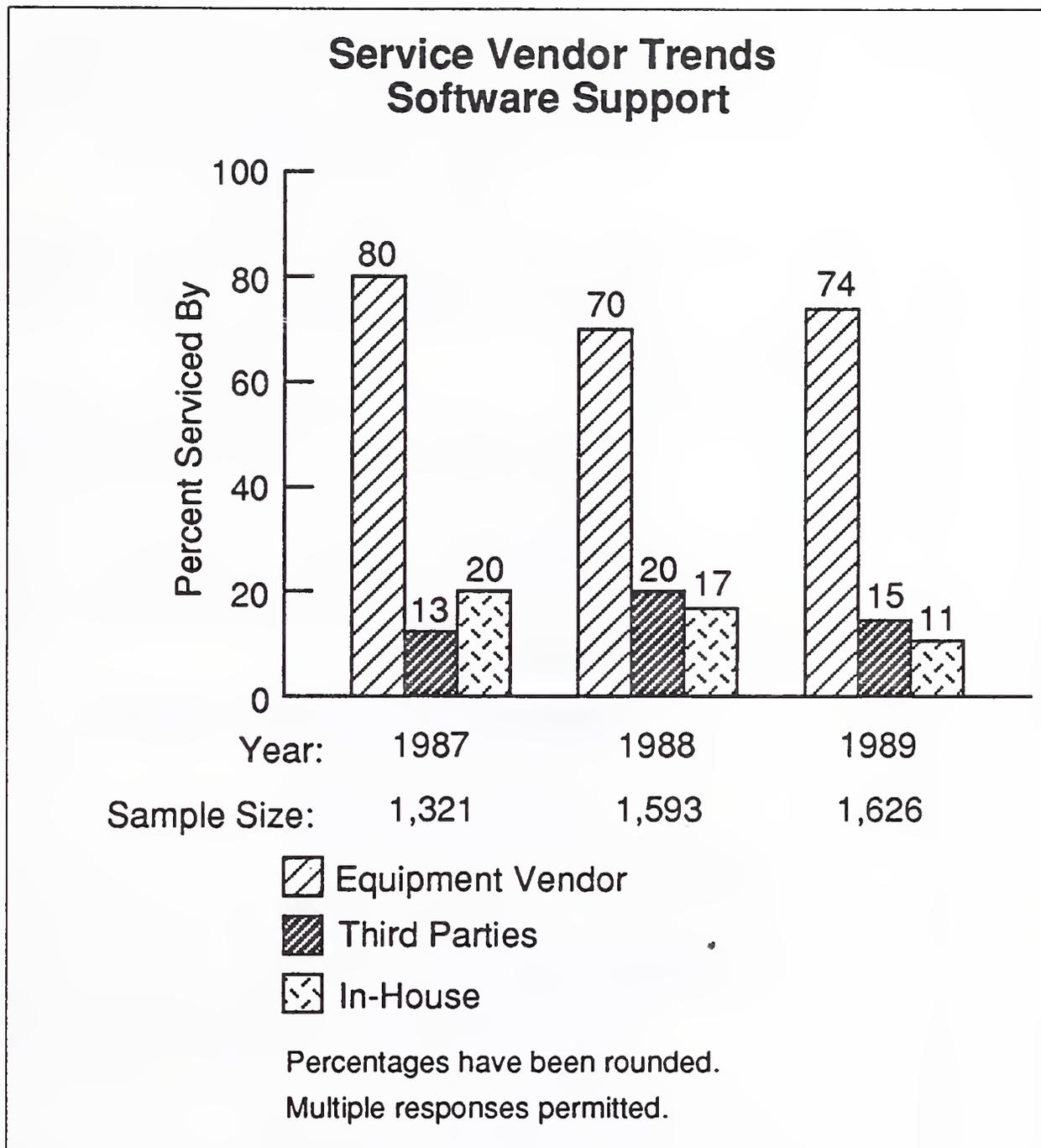


Exhibit III-16 shows which vendor provides software support for the user's computer system. This data indicates that the percentage of user systems for which the equipment vendor provides software support has decreased marginally over the three-year period 1987 to 1989. Over the same three-year period, the percentage of users claiming to use "in-house" resources for software support has also decreased.

Consistent with the decrease in the percentage of user systems where software support is provided by either the equipment vendor or the user's own resources, the level of software support provided by third parties indicates a marginal increase. The majority of software support originating from third-party sources, around 10% overall, is provided by software houses, and a small proportion (4% overall) is provided by the software product vendor.

EXHIBIT III-16



E

Service Quality Image

During the course of user interviews, INPUT requested that users provide answers to the following questions:

- How important is hardware maintenance, or software support, to your business and how satisfied are you with it? Answers to this question tend to be reflexive or reactive.
- Users are requested to provide importance and satisfaction ratings for twelve aspects of hardware service and thirteen aspects of software support. Answers to these questions tend to be more considered or weighted responses.

A June 1989 INPUT report, *Quality Issues, Western European Customer Services*, contained analysis of the connection between reflex response and measurable service performance. This analysis concluded that the reflex response was a measure of vendors' service quality image.

Exhibits III-17 and III-18 provide a comparison between the considered (or weighted) responses and vendors' service quality image (reflex response). In these exhibits, vendors are listed in order of overall user satisfaction with service:

- Overall user satisfaction ratings are expressed as the mean value of the satisfaction ratings for either the twelve individual aspects of hardware service or the thirteen individual aspects of software support.
- Vendor quality image rating is related to these individual aspects of service but also includes additional service performance factors such as:
 - satisfaction with system availability
 - system failure rates
 - vendor response time
 - vendor repair/fix time

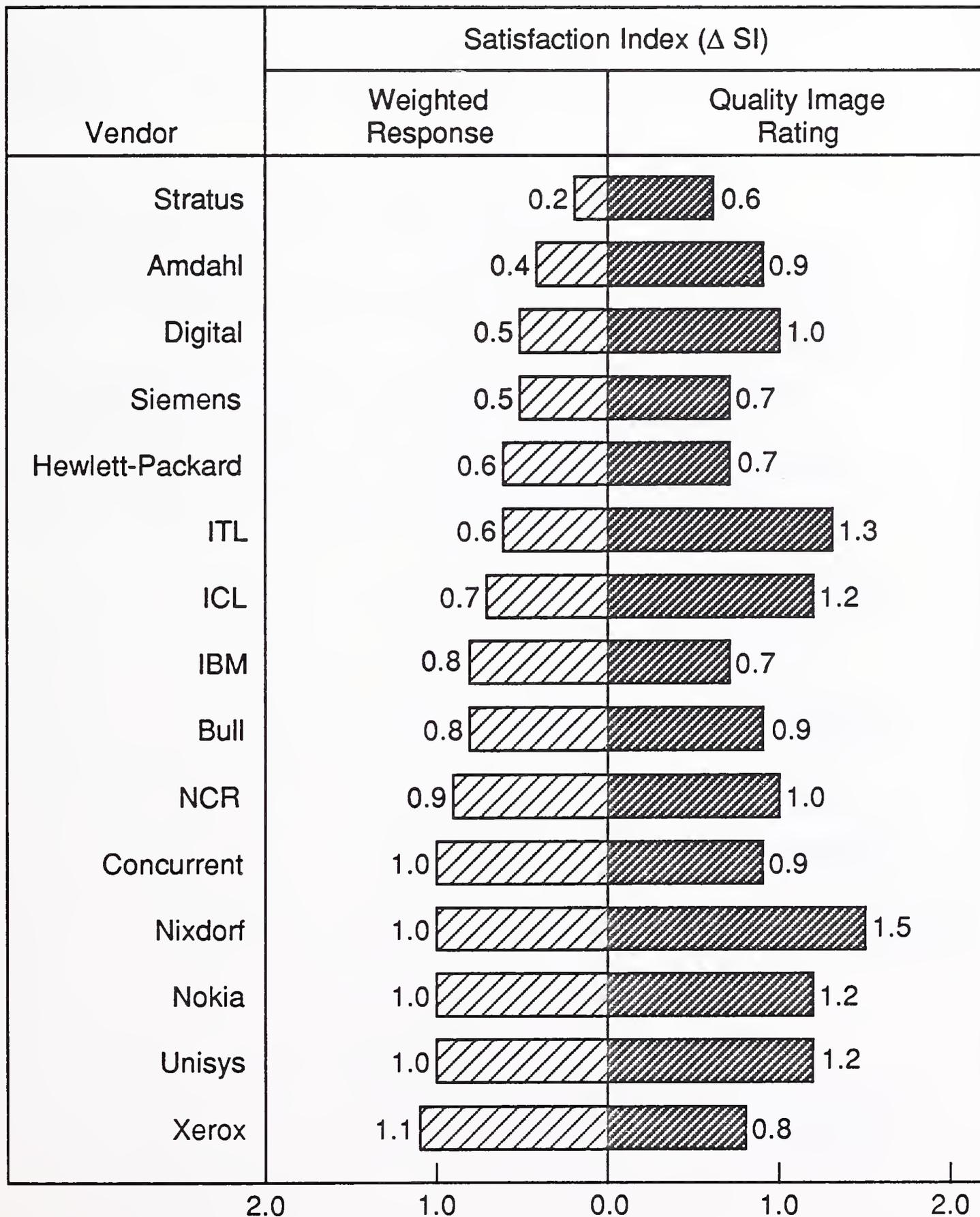
1. Vendor Quality Image—Hardware Service

Exhibit III-17 illustrates how overall user satisfaction with hardware service compares with vendors' hardware service quality image. Data presented in Exhibit III-17 refers to users of fifteen vendors' computer systems:

- Users of five vendors' computer systems indicate dissatisfaction with the vendors' hardware service at a level which suggests a degree of concerns and worries. This level is defined by a satisfaction index (Δ SI) of 1.0 or greater.
- Vendor hardware service quality image, which takes into account additional service performance factors, indicates that users of seven vendors' computer systems consider the vendors' hardware service quality image to be subject to a degree of concerns and worries. This level is defined by a reflex response rating (Δ SI) of 1.0 or greater.

EXHIBIT III-17

Vendor Quality Image Hardware Service



Sample Size: 1,626

2. Vendor Quality Image—Software Support

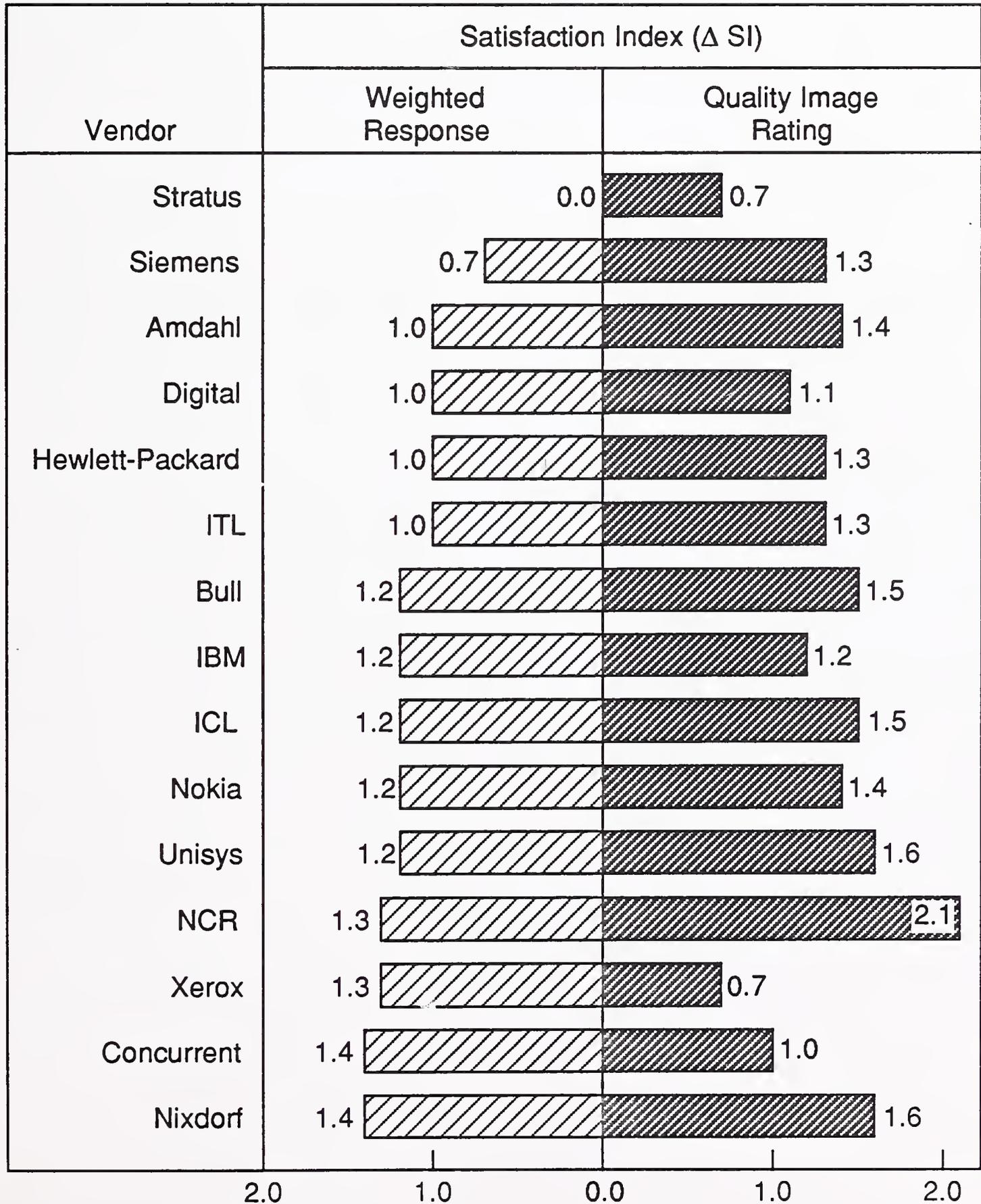
Exhibit III-18 illustrates how overall user satisfaction with software support compared with vendors' software support quality image. Data presented in Exhibit III-18 refers to users of fifteen vendors' computer systems:

- Users of thirteen vendors' computer systems indicate dissatisfaction with the vendors' software support at a level which suggests a degree of concerns and worries. This level is defined by a satisfaction index (Δ SI) of 1.0 or greater.
- Vendor software support quality image, which takes into account additional service performance factors, indicates that users of thirteen vendors' computer systems consider the vendors' software support quality image to be subject to a degree of concerns and worries. This level is defined by a reflex response rating (Δ SI) of 1.0 or greater.

Data in Exhibit III-18 suggests a potentially serious situation, in which both user satisfaction with vendor software support and confidence in vendor performance is approaching a level of overall concern to users. Vendors are urged to review software support strategies, and structure service offerings to meet user requirements, in order that the trend of negative user reaction may be reversed.

EXHIBIT III-18

Vendor Quality Image Software Support

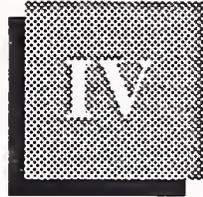


Sample Size: 1,626



Vendor Performance Comparisons





Vendor Performance Comparisons

This chapter of the report is structured to allow comparisons of satisfaction with service between users of fifteen vendors' computer systems. Data is presented in the form of a satisfaction index (Δ SI) and as such "normalises" variations in importance ratings.

A

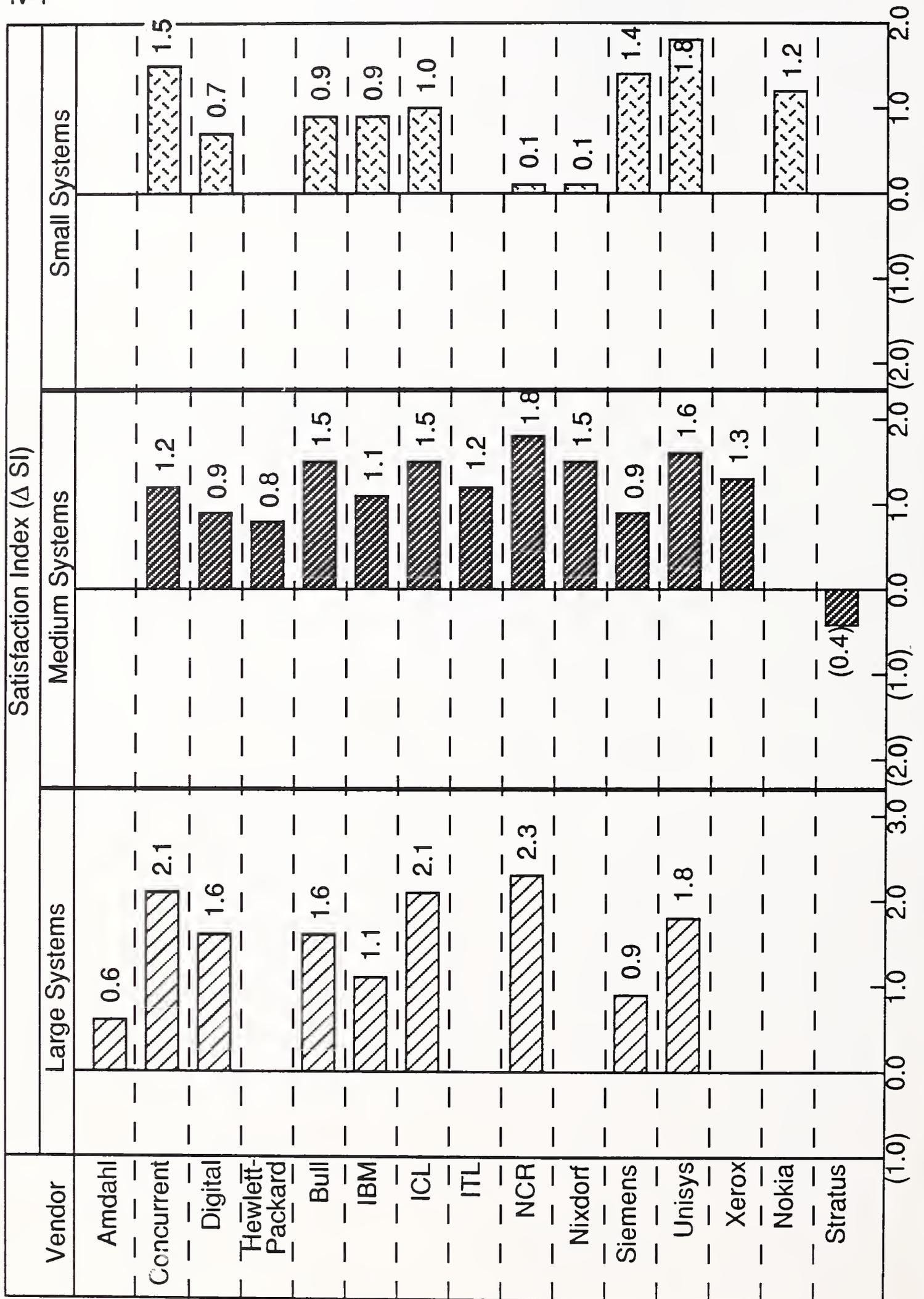
Hardware Service Satisfaction

User satisfaction with hardware service is illustrated in Exhibits IV-1 to IV-12. These exhibits indicate user satisfaction with twelve individual aspects of hardware service, for users of fifteen vendors' computer systems:

- Spares availability
- Engineer skills
- Problem escalation
- Call handling
- Backup support
- Hardware training
- Telephone support
- Service administration
- Documentation
- Consultancy/planning
- Remote diagnostics
- Out-of-hours service

EXHIBIT IV-1

Hardware Service—Spares Availability



Standard Error = 0.05

Small = 401

Medium = 784

Large = 441

EXHIBIT IV-2

Hardware Service—Engineer Skills

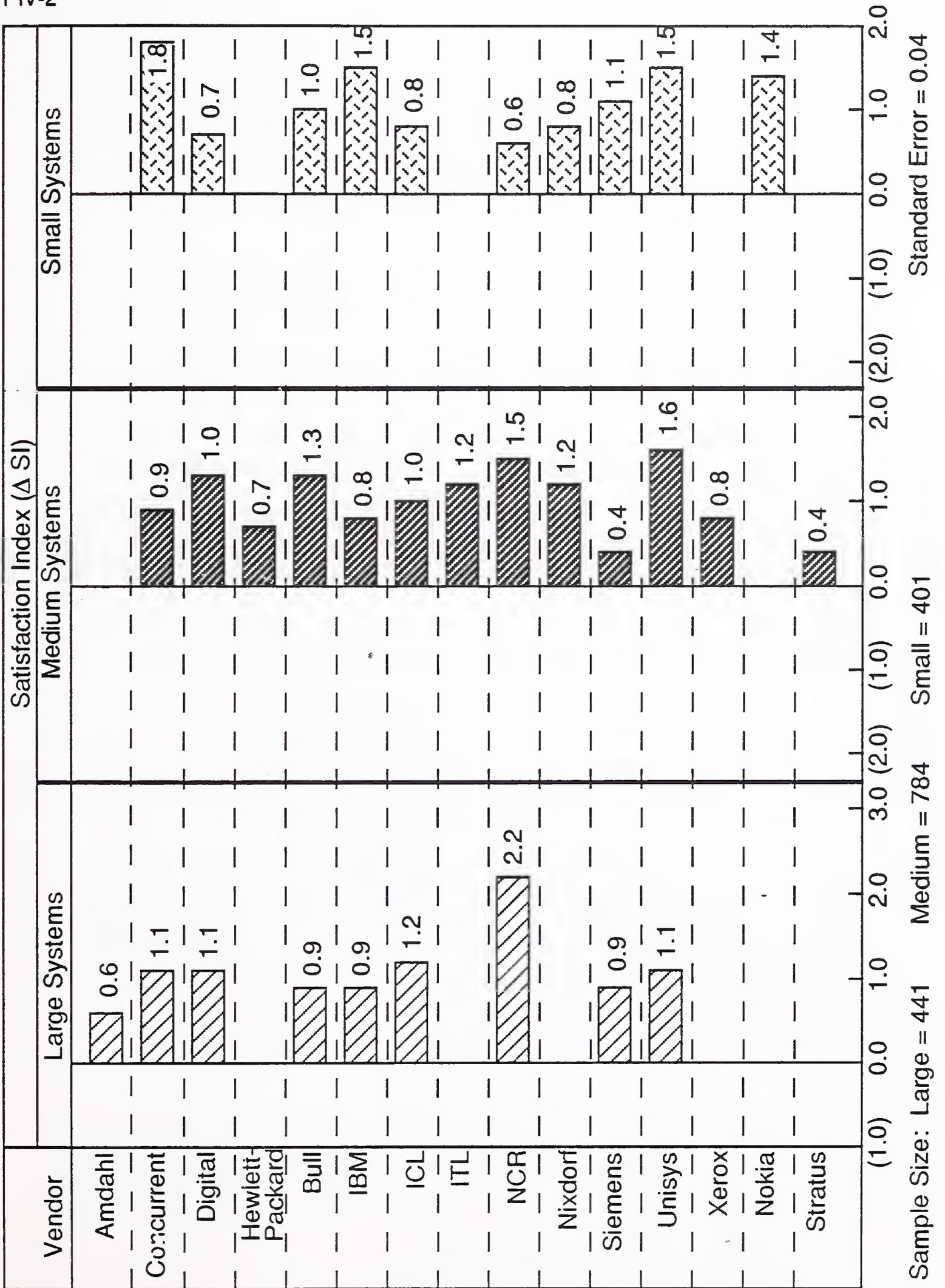


EXHIBIT IV-3

Hardware Service—Problem Escalation

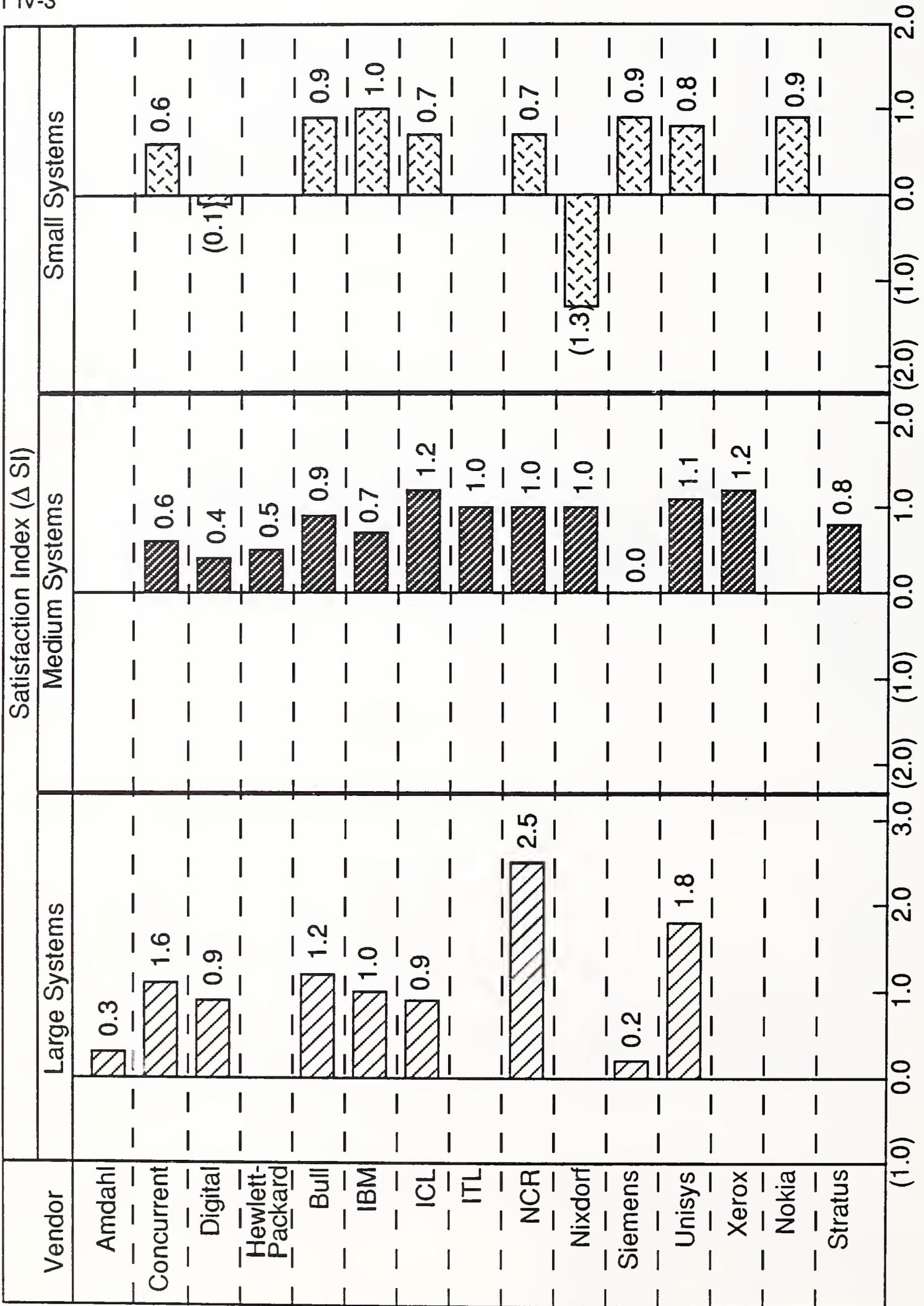
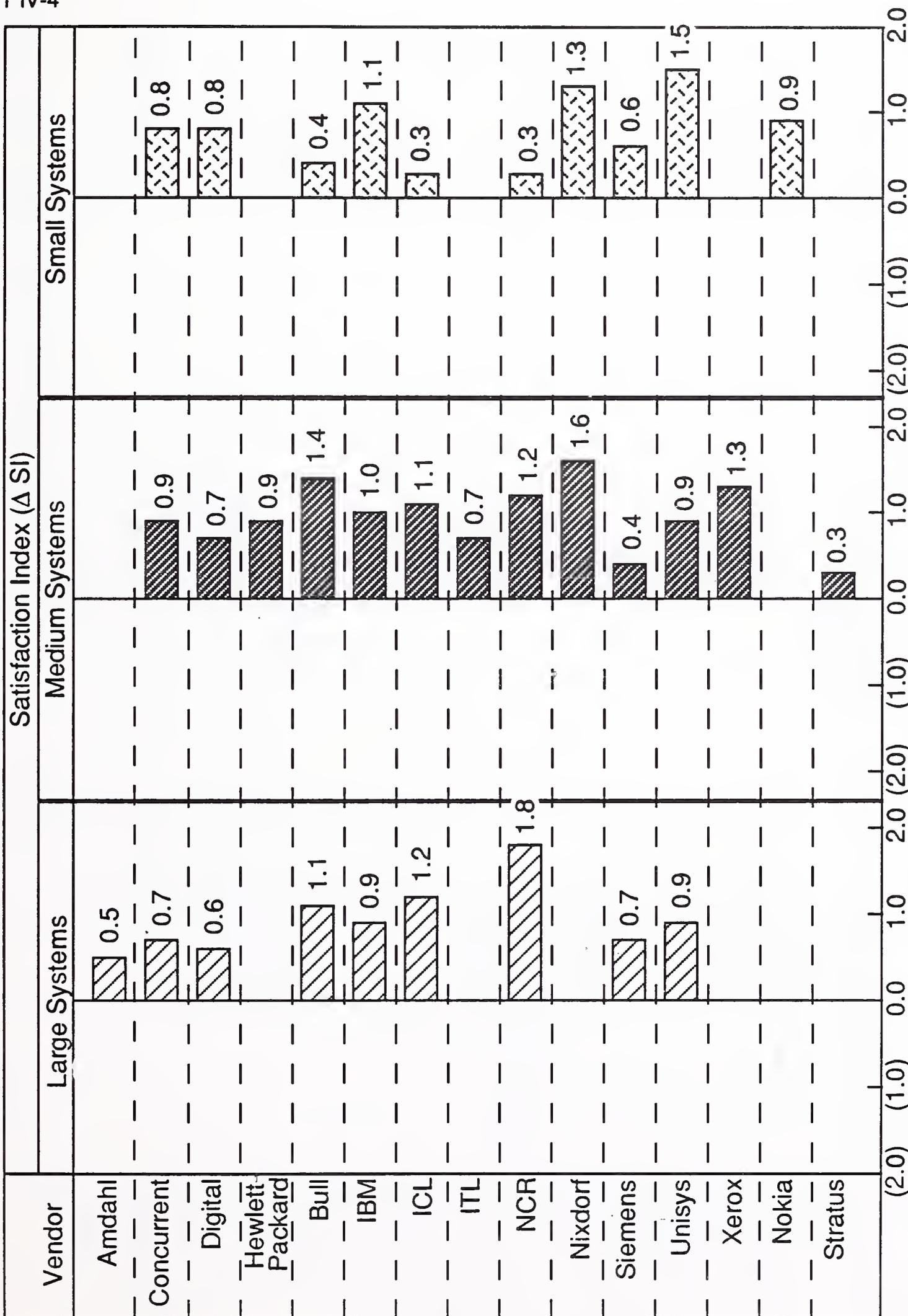


EXHIBIT IV-4

Hardware Service—Call Handling



Standard Error = 0.05

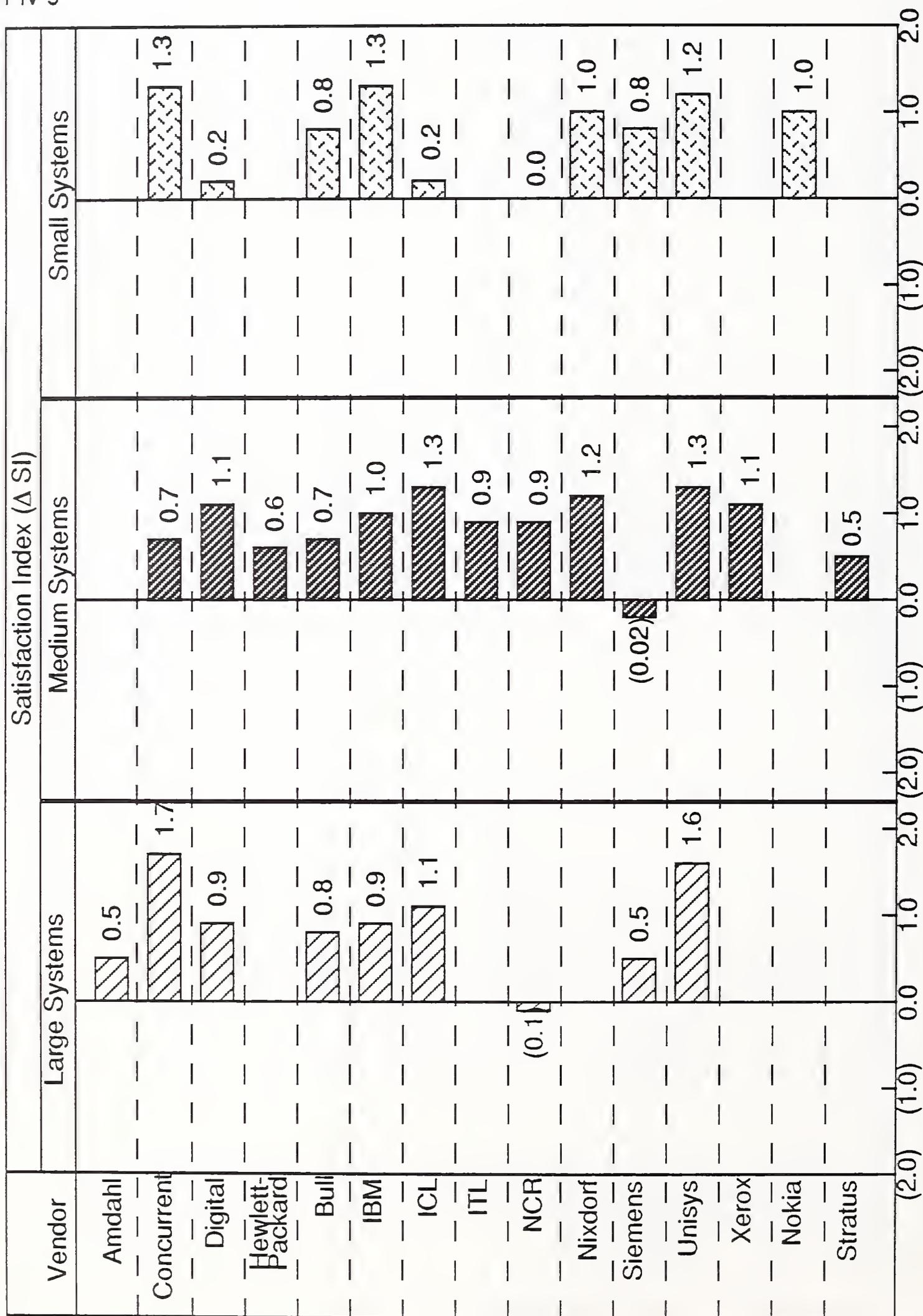
Small = 401

Medium = 784

Large = 441

EXHIBIT IV-5

Hardware Service—Backup Support



Standard Error = 0.05

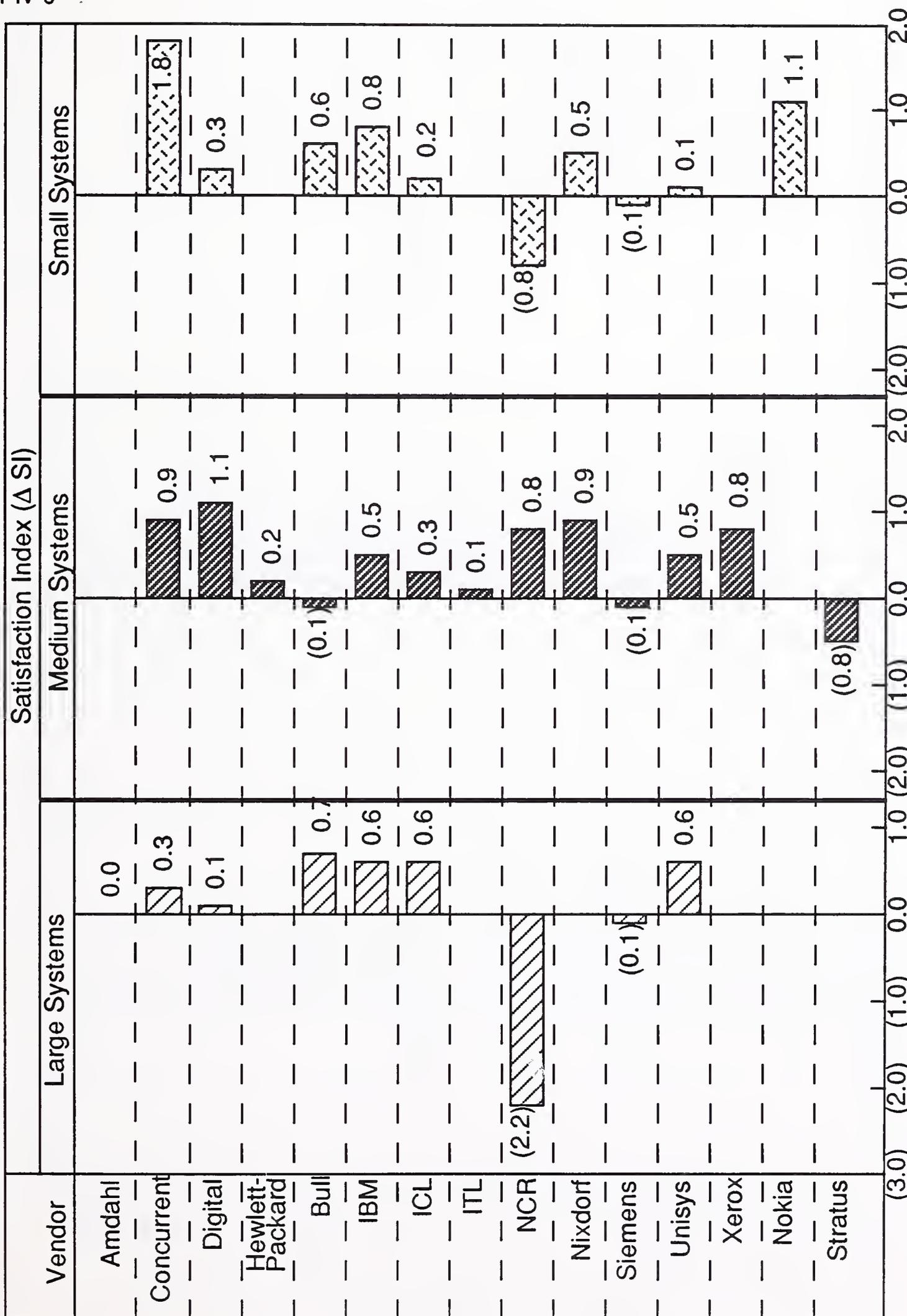
Small = 401

Medium = 784

Large = 441

EXHIBIT IV-6

Hardware Service—Hardware Training

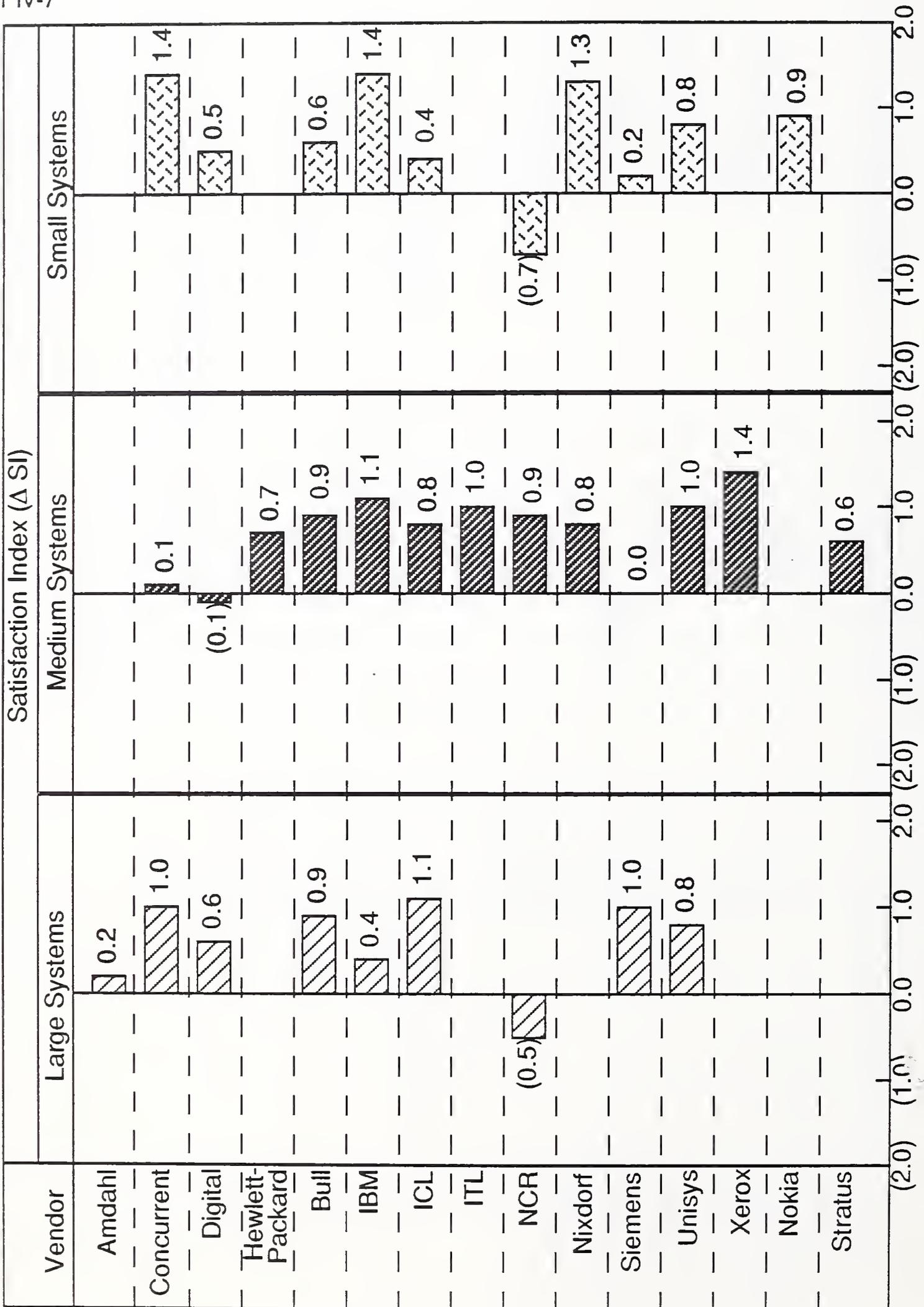


Standard Error = 0.06

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-7

Hardware Service—Telephone Support

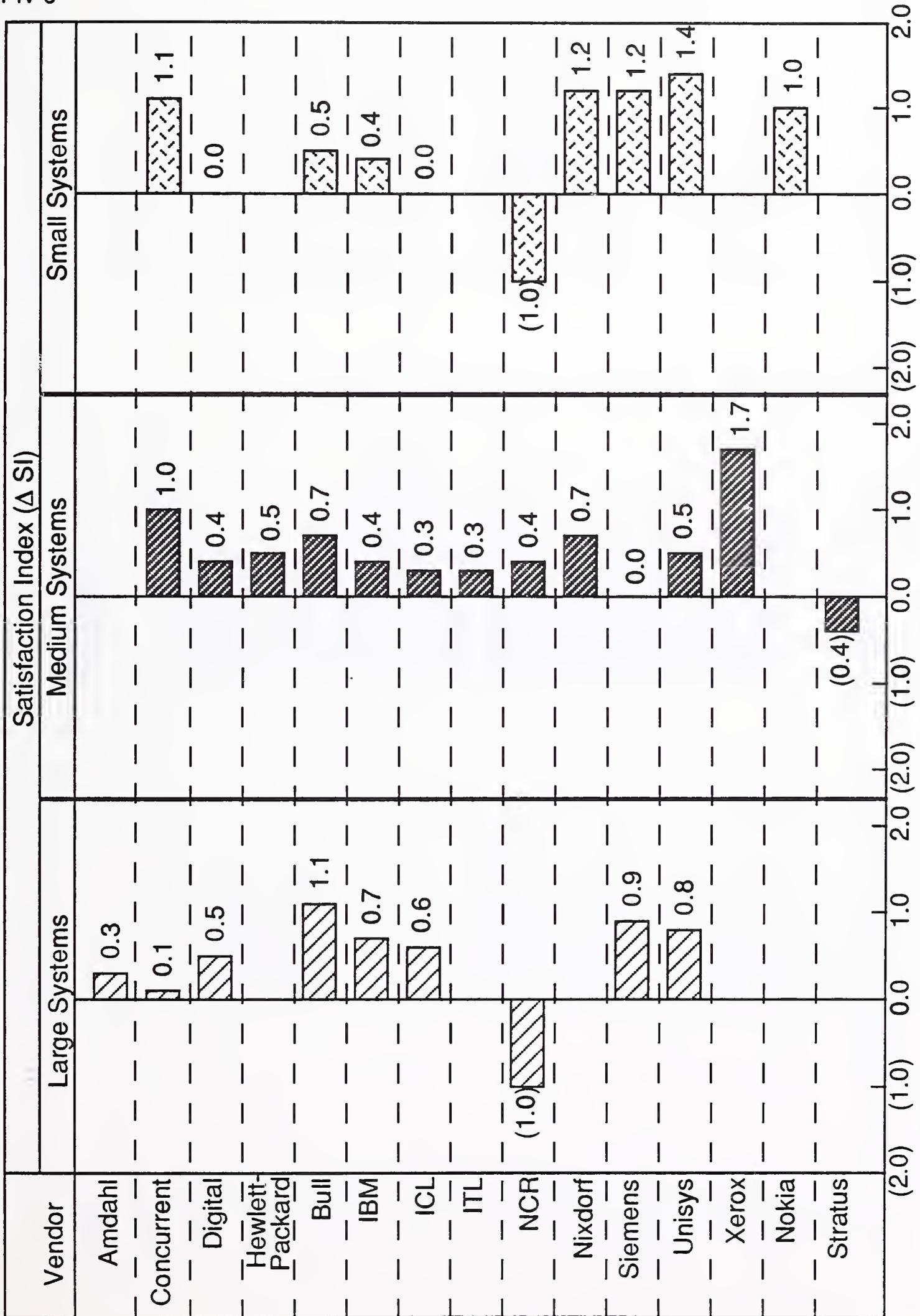


Standard Error = 0.06

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-8

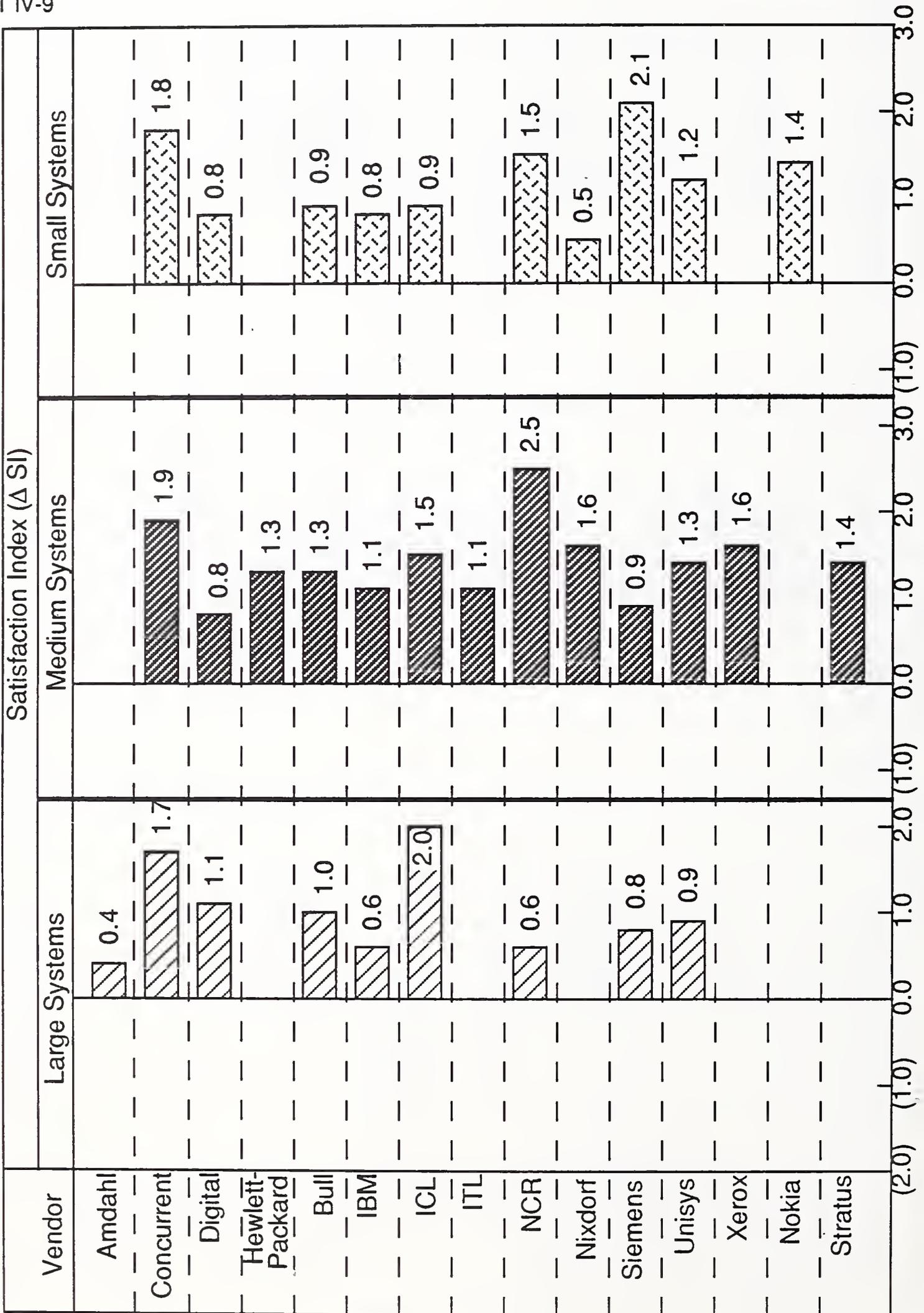
Hardware Service—Service Administration



Sample Size: Large = 441 Medium = 784 Small = 401 Standard Error = 0.05

EXHIBIT IV-9

Hardware Service—Documentation



Standard Error = 0.05

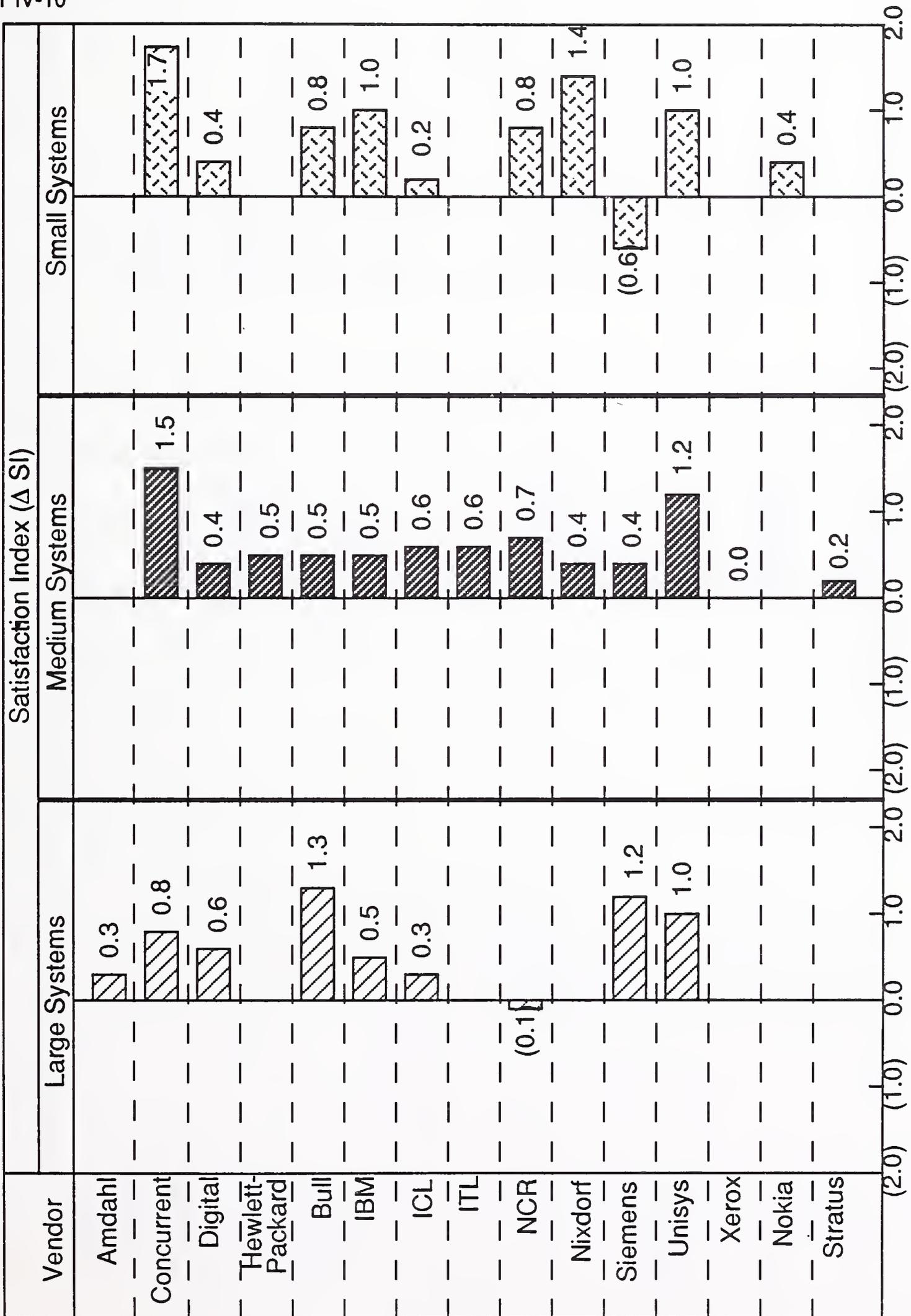
Small = 401

Medium = 784

Large = 441

EXHIBIT IV-10

Hardware Service—Consultancy/Planning

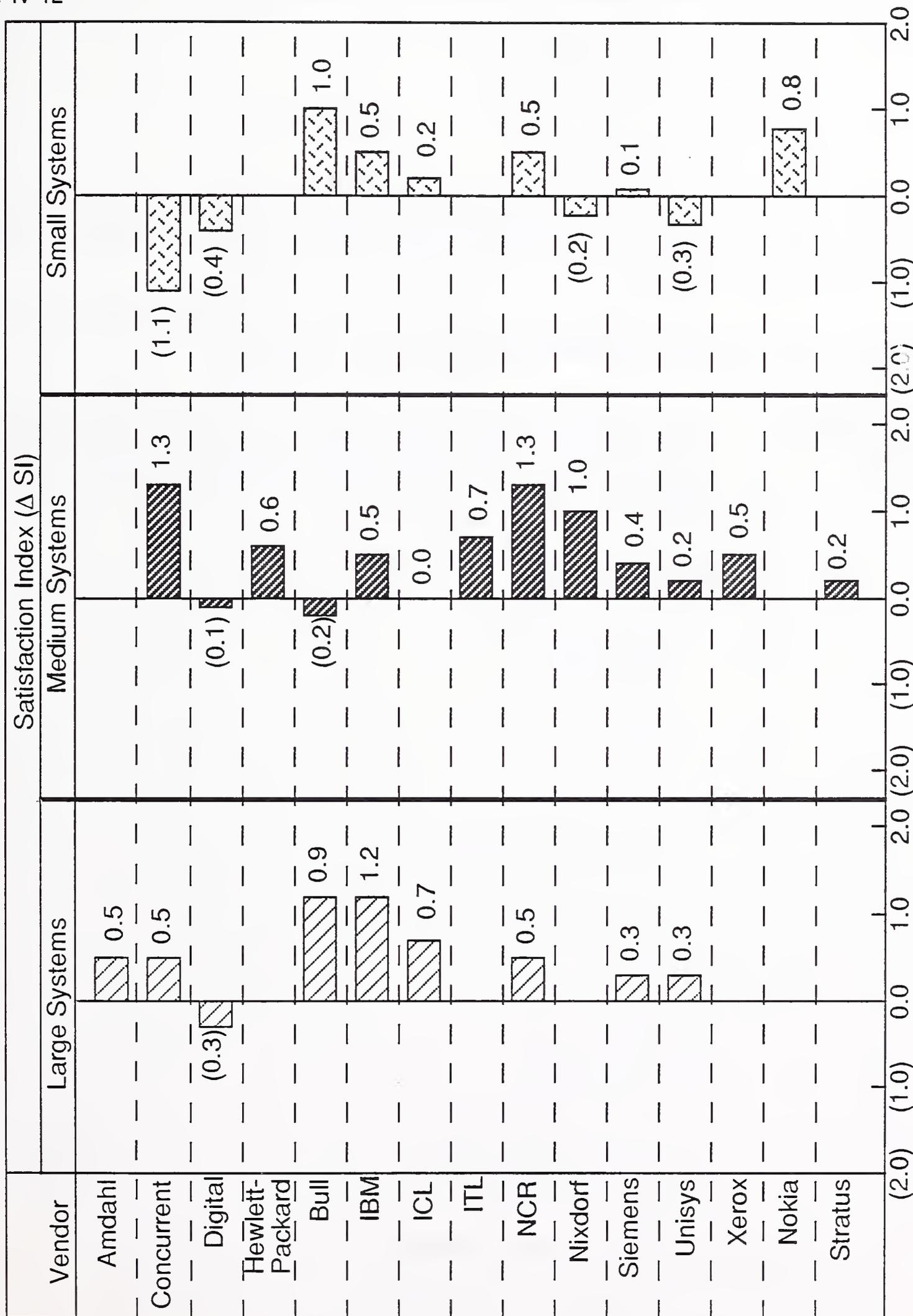


Standard Error = 0.06

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-12

Hardware Service—Out-of-Hours Service



Each exhibit in this section presents the data by system size segment:

- Large systems
- Medium systems
- Small systems

Where a vendor's range of systems does not extend across all system size segments, for example Nokia, the relevant entry in the exhibit is left blank.

Satisfaction indexes (Δ SI) in brackets—for example, (0.2)—indicate oversatisfaction of user needs.

B

Software Support Satisfaction

User satisfaction with software support is illustrated in Exhibits IV-13 to IV-25. These exhibits indicate user satisfaction with thirteen individual aspects of software support, for users of fifteen vendors' computer systems:

- Engineer skills
- Telephone support
 - Fix speed
 - Accessibility
- Documentation
- Software updates
- Software installation
- Software training
- Hotline
- Capacity tuning
- On-site support
- Consultancy/planning
- Remote diagnostics
- Software problem database

Each exhibit in this section of the report presents the data by system size segment:

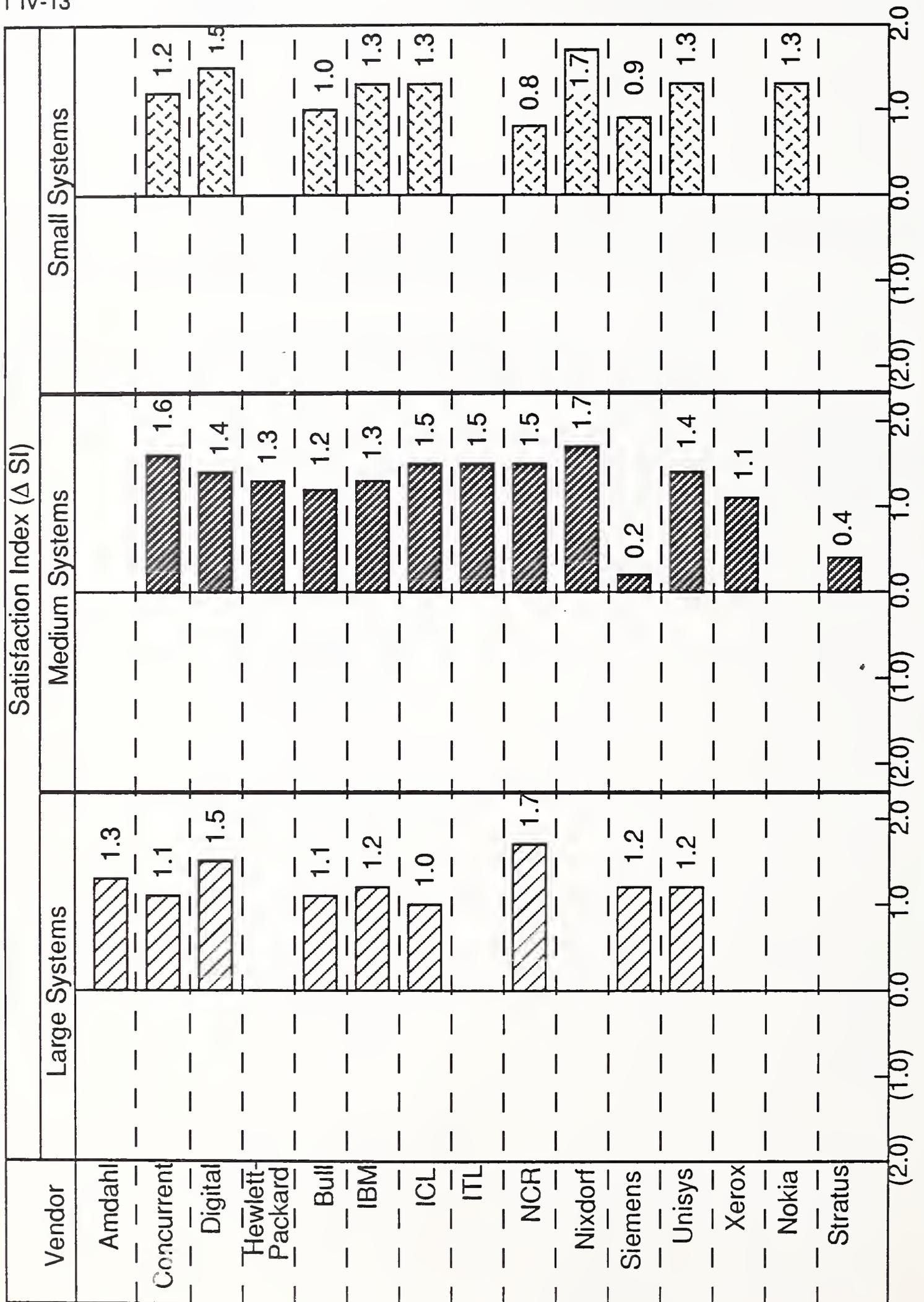
- Large systems
- Medium systems
- Small systems

Where a vendor's range of systems does not extend across all system size segments, for example Xerox, the relevant entry in the exhibit is left blank.

Satisfaction indexes (Δ SI) in brackets, for example (0.2), indicate over-satisfaction of user needs.

EXHIBIT IV-13

Software Support—Engineer Skills

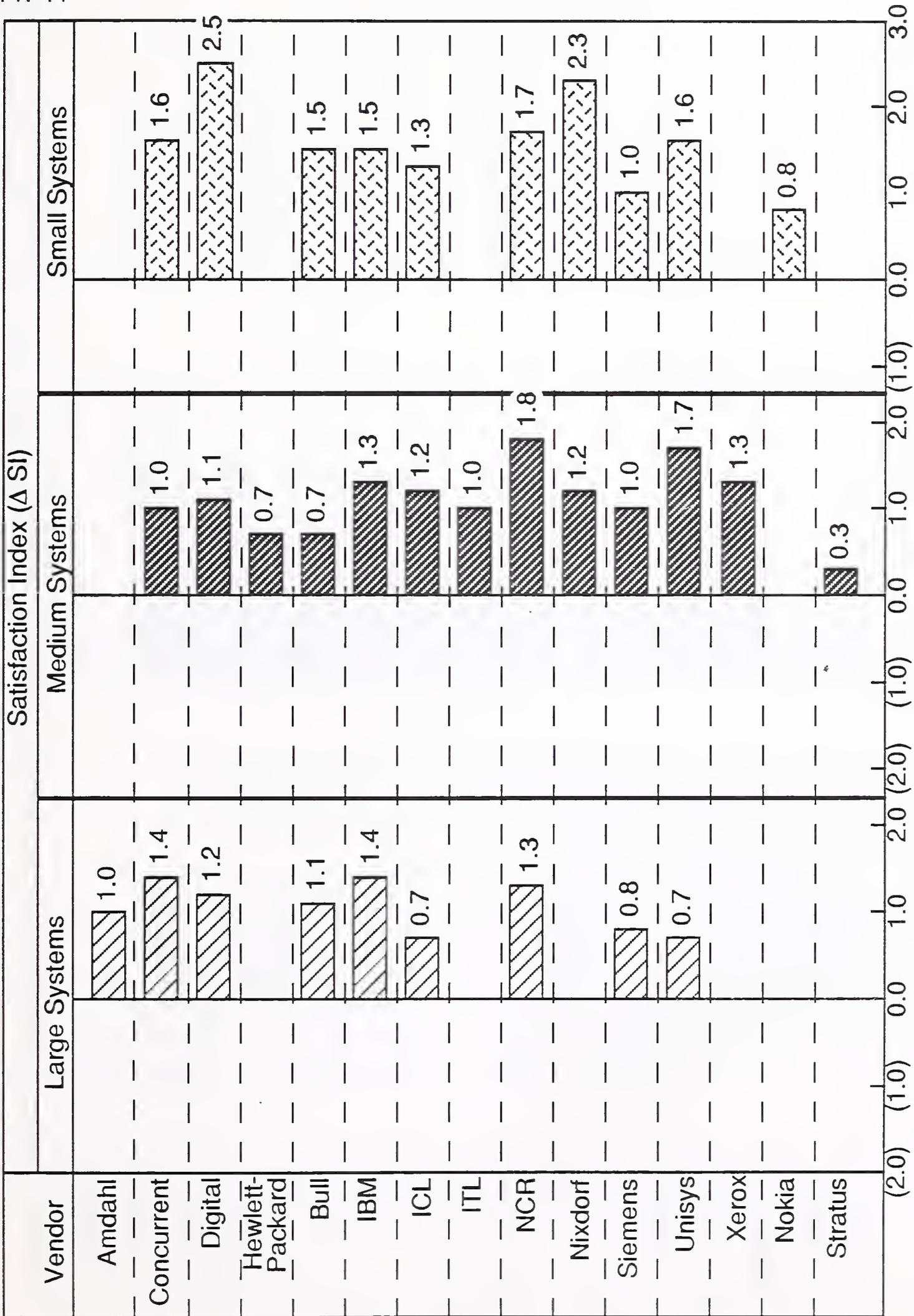


Standard Error = 0.05

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-14

Software Support—Fix Speed



Standard Error = 0.06

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-15

Software Support—Accessibility

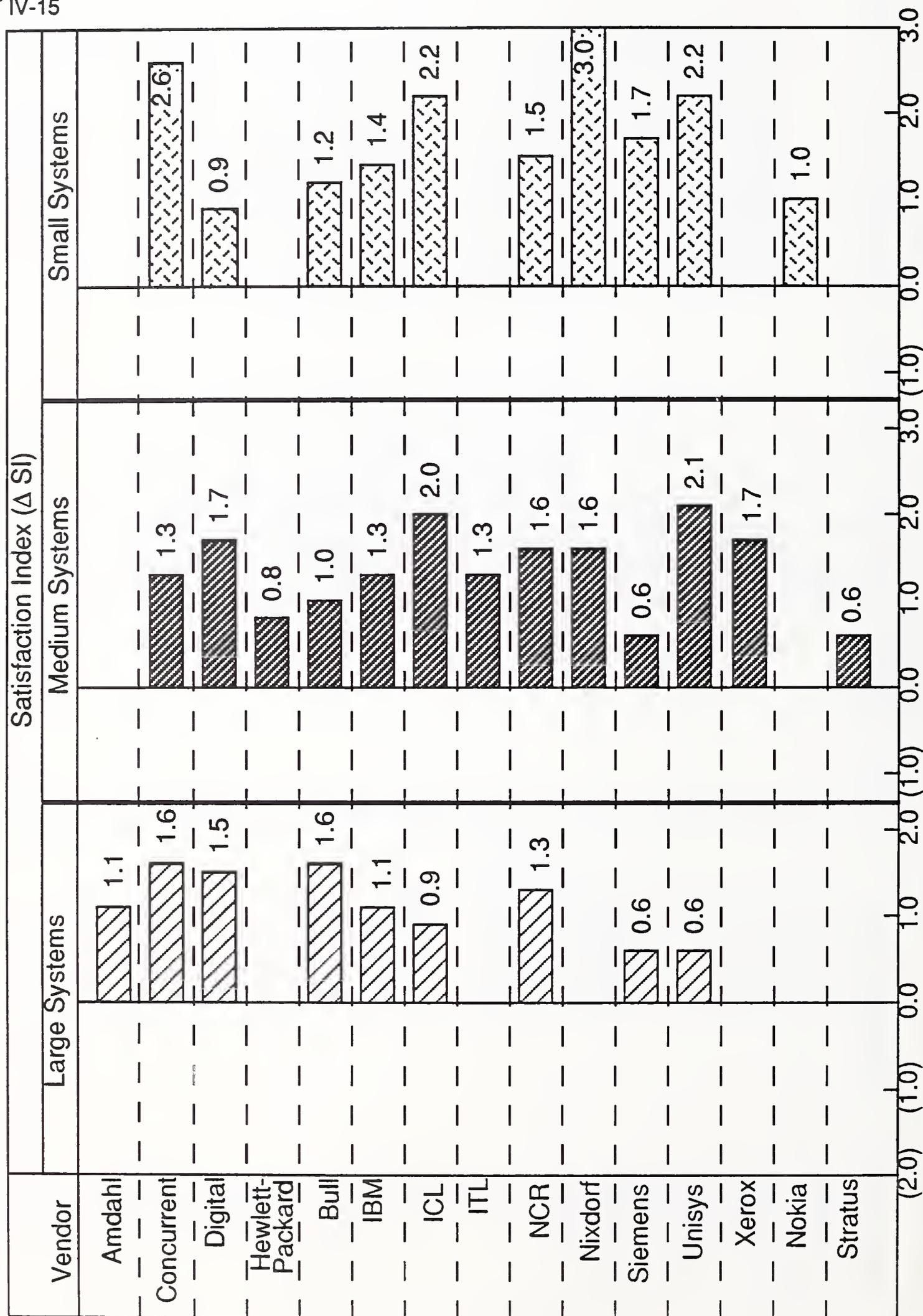
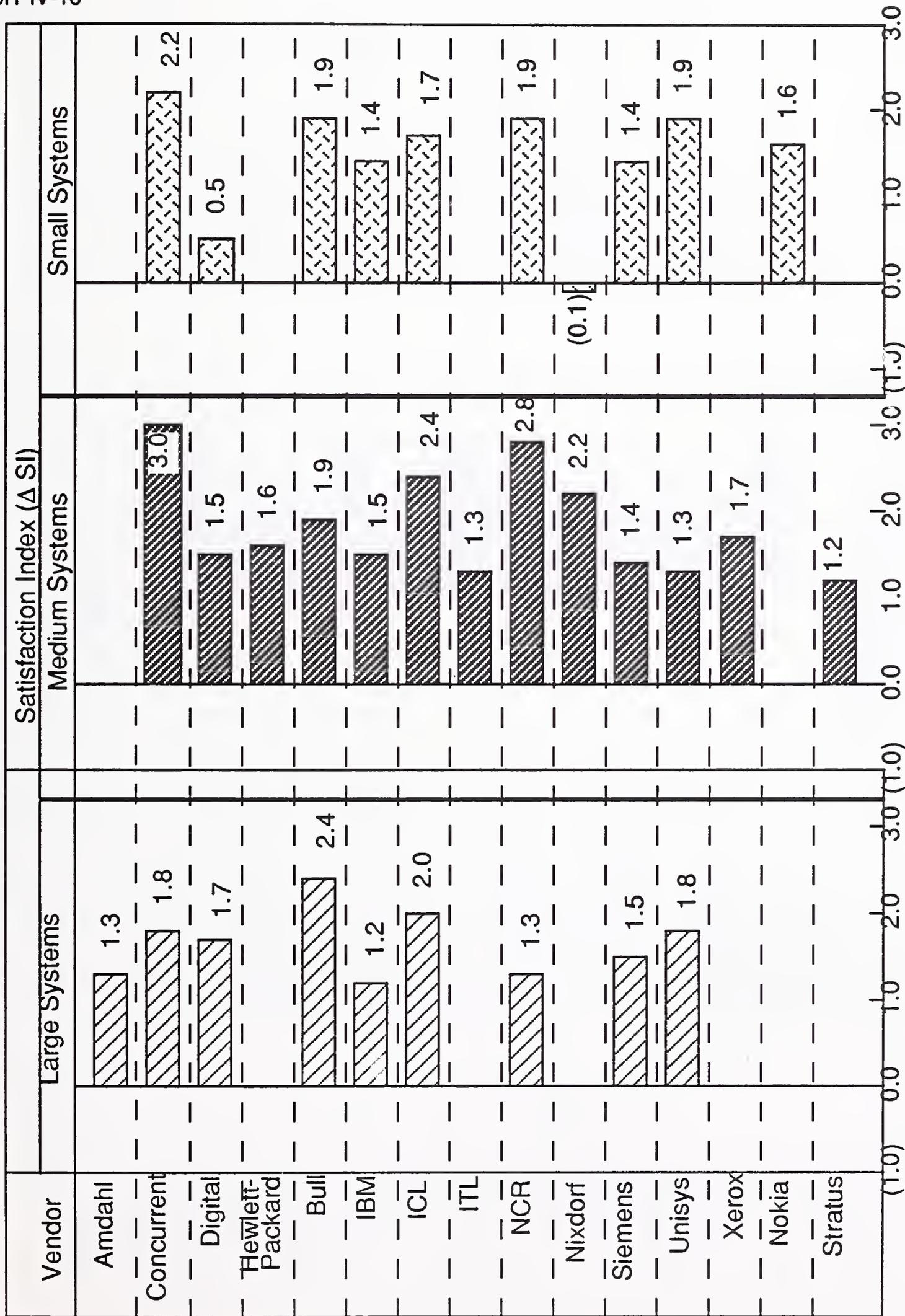


EXHIBIT IV-16

Software Support—Documentation



Standard Error = 0.05

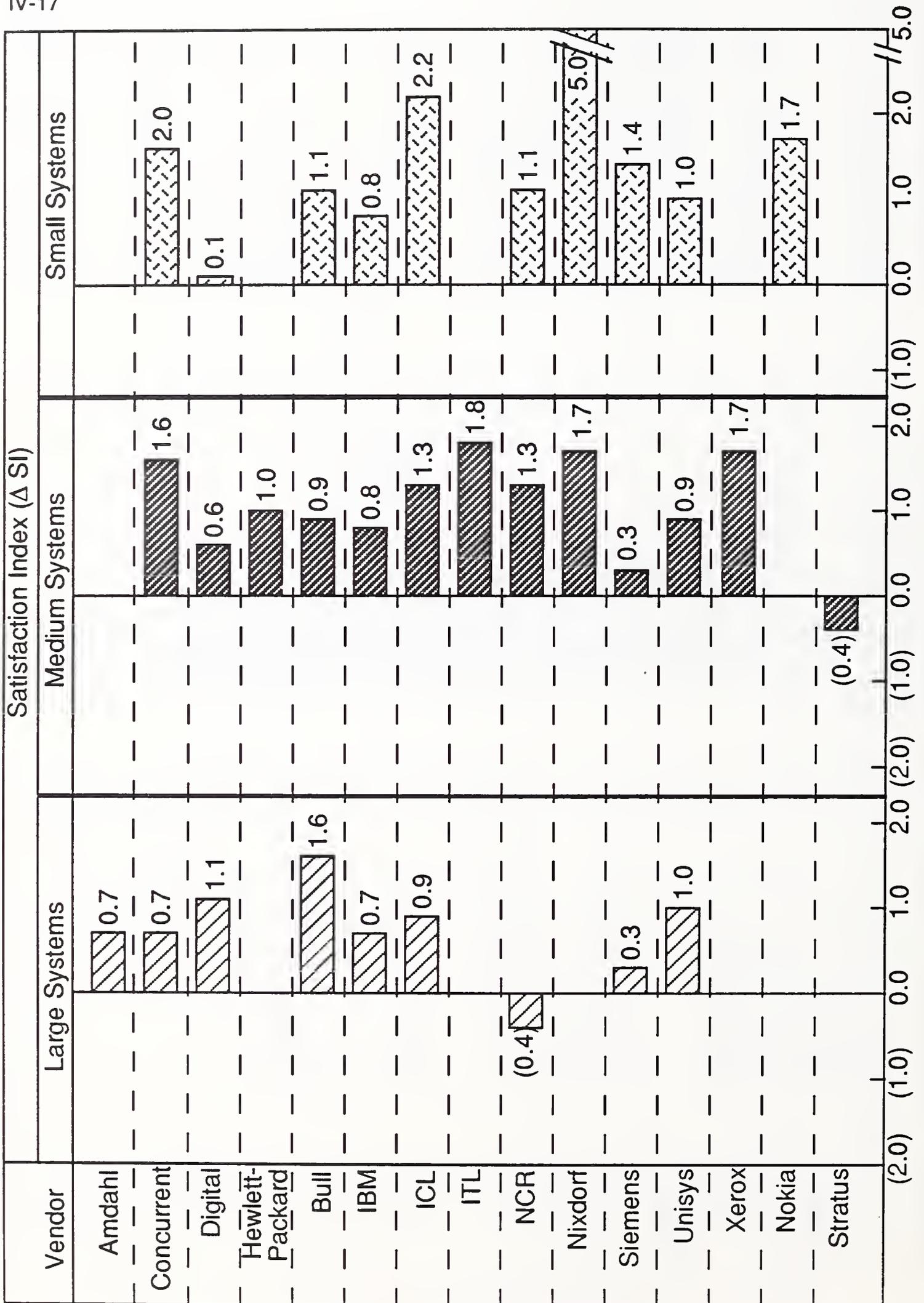
Small = 401

Medium = 784

Large = 441

EXHIBIT IV-17

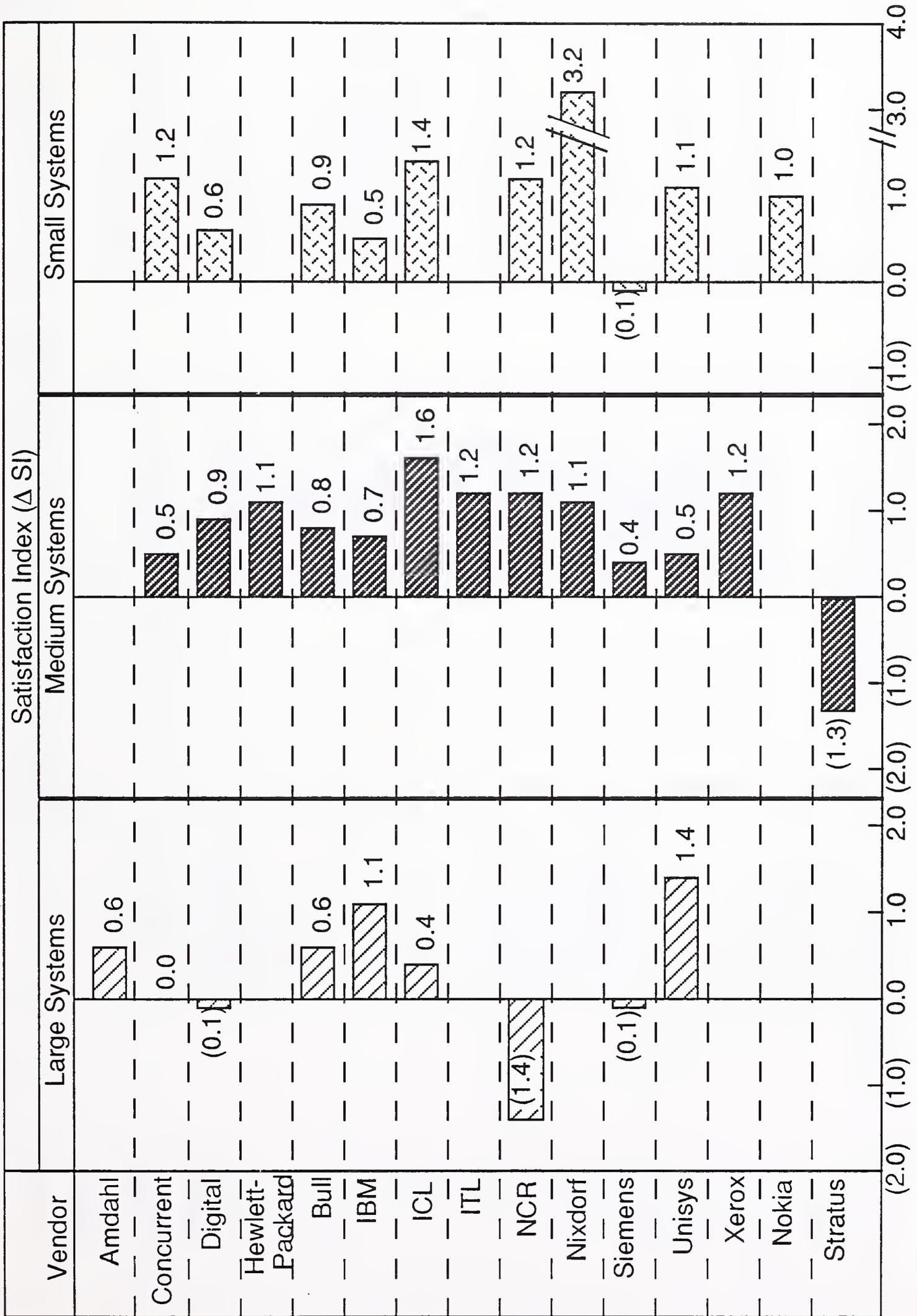
Software Support—Software Updates



Sample Size: Large = 441 Medium = 784 Small = 401 Standard Error = 0.05

EXHIBIT IV-18

Software Support—Software Installation

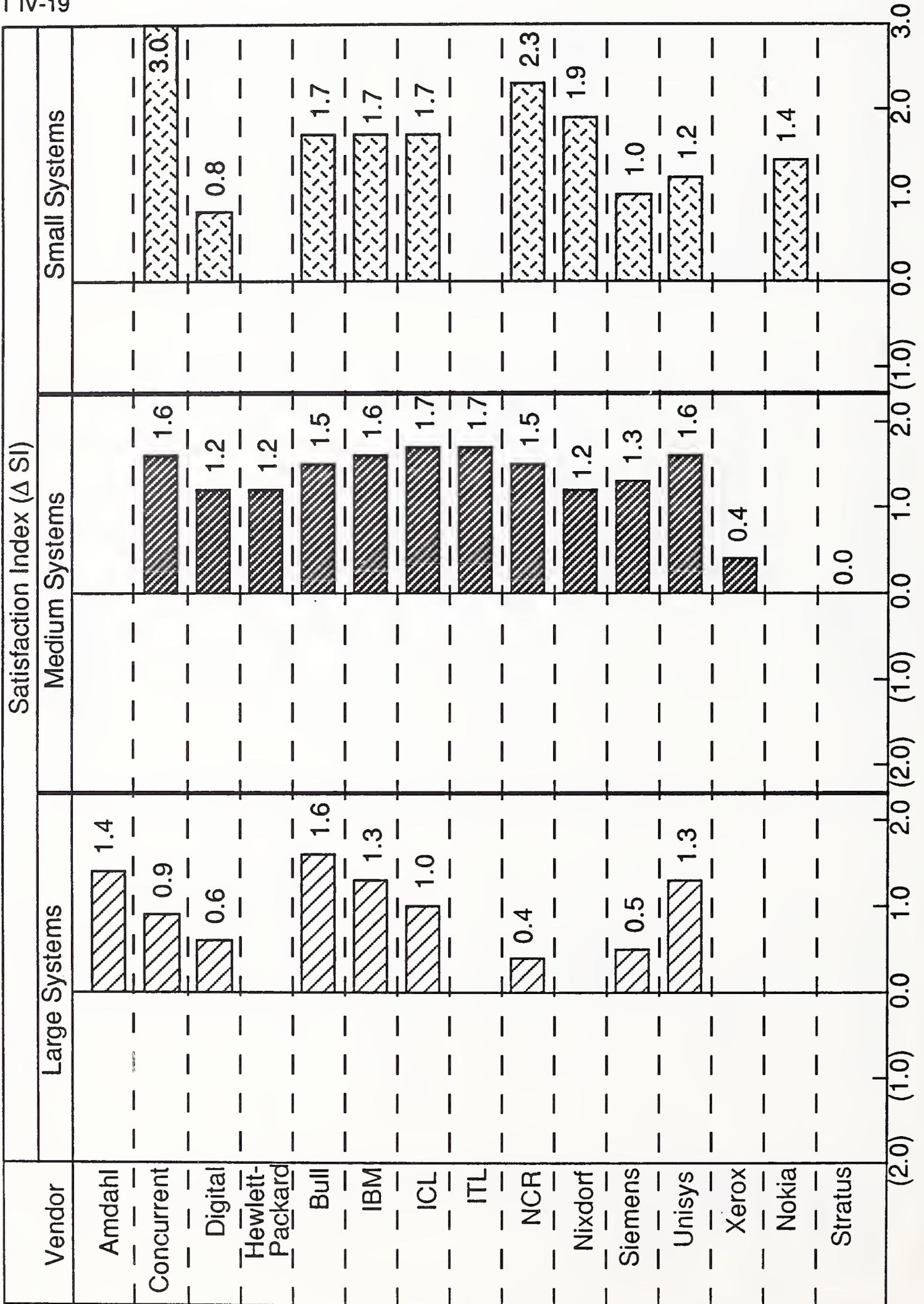


Standard Error = 0.06

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-19

Software Support—Software Training



Standard Error = 0.05

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-20

Software Support—Hotline

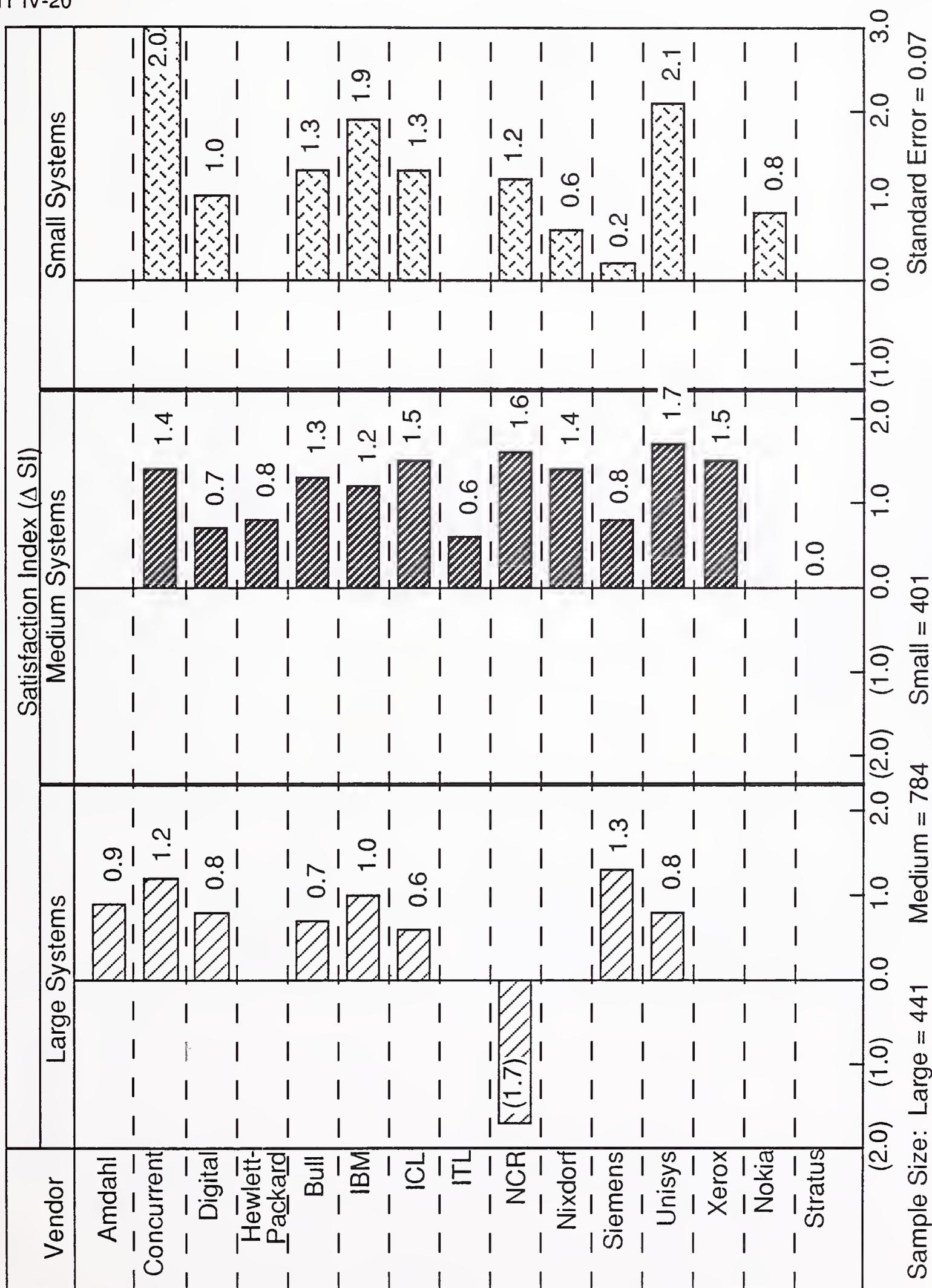
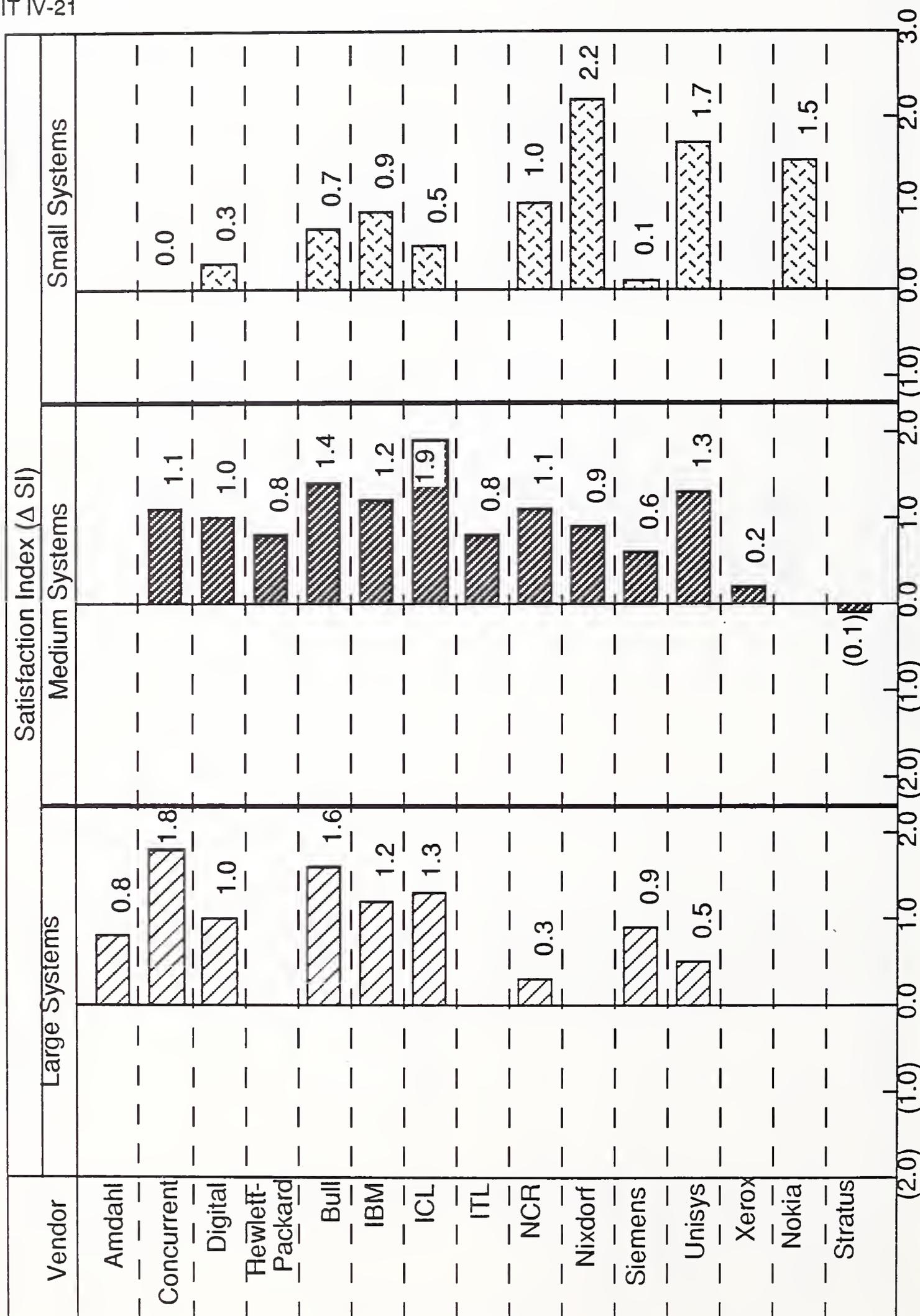


EXHIBIT IV-21

Software Support—Capacity Tuning



Sample Size: Large = 441 Medium = 784 Small = 401 Standard Error = 0.07

EXHIBIT IV-22

Software Support—On-Site Support

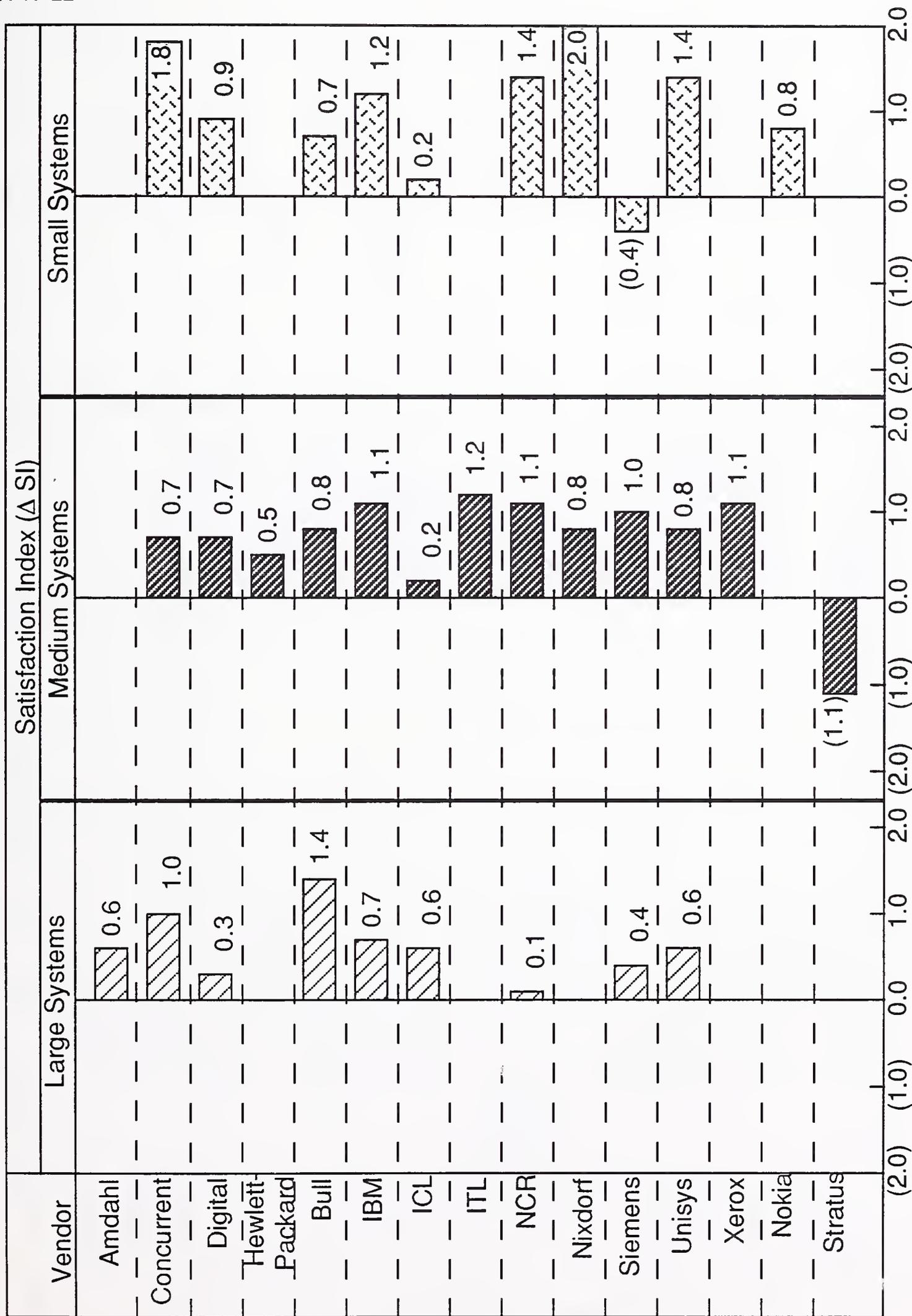
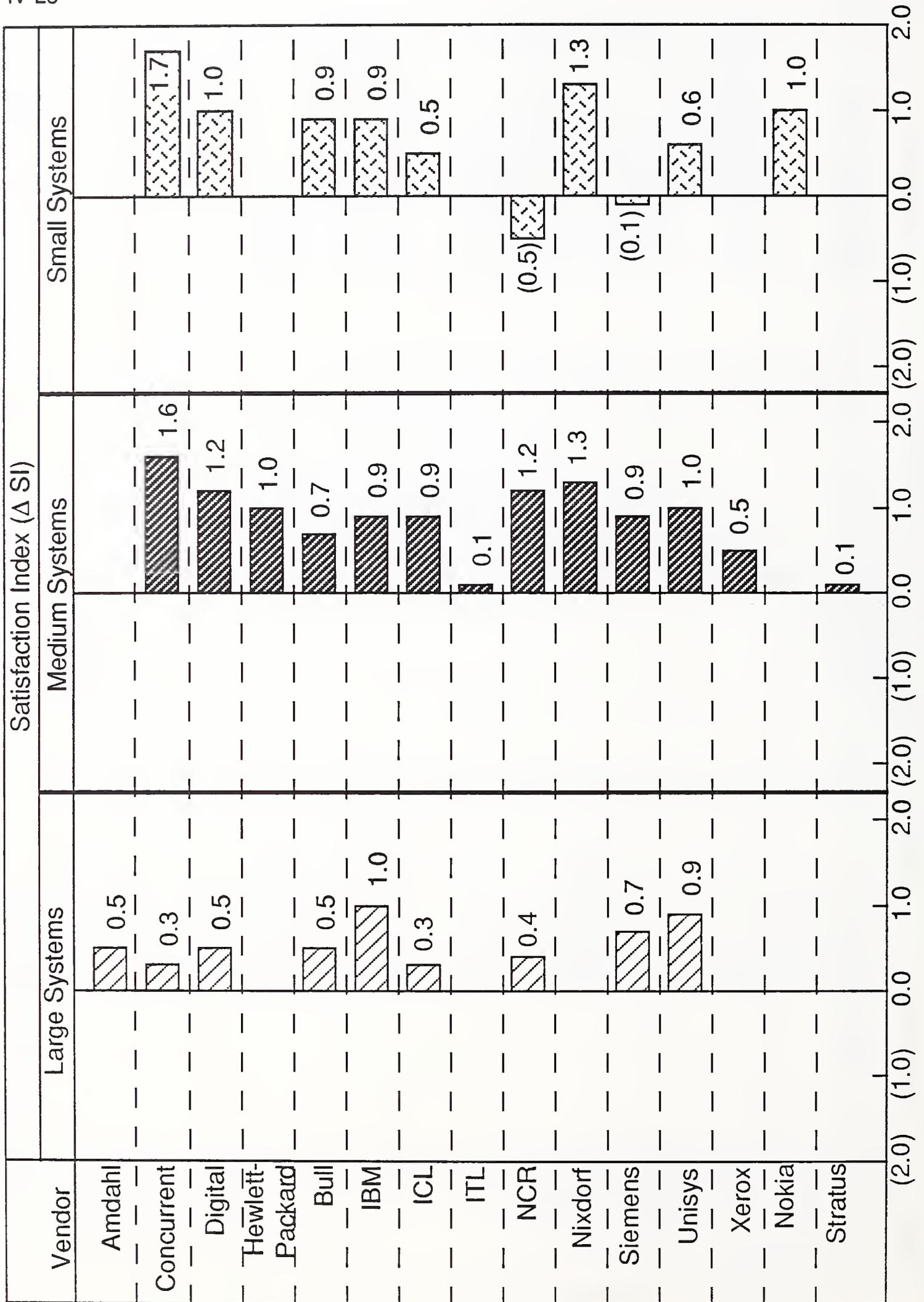


EXHIBIT IV-23

Software Support—Consultancy/Planning

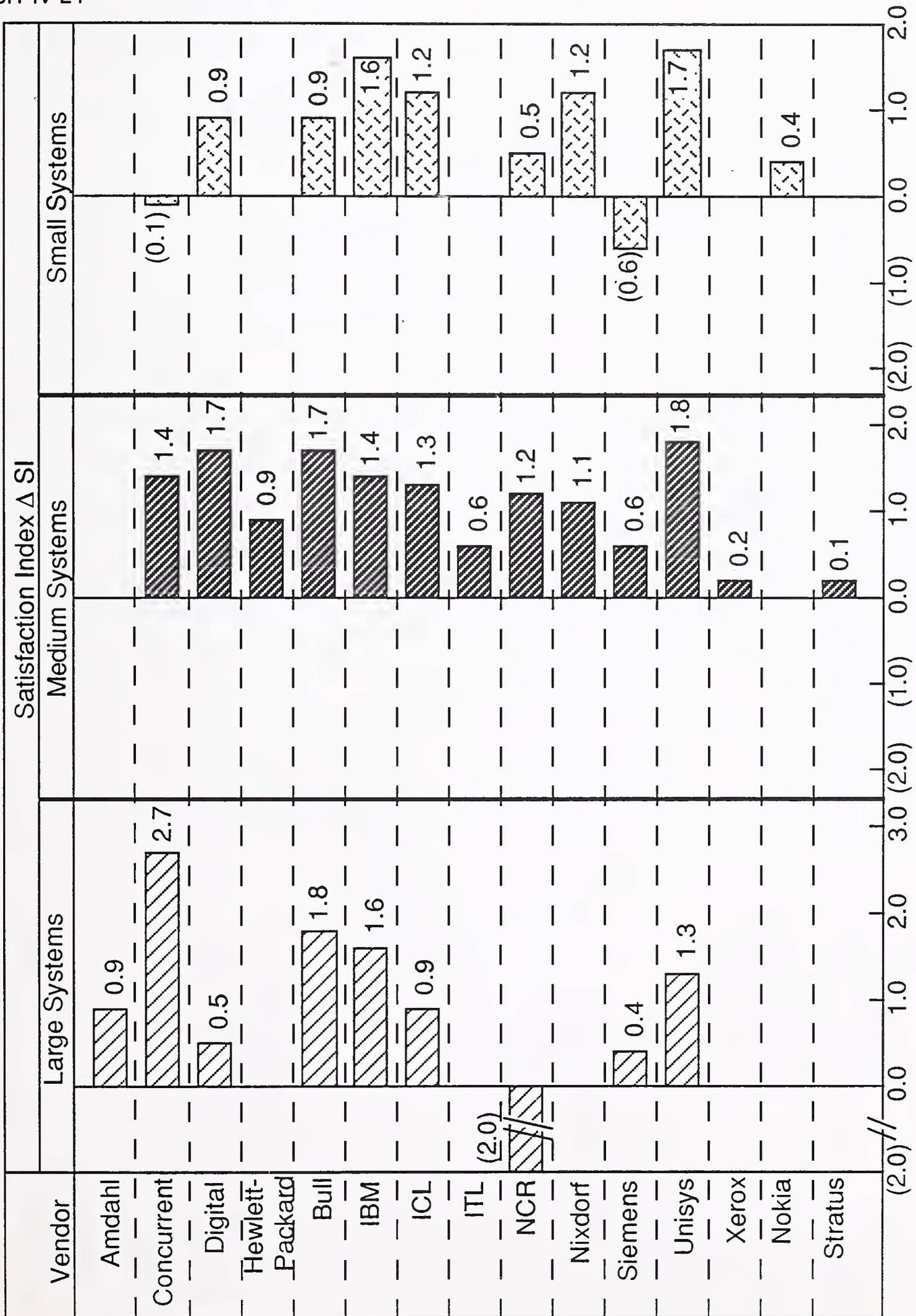


Standard Error = 0.07

Sample Size: Large = 441 Medium = 784 Small = 401

EXHIBIT IV-24

Software Support—Remote Diagnostics



Standard Error = 0.09

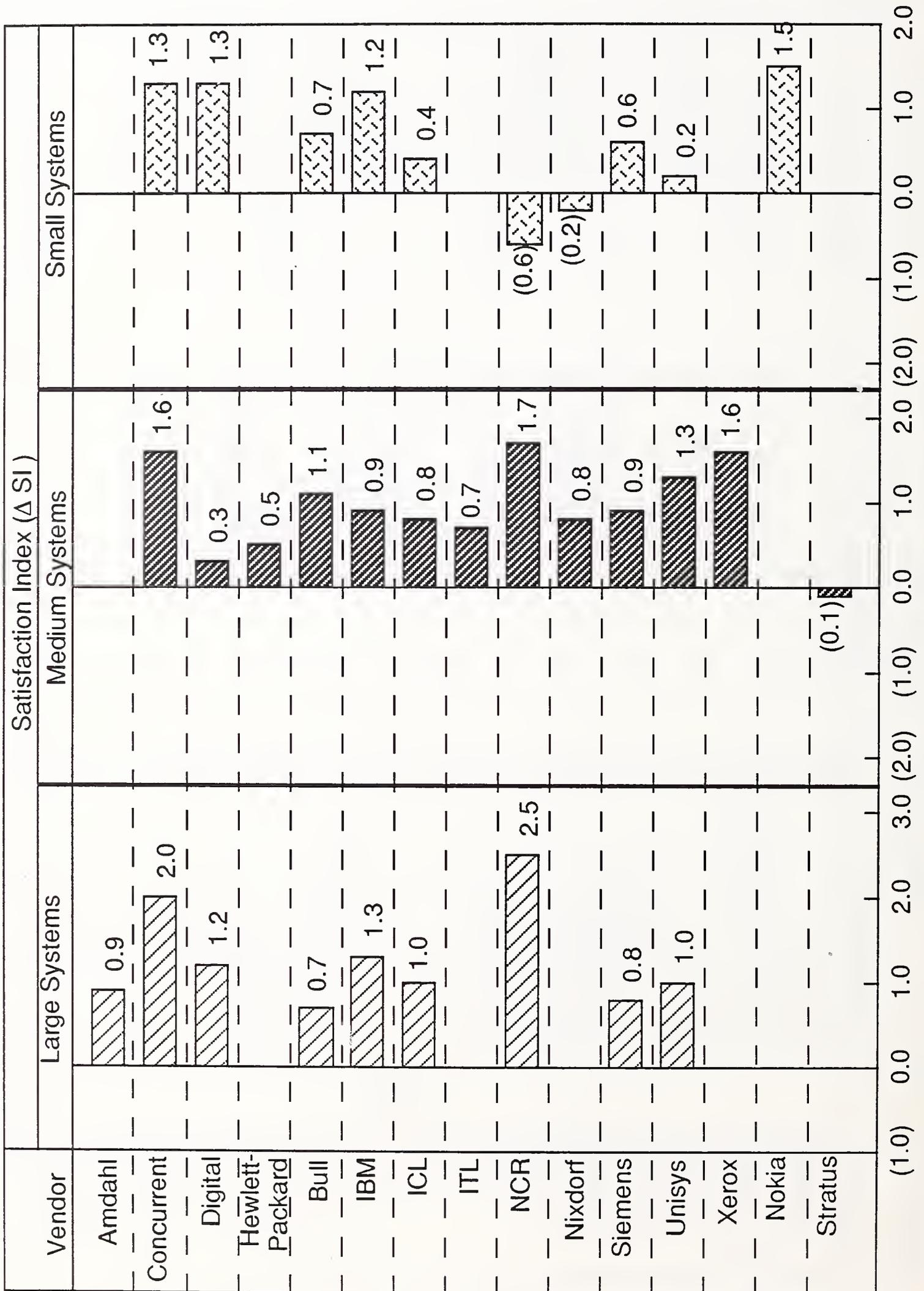
Small = 401

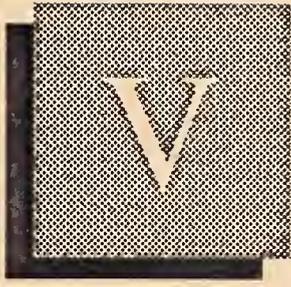
Medium = 784

Large = 441

EXHIBIT IV-25

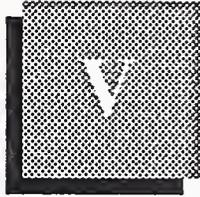
Software Support—Software Problem Data Base





Vendor Performance Trends, 1988-1989





Vendor Performance Trends, 1988-1989

This chapter of the report presents data comparing trends in user perception of vendor service performance between 1988 and 1989. Trends in vendor performance are illustrated in Exhibits V-1 to V-48. These exhibits provide data relating trends for twelve vendors of computer systems:

- Amdahl
- Bull
- Concurrent
- Digital
- Hewlett-Packard
- IBM
- ICL
- ITL
- NCR
- Nixdorf
- Siemens
- Unisys

Data relating to each vendor's service performance is illustrated in four exhibits.

- Trends in user satisfaction with vendor hardware service and software support performance are shown in graphical format. These trends indicate changes in user requirements for service and related vendor performance that have occurred between 1988 and 1989. These trends relate to the overall sample of users of each vendor's computer systems (all system sizes) and indicate:
 - Changes in the importance users place on each aspect of service. Areas where importance ratings have increased between 1988 and 1989 are shaded to highlight the significance of changes.
 - Changes in satisfaction index (Δ SI) relating the vendors' performance to user needs. Areas where user satisfaction has declined in 1989 have been shaded to highlight aspects of service where the vendor has not responded to user needs. These changes may relate to increased importance or decreased satisfaction.
- Trends in system failure rates and user satisfaction with systems availability are shown in bar graph form to illustrate changes that have occurred between 1988 and 1989. System failure rates are expressed as the number of times each year the user perceived the vendor's system to have failed completely for a period of more than one hour. User satisfaction with system availability is expressed in terms of satisfaction index.
- Trends in vendor hardware service and software support response and repair/fix time performance are presented in the form of bar graphs, illustrating changes that have occurred between 1988 and 1989. Response and repair/fix times are expressed as the percentage by which they exceed or fall short of user requirements. Data relating to vendor hardware service and software support performance is shown in the same exhibit.

EXHIBIT V-1

Amdahl Hardware Service Trends, 1988-1989

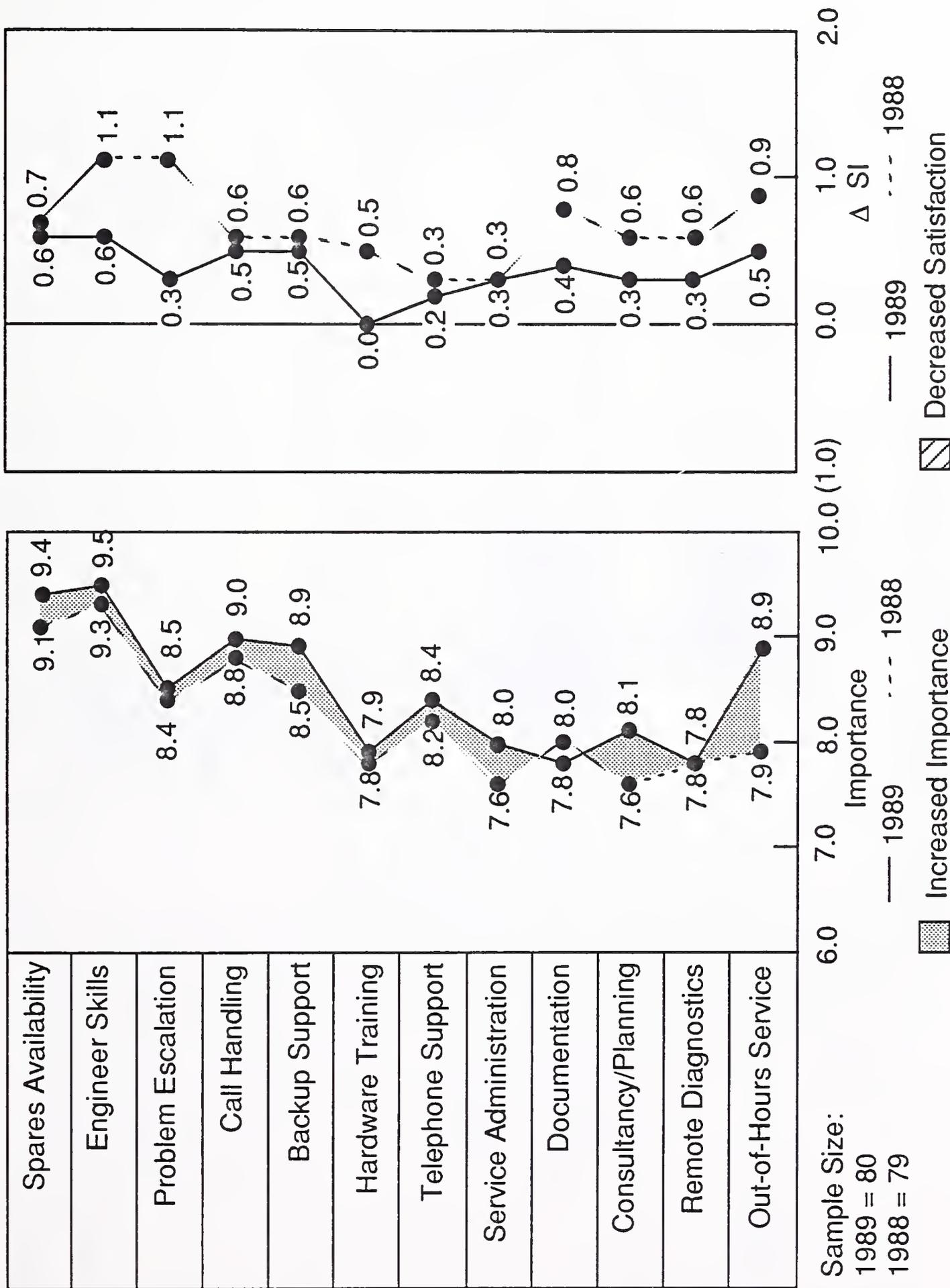


EXHIBIT V-2

Amdahl Software Support Trends, 1988-1989

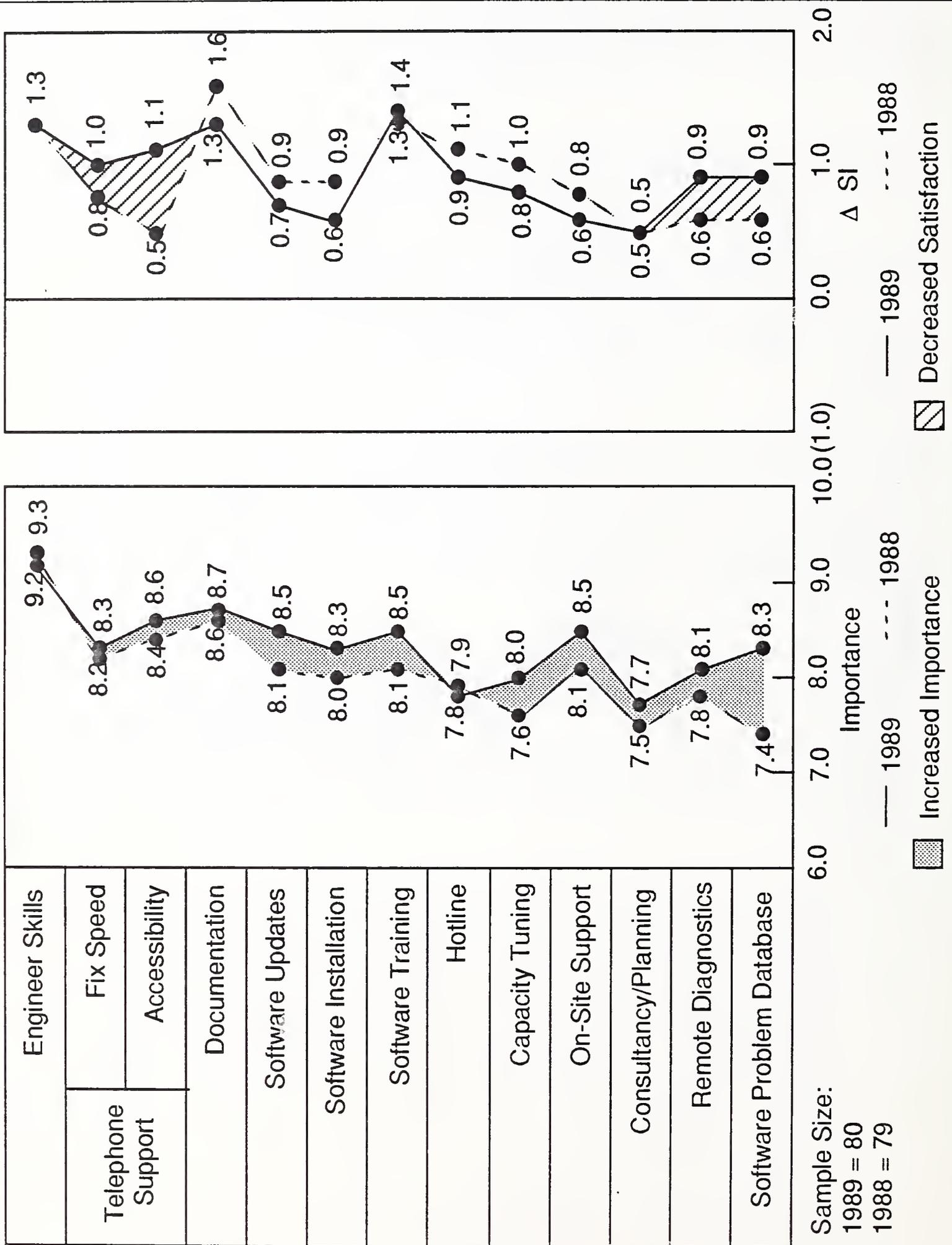


EXHIBIT V-3

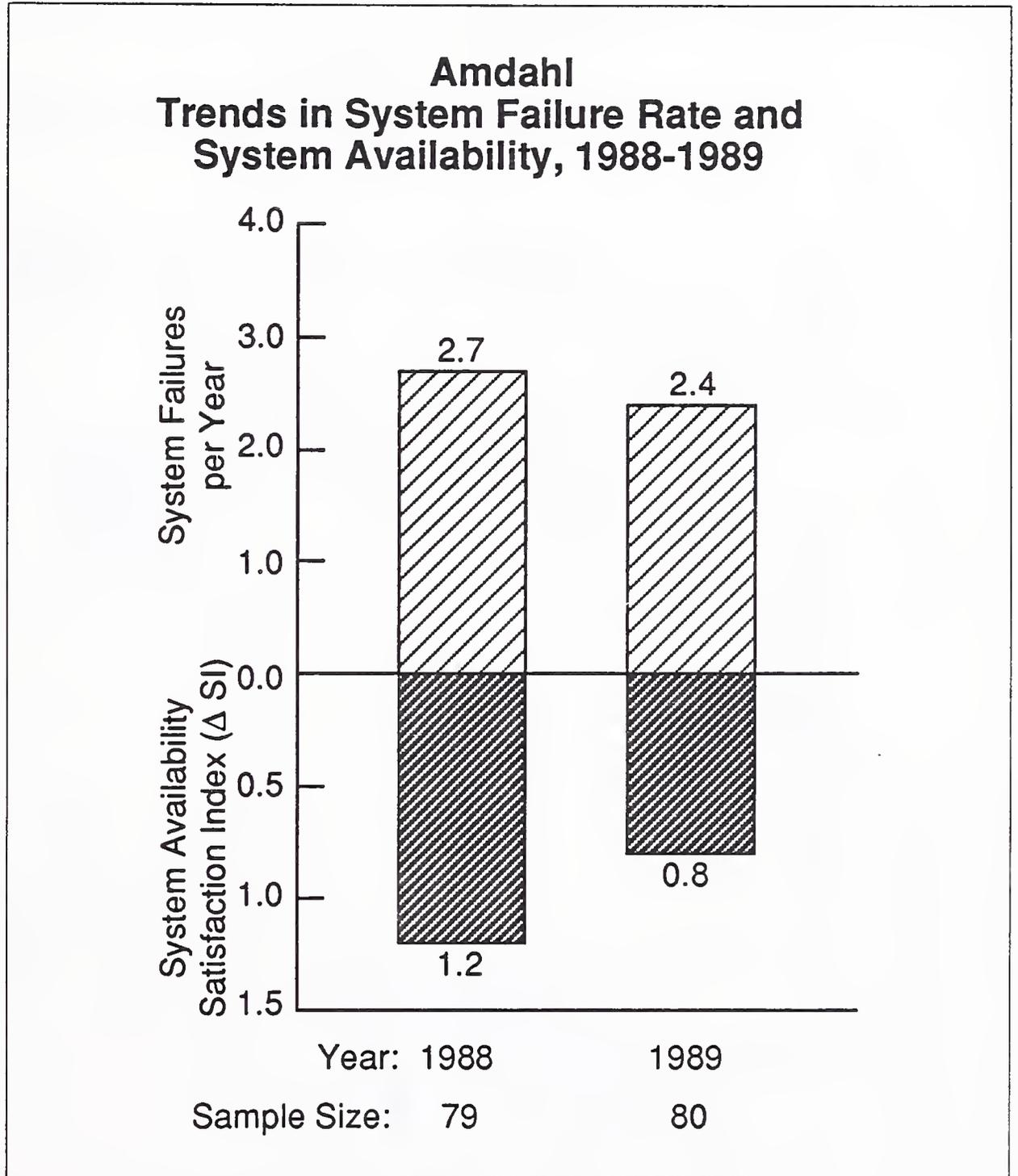


EXHIBIT V-4

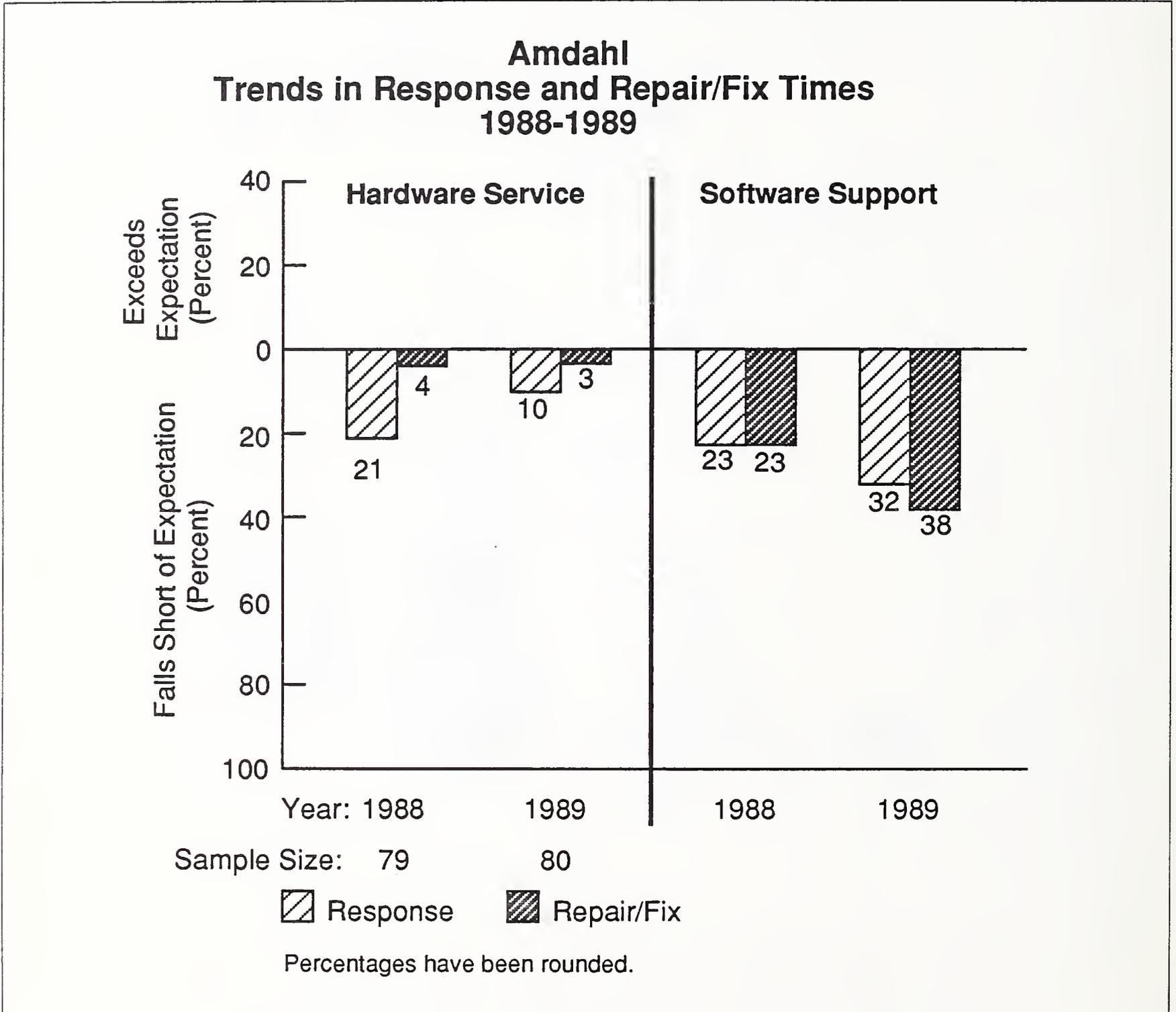


EXHIBIT V-5

Bull Hardware Service Trends, 1988-1989

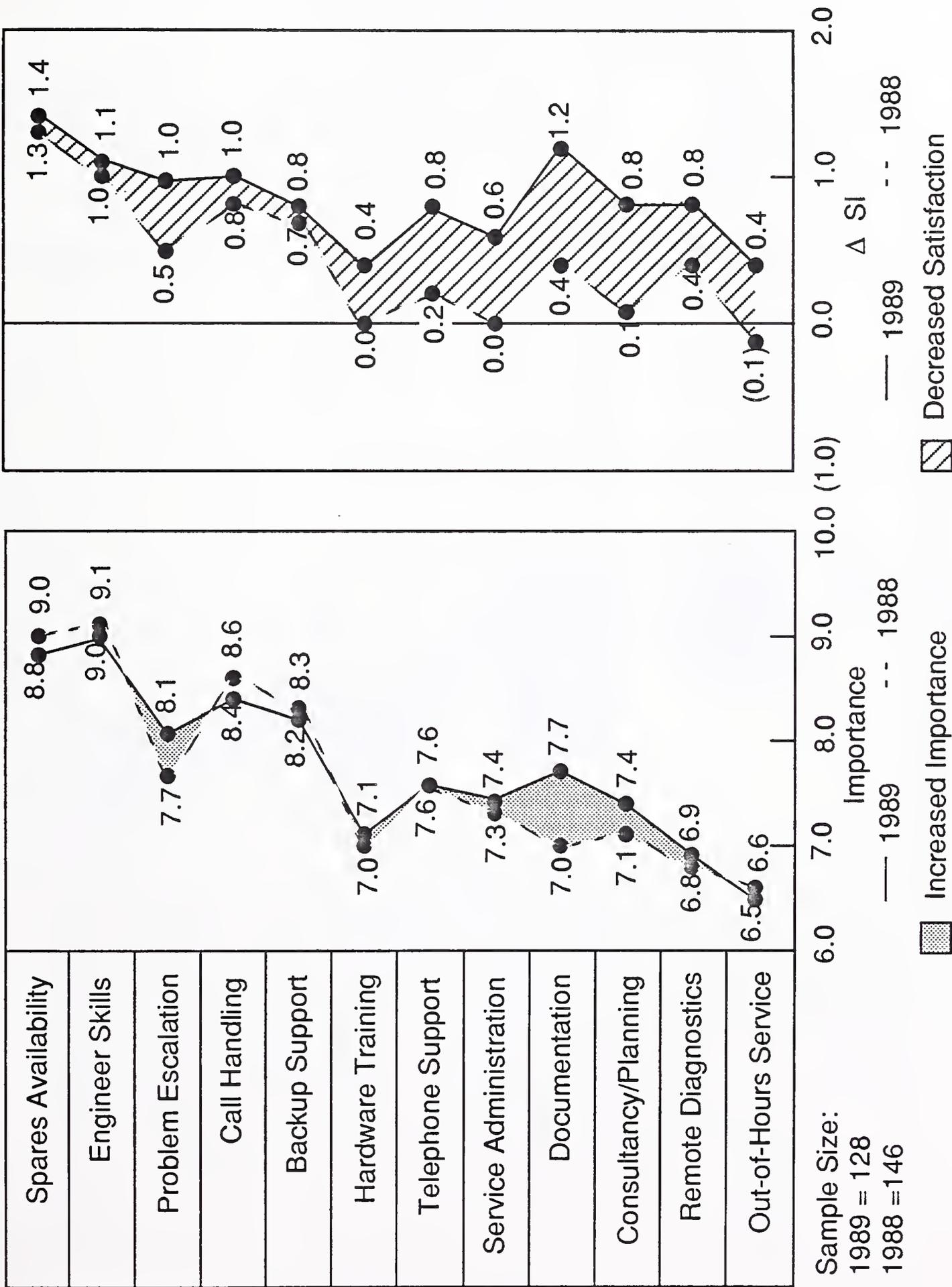


EXHIBIT V-6

Bull
Software Support Trends, 1988-1989

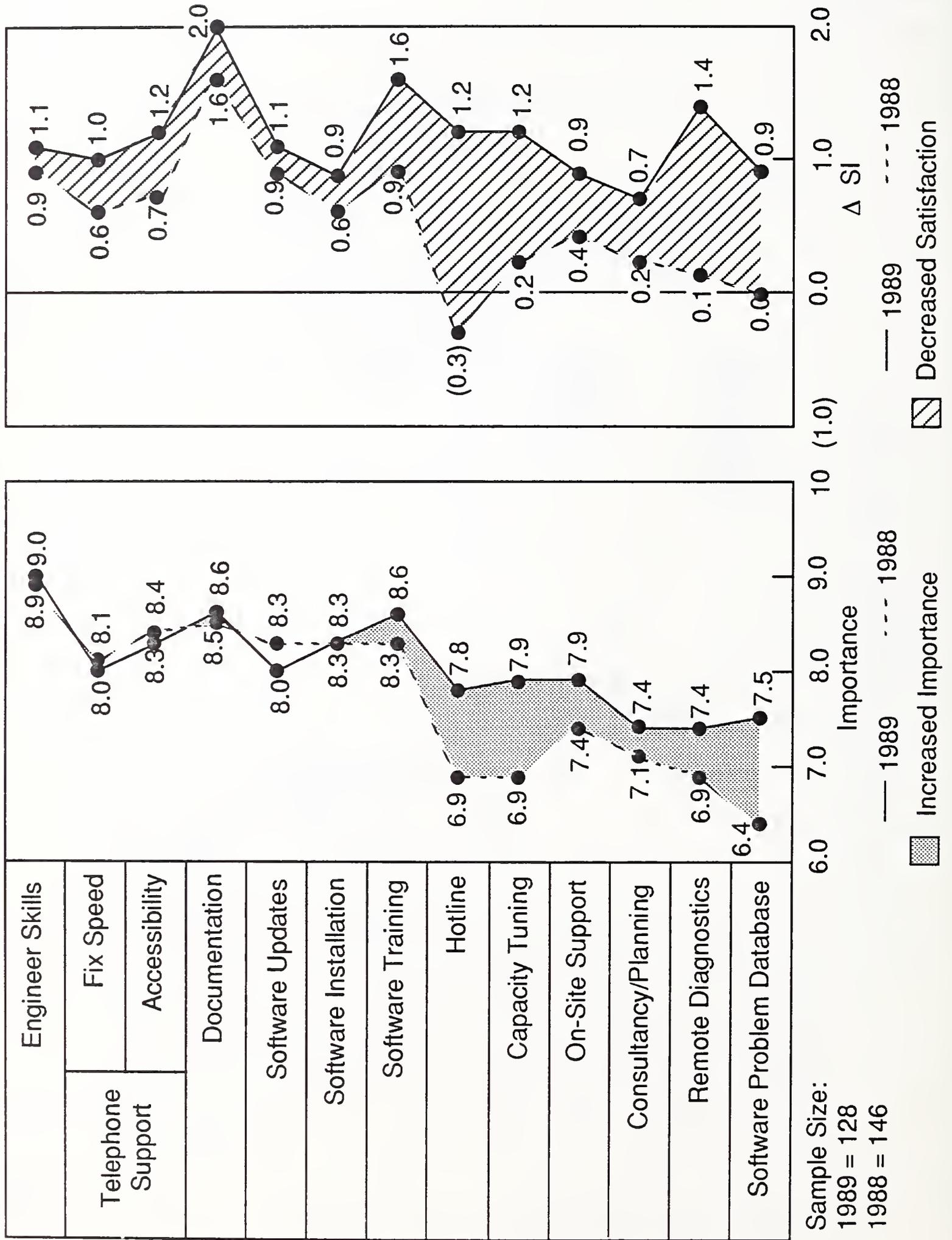


EXHIBIT V-7

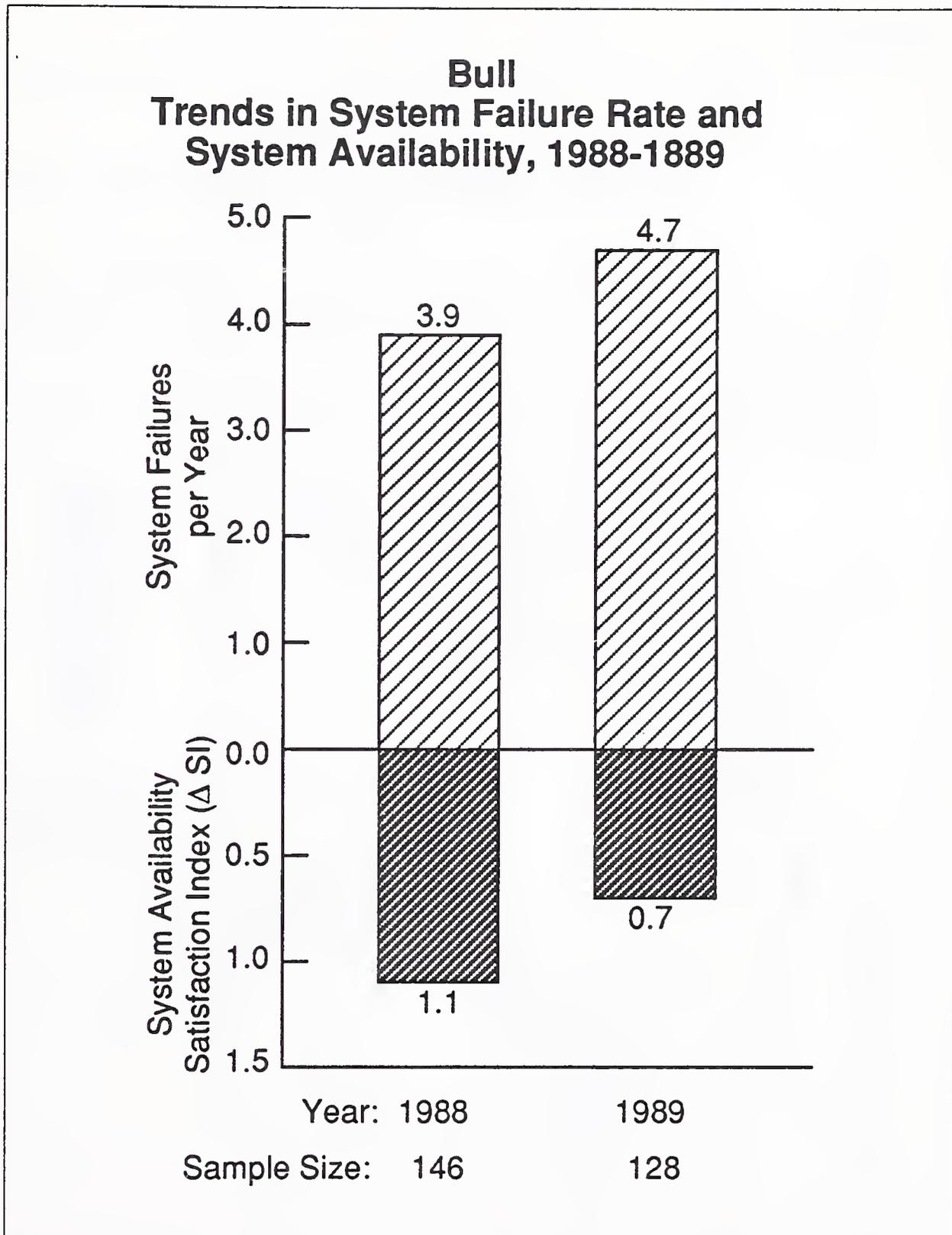
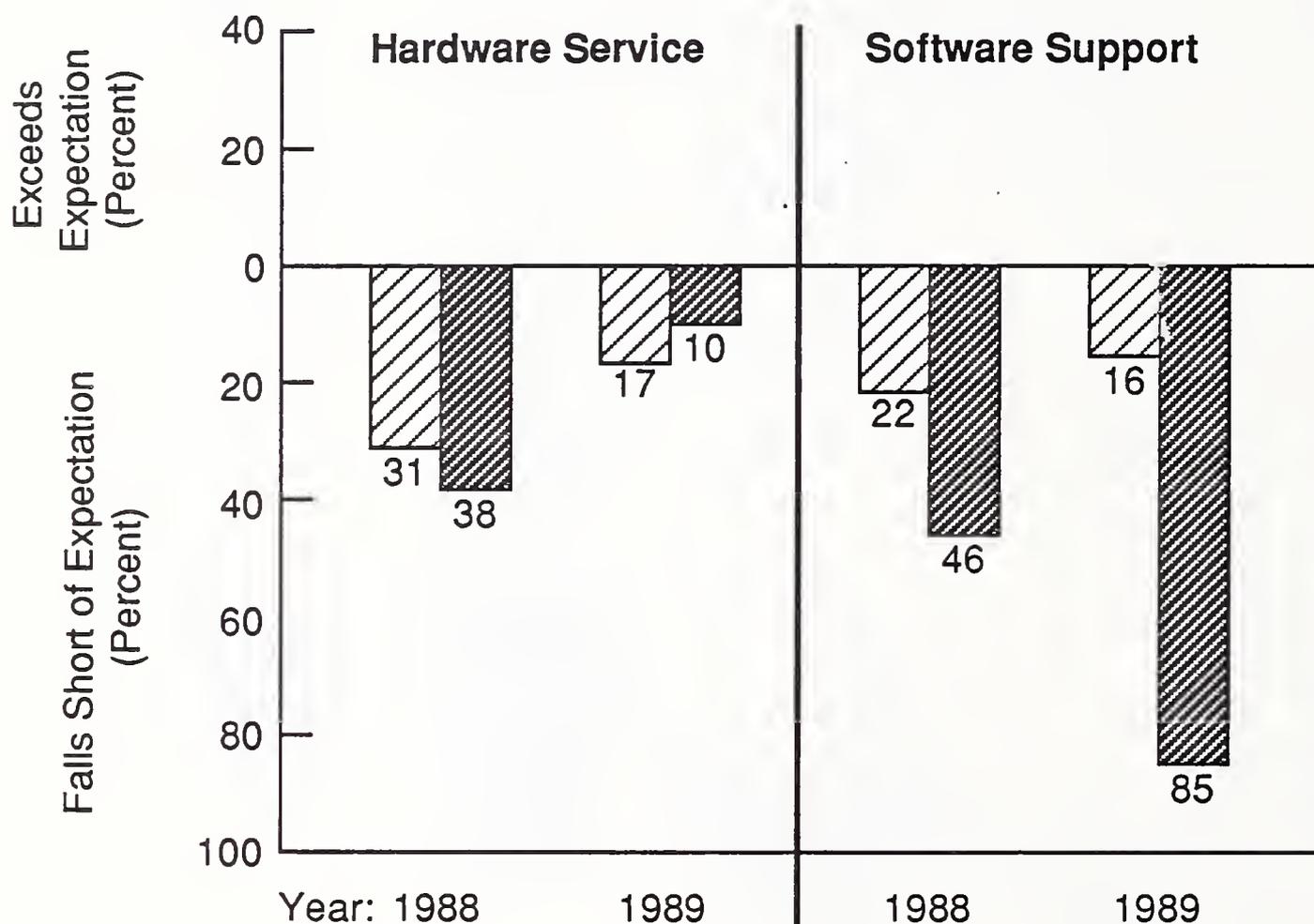


EXHIBIT V-8

Bull Trends in Response and Repair/Fix Times 1988-1989



Sample Size: 146 128

▨ Response ▩ Repair/Fix

Percentages have been rounded.

EXHIBIT V-9

Concurrent Hardware Service Trends, 1988-1989

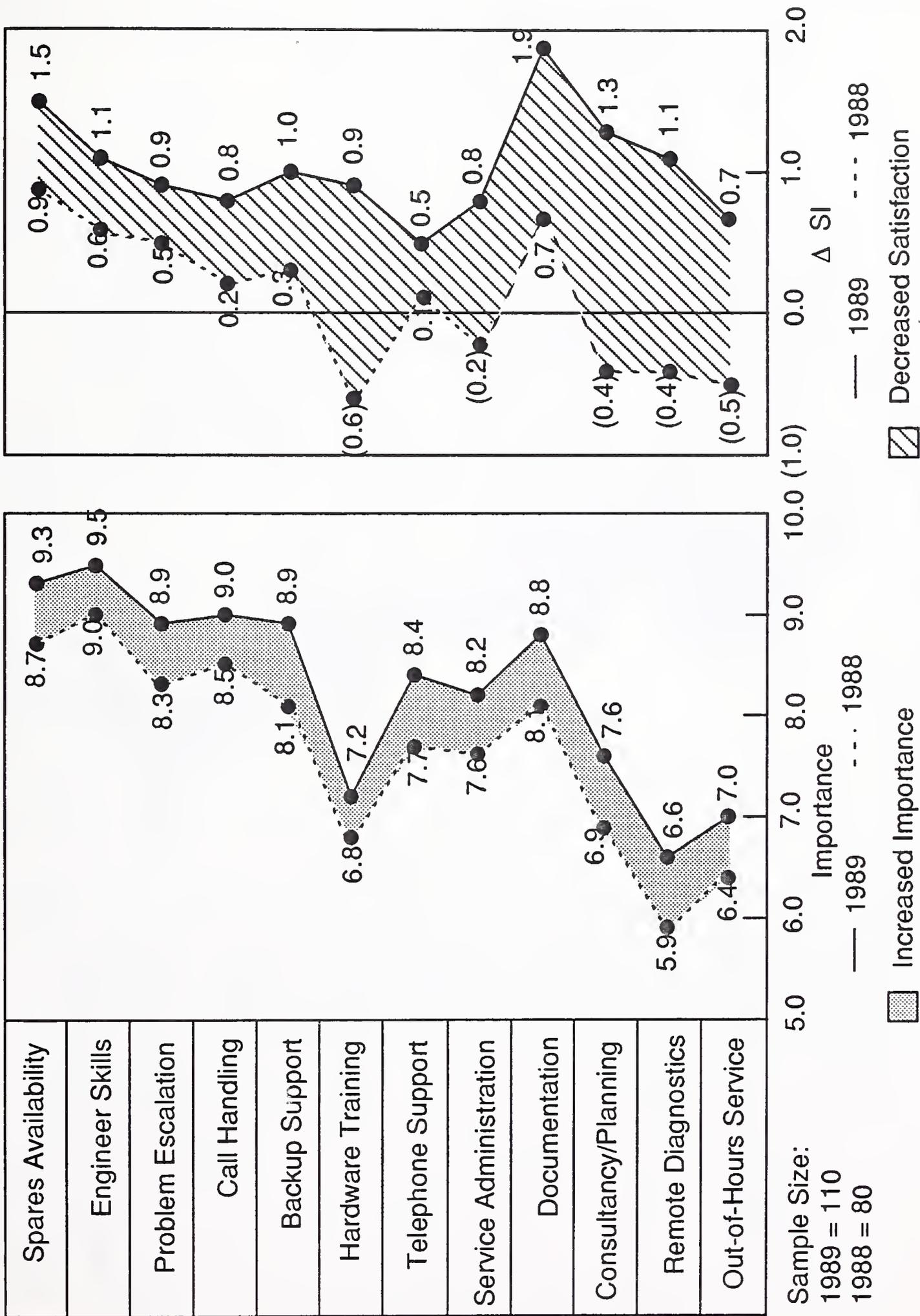


EXHIBIT V-10

Concurrent
Software Support Trends, 1988-1989

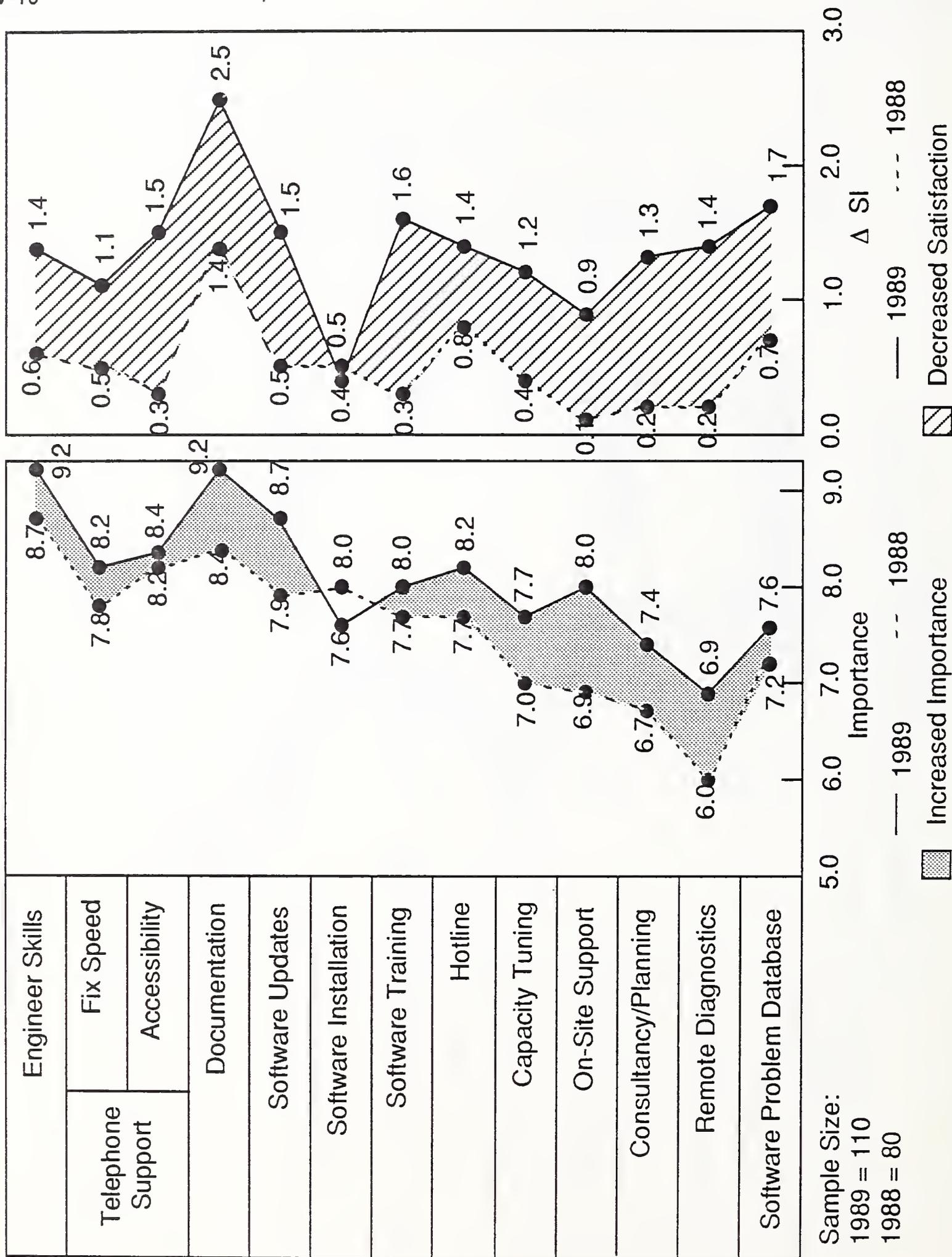


EXHIBIT V-11

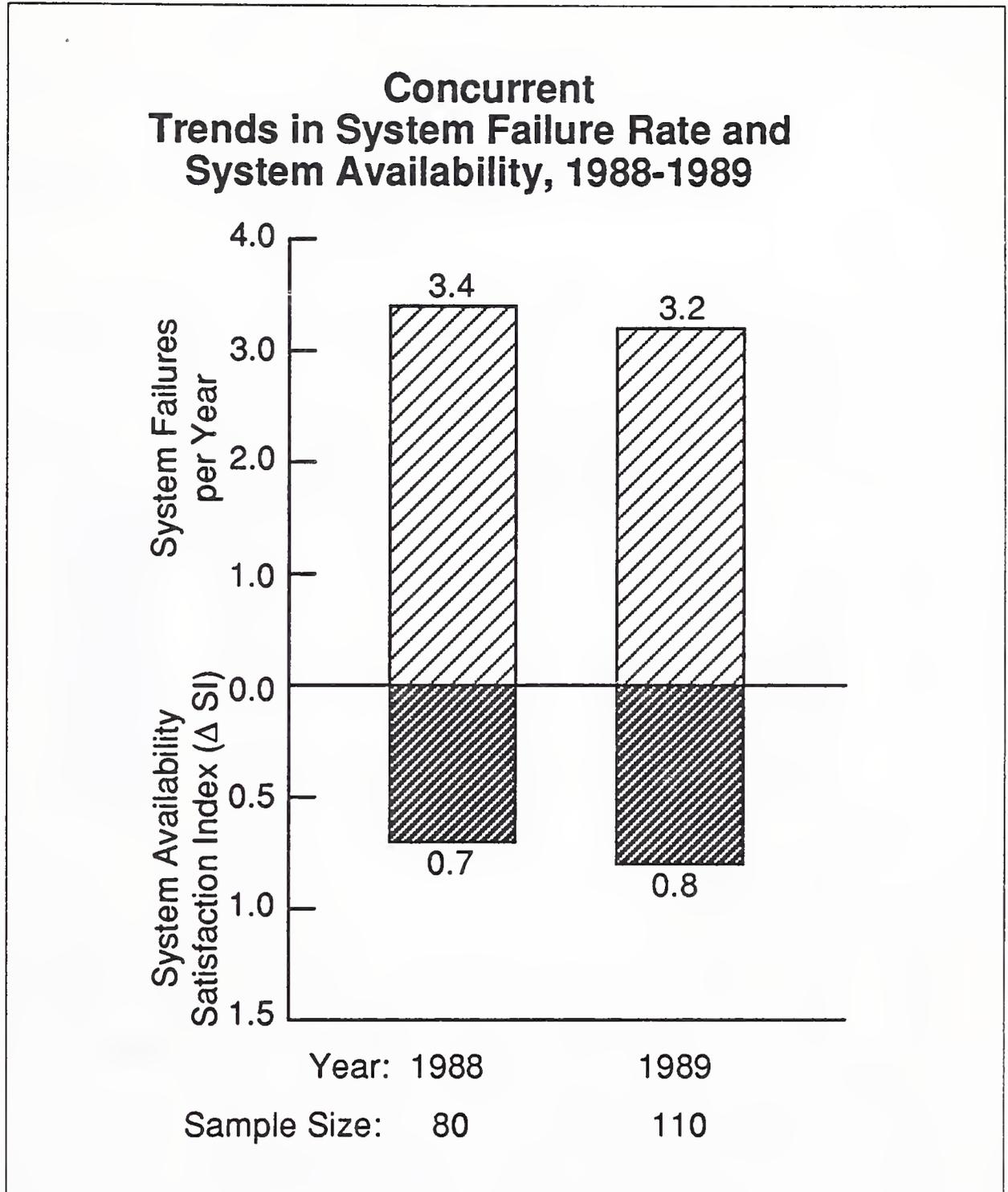


EXHIBIT V-12

Concurrent Trends in Response and Repair/Fix Times 1988-1989

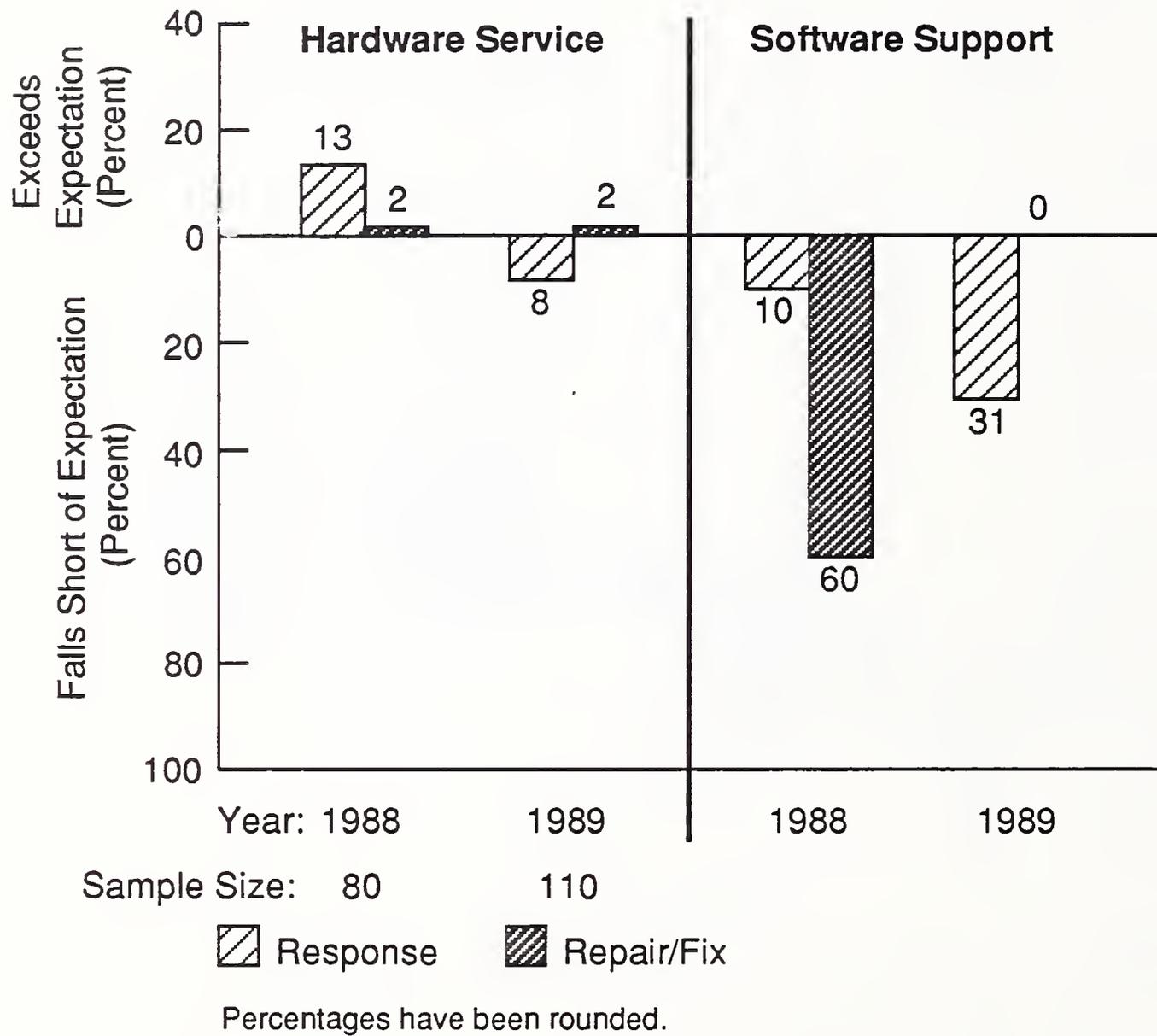


EXHIBIT V-13

Digital Hardware Service Trends, 1988-1989

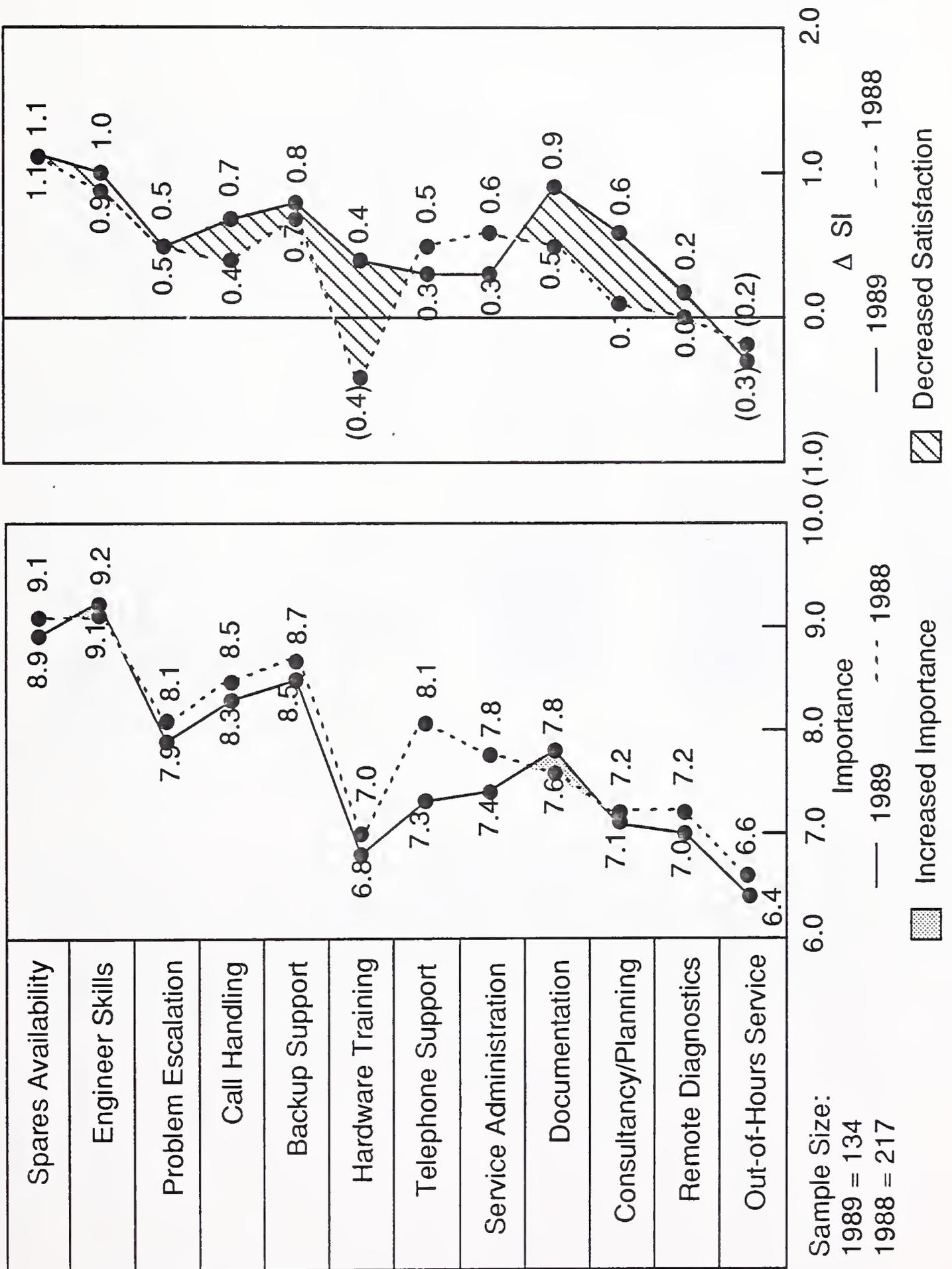


EXHIBIT V-14

Digital Software Support Trends, 1988-1989

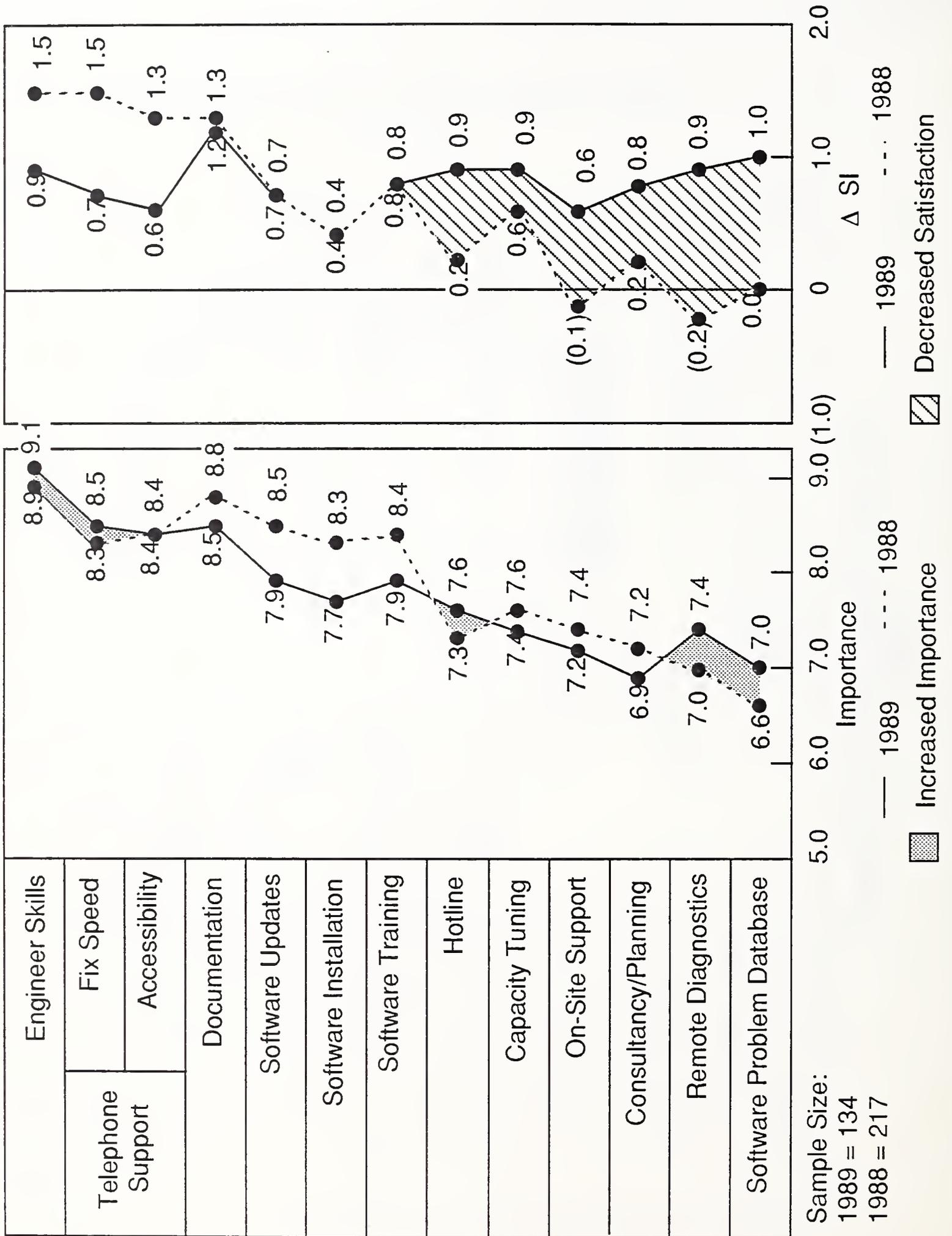


EXHIBIT V-15

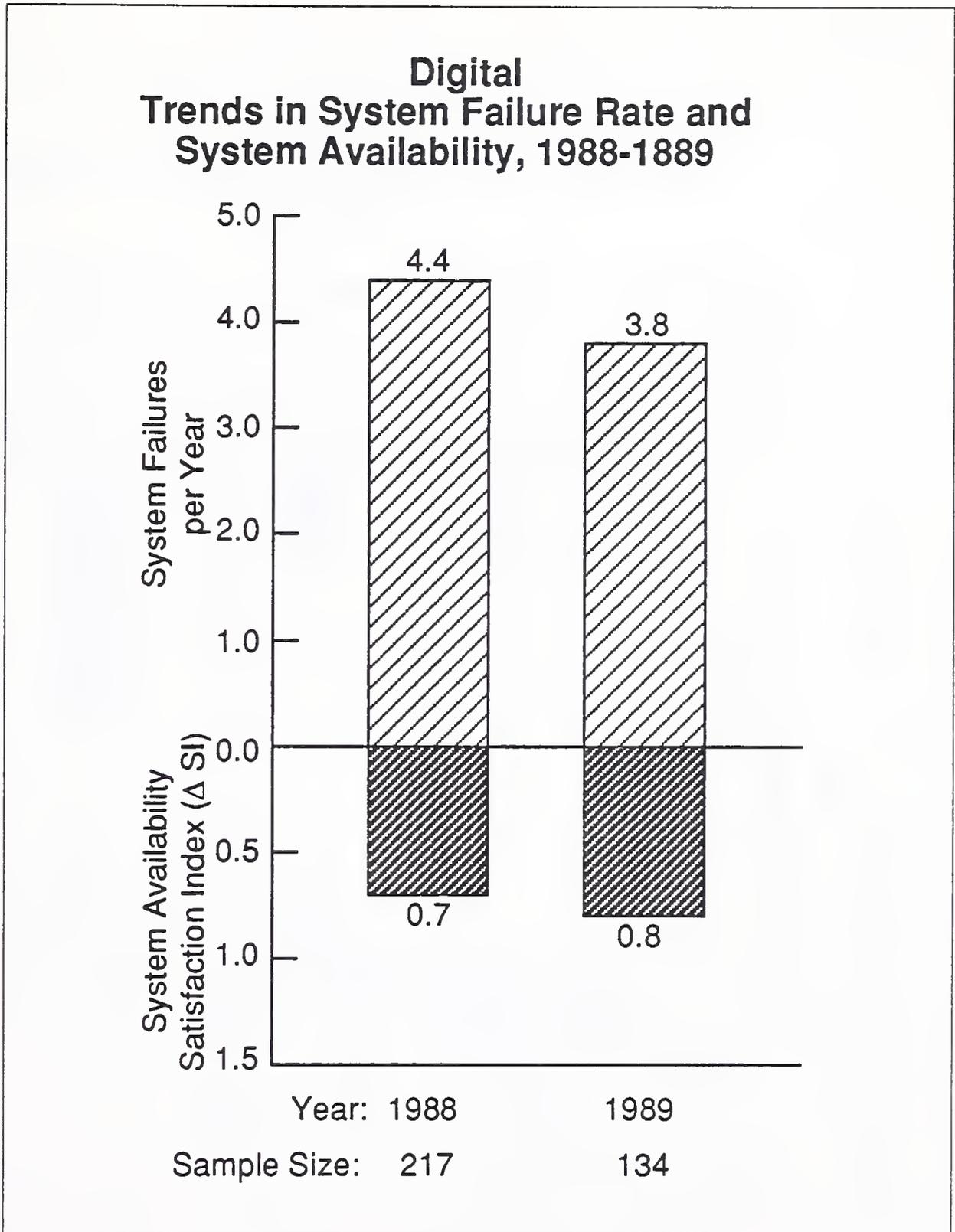
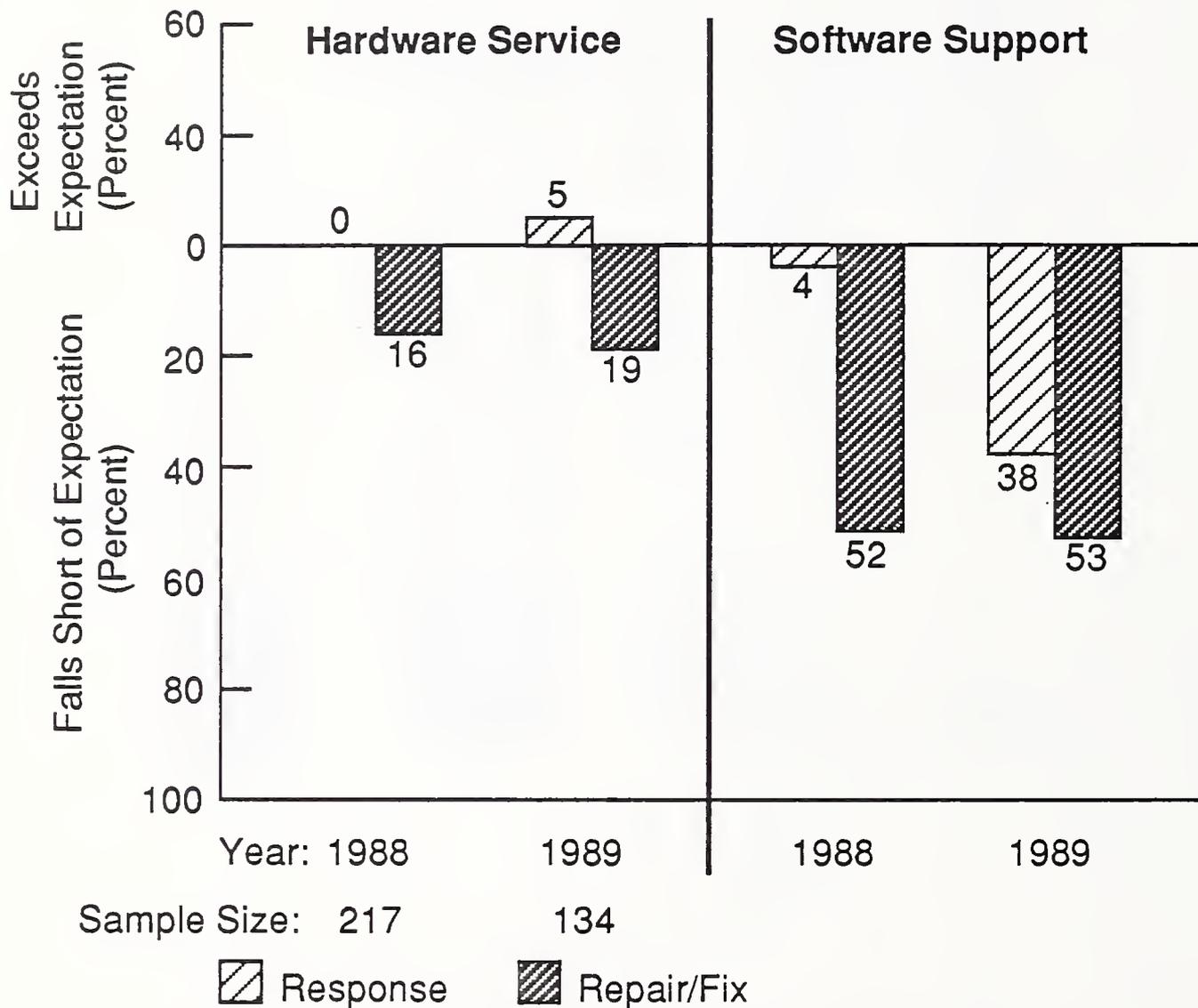


EXHIBIT V-16

Digital Trends in Response and Repair/Fix Times 1988-1989



Percentages have been rounded.

EXHIBIT V-17

Hewlett-Packard Hardware Service Trends, 1988-1989

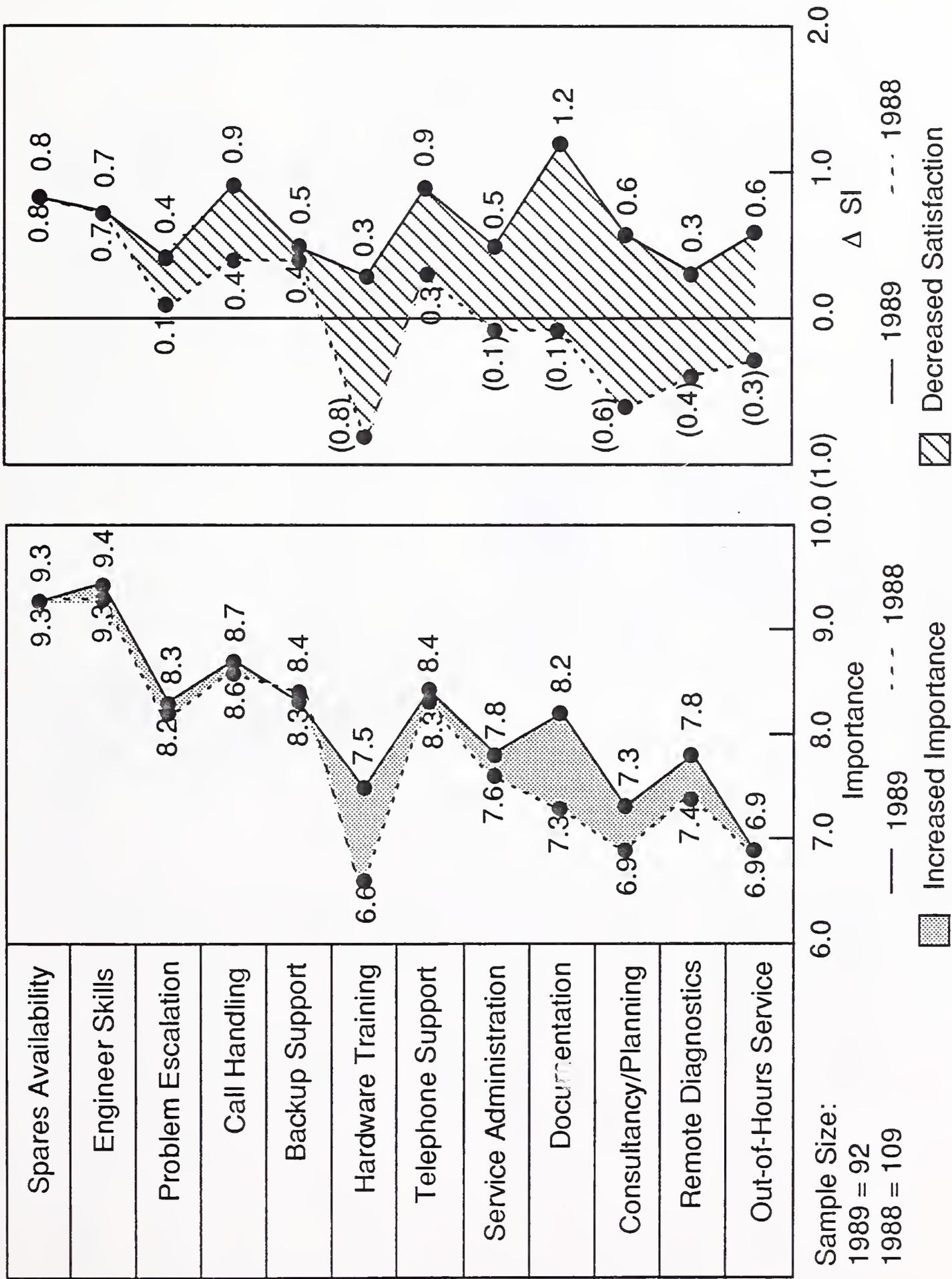


EXHIBIT V-18

**Hewlett-Packard
Software Support Trends, 1988-1989**

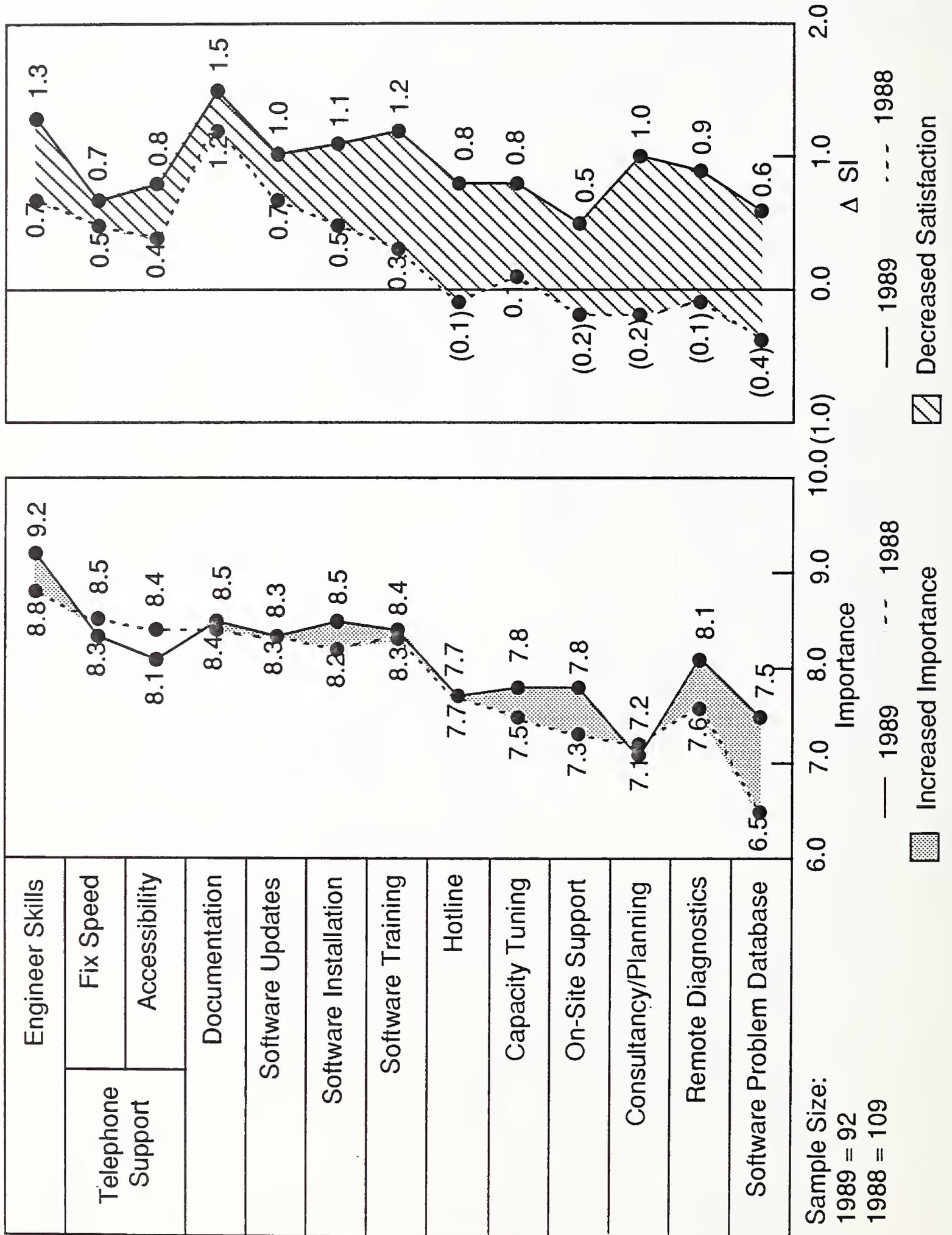


EXHIBIT V-19

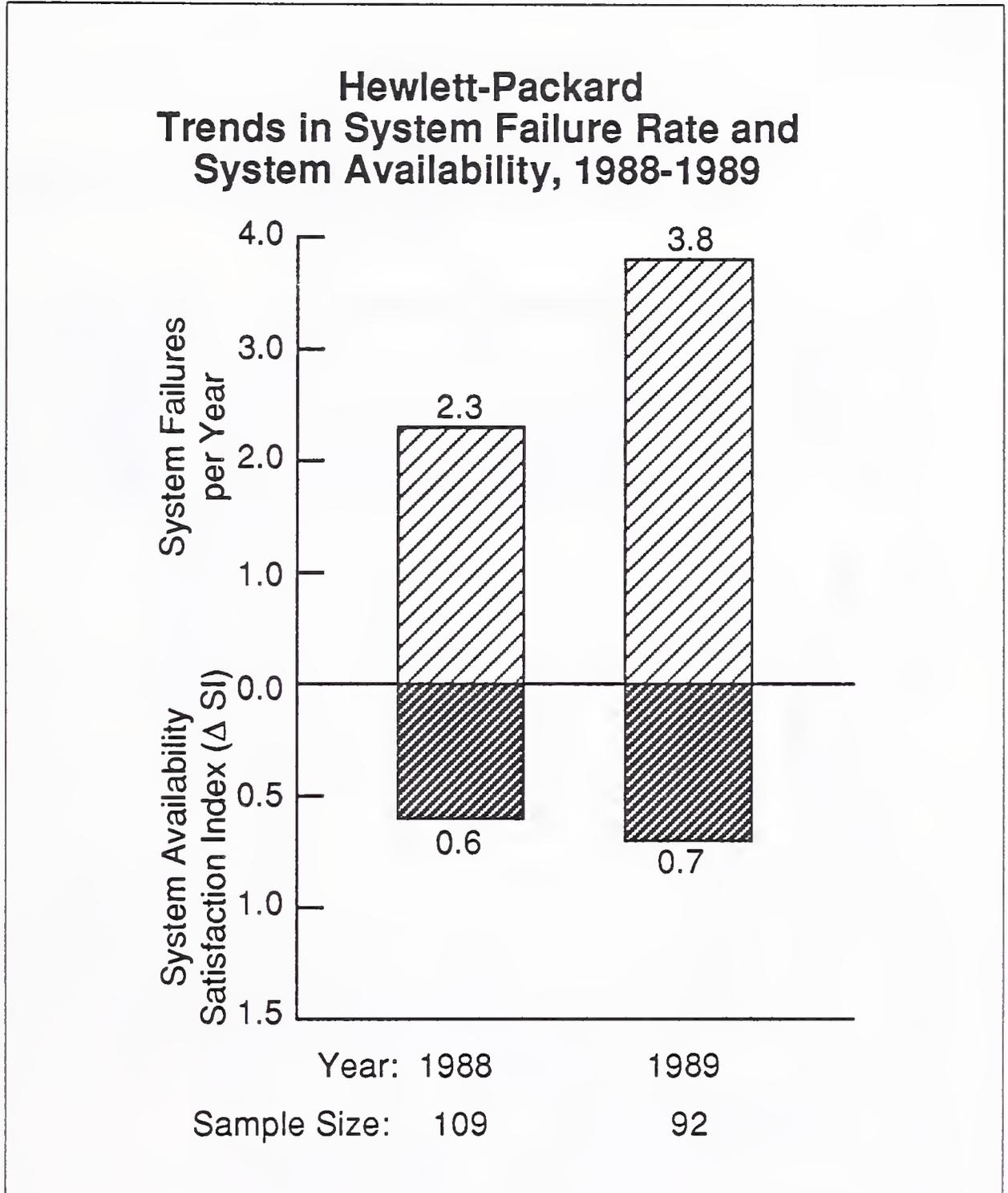
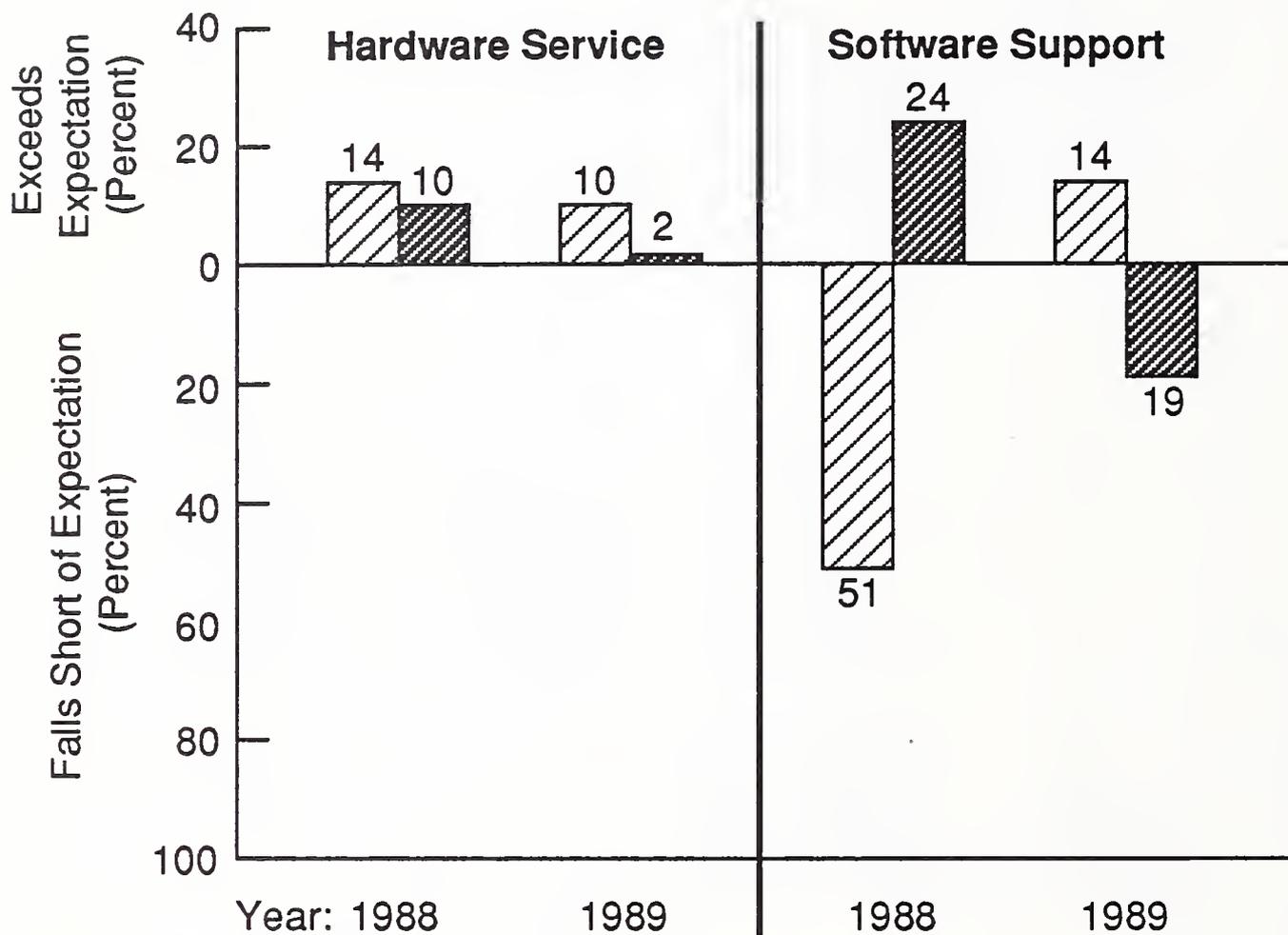


EXHIBIT V-20

Hewlett-Packard Trends in Response and Repair/Fix Times 1988-1989



Sample Size: 109 92

▨ Response ▩ Repair/Fix

Percentages have been rounded.

EXHIBIT V-21

IBM
Hardware Service Trends, 1988-1989

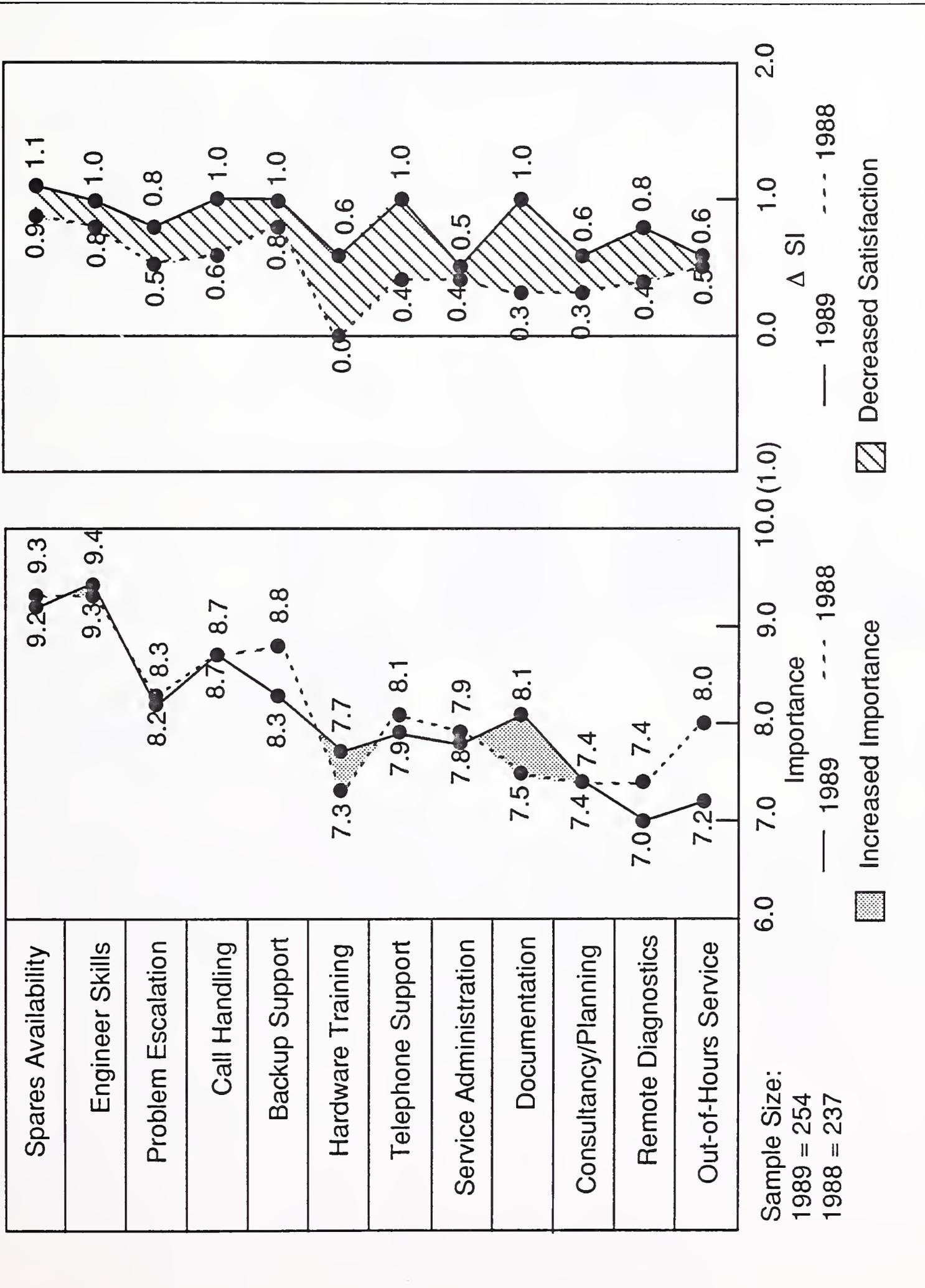


EXHIBIT V-22

IBM
Software Support Trends, 1988-1989

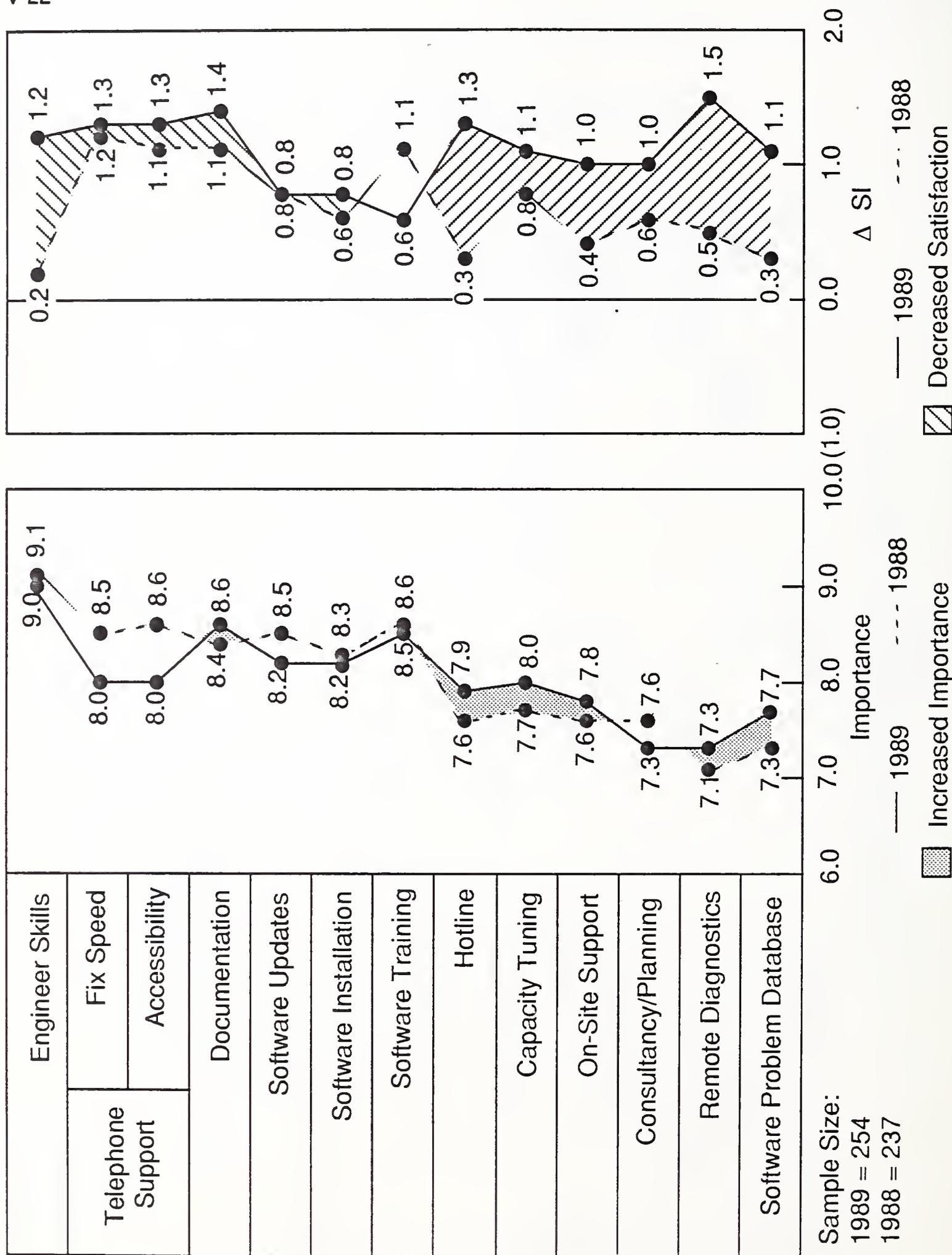


EXHIBIT V-23

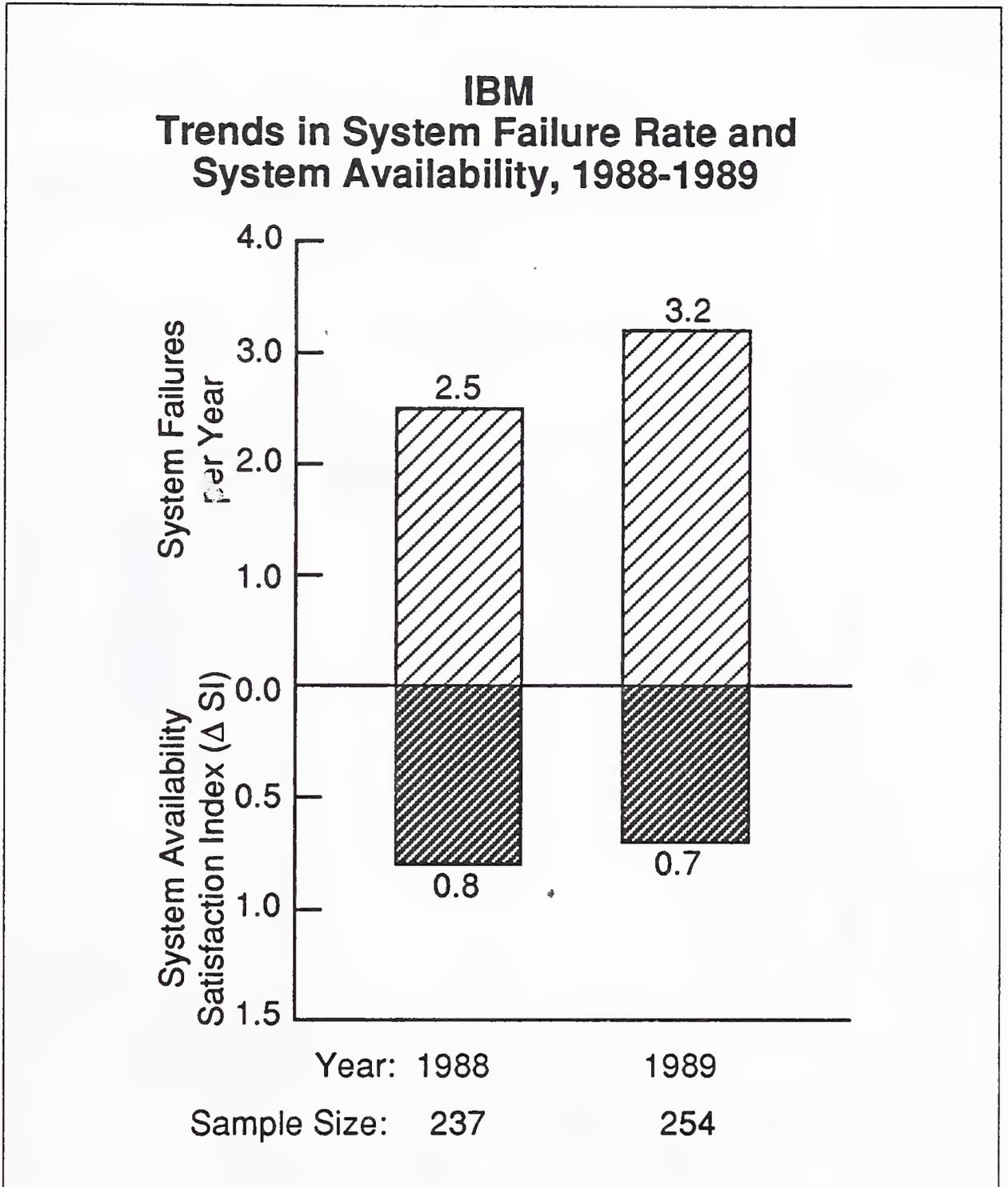


EXHIBIT V-24

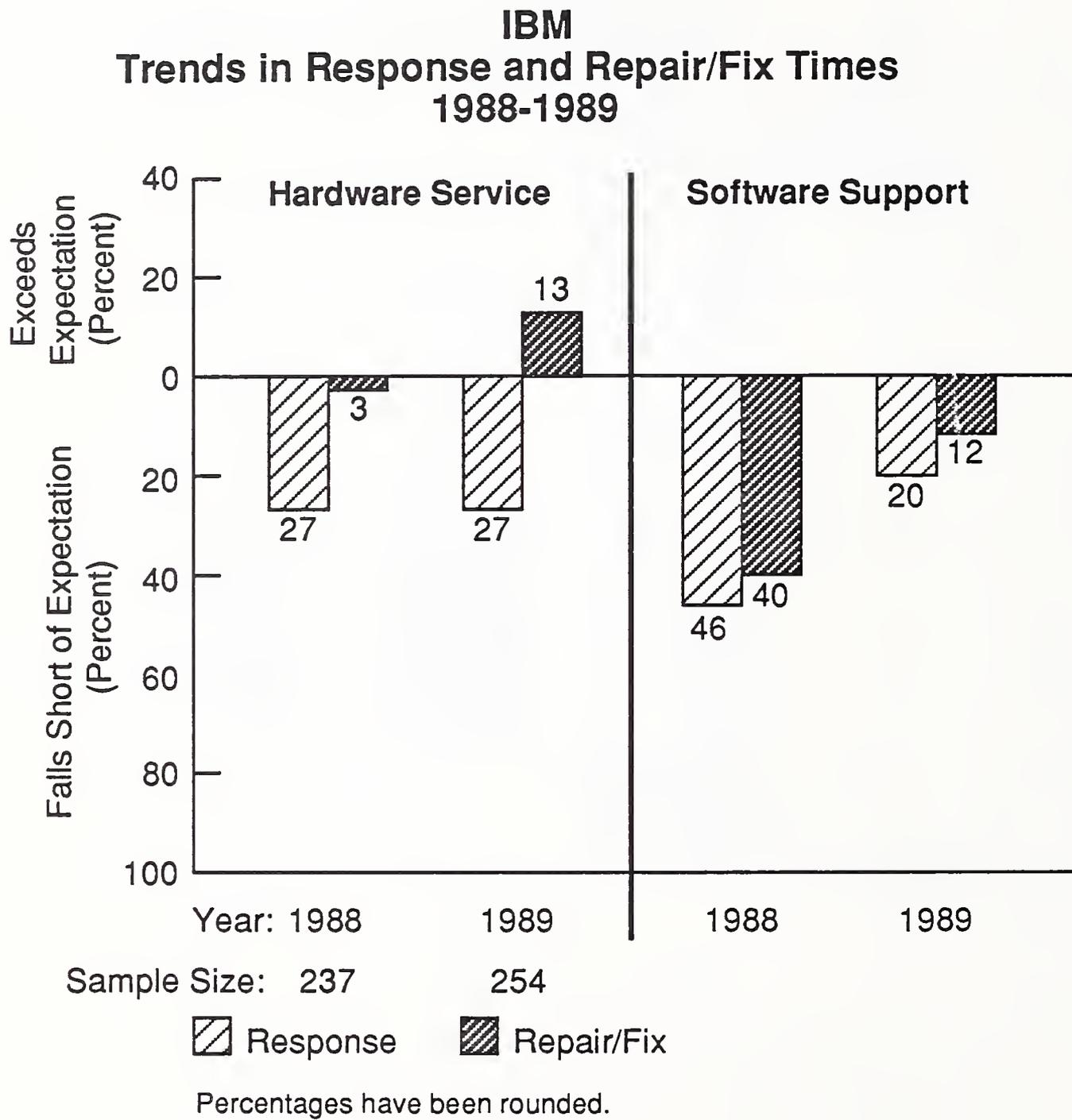


EXHIBIT V-25

**ICL
Hardware Service Trends, 1988-1989**

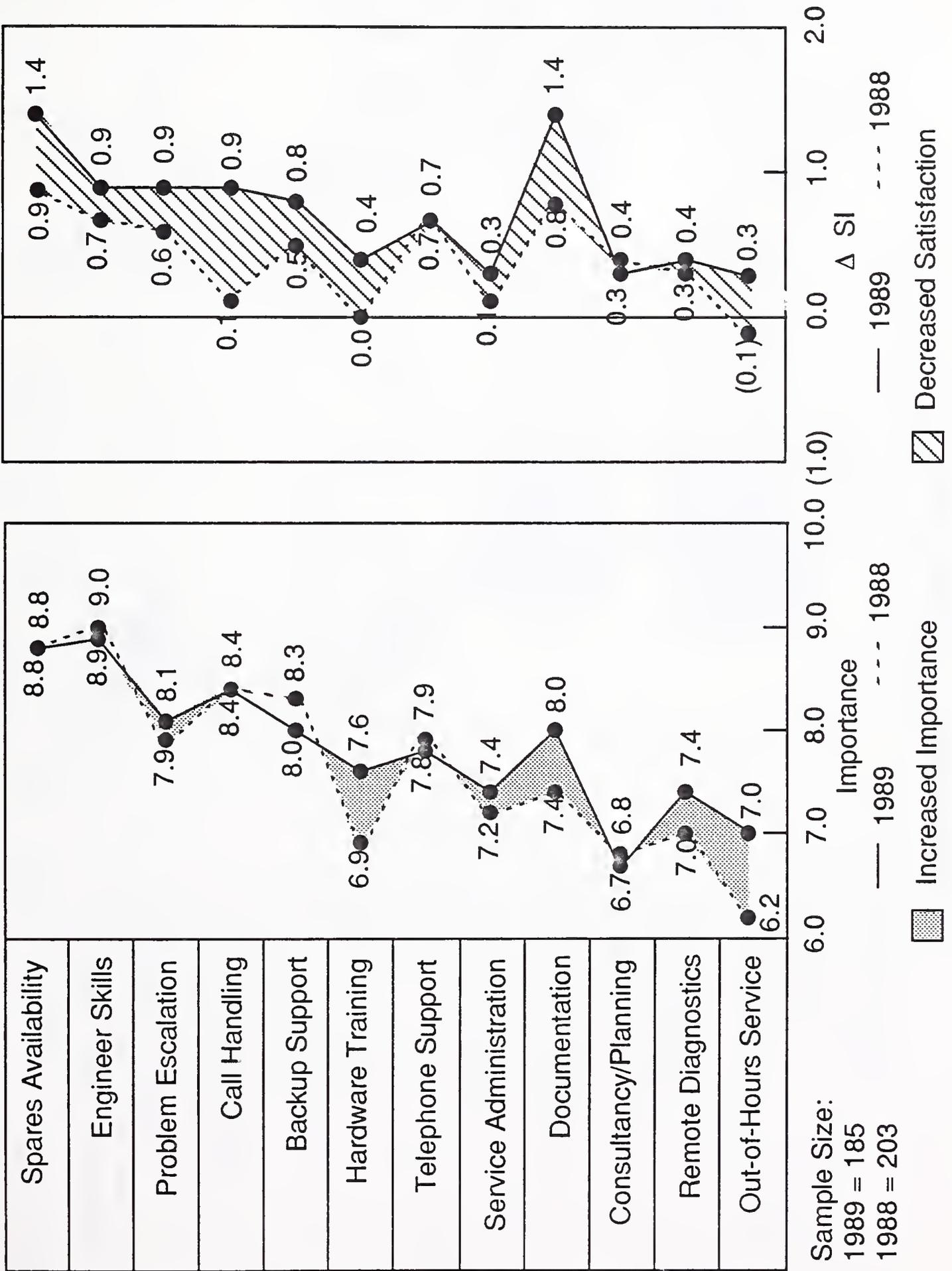
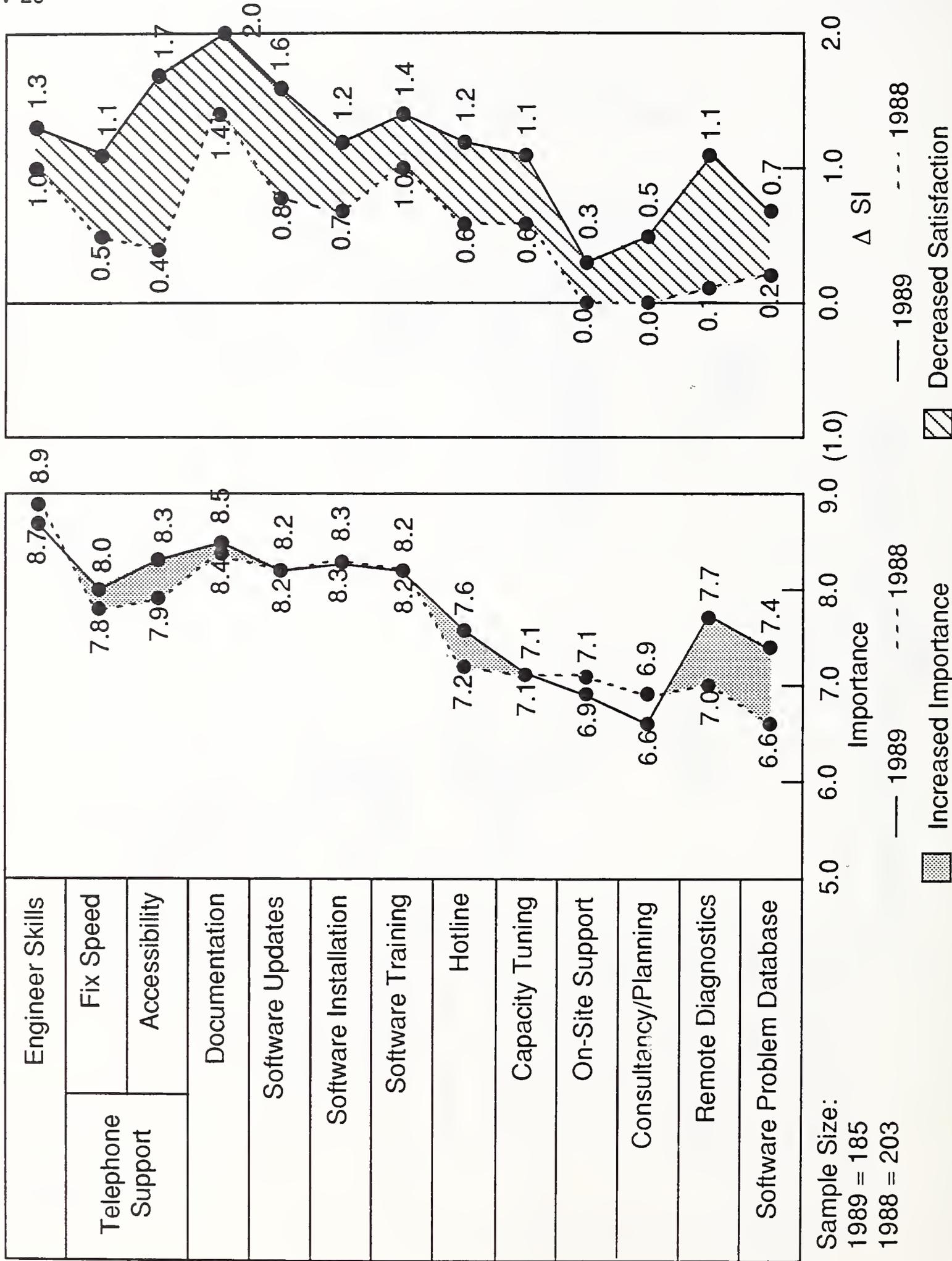


EXHIBIT V-26

ICL
Software Support Trends, 1988-1989



Sample Size:
1989 = 185
1988 = 203

EXHIBIT V-27

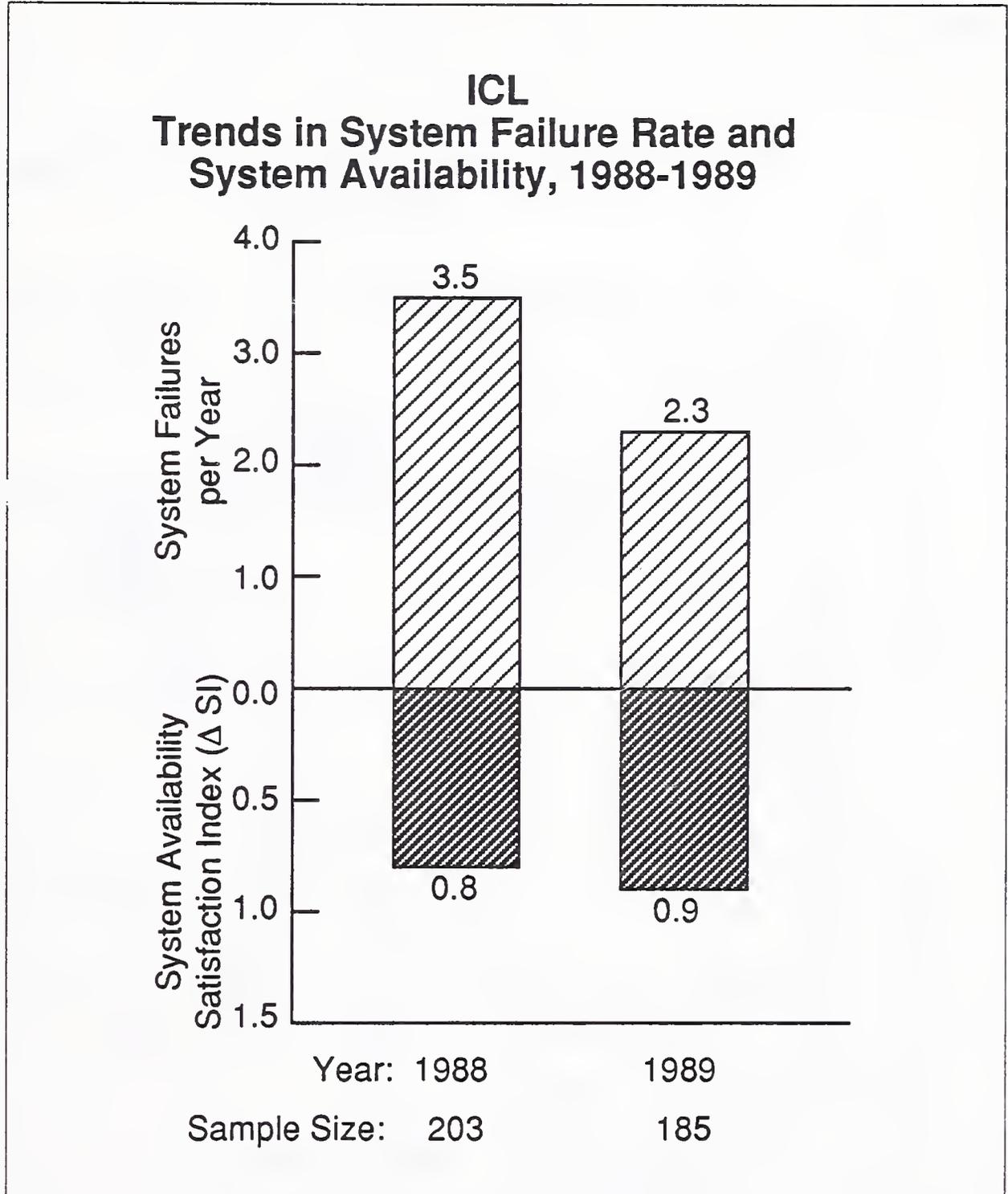
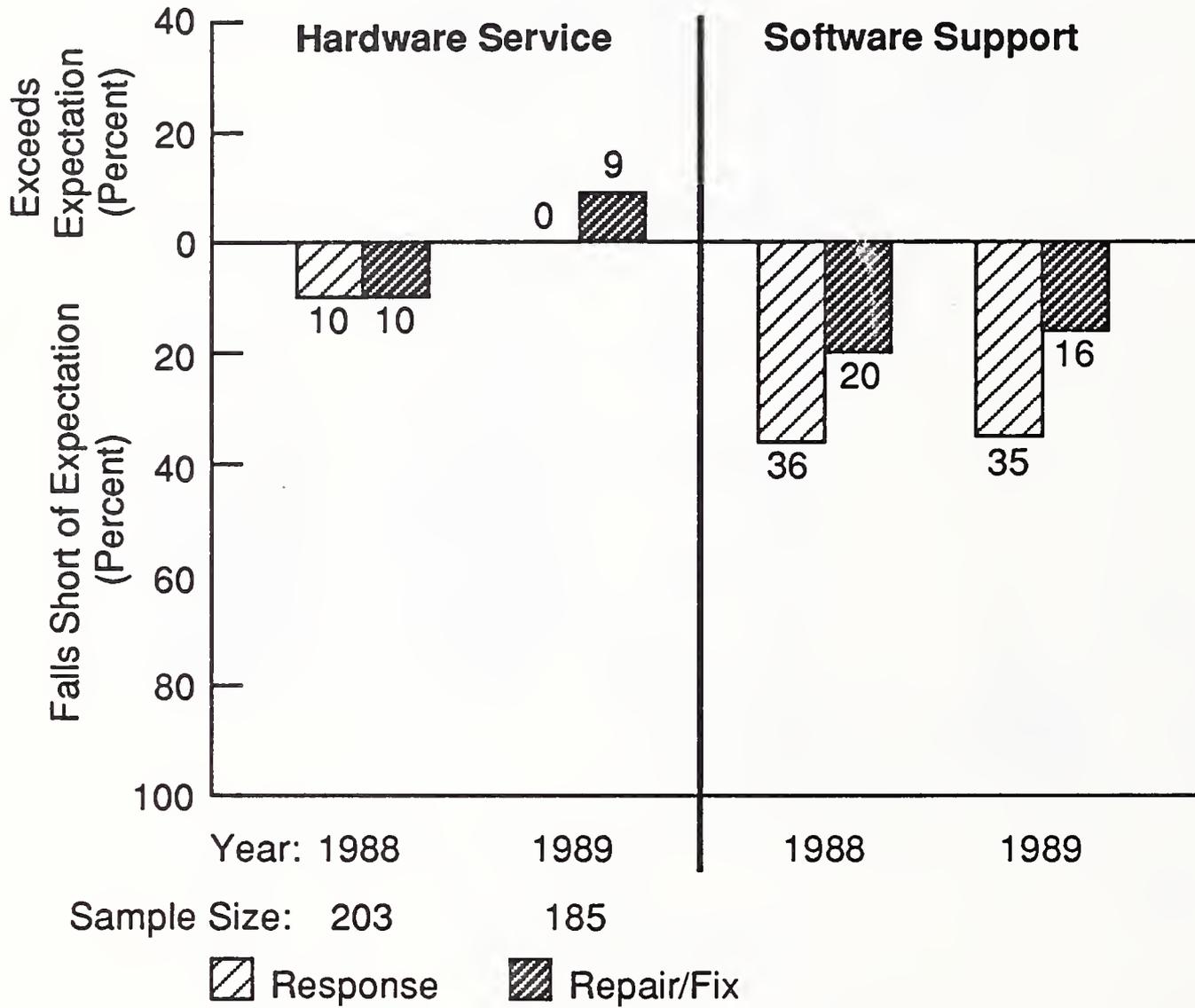


EXHIBIT V-28

ICL Trends in Response and Repair/Fix Times 1988-1989



Percentages have been rounded.

EXHIBIT V-29

ITL
Hardware Service Trends, 1988-1989

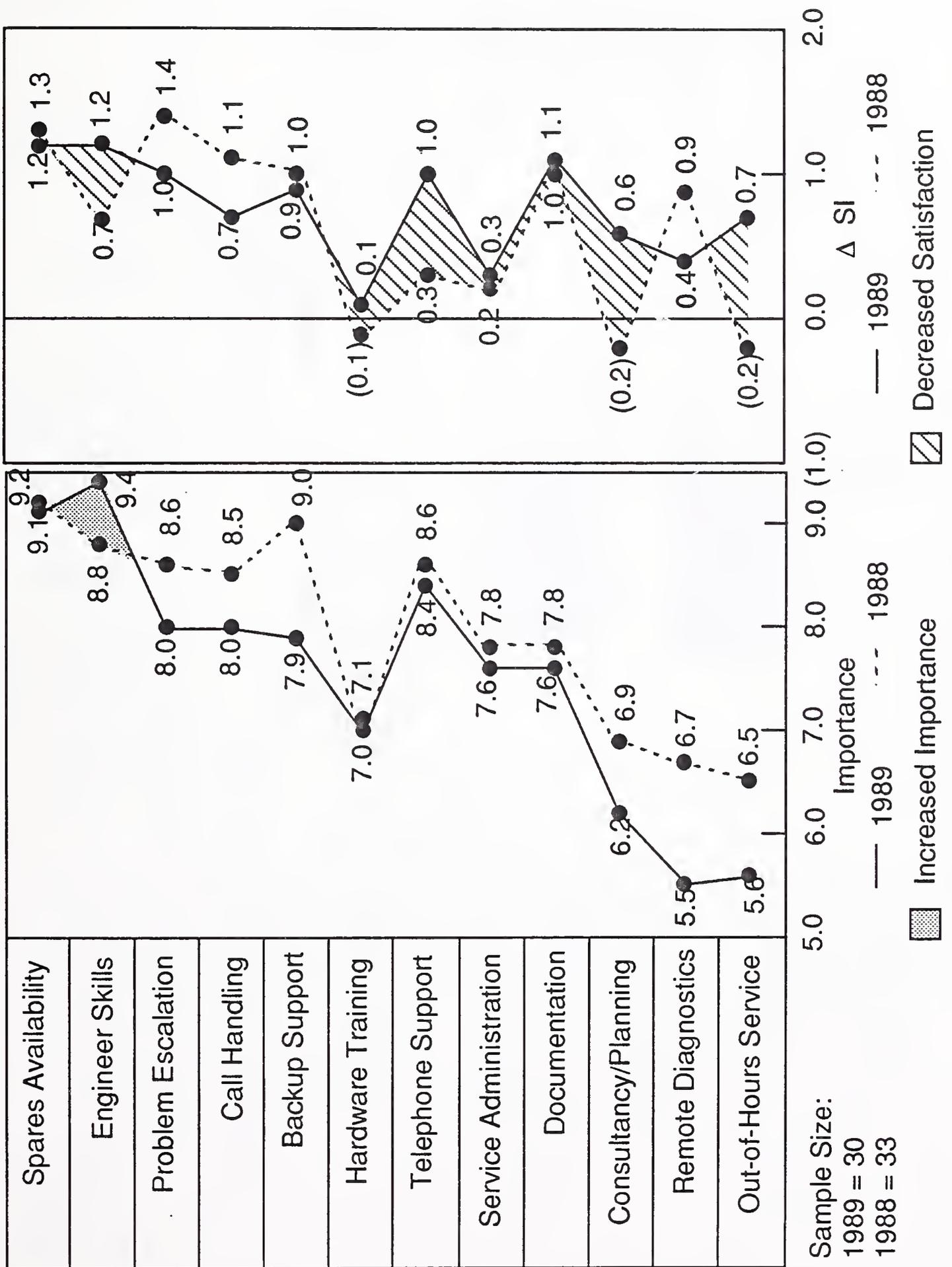


EXHIBIT V-30

ITL
Software Support Trends, 1988-1989

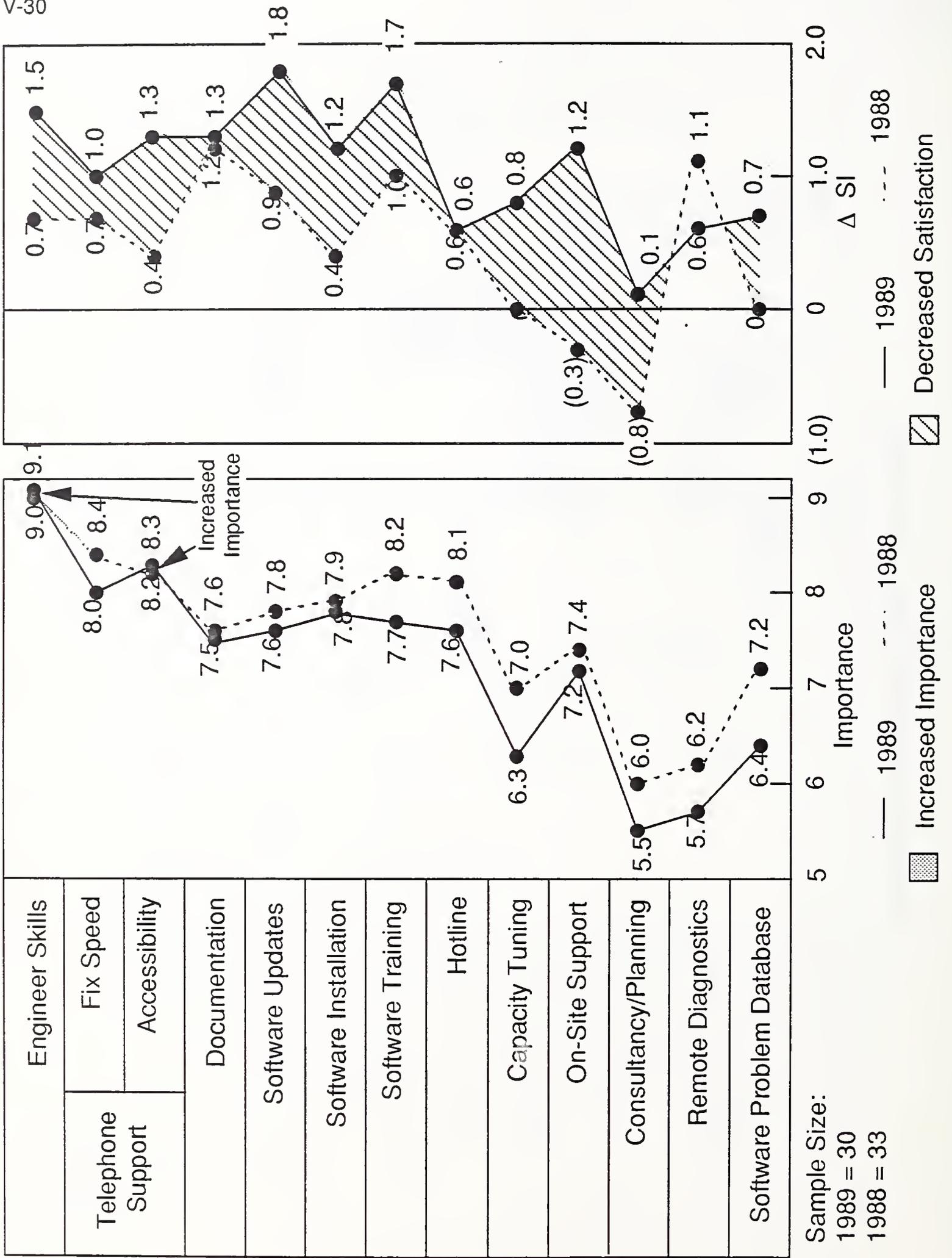


EXHIBIT V-31

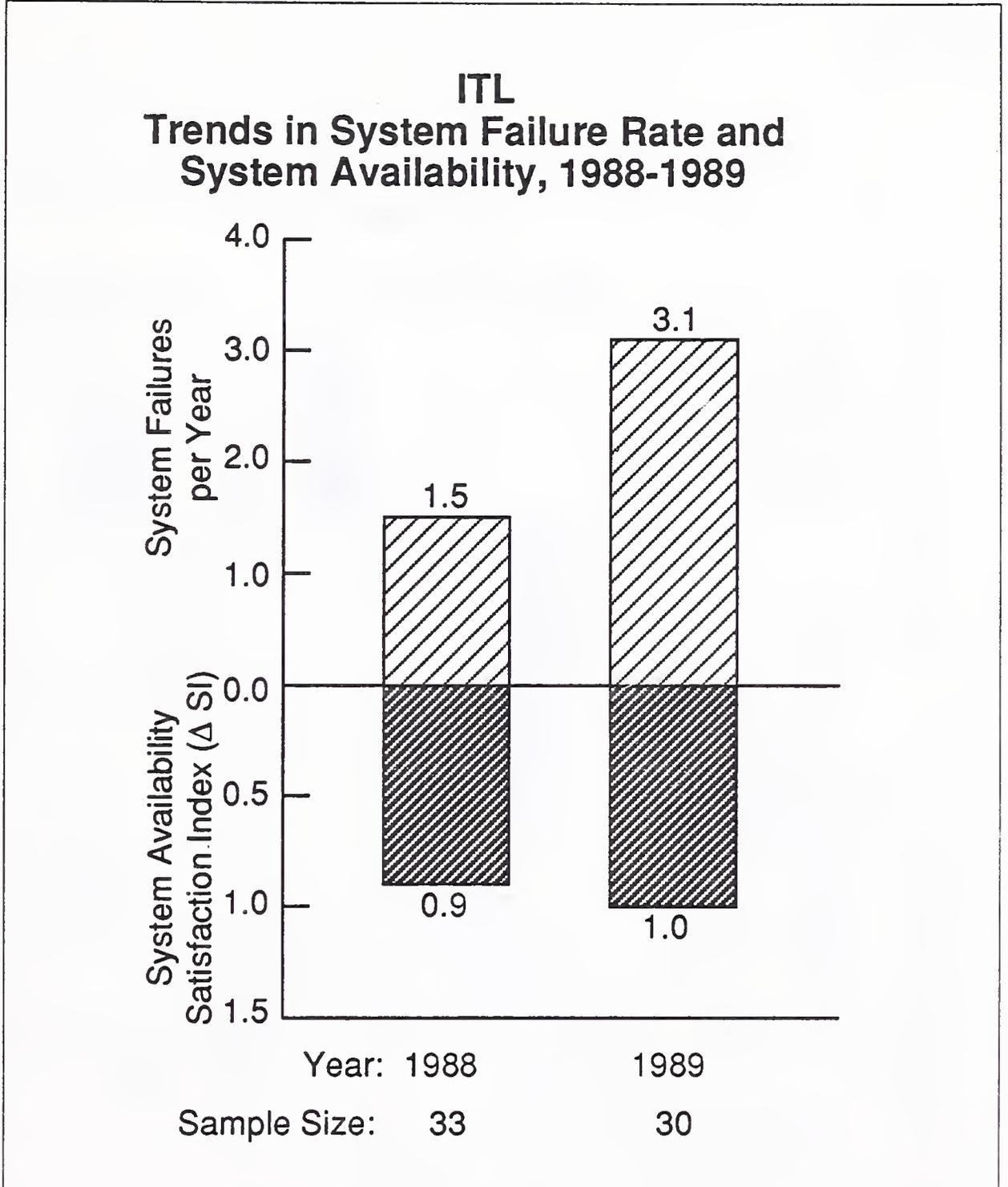


EXHIBIT V-32

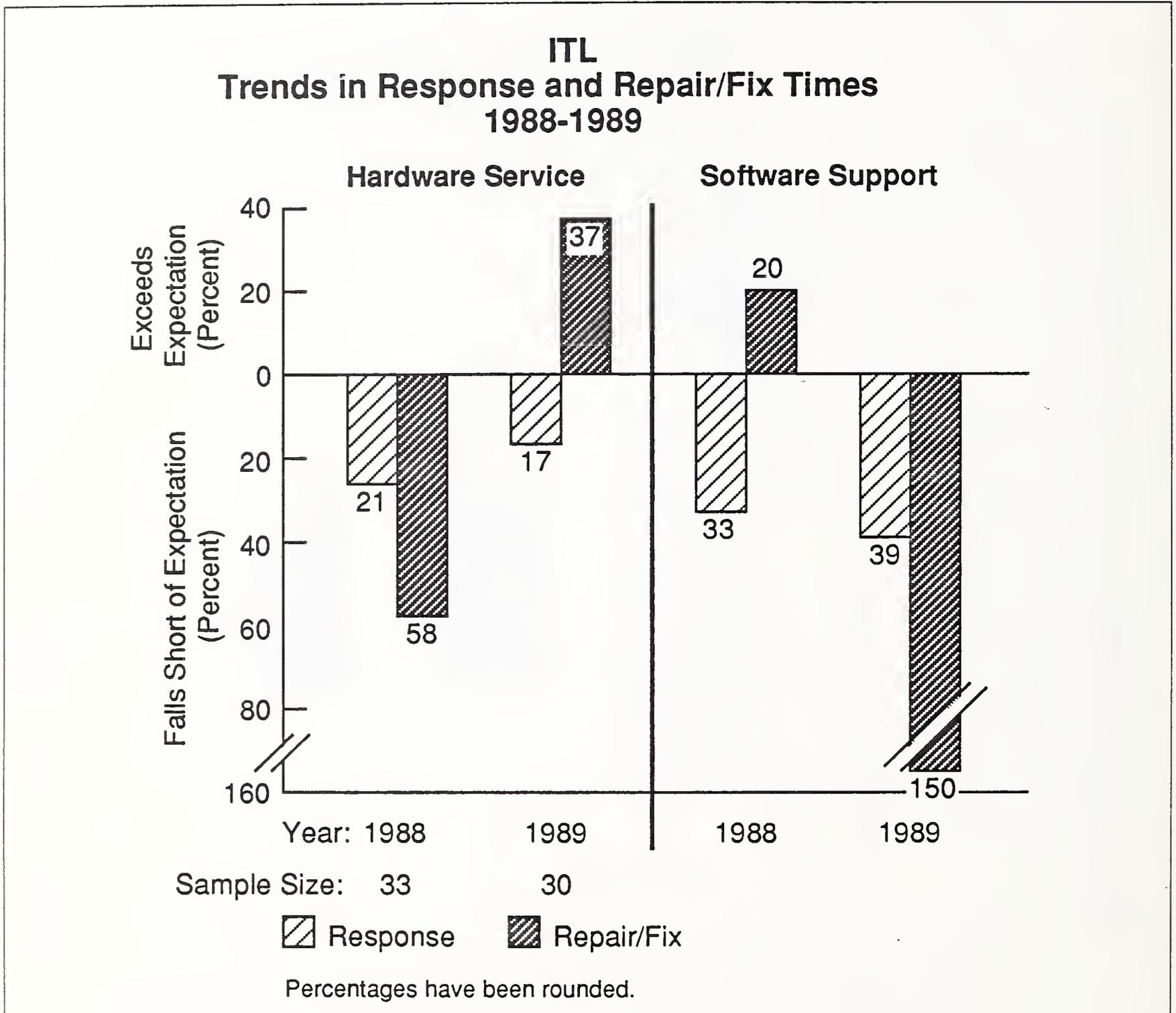


EXHIBIT V-33

NCR Hardware Service Trends, 1988-1989

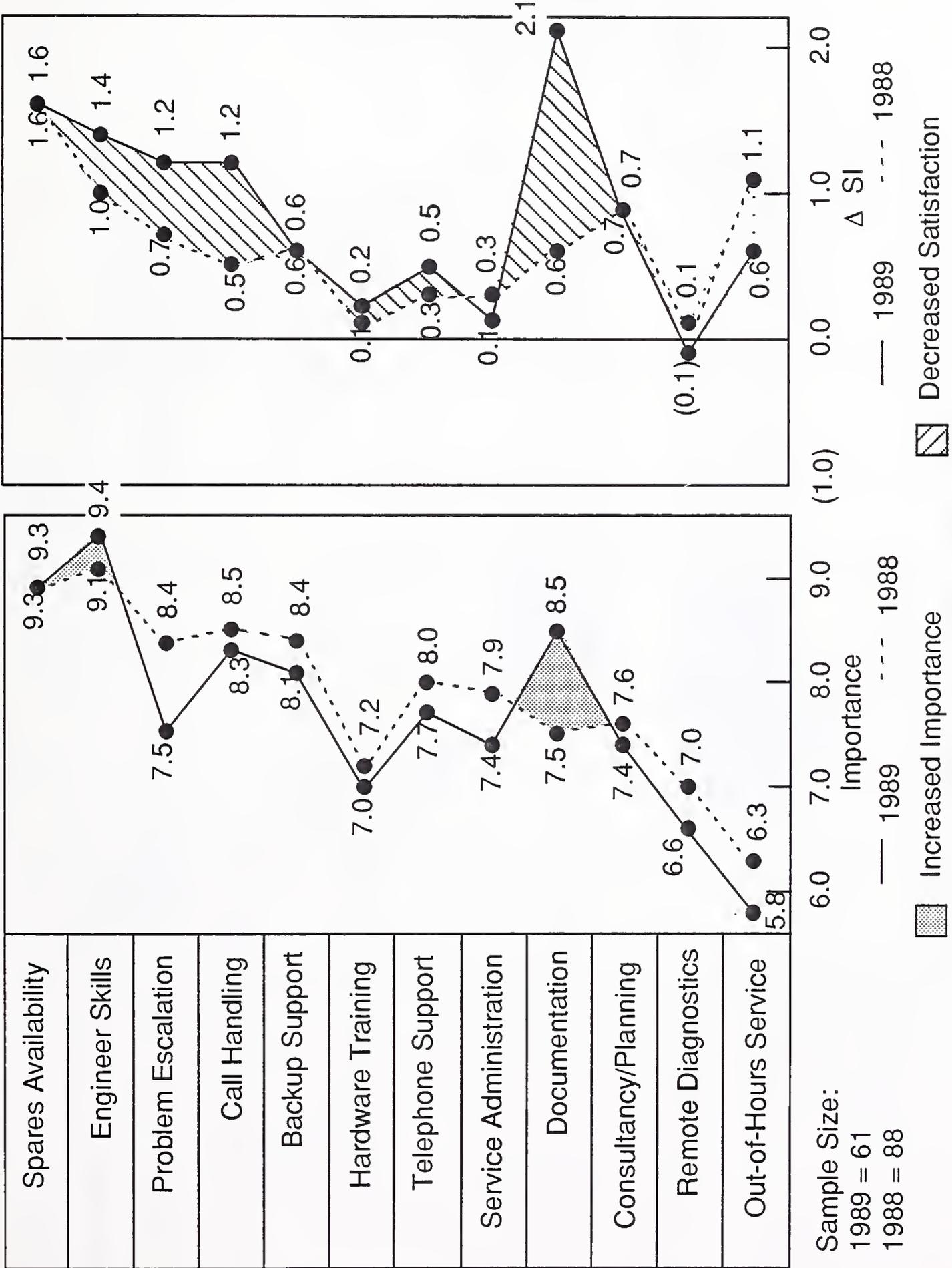
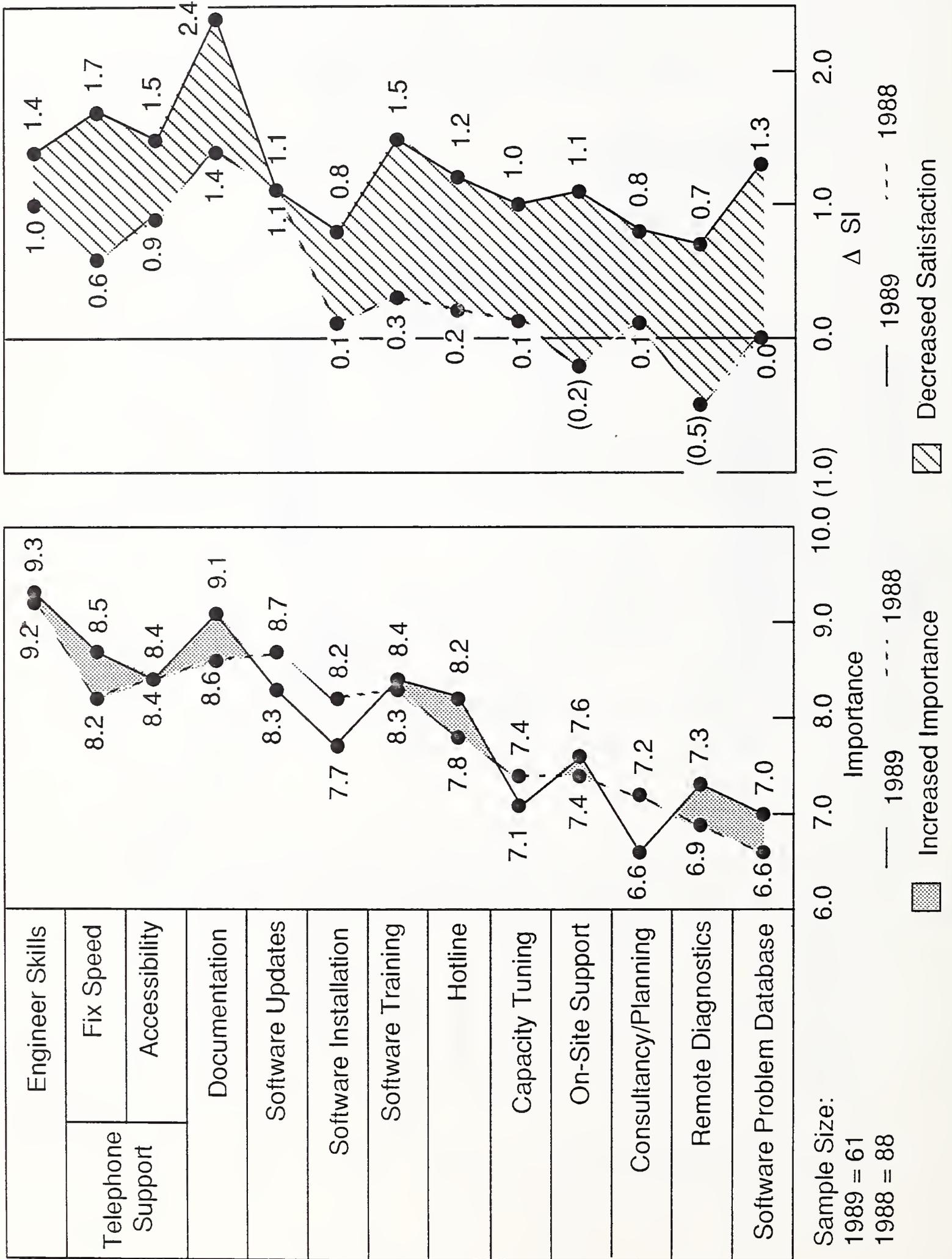


EXHIBIT V-34

NCR
Software Support Trends, 1988-1989



Sample Size:
1989 = 61
1988 = 88

EXHIBIT V-35

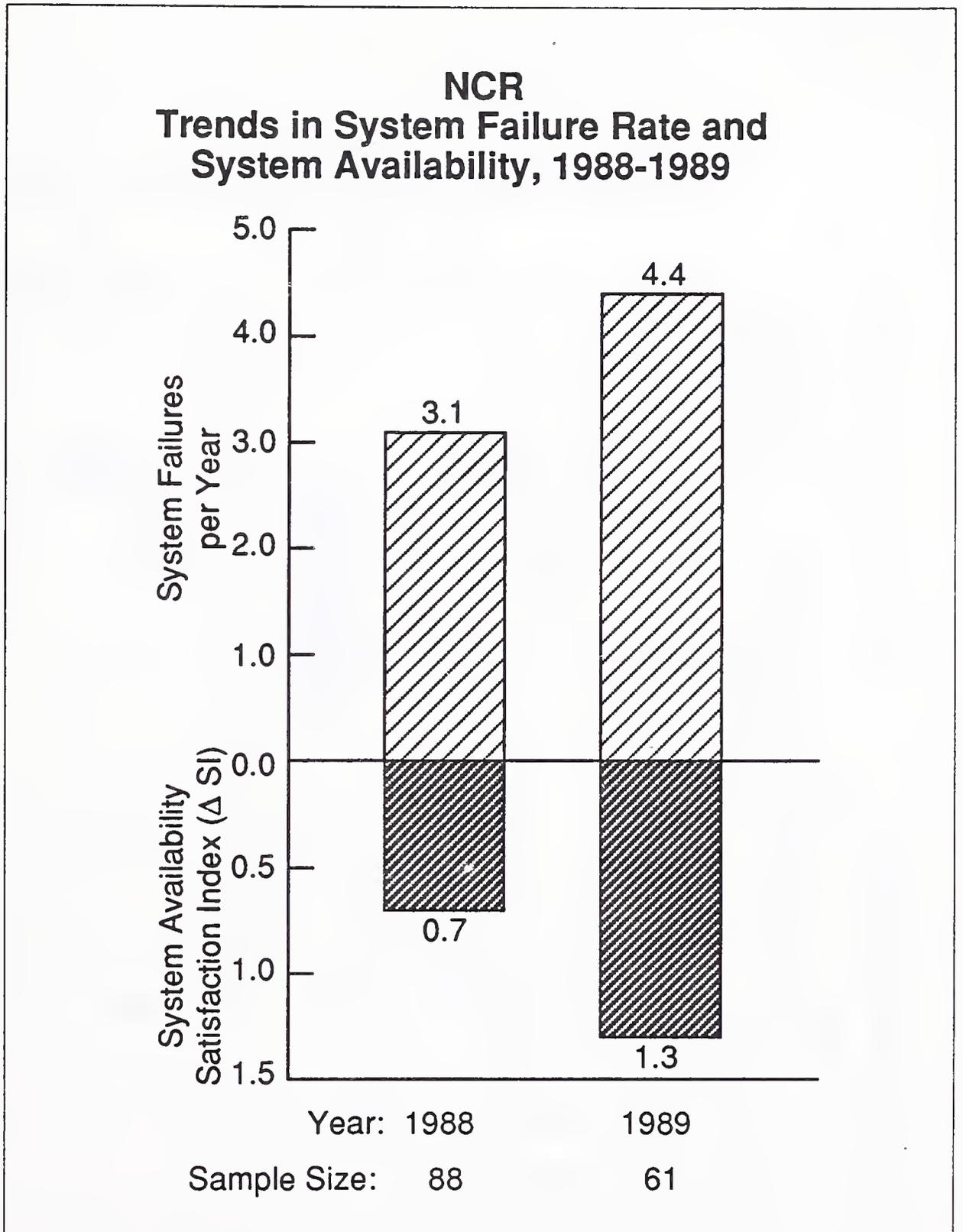
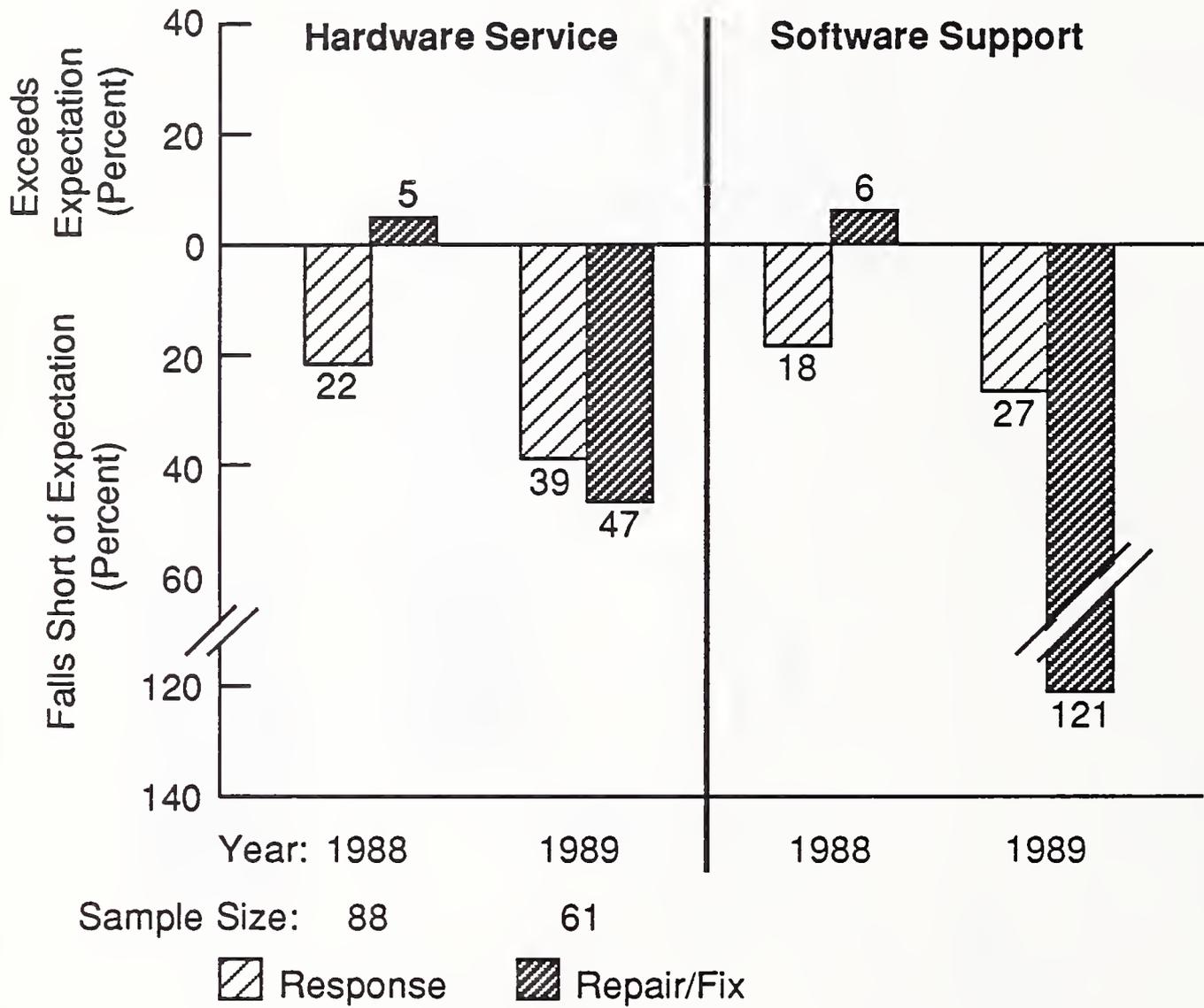


EXHIBIT V-36

NCR Trends in Response and Repair/Fix Times 1988-1989



Percentages have been rounded.

EXHIBIT V-37

Nixdorf Hardware Service Trends, 1988-1989

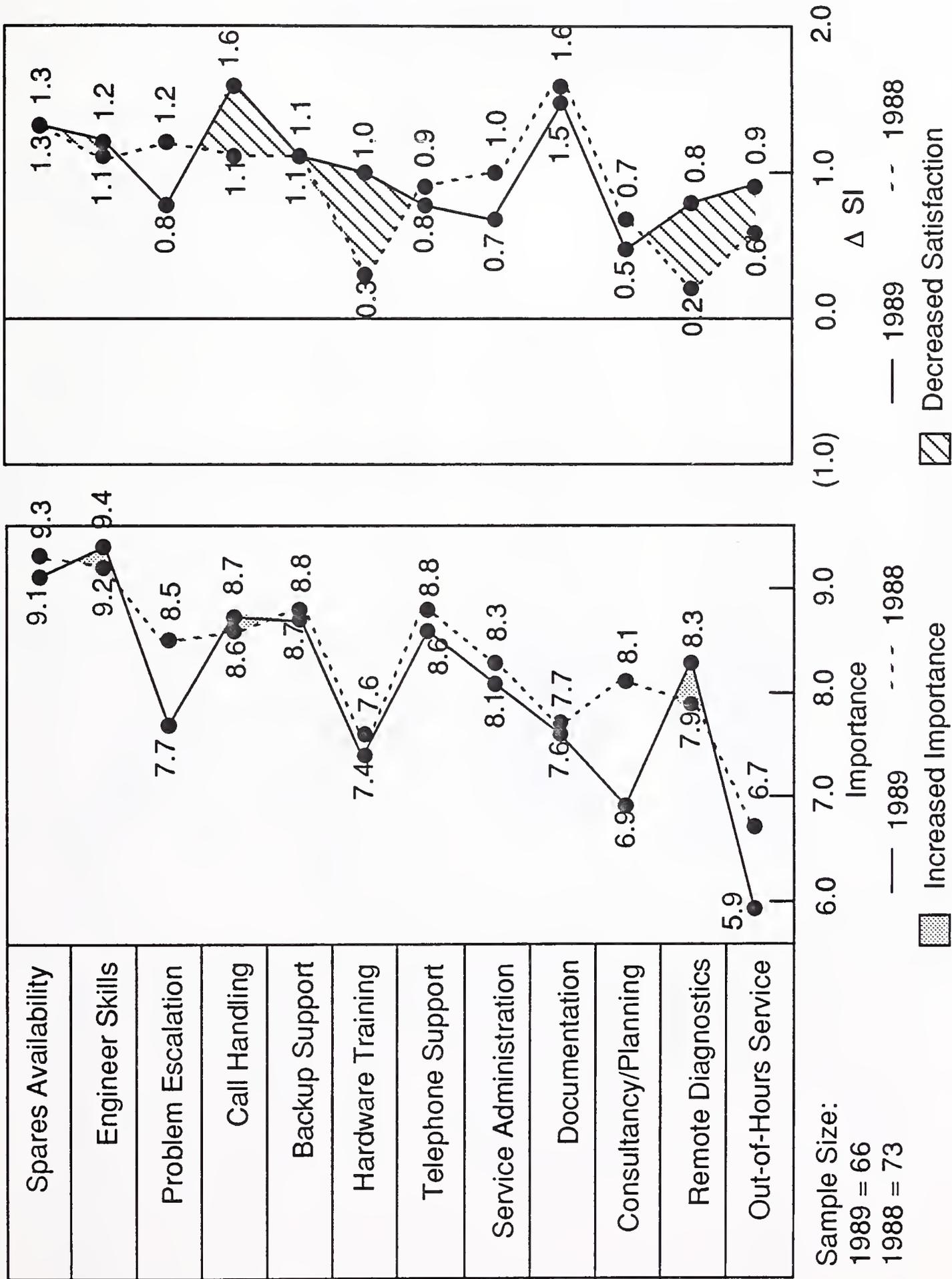


EXHIBIT V-38

**Nixdorf
Software Support Trends, 1988-1989**

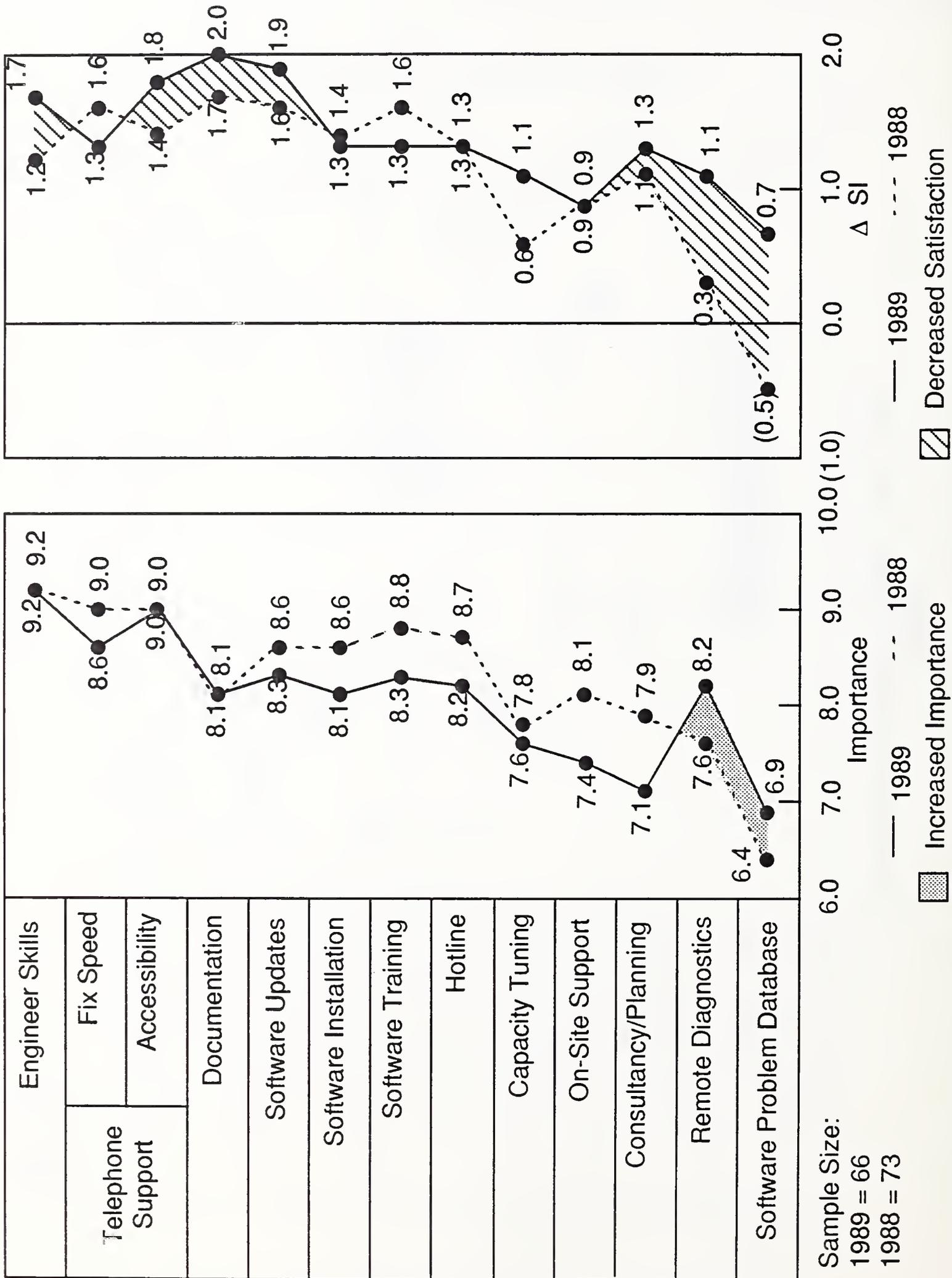


EXHIBIT V-39

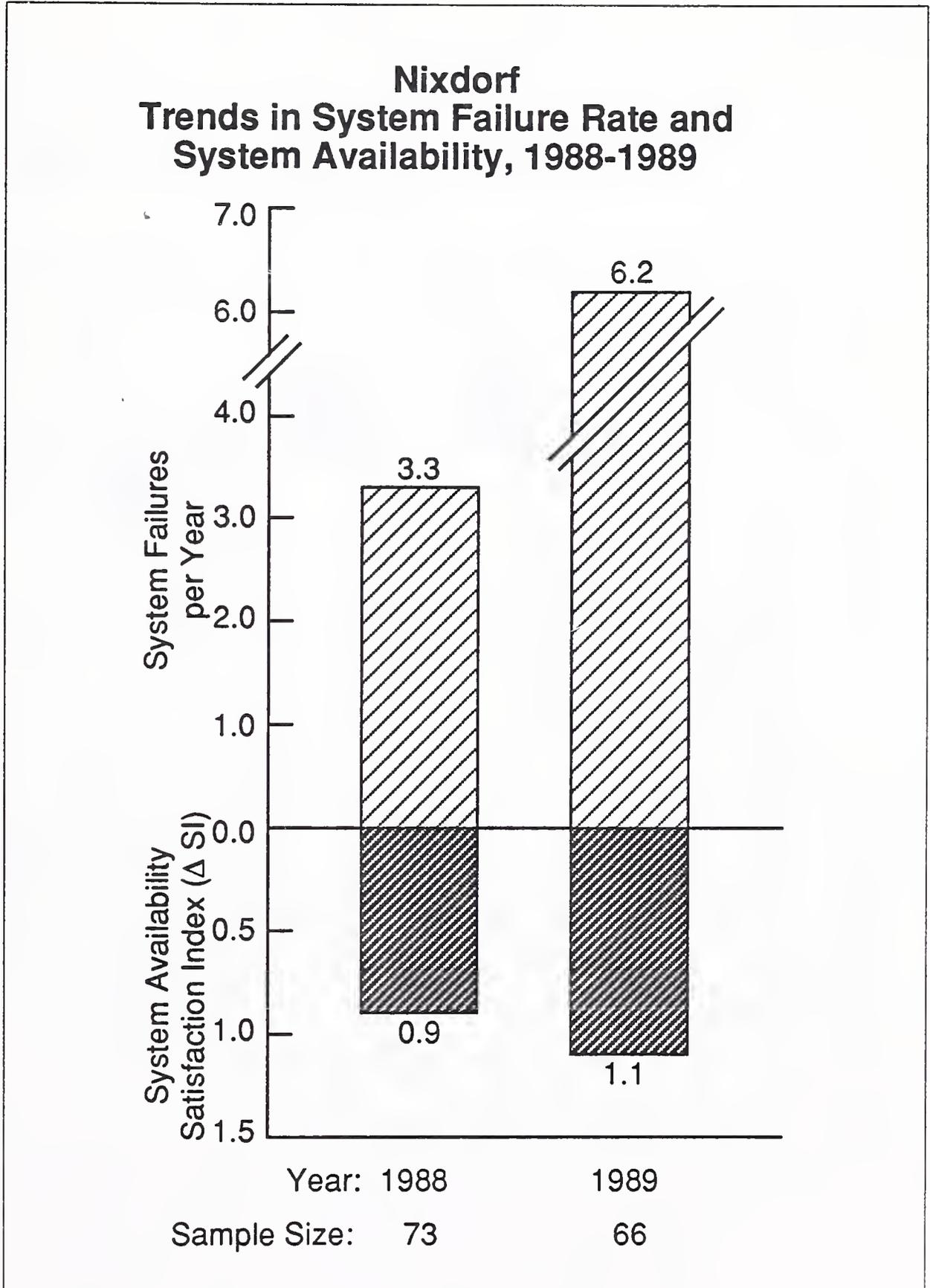


EXHIBIT V-40

Nixdorf Trends in Response and Repair/Fix Times 1988-1989

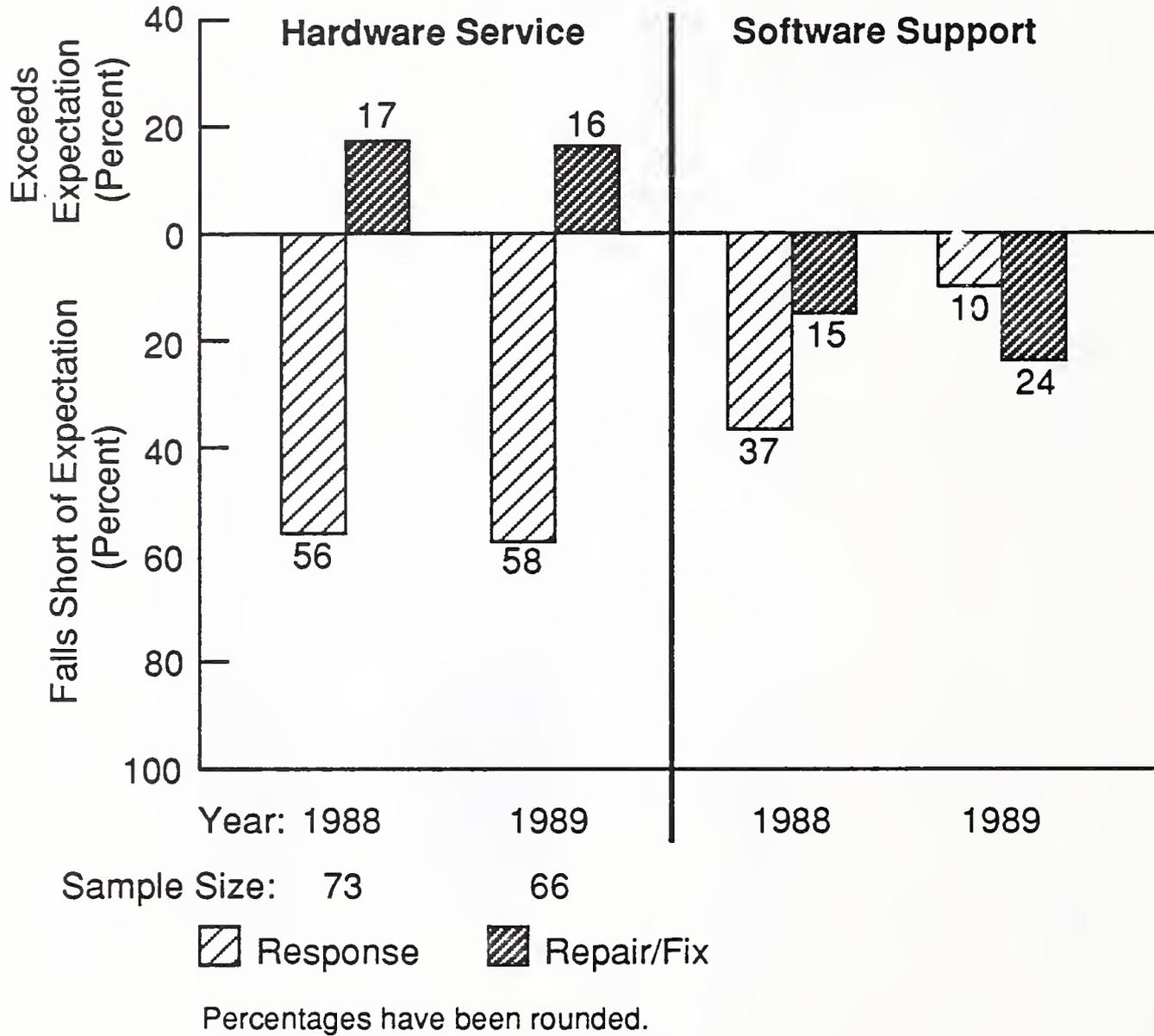


EXHIBIT V-41

**Siemens
Hardware Service Trends, 1988-1989**

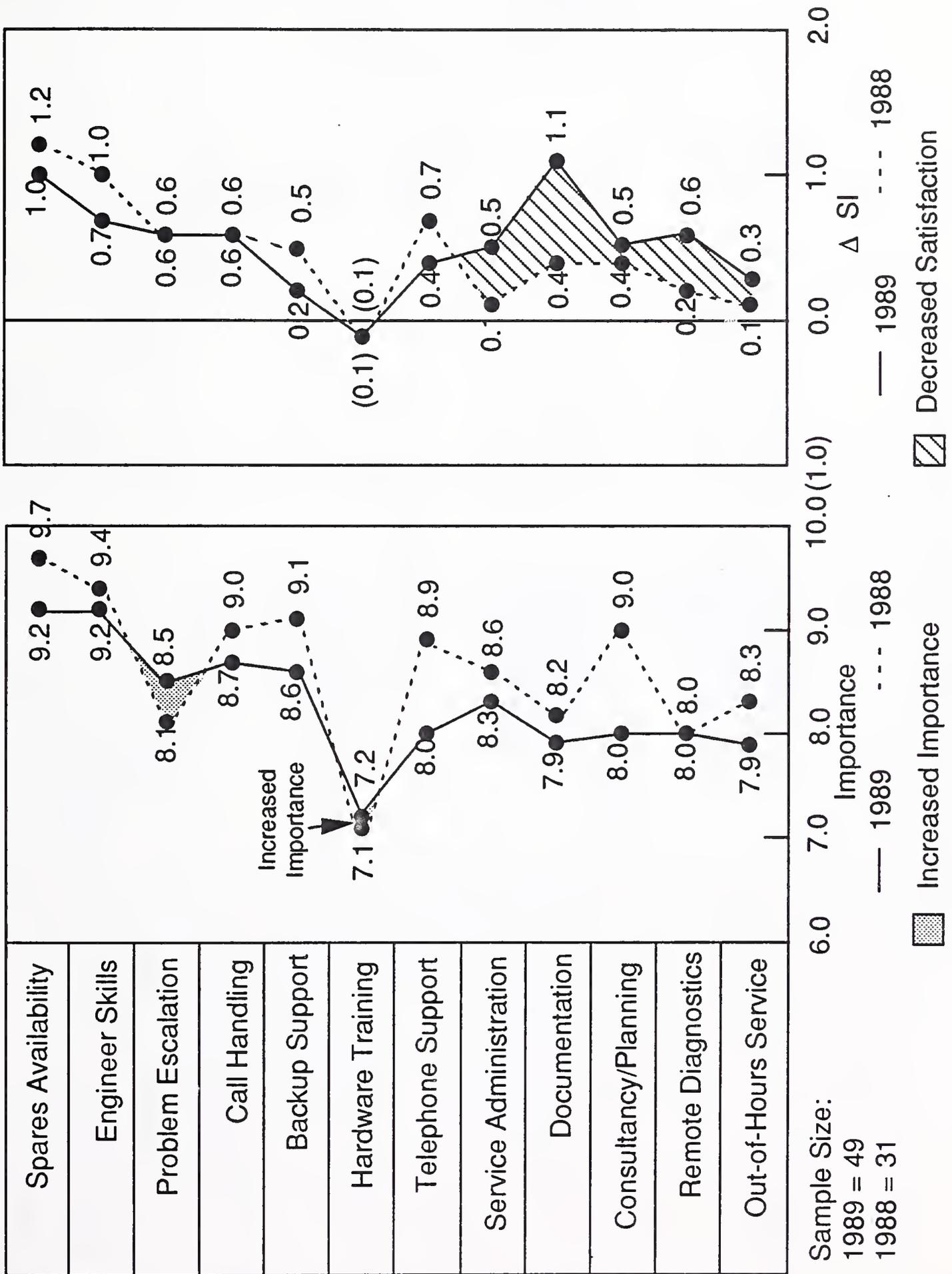


EXHIBIT V-42

Siemens Software Support Trends, 1988-1989

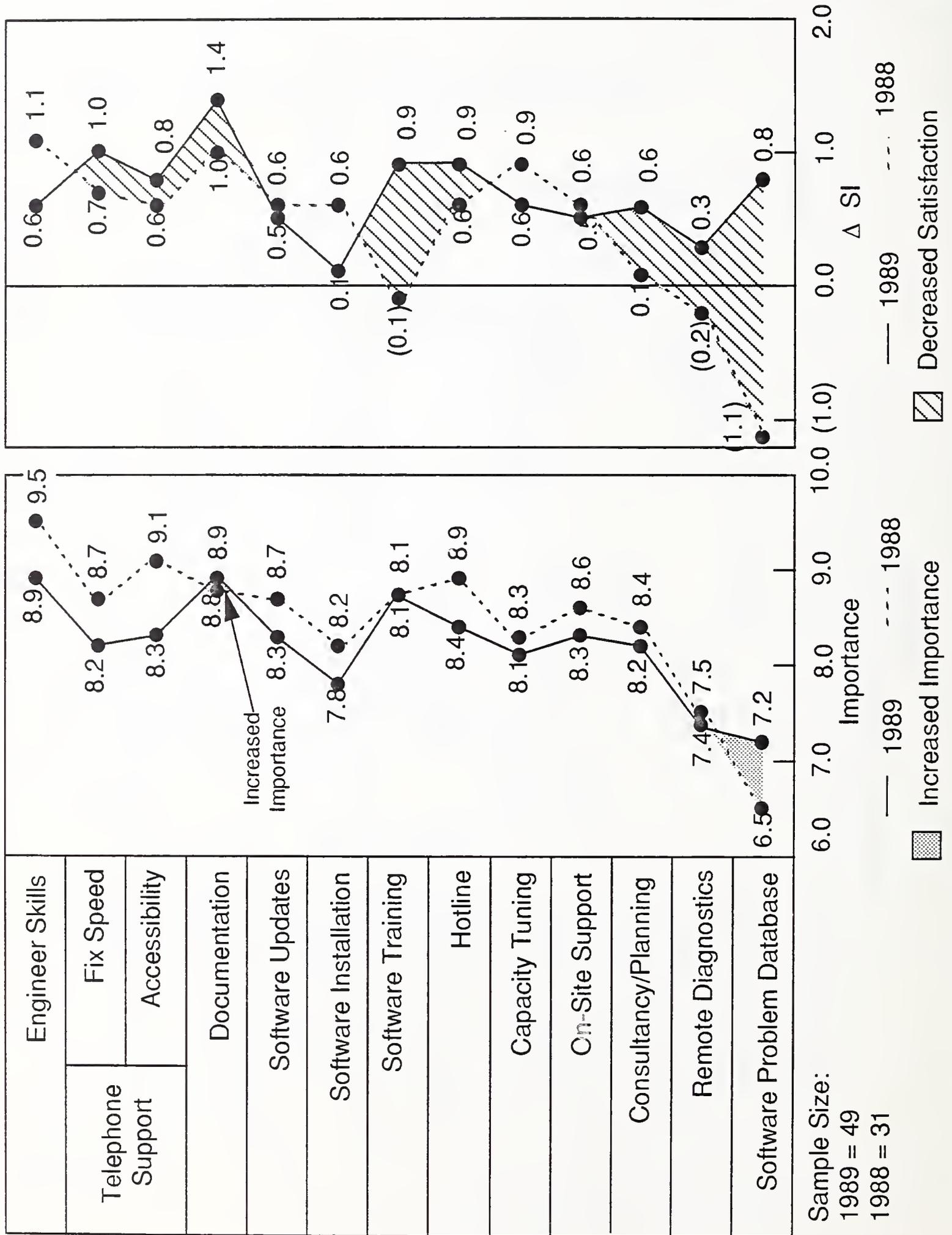


EXHIBIT V-43

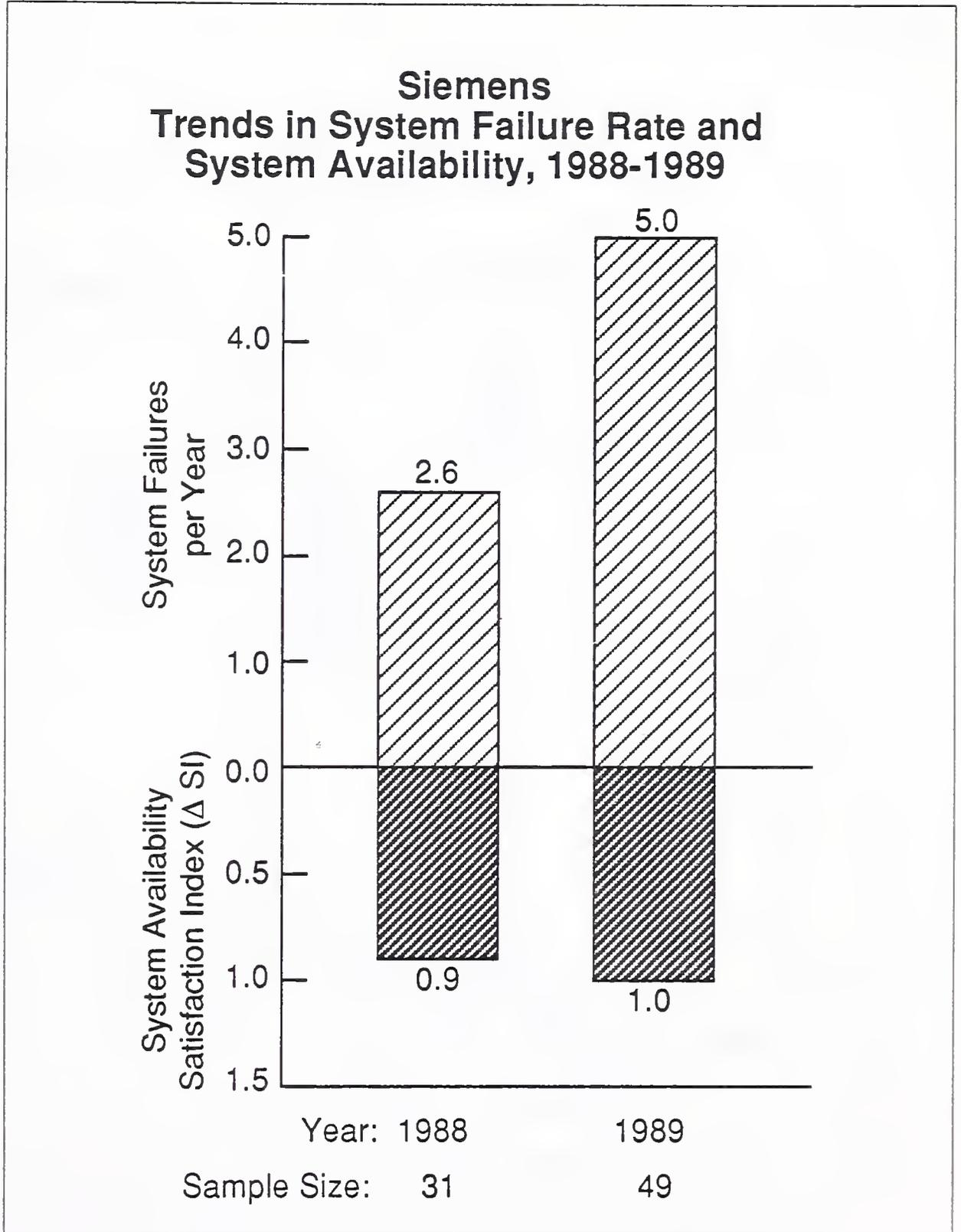
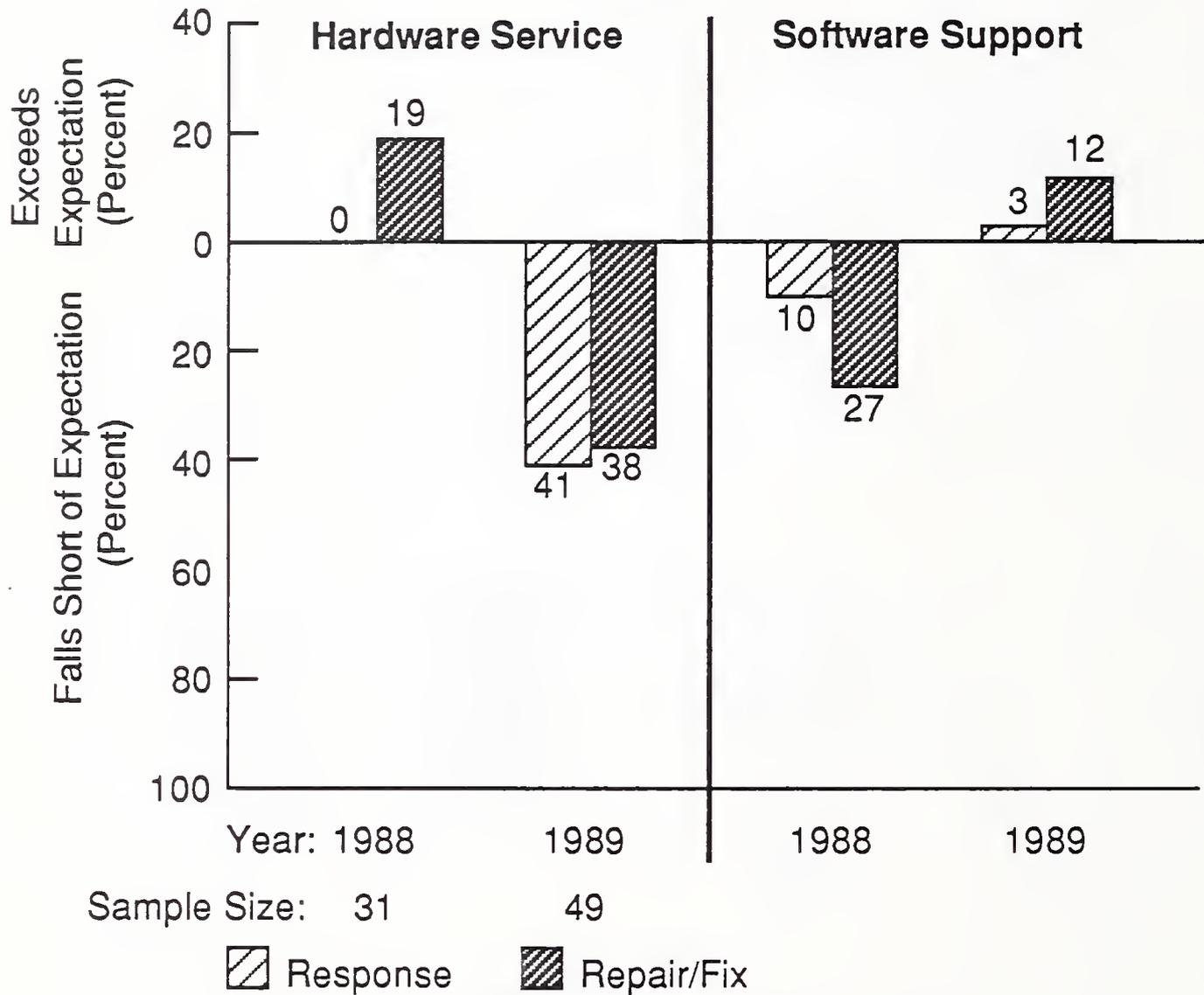


EXHIBIT V-44

Siemens Trends in Response and Repair/Fix Times 1988-1989



Percentages have been rounded.

EXHIBIT V-45

Unisys Hardware Service Trends, 1988-1989

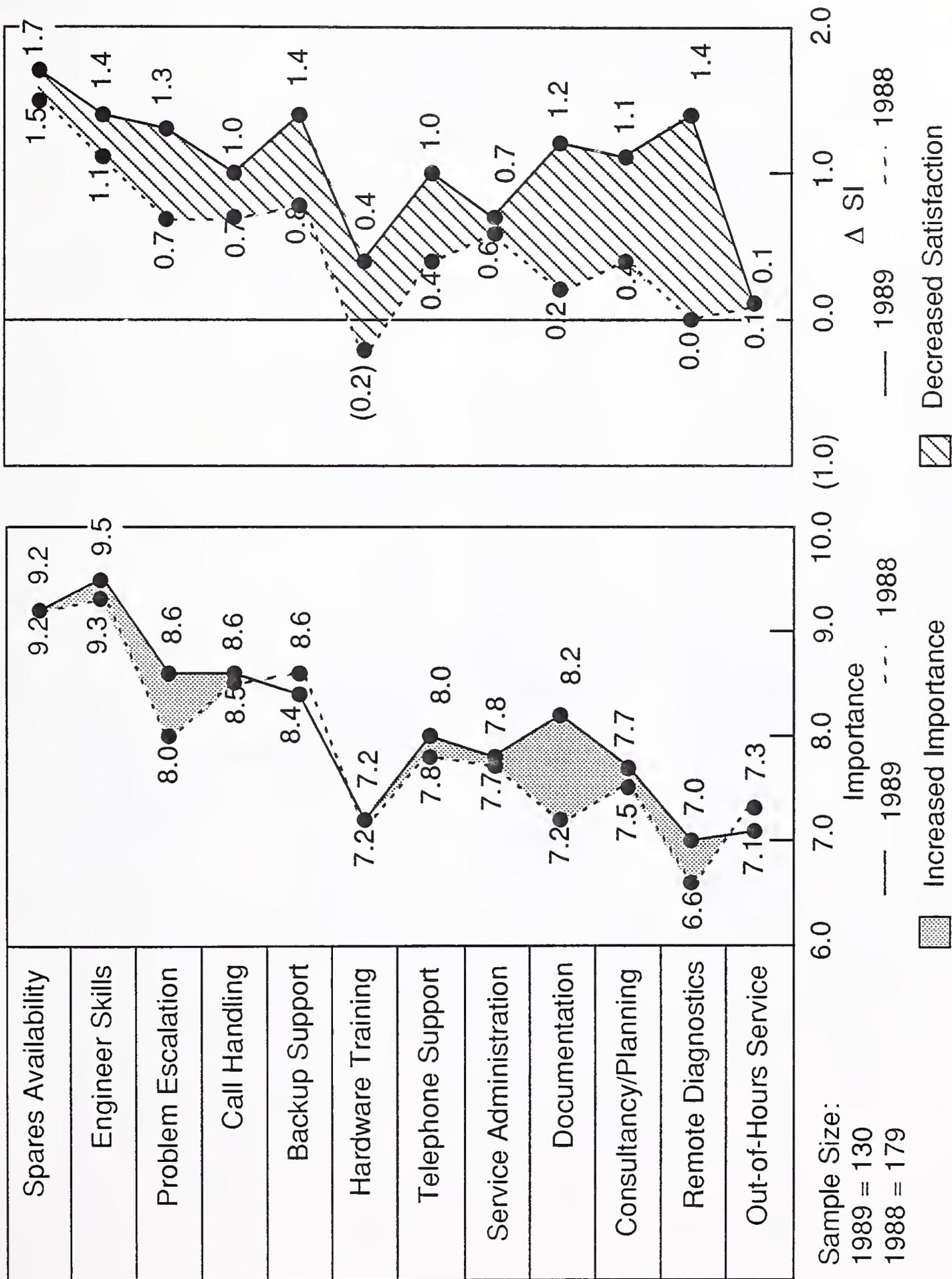


EXHIBIT V-46

**Unisys
Software Support Trends, 1988-1989**

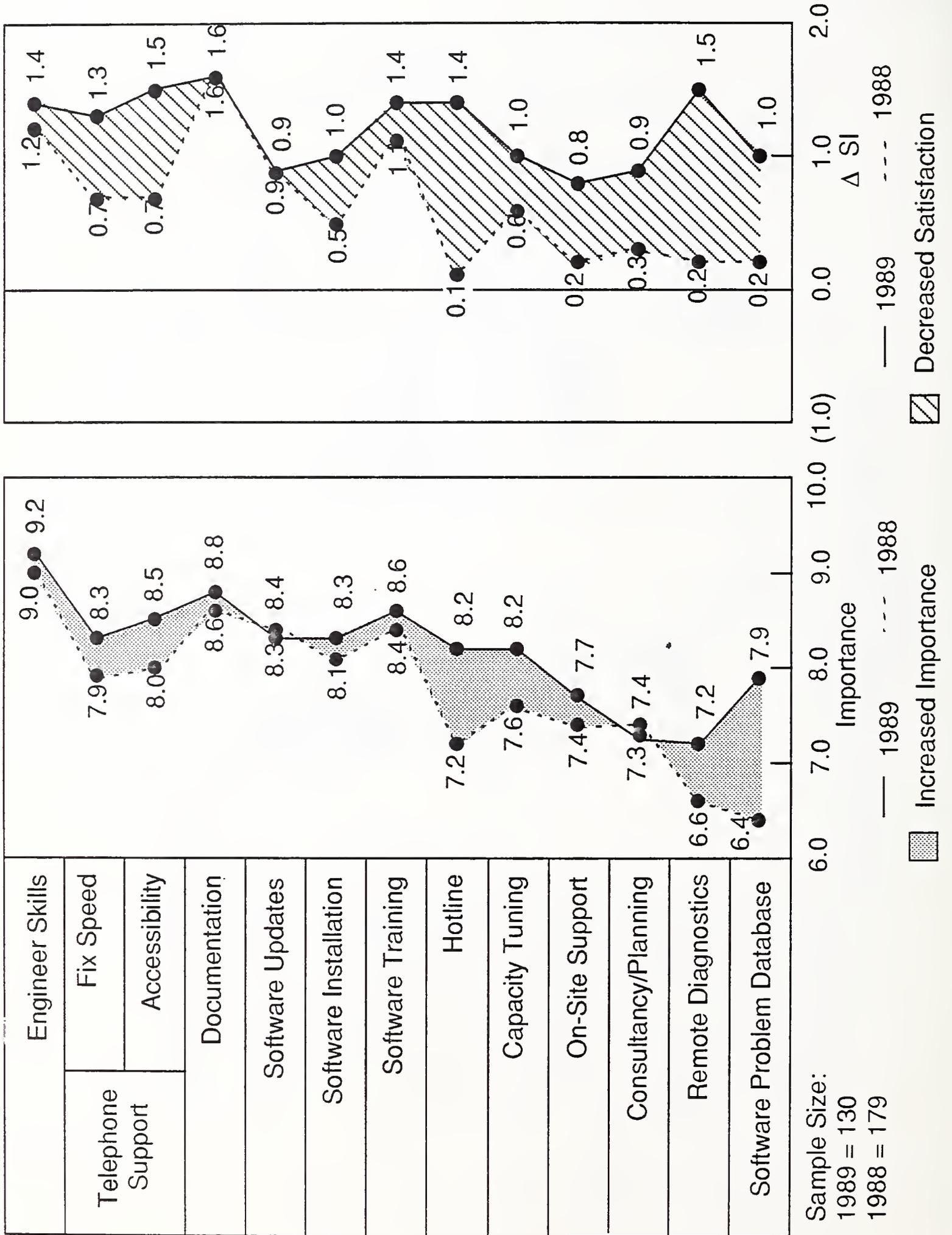


EXHIBIT V-47

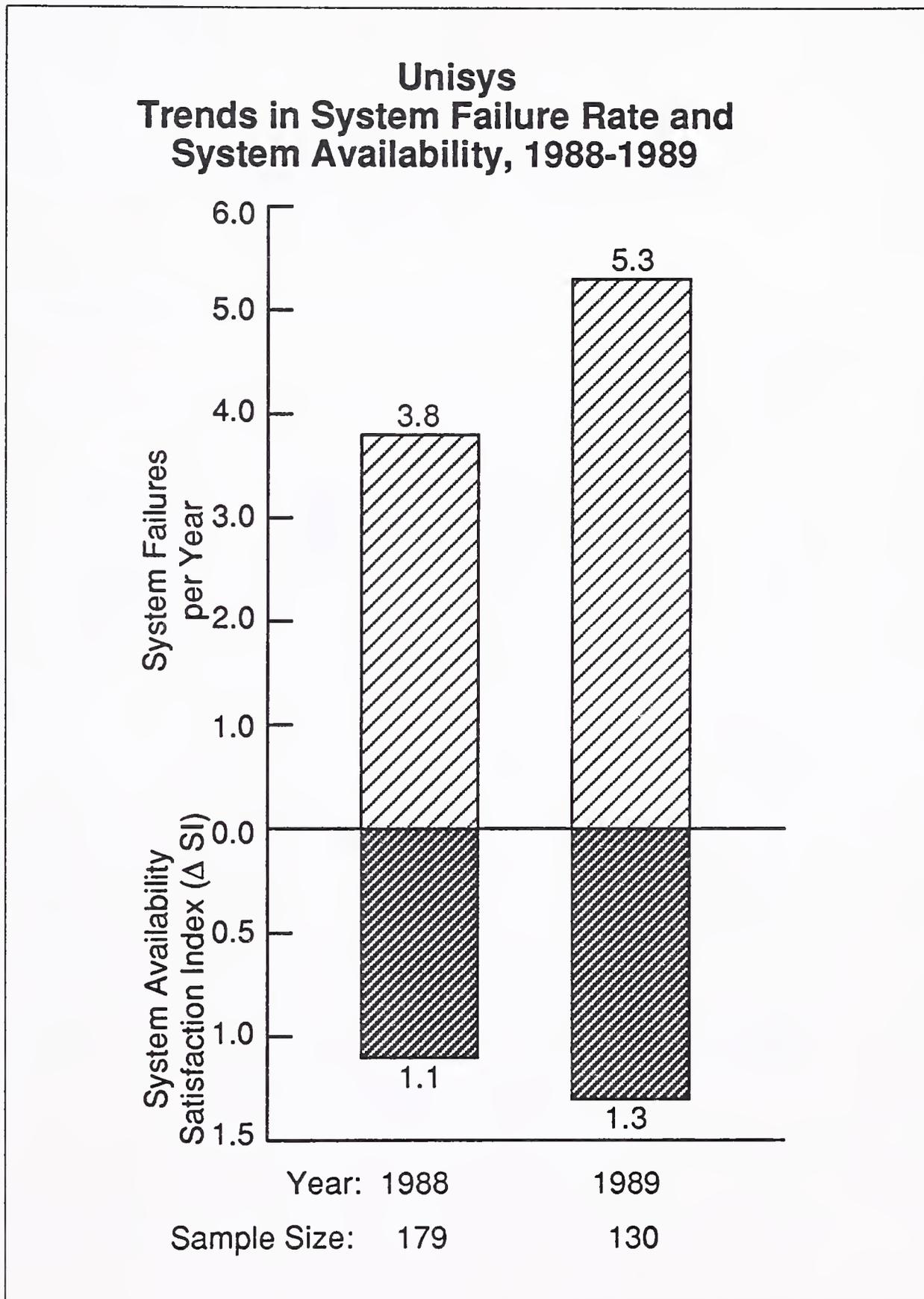
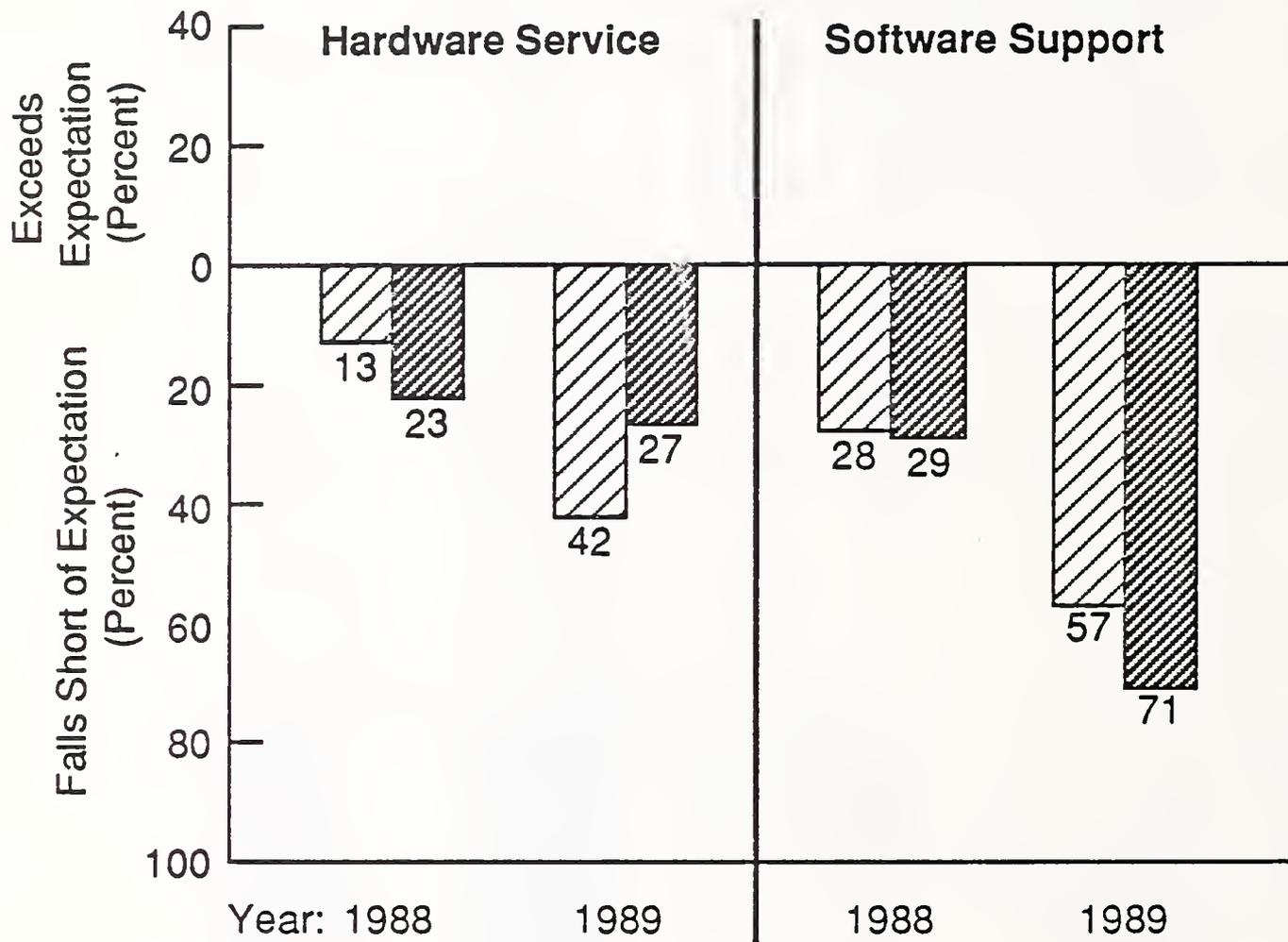


EXHIBIT V-48

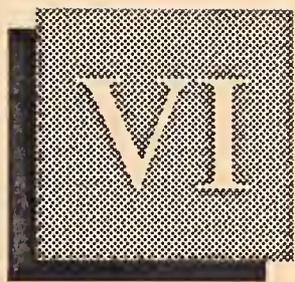
Unisys Trends in Response and Repair/Fix Times 1988-1989



Sample Size: 179 130

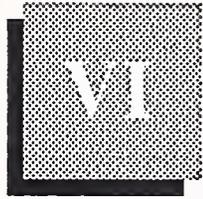
▨ Response ▩ Repair/Fix

Percentages have been rounded.



Western Europe—
Country Comparisons





Western Europe— Country Comparisons

This chapter of the report presents data relating to vendor service performance in Western Europe overall and to vendor performance in ten specific Western European country markets.

A

Overall User Satisfaction in Western Europe

1. Hardware Service

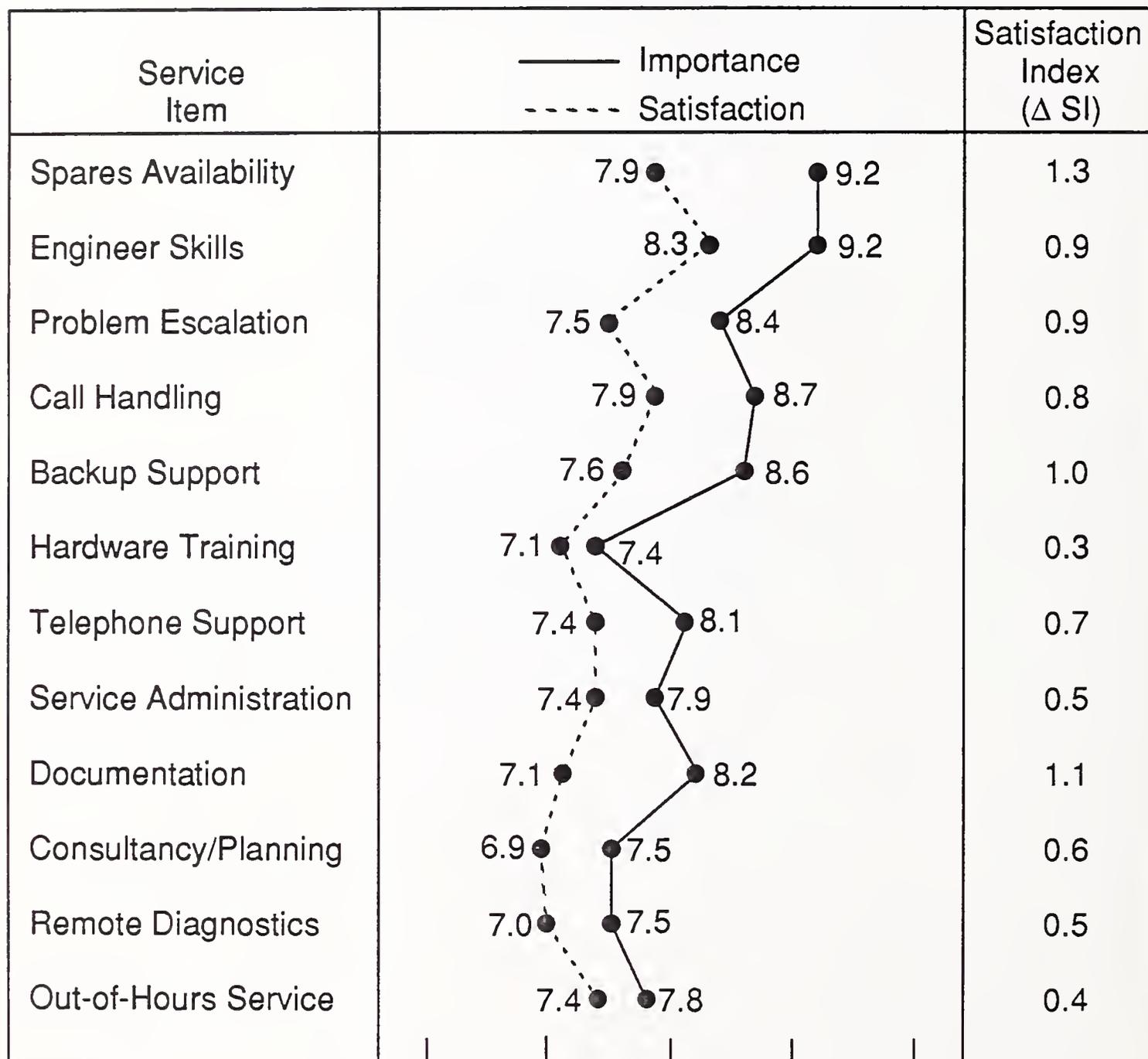
Exhibits VI-1 to VI-3 illustrate overall user satisfaction with twelve aspects of vendor hardware service in Western Europe. Data is presented as user ratings for importance and satisfaction in graphical form to highlight critical and less critical aspects of user need for hardware service.

Each exhibit in this section presents the data by system size segment:

- Large systems
- Medium systems
- Small systems

EXHIBIT VI-1

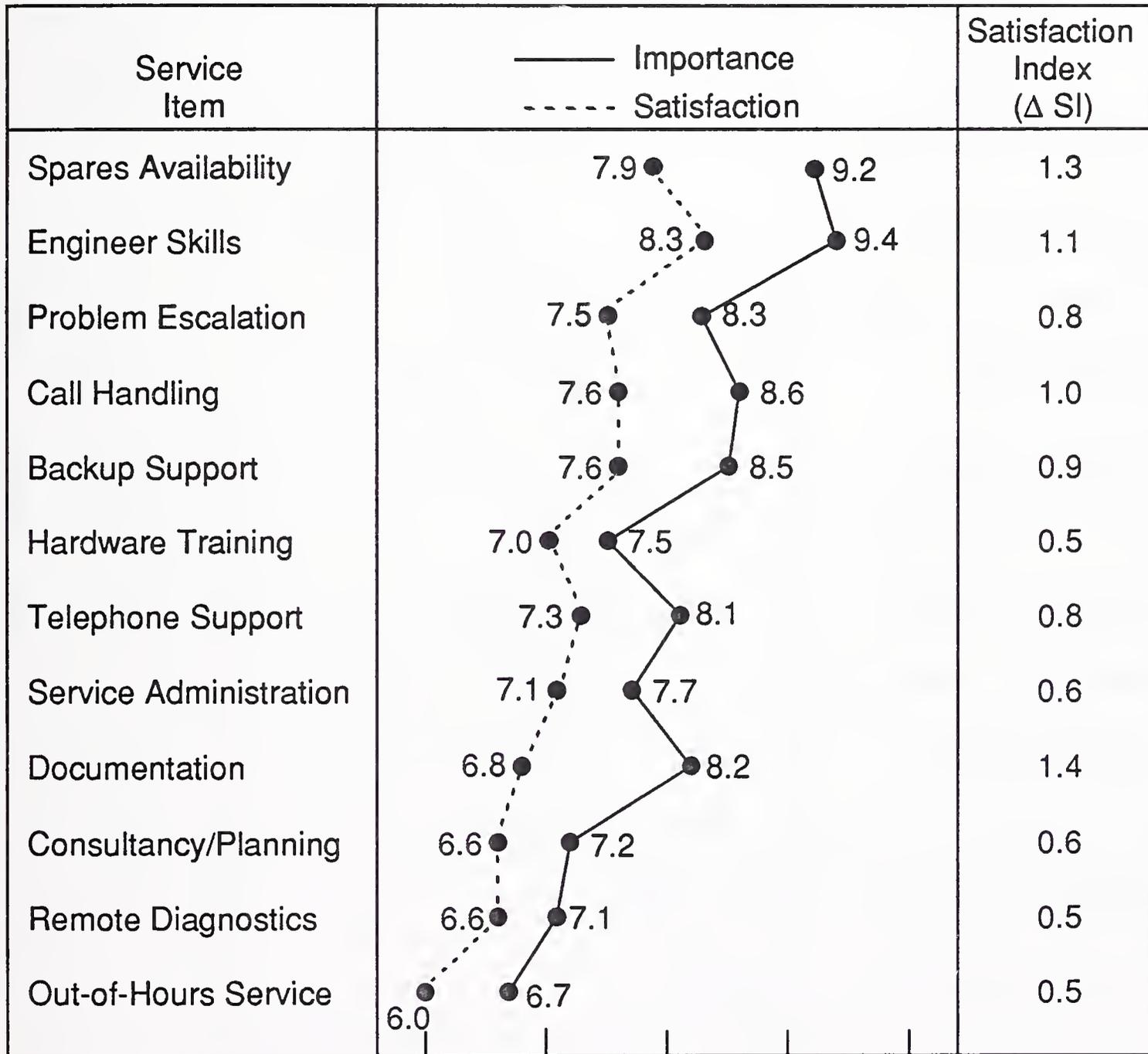
Western Europe Hardware Service Performance Profile Large Systems



Sample Size: 441

EXHIBIT VI-2

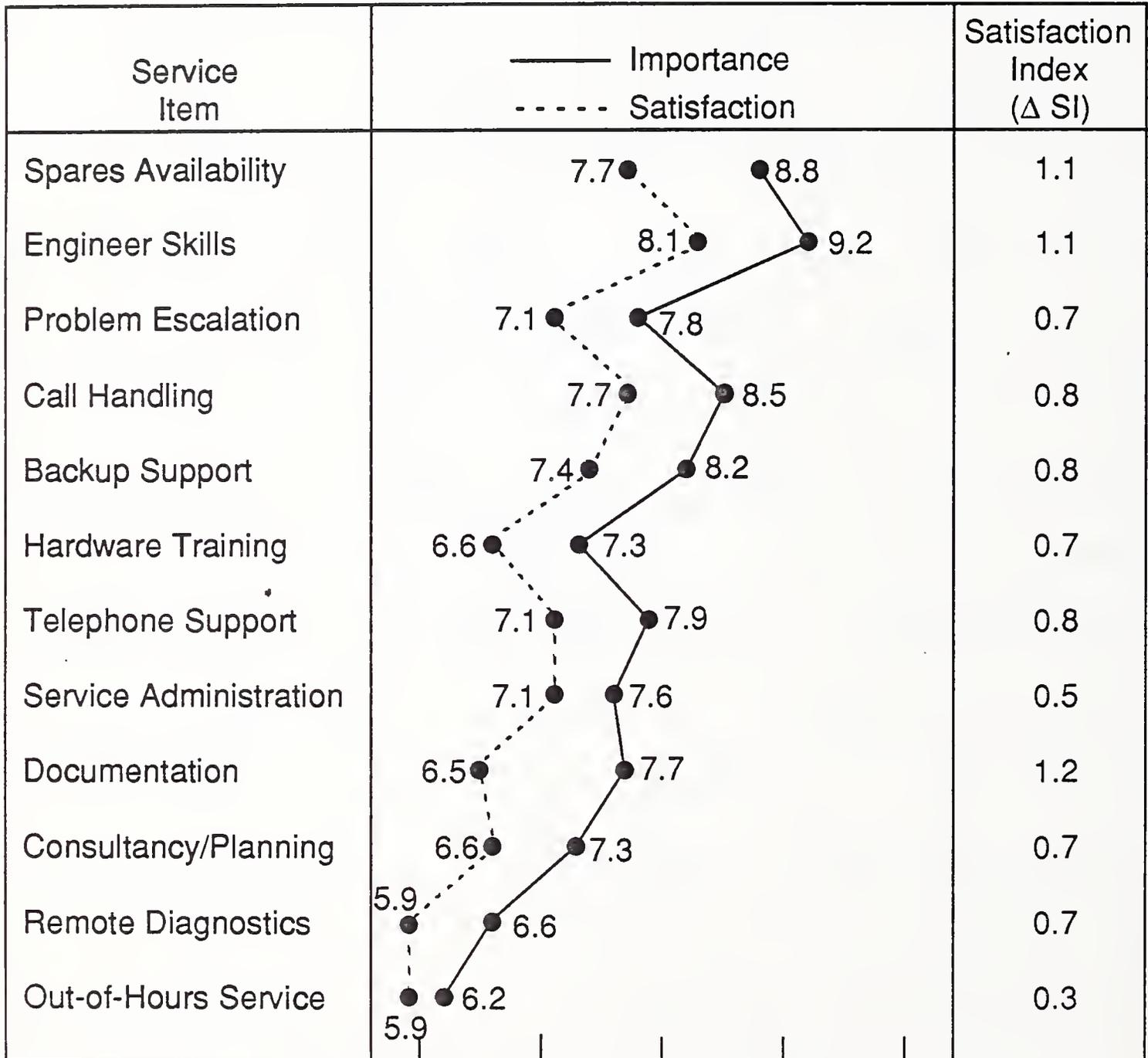
Western Europe Hardware Service Performance Profile Medium Systems



Sample Size: 784

EXHIBIT VI-3

Western Europe Hardware Service Performance Profile Small Systems



Sample Size: 401

2. Software Support

Exhibits VI-4 to VI-6 illustrate overall user satisfaction with thirteen aspects of vendor software support in Western Europe. Data is presented as user ratings for importance and satisfaction in graphical form to highlight critical and less critical aspects of user need for software support.

Each exhibit in this section presents the data by system size segment:

- Large systems
- Medium systems
- Small systems

EXHIBIT VI-4

Western Europe Software Support Performance Profile Large Systems

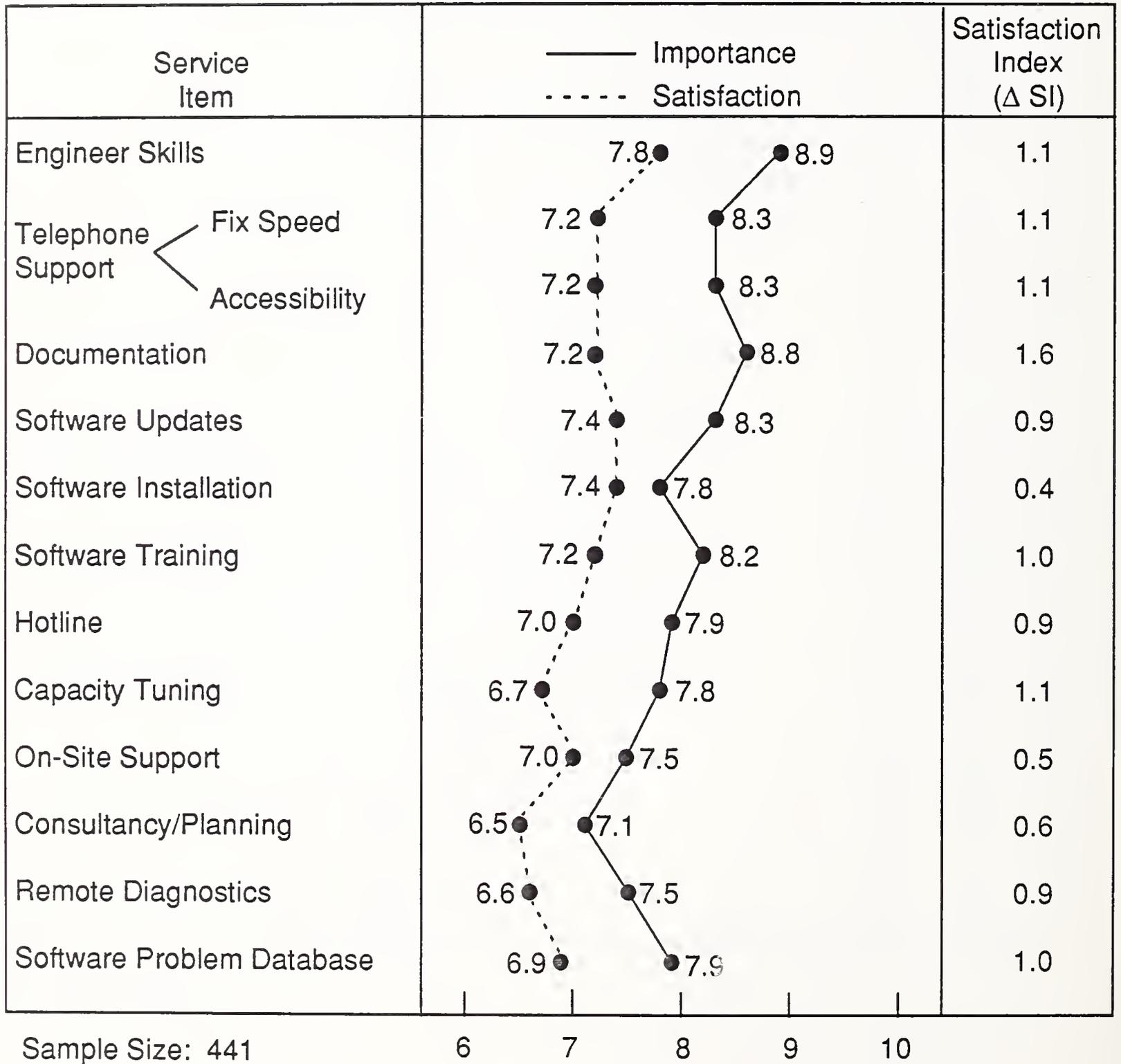
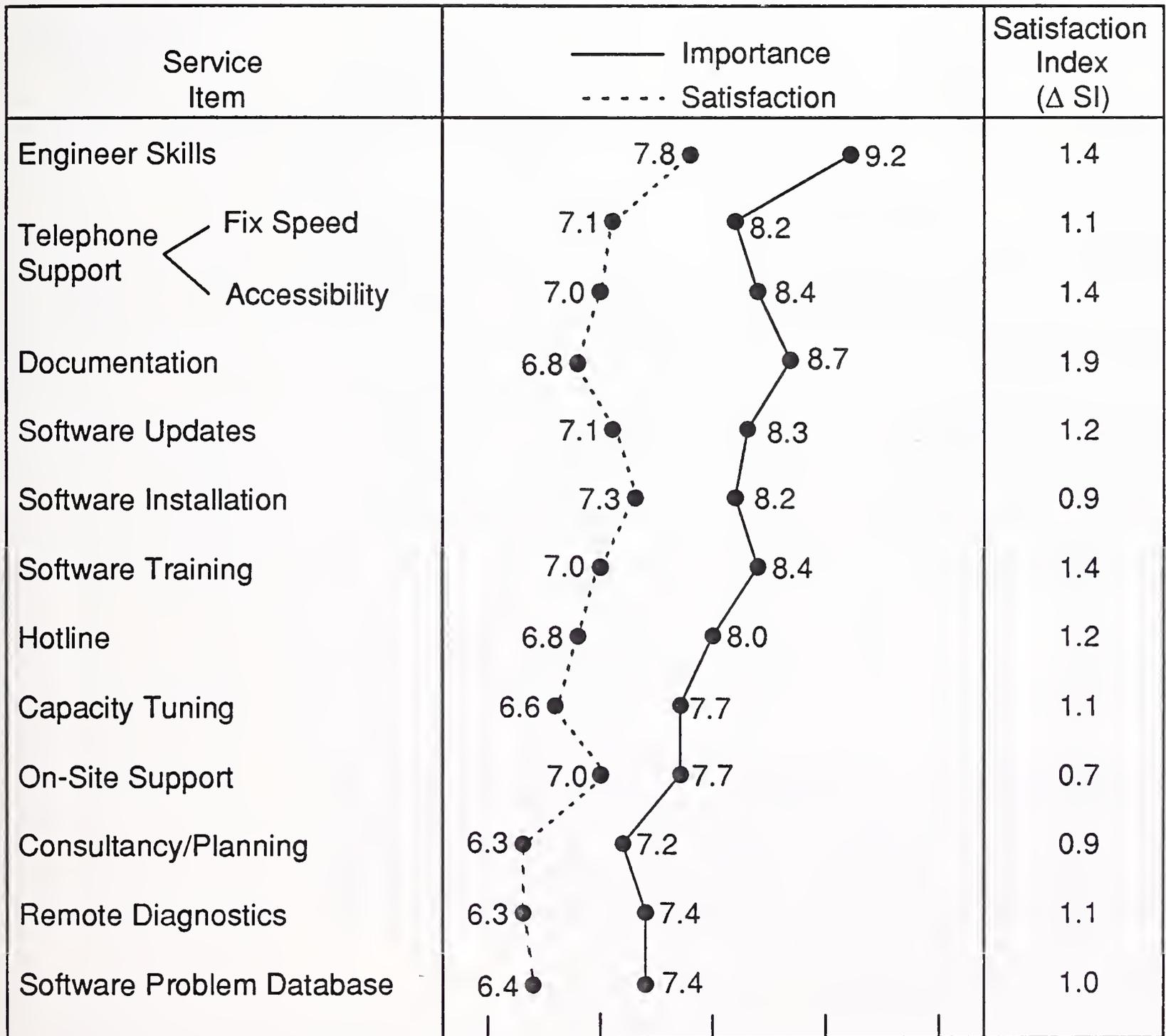


EXHIBIT VI-5

Western Europe Software Support Performance Profile Medium Systems

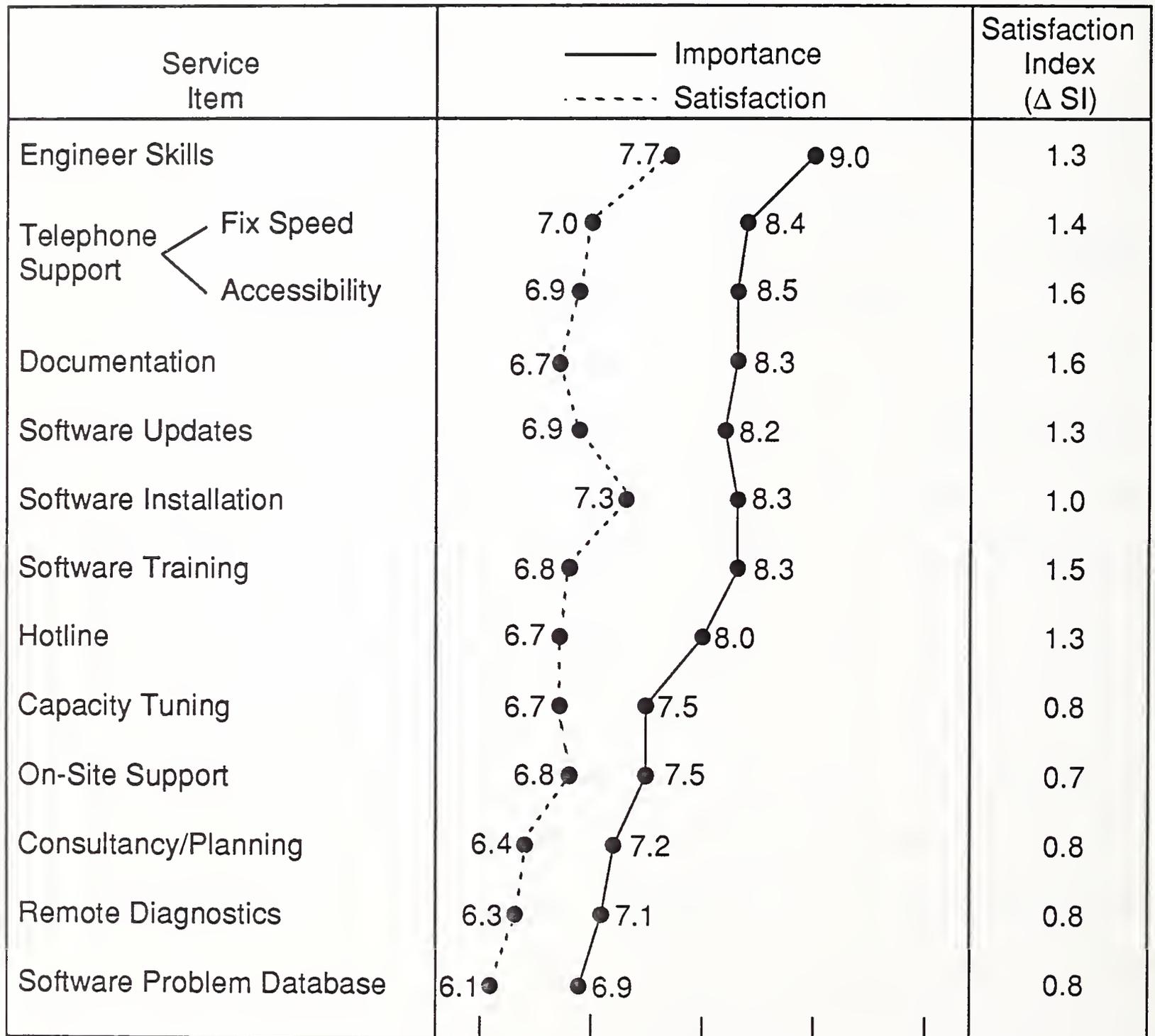


Sample Size: 784

6 7 8 9 10

EXHIBIT VI-6

Western Europe Software Support Performance Profile Small Systems



Sample Size: 401

B**User Satisfaction—
Country Comparisons****1. Hardware Service Satisfaction**

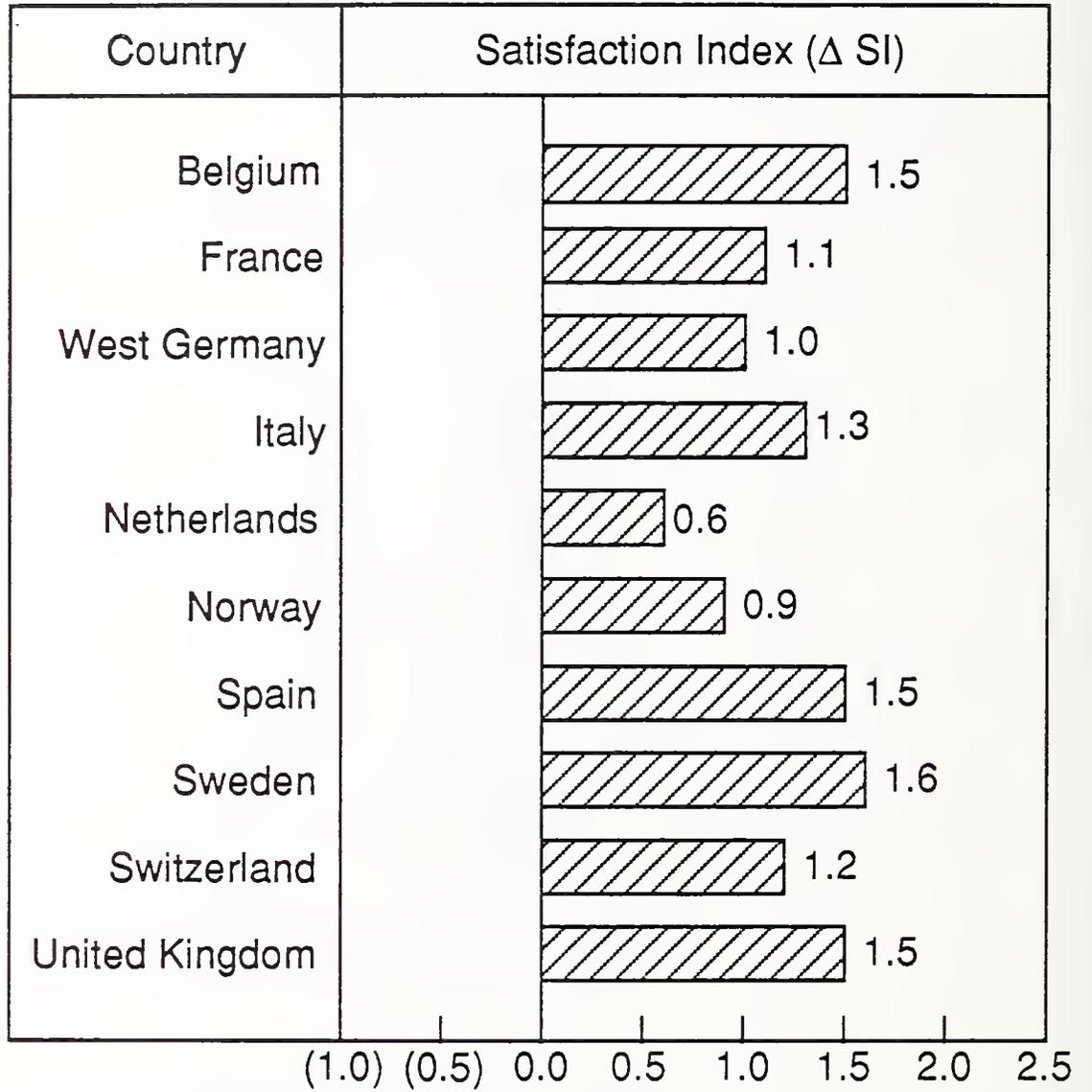
User satisfaction with hardware service in ten Western European country markets is illustrated in Exhibits VI-7 to VI-18. These exhibits indicate user satisfaction with twelve individual aspects of hardware service:

- Spares availability
- Engineer skills
- Problem escalation
- Call handling
- Backup support
- Hardware training
- Telephone support
- Service administration
- Documentation
- Consultancy/planning
- Remote diagnostics
- Out-of-hours service

Data is presented in the form of a satisfaction index (Δ SI) which normalises variations in importance ratings. Exhibits are structured to allow comparison of user satisfaction ratings for each aspect of hardware service on a country-by-country basis. Satisfaction indexes (Δ SI) in brackets indicate oversatisfaction of user needs.

EXHIBIT VI-7

Hardware Service Spares Availability



Sample Size: 1,626
 Standard Error: 0.05

EXHIBIT VI-8

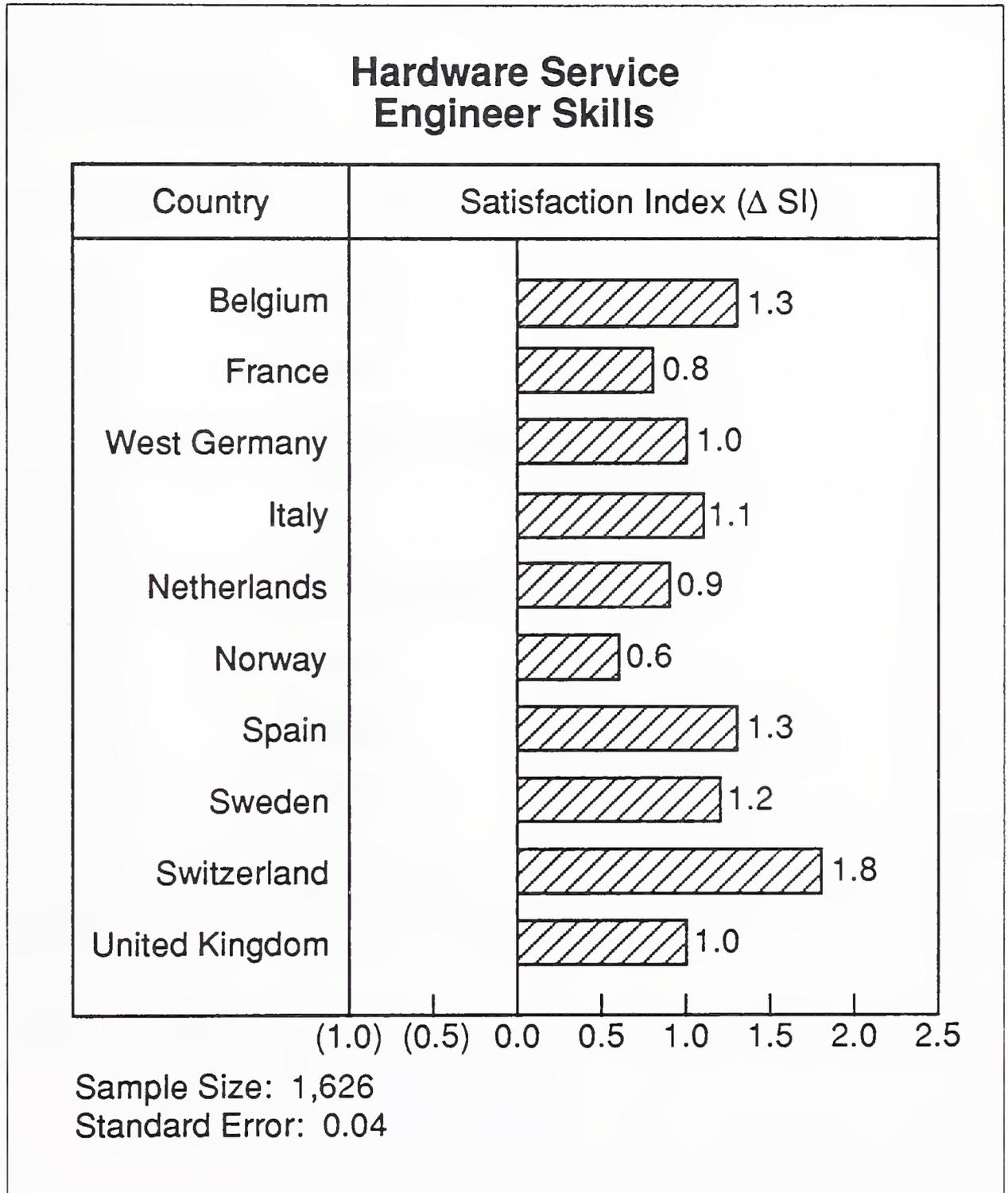


EXHIBIT VI-9

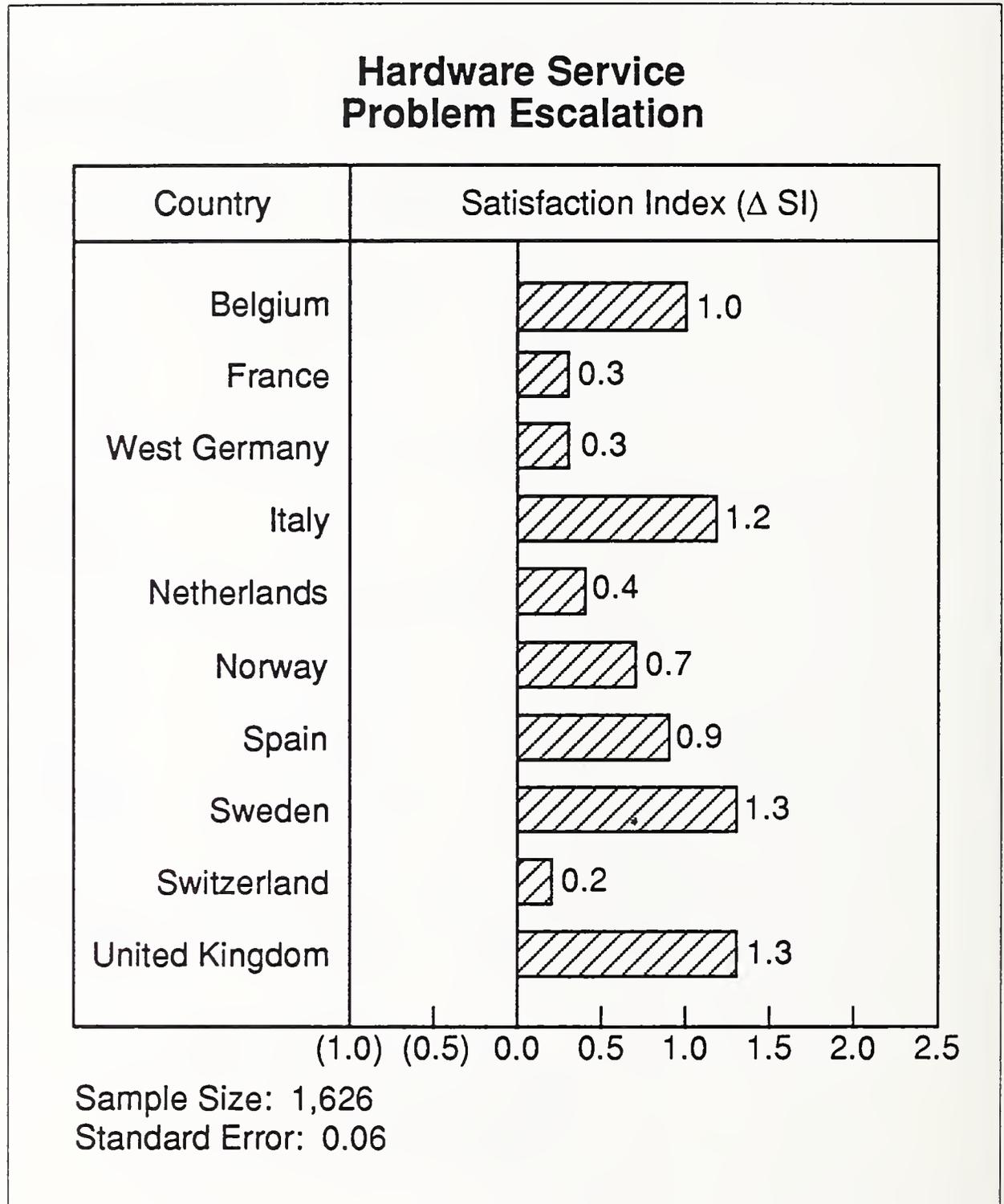


EXHIBIT VI-10

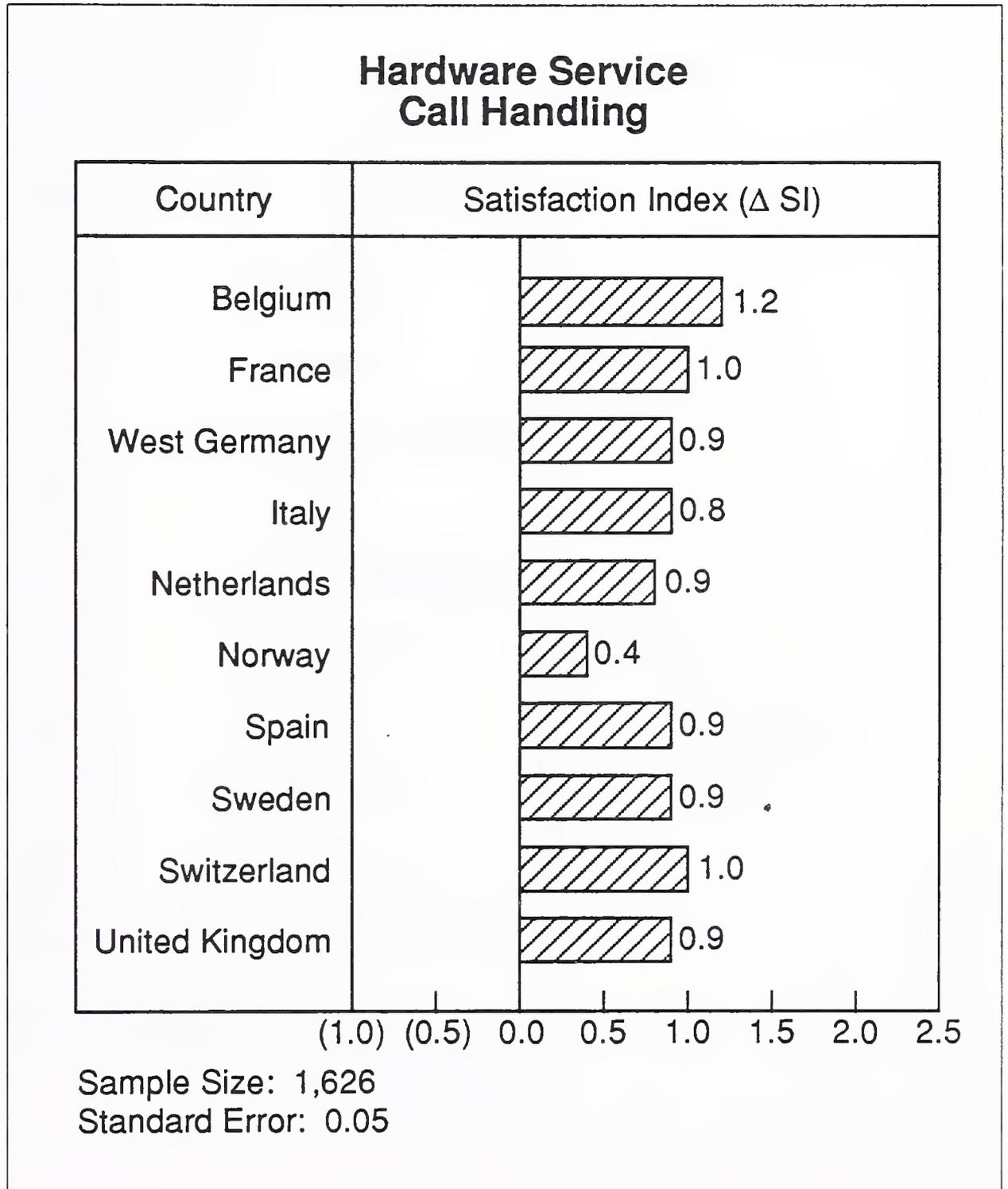
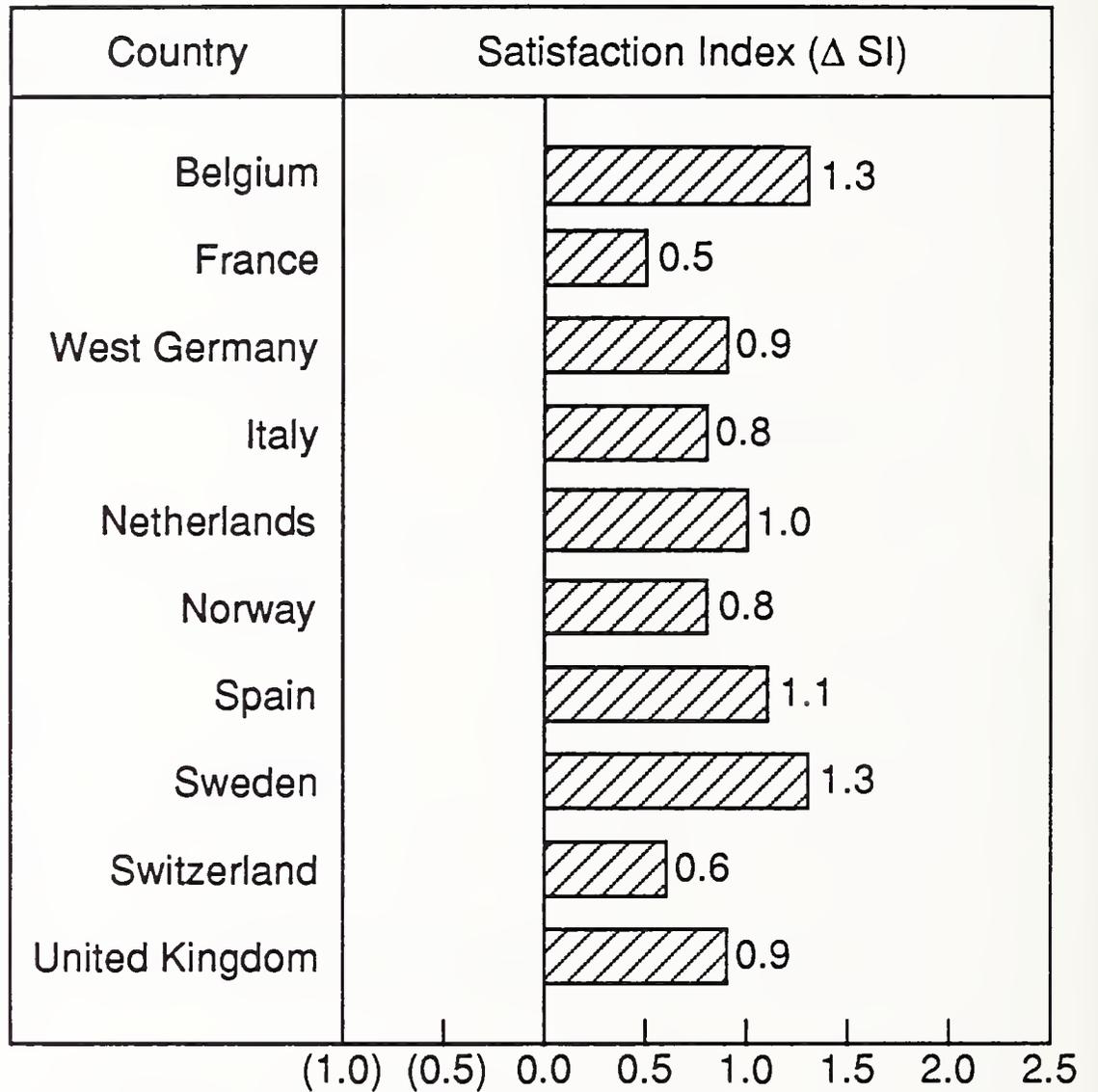


EXHIBIT VI-11

Hardware Service Backup Support



Sample Size: 1,626
 Standard Error: 0.05

EXHIBIT VI-12

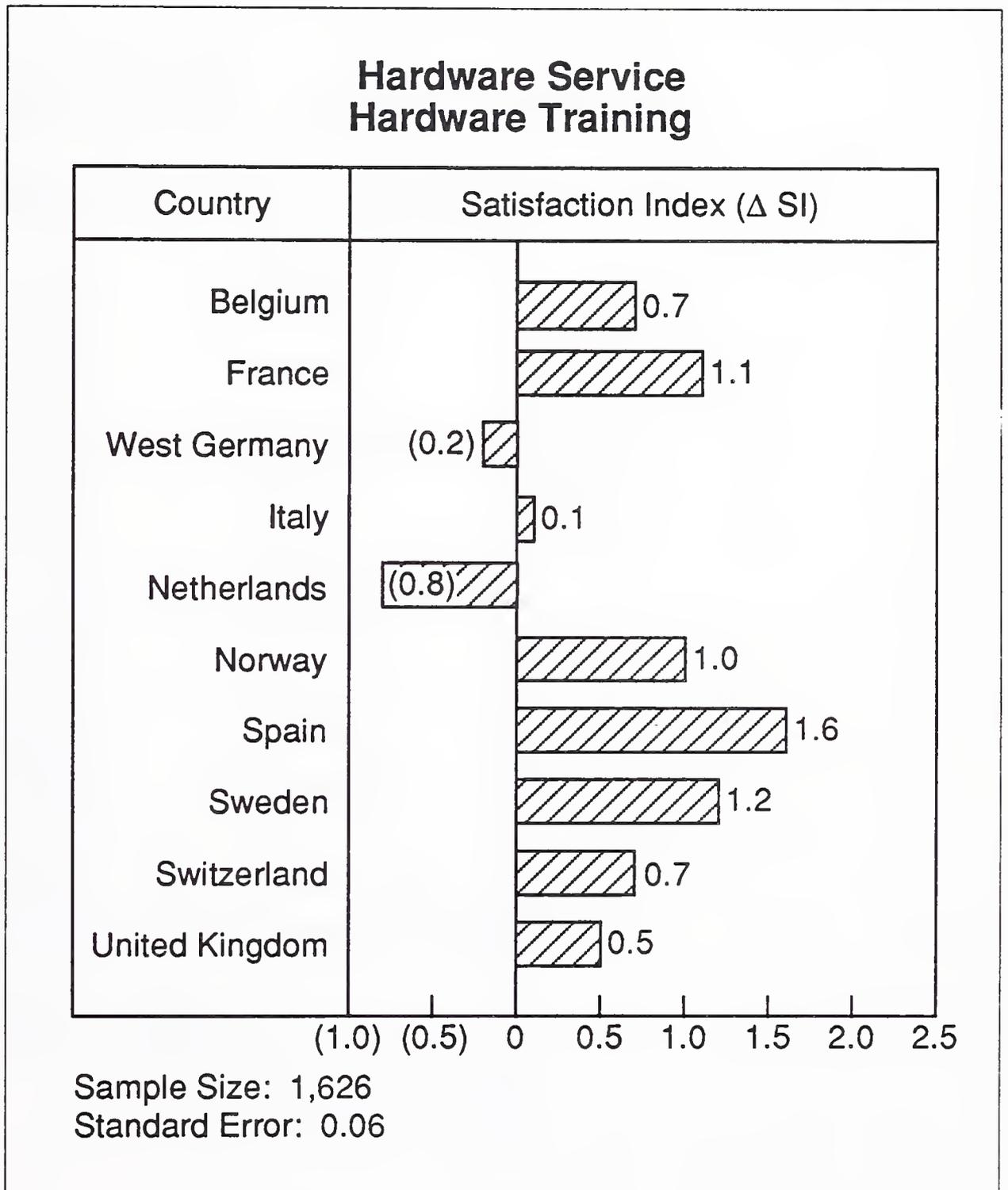


EXHIBIT VI-13

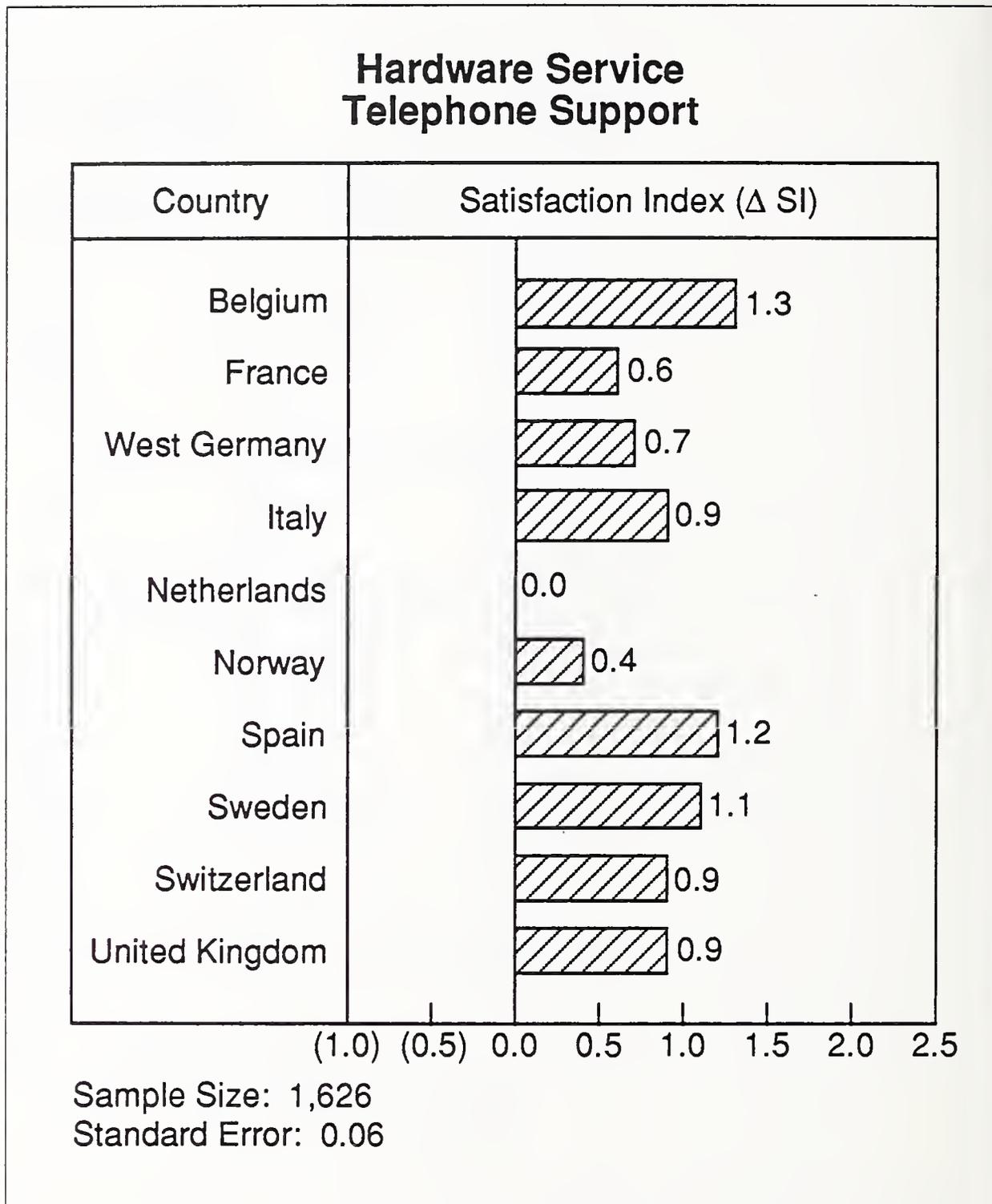
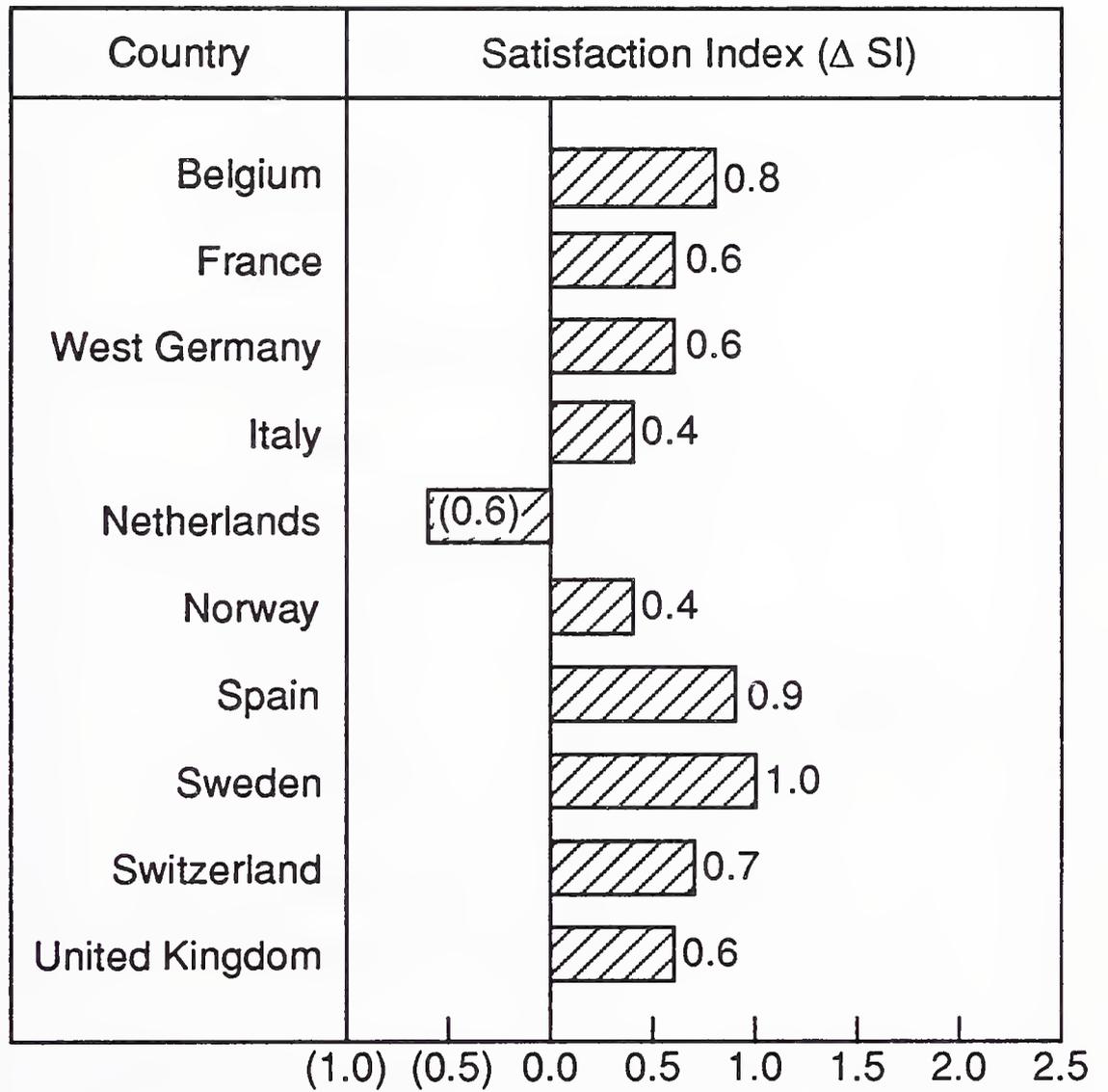


EXHIBIT VI-14

Hardware Service Service Administration



Sample Size: 1,626
Standard Error: 0.05

EXHIBIT VI-15

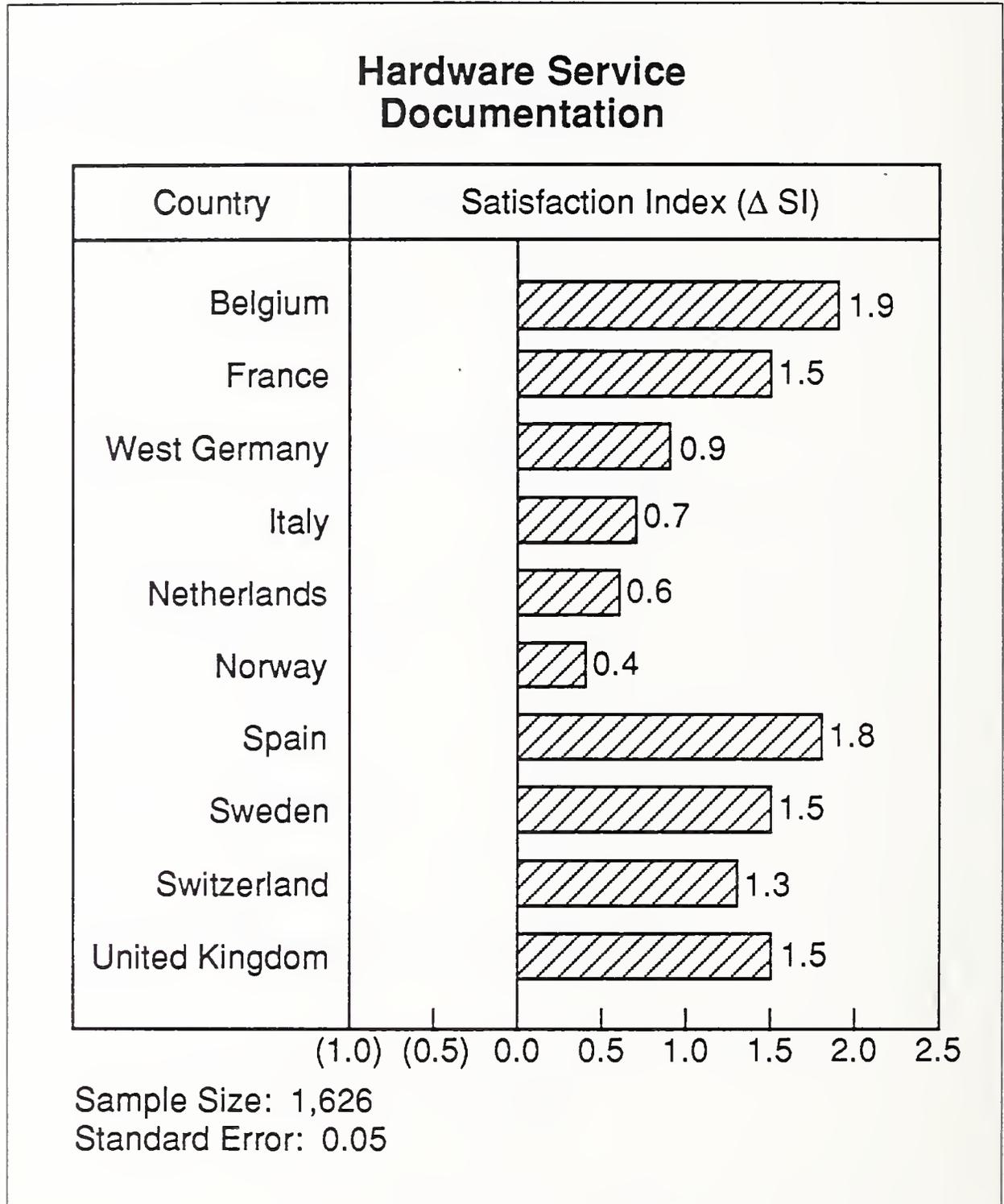


EXHIBIT VI-16

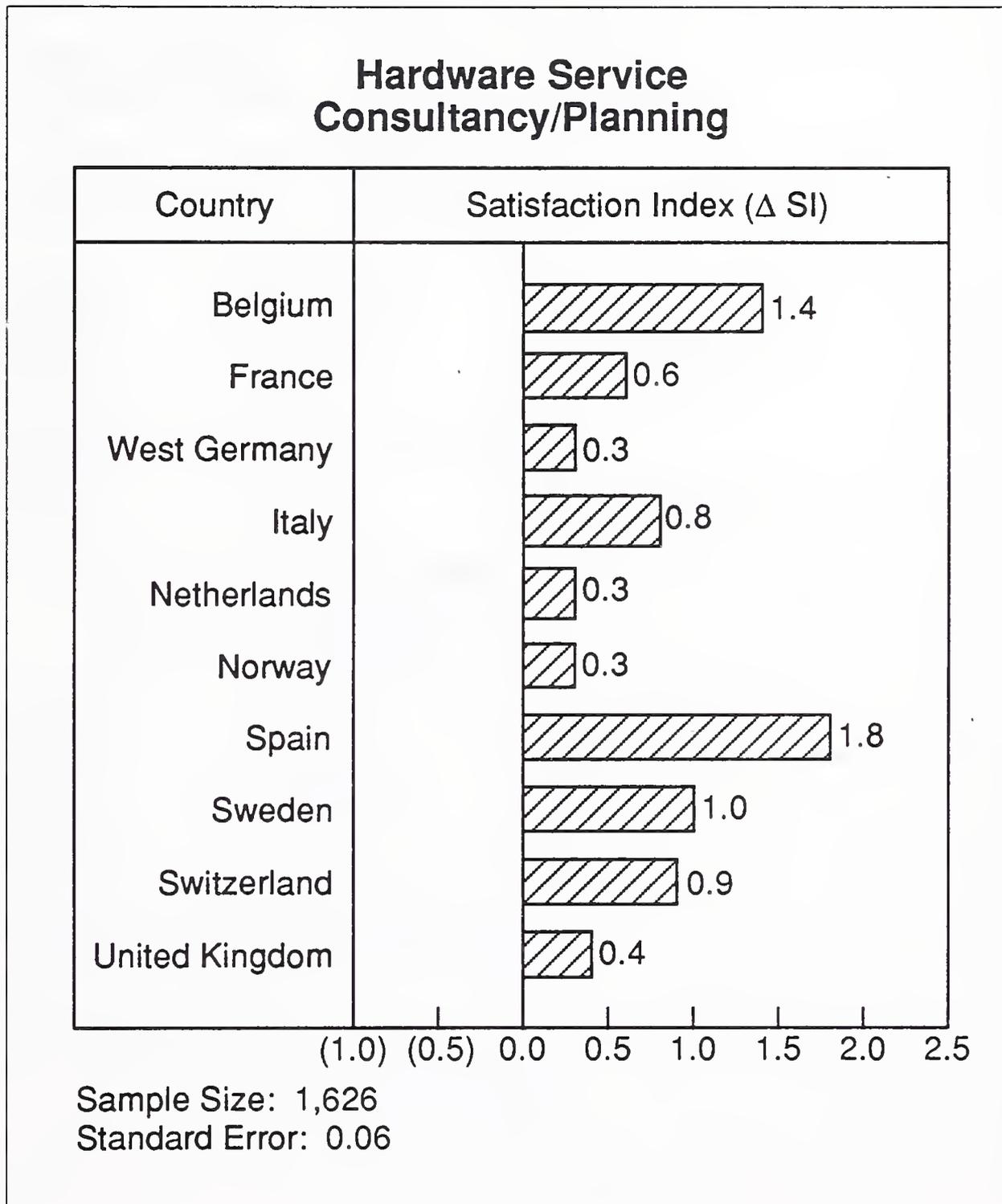


EXHIBIT VI-17

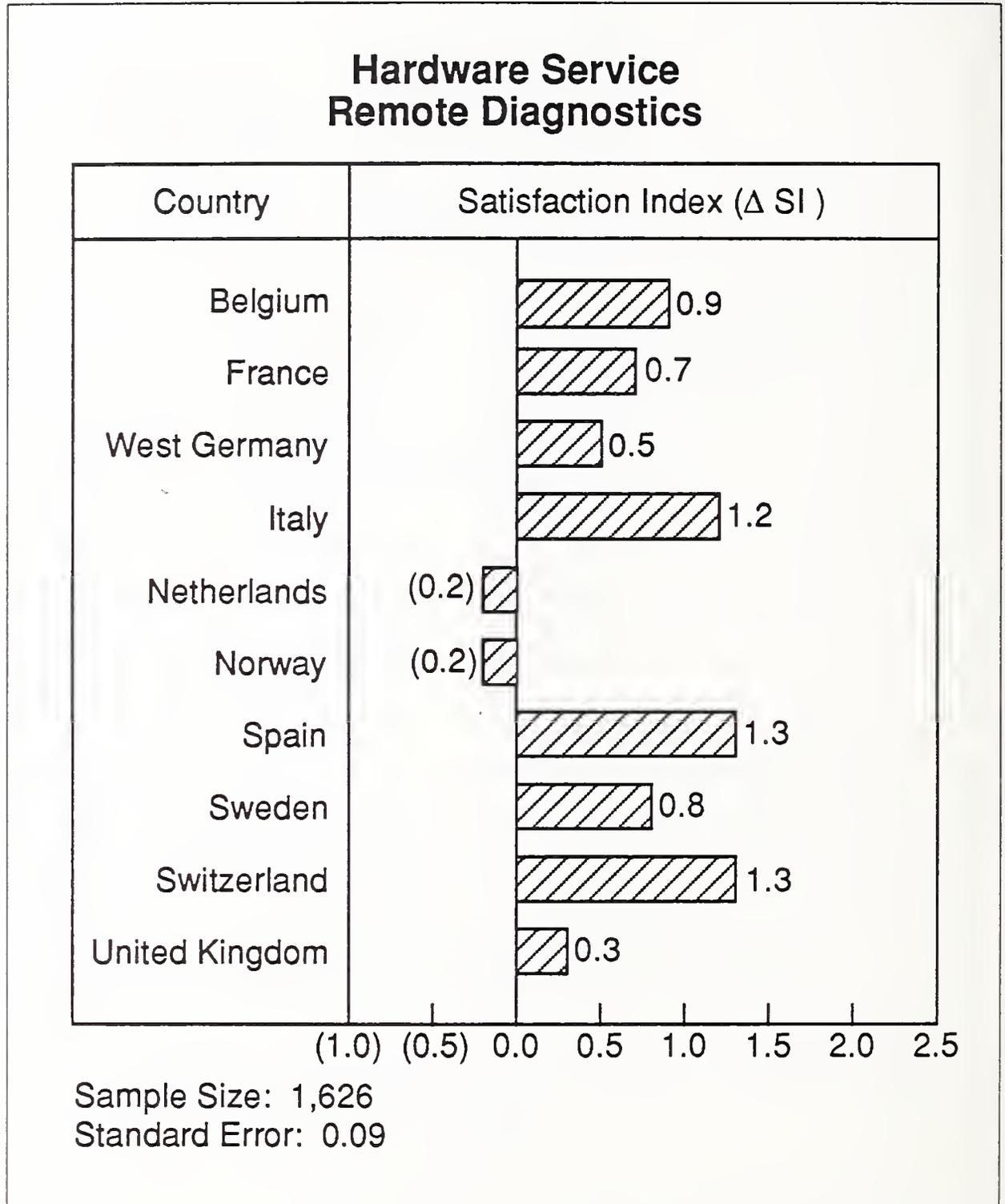
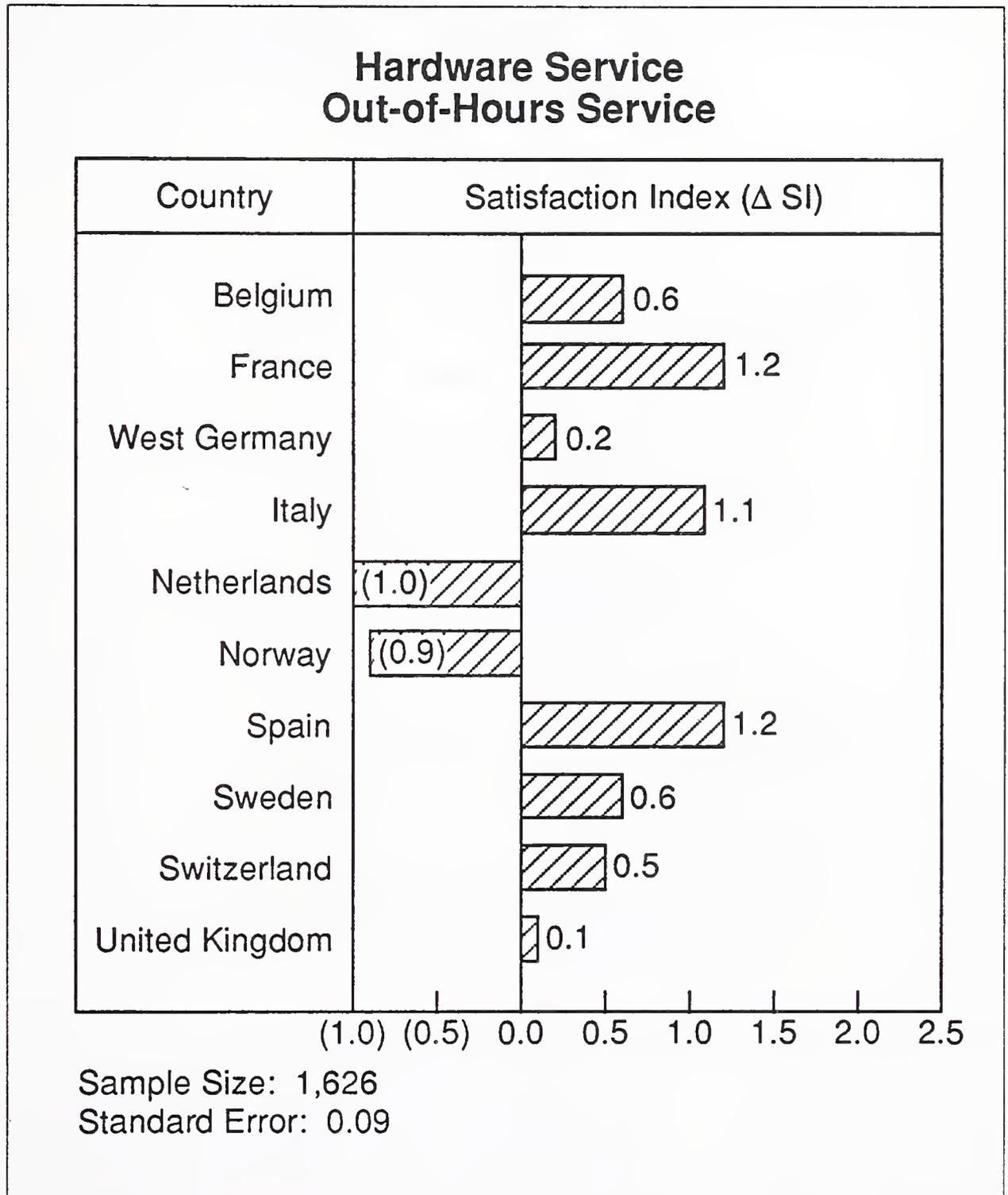


EXHIBIT VI-18



2. Software Support Satisfaction

User satisfaction with software support in ten Western European country markets is illustrated in Exhibits VI-19 to VI-31. These exhibits indicate user satisfaction with thirteen individual aspects of software support:

- Engineer skills
- Telephone support
 - Fix speed
 - Accessibility
- Documentation
- Software updates
- Software installation
- Software training
- Hotline
- Capacity tuning
- On-site support
- Consultancy/planning
- Remote diagnostics
- Software problem database

Data is presented in the form of a satisfaction index (Δ SI) which normalises variations in importance ratings. Exhibits are structured to allow comparison of user satisfaction ratings for each aspect of software support on a country-by-country basis. Satisfaction indexes (Δ SI) in brackets indicate oversatisfaction of user needs.

EXHIBIT VI-19

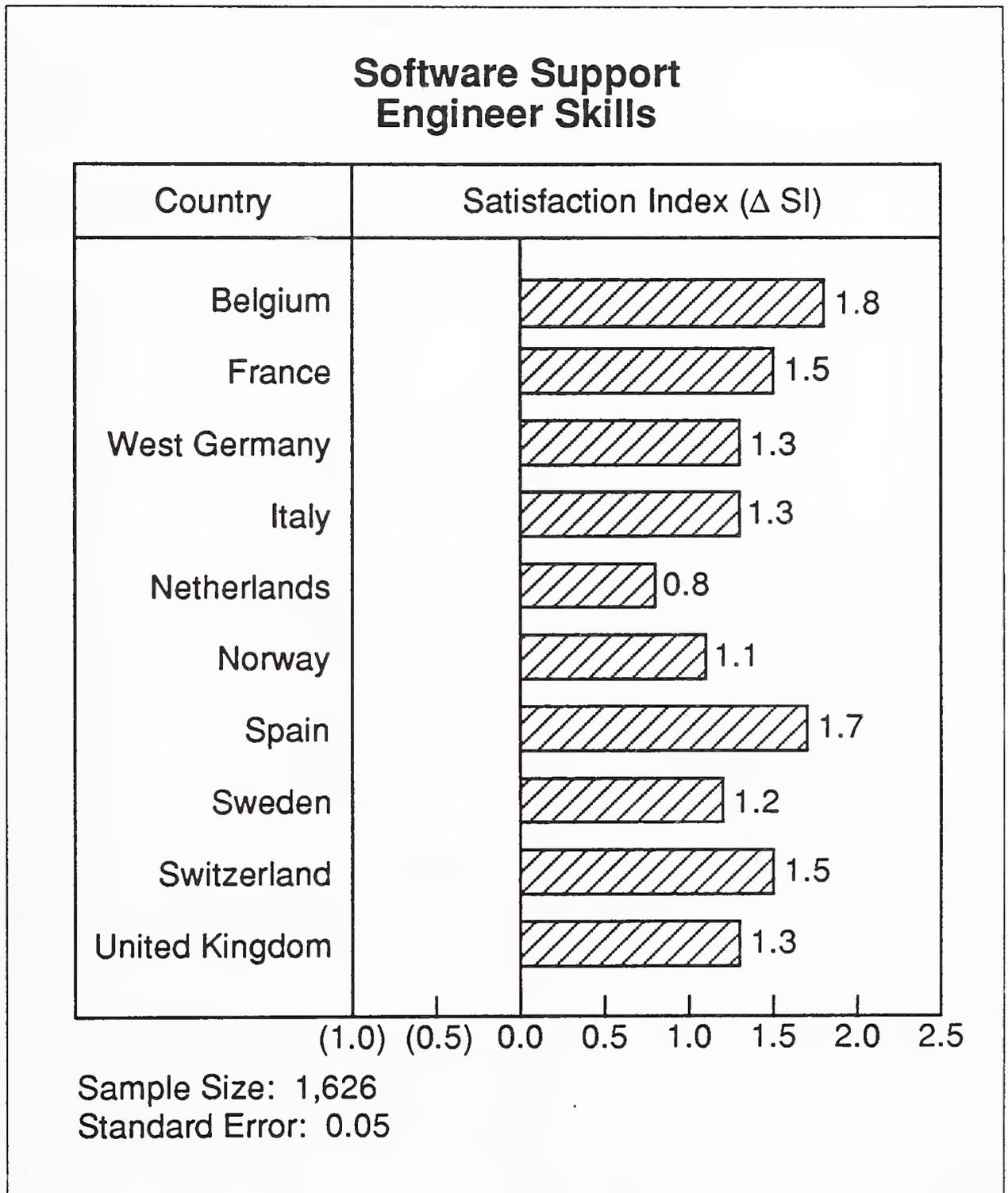
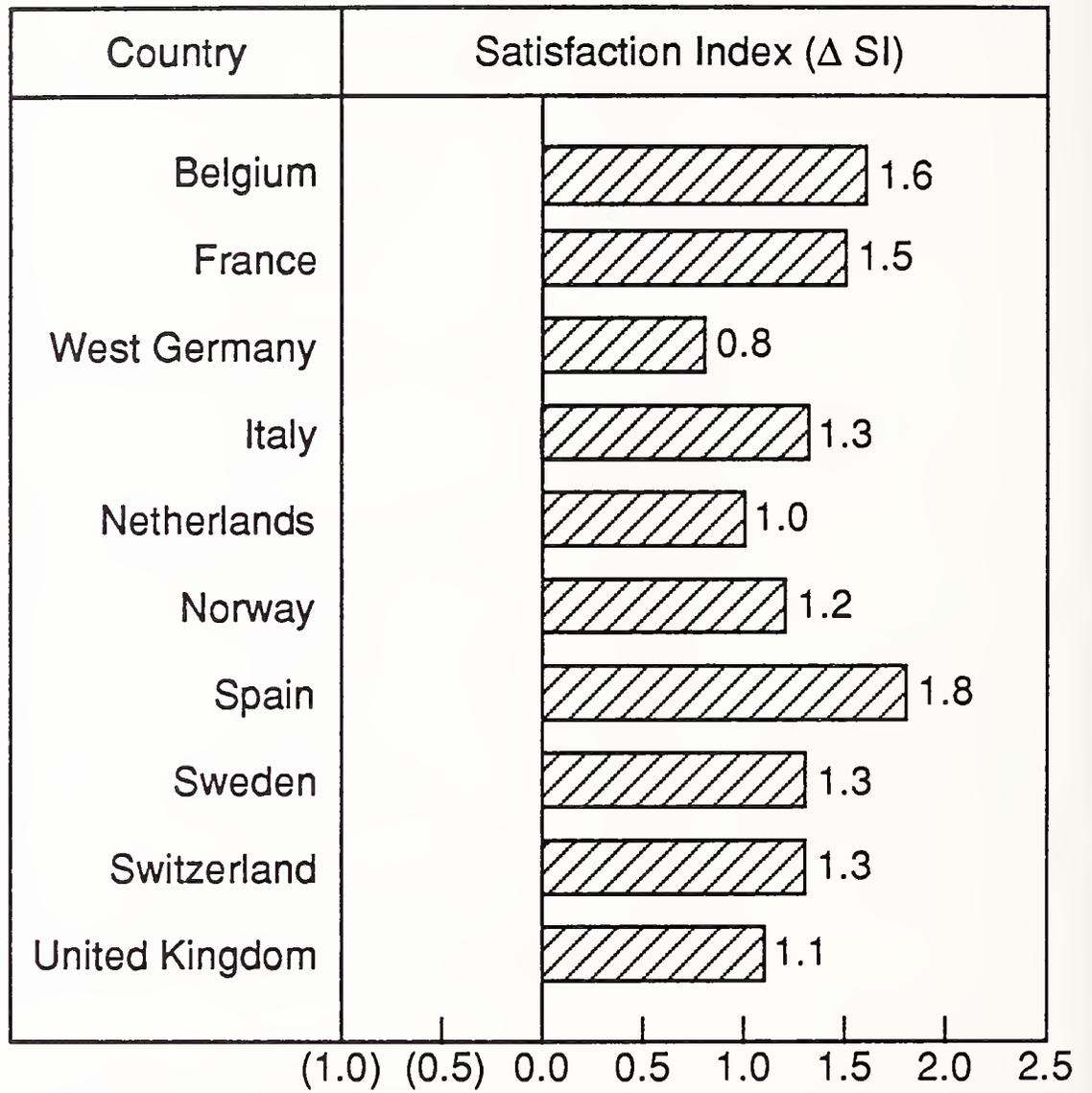


EXHIBIT VI-20

Software Support Fix Speed



Sample Size: 1,626
Standard Error: 0.06

EXHIBIT VI-21

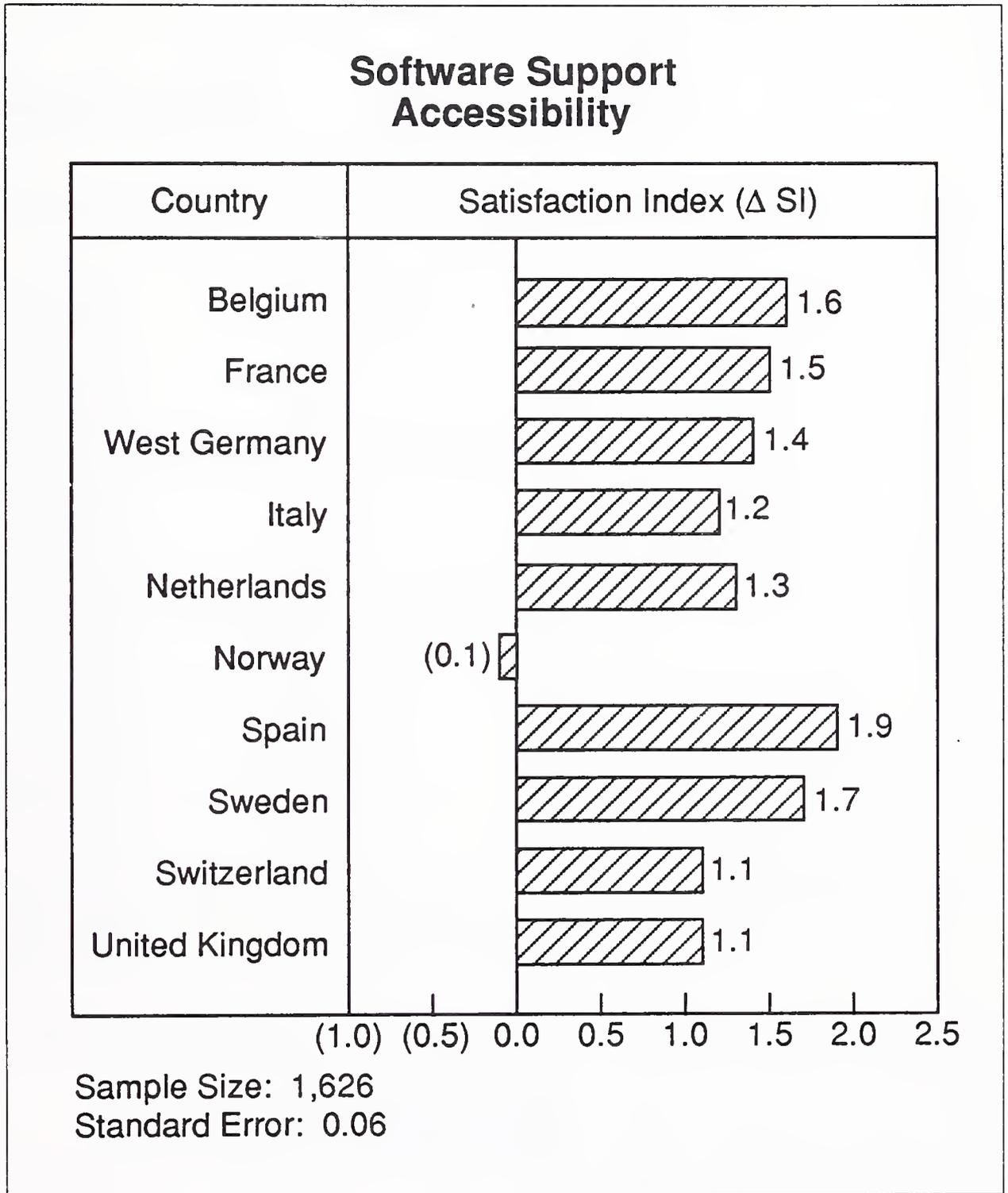


EXHIBIT VI-22

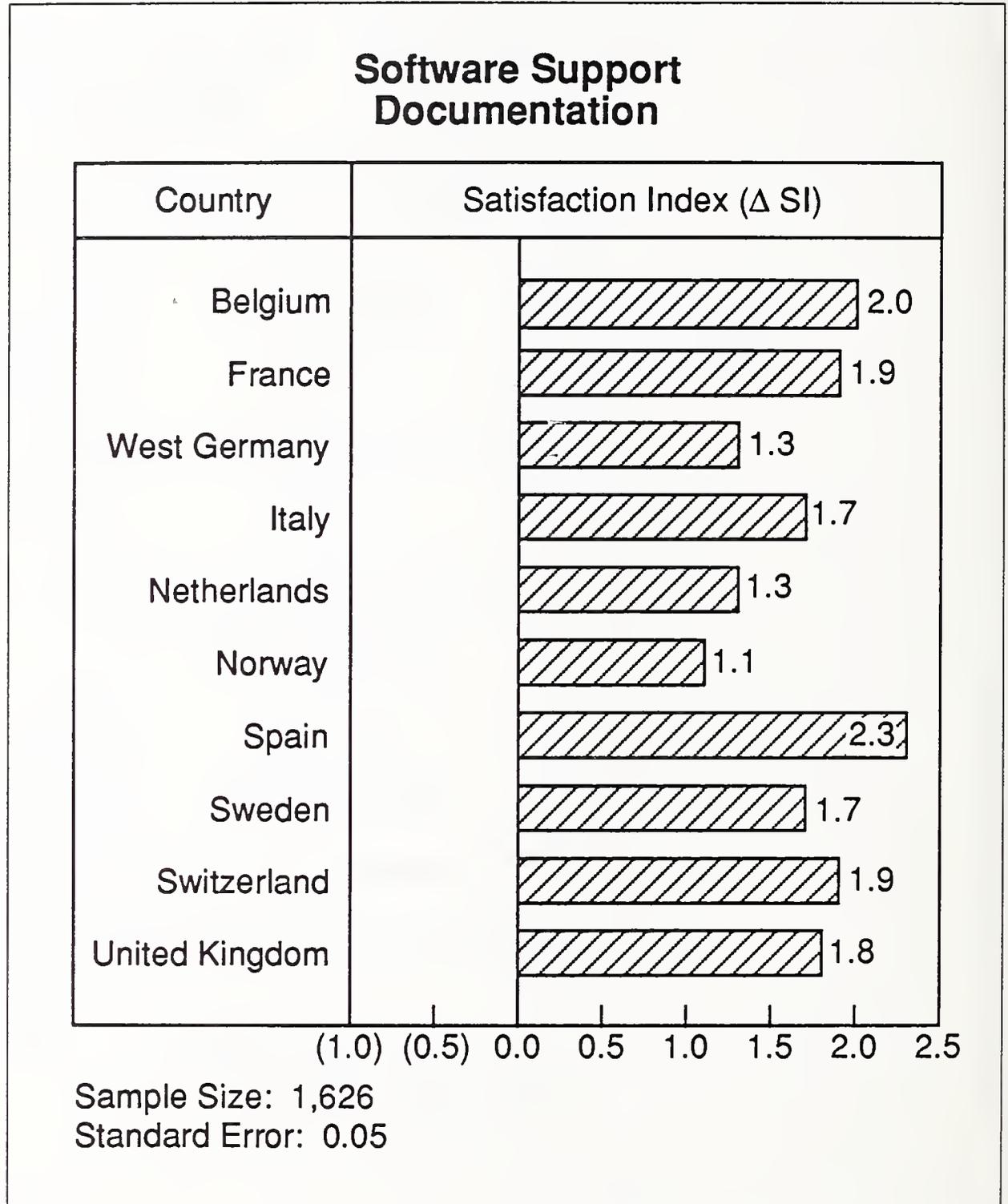


EXHIBIT VI-23

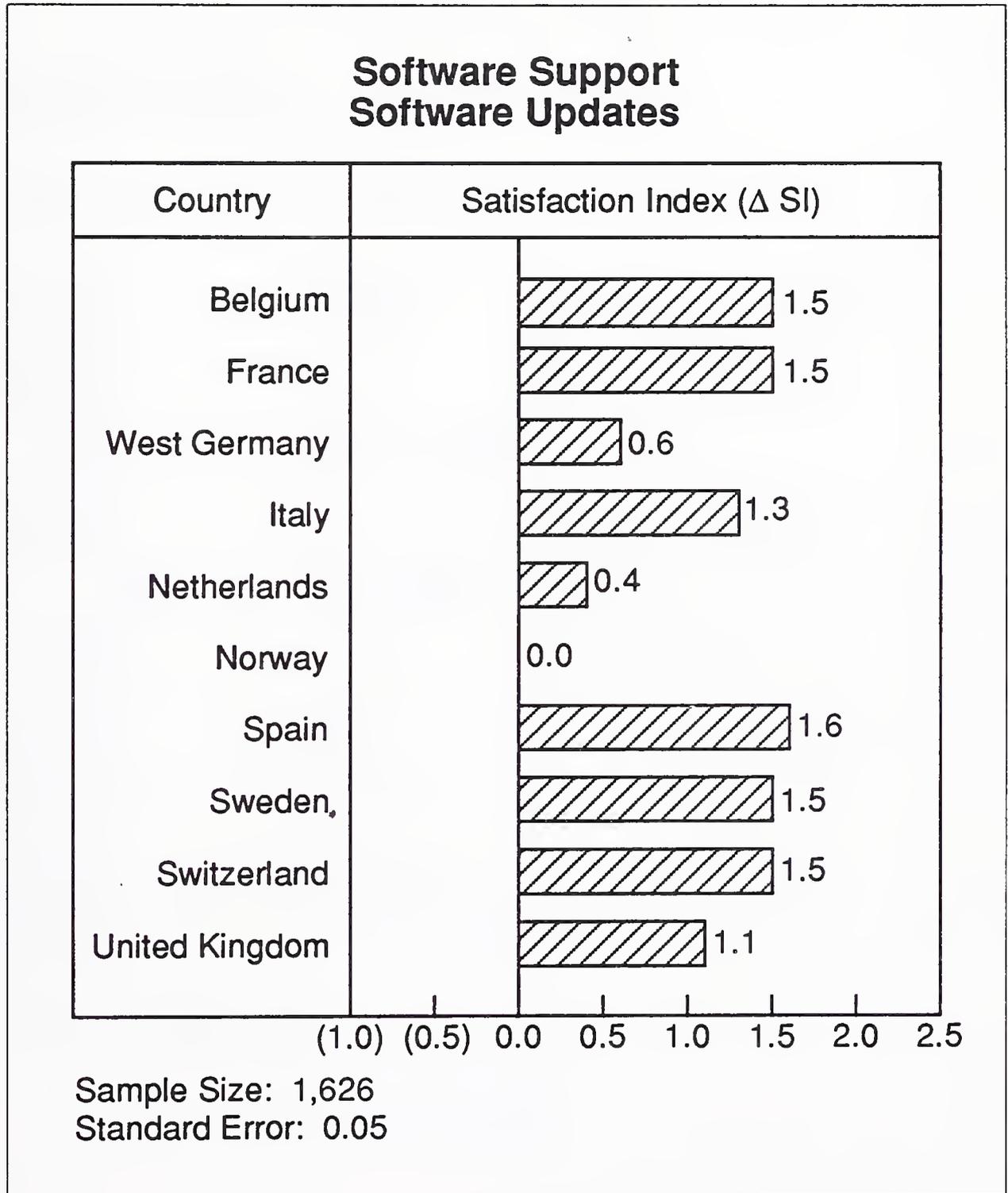


EXHIBIT VI-24

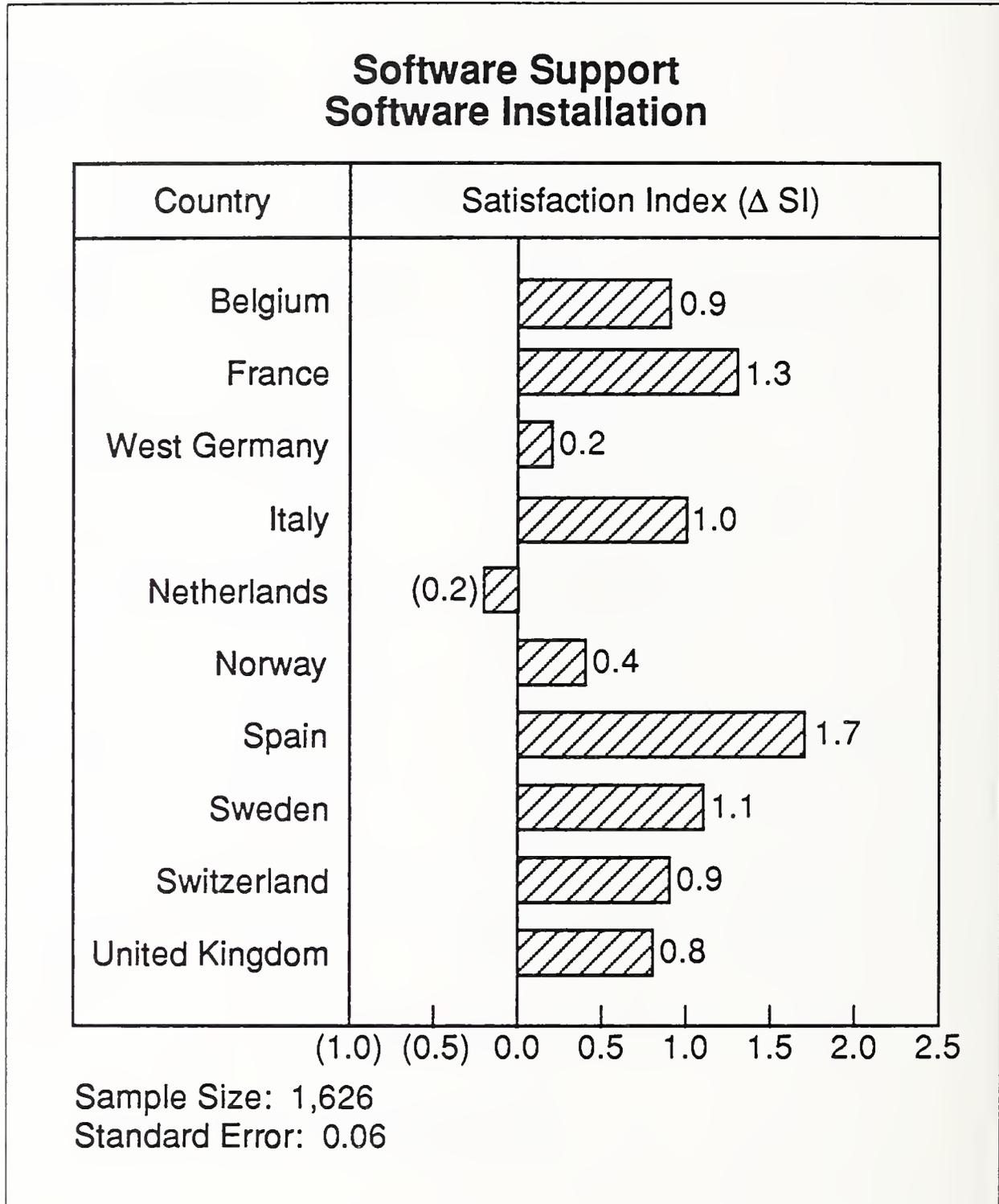


EXHIBIT VI-25

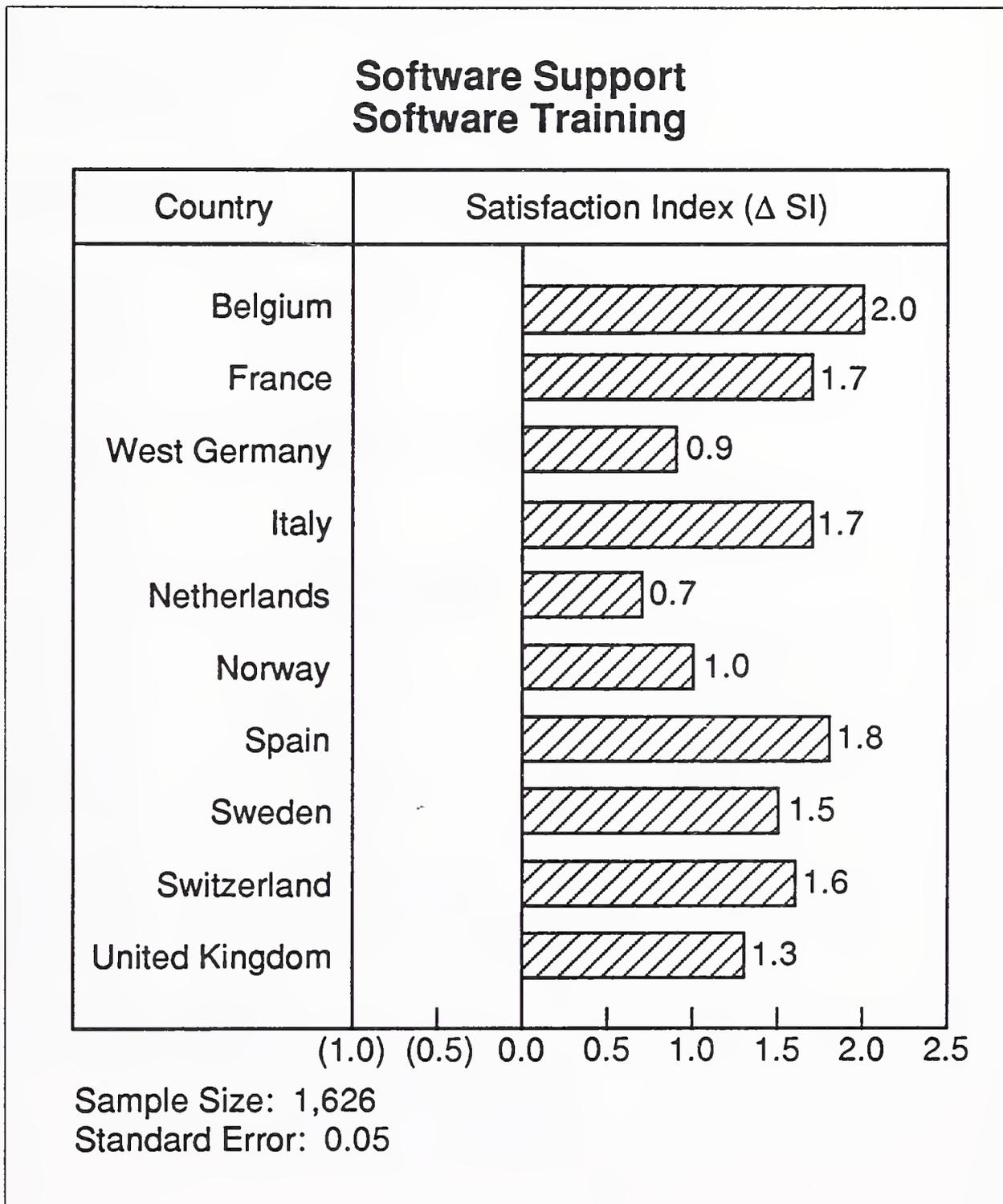


EXHIBIT VI-26

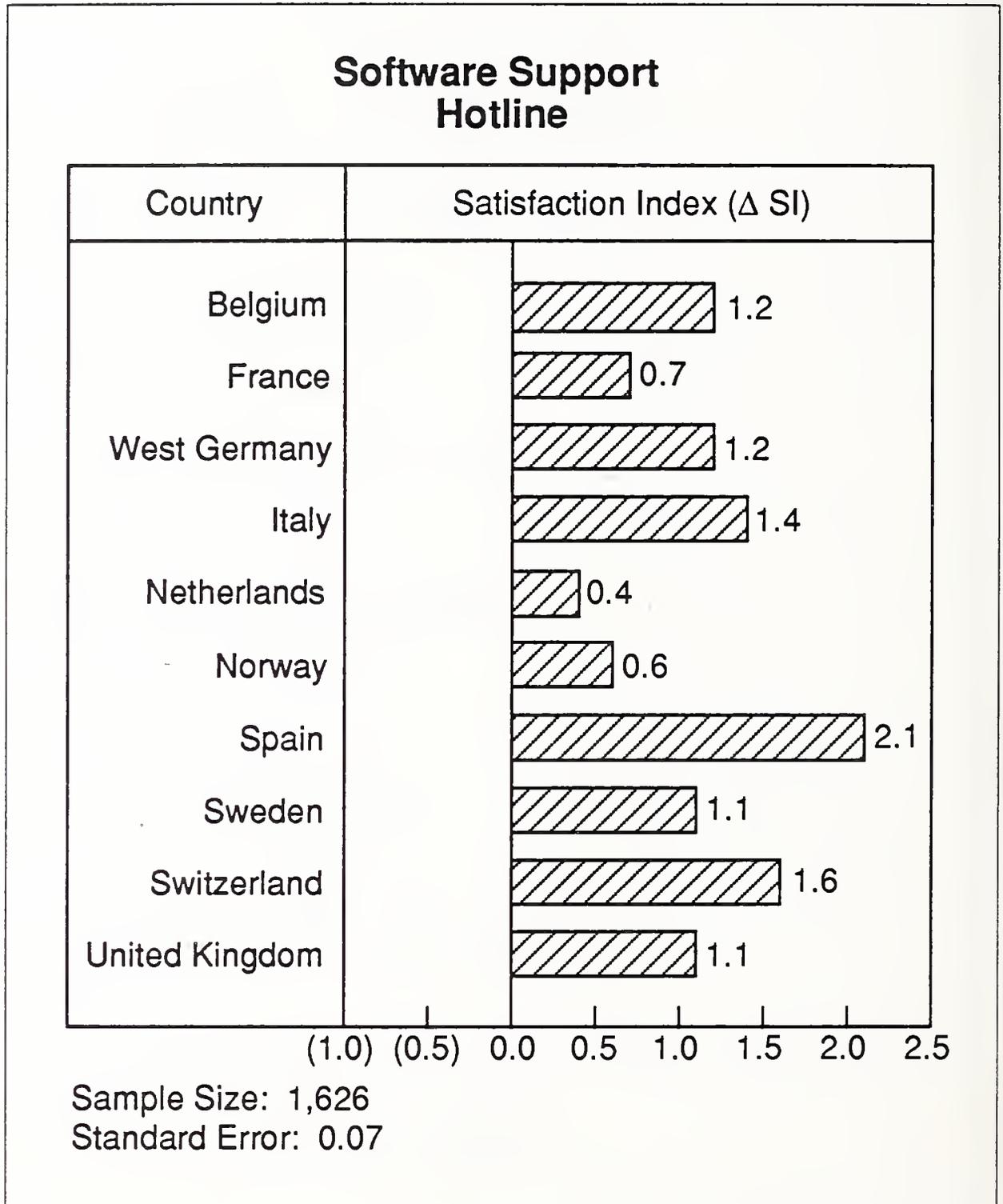


EXHIBIT VI-27

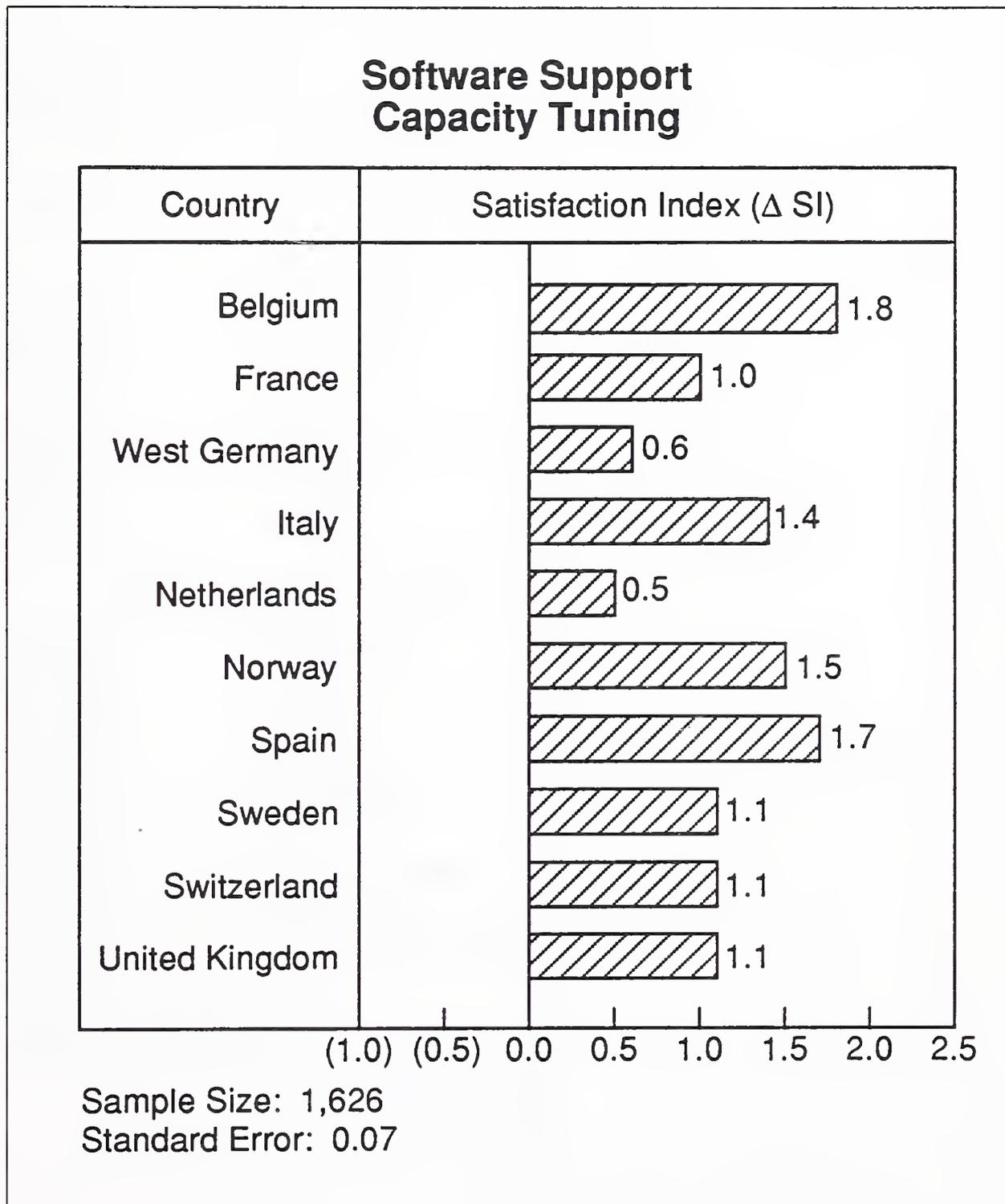


EXHIBIT VI-28

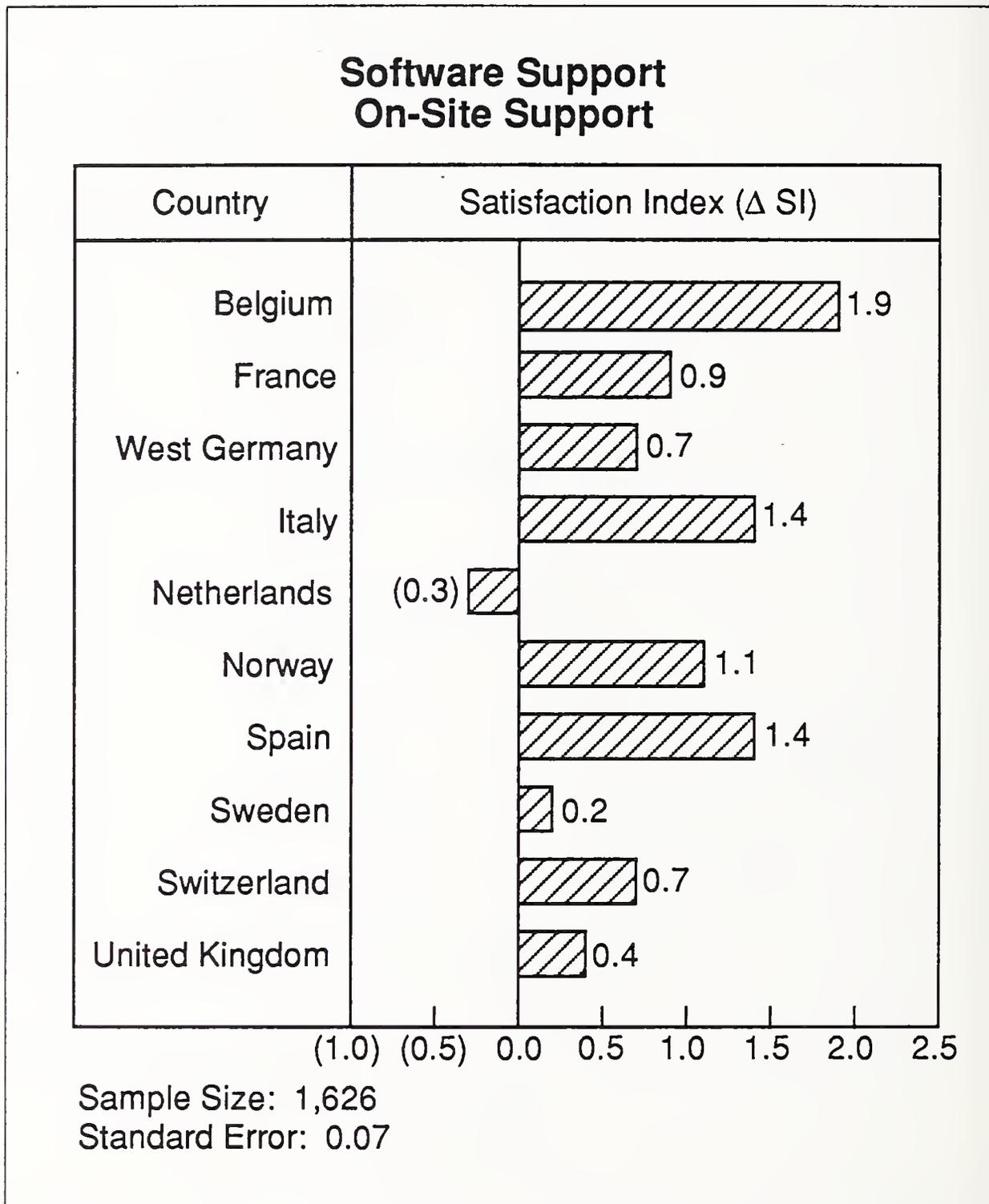


EXHIBIT VI-29

Software Support Consultancy/Planning



Sample Size: 1,626
Standard Error: 0.07

EXHIBIT VI-30

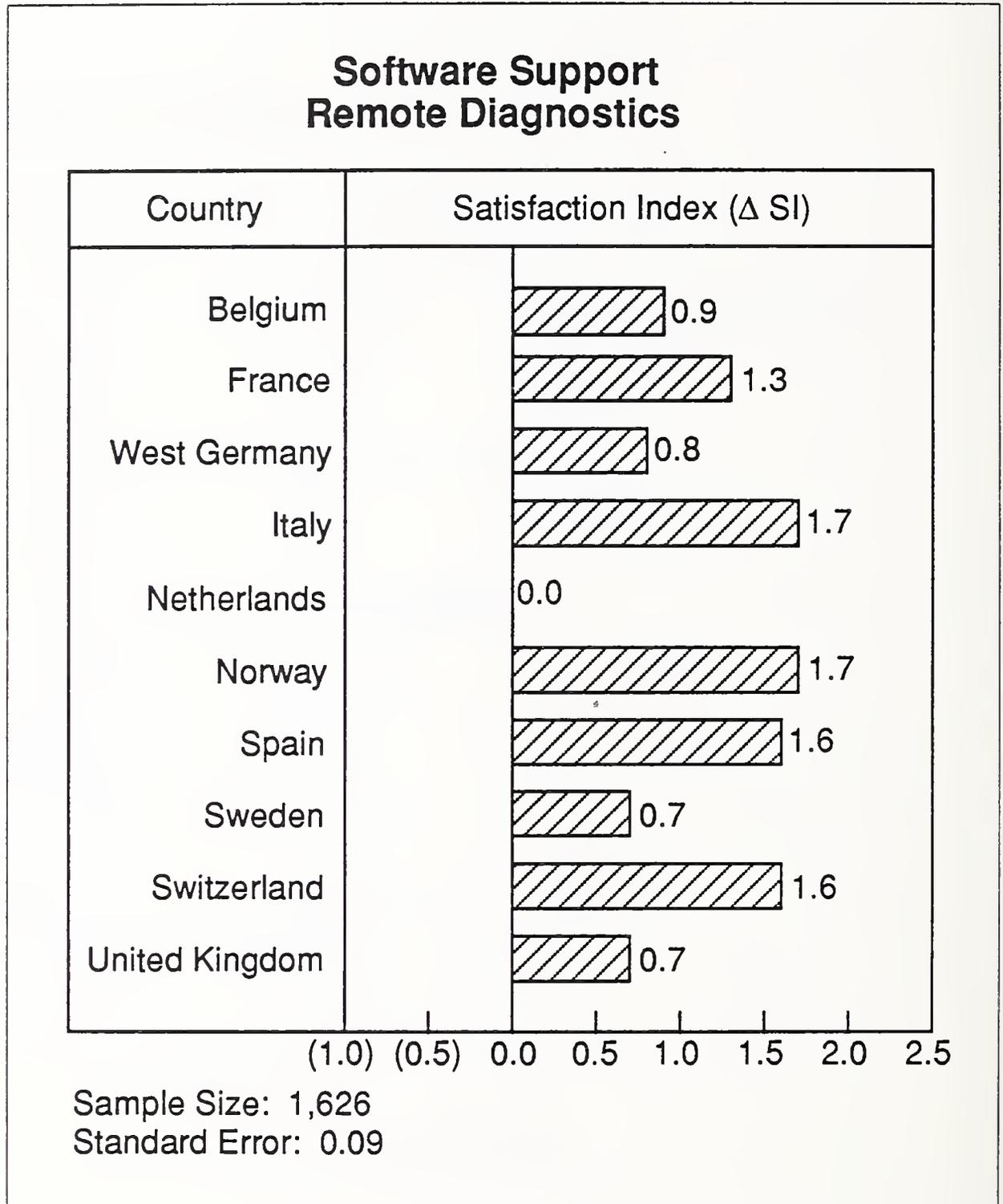
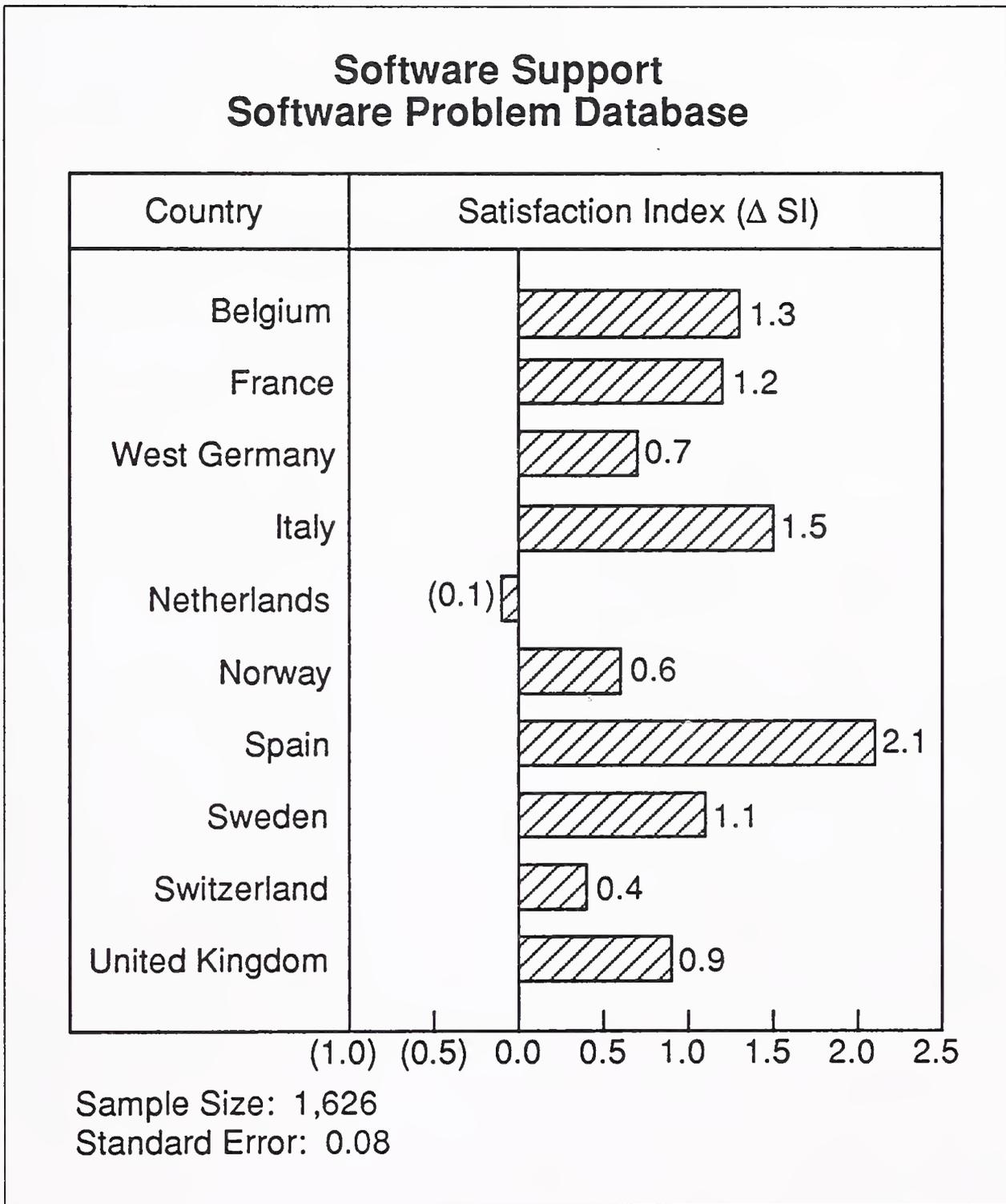
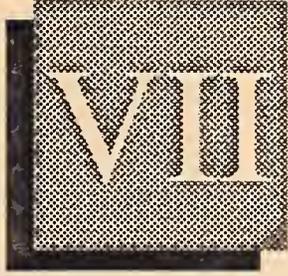


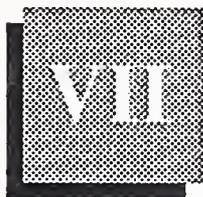
EXHIBIT VI-31





Western Europe—
Country Trends, 1988-1989





Western Europe—Country Trends, 1988-1989

This chapter of the report presents data comparing trends in user perception of vendor service performance between 1988 and 1989, in Western Europe overall and in ten Western European country markets.

A

Western Europe Service Trends

Exhibits VII-1 and VII-2 illustrate trends in user satisfaction with vendor hardware service and software support performance for Western Europe overall. These trends indicate changes in user requirements for service and related vendor performance that have occurred between 1988 and 1989. These trends relate to the total sample of users surveyed, covering all system sizes, and indicate:

- Changes in the importance that users place on each aspect of service. Areas where importance ratings have increased between 1988 and 1989 are shaded to highlight the significance of changes. Data is presented in graphical format to highlight critical and less critical aspects of user needs for service.
- Changes in satisfaction index (Δ SI) relating vendor performance to user needs. Areas where user satisfaction has declined in 1989 have been shaded to highlight aspects of service where vendors have not responded to user needs. These changes may relate to increased importance or decreased satisfaction.

EXHIBIT VII-1

Western Europe
Hardware Service Trends, 1988-1989

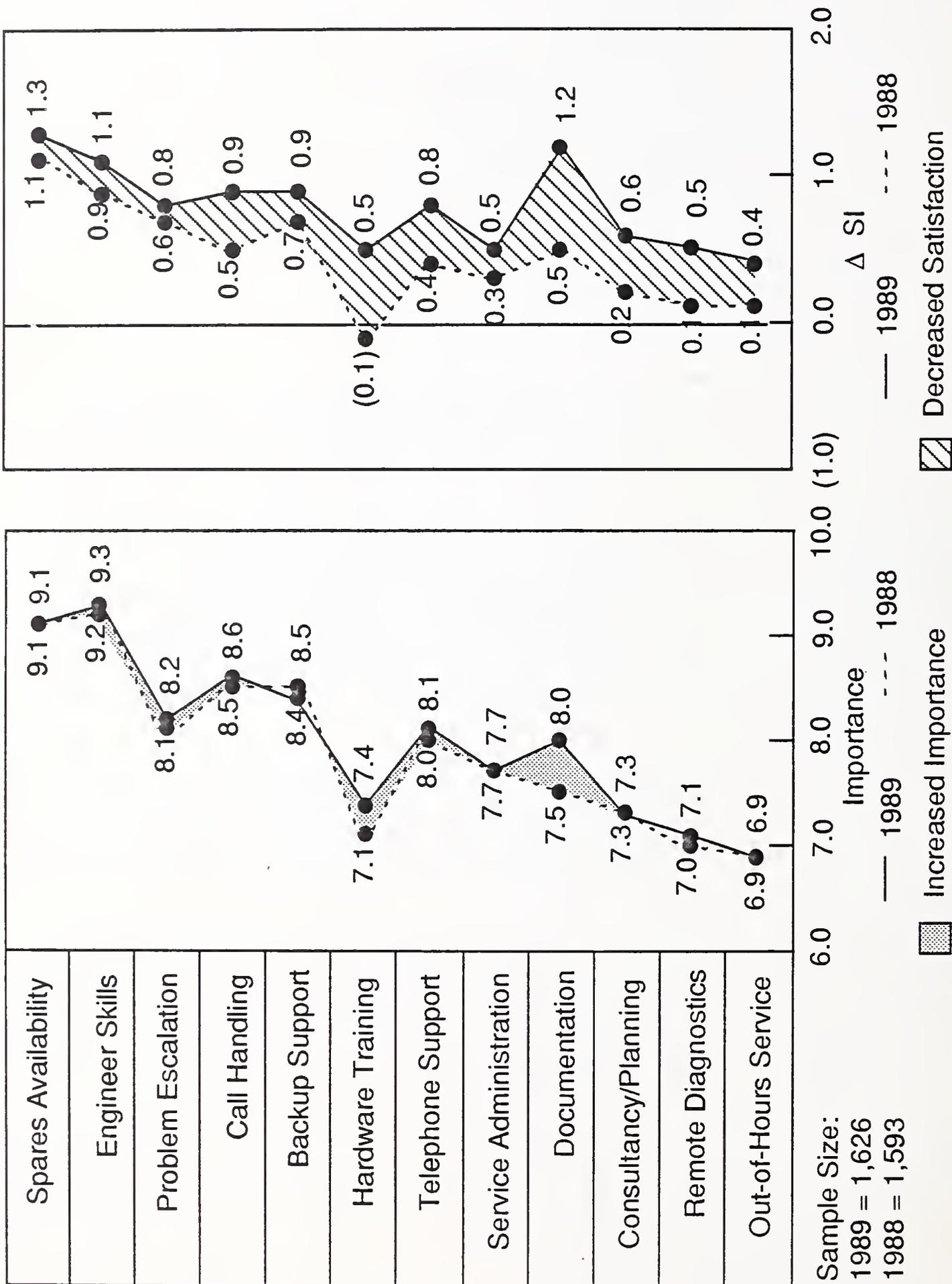
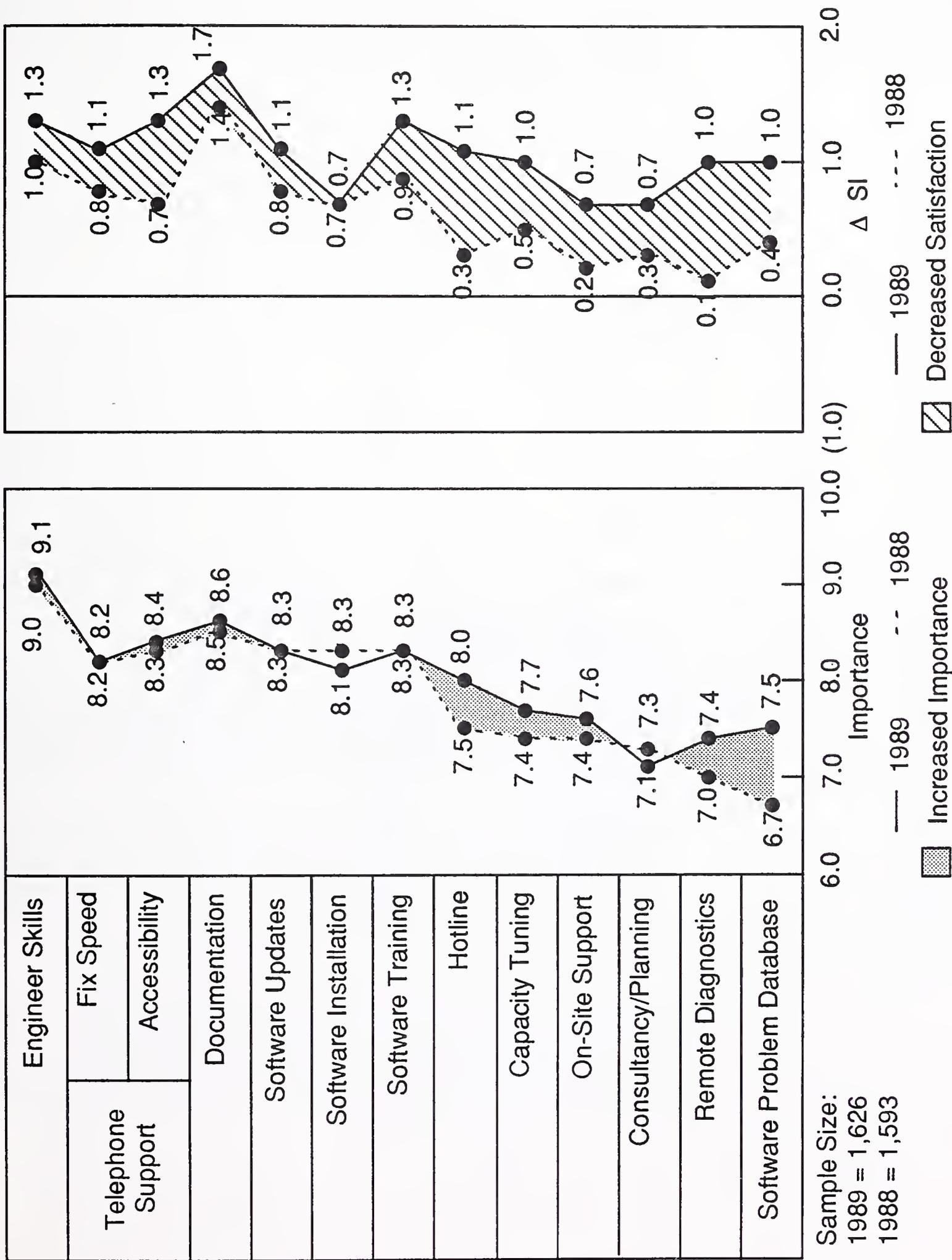


EXHIBIT VII-2

Western Europe
Software Support Trends, 1988-1989



B**Country Market
Service Trends**

Exhibits VII-3 to VII-22 illustrate trends in user satisfaction with vendor hardware service and software support performance in ten Western European country markets.

- Belgium
- France
- West Germany
- Italy
- The Netherlands
- Norway
- Spain
- Sweden
- Switzerland
- The United Kingdom

These trends are presented in graphical format and indicate changes in user requirements for service and related vendor performance that have occurred between 1988 and 1989. The trends relate to the sample of users in each country surveyed, combine all system sizes, and indicate:

- Changes in the importance that users place on each aspect of service. Areas where importance ratings have increased between 1988 and 1989 are shaded to highlight the significance of changes. Data is presented in graphical format to highlight critical and less critical aspects of user needs for service.
- Changes in satisfaction index (Δ SI) relating vendor performance to user needs. Areas where user satisfaction has declined in 1989 have been shaded to highlight aspects of service where vendors have not responded to user needs. These changes may relate to increased importance or decreased satisfaction.

EXHIBIT VII-3

Belgium
Hardware Service Trends, 1988-1989

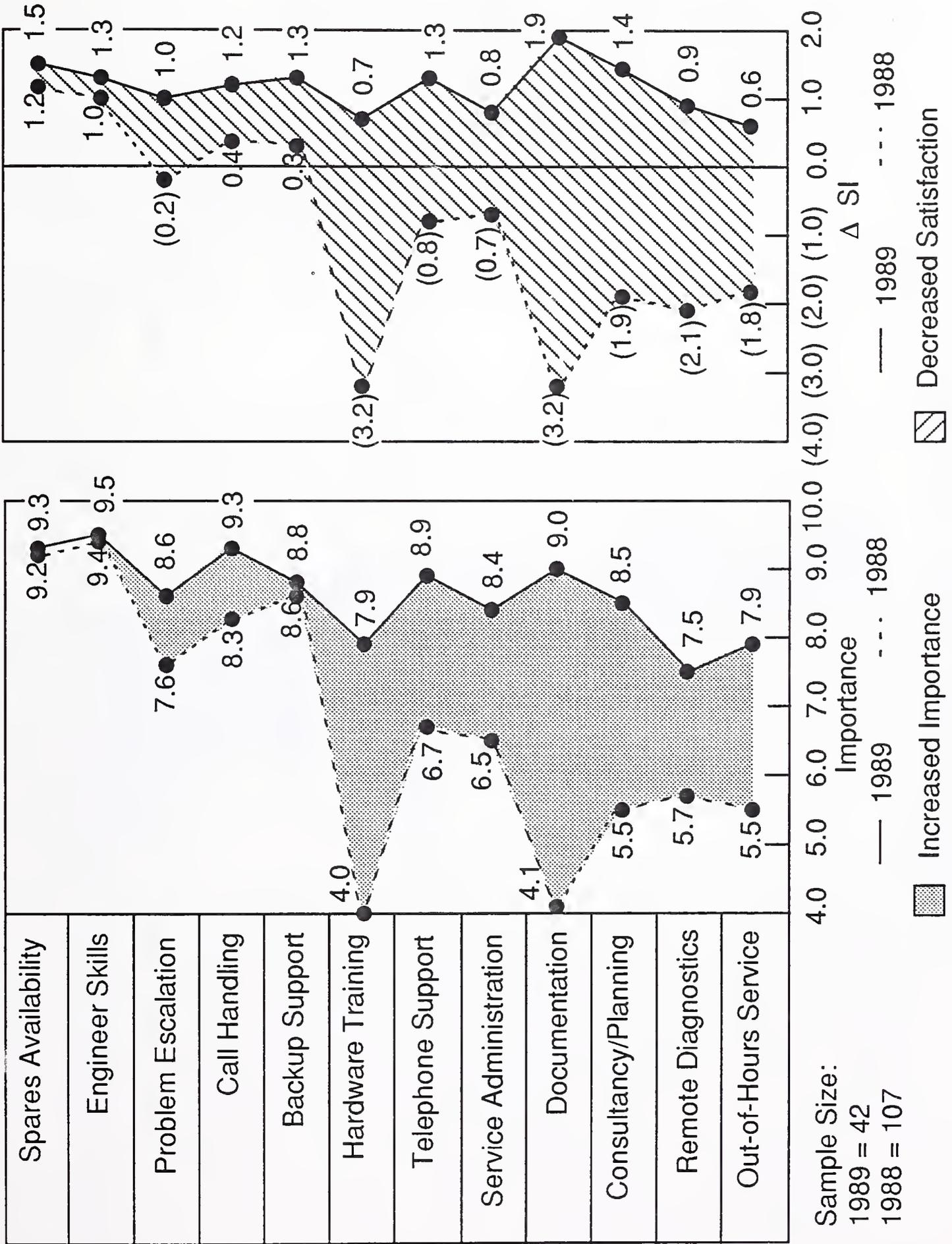


EXHIBIT VII-4

Belgium
Software Support Trends, 1988-1989

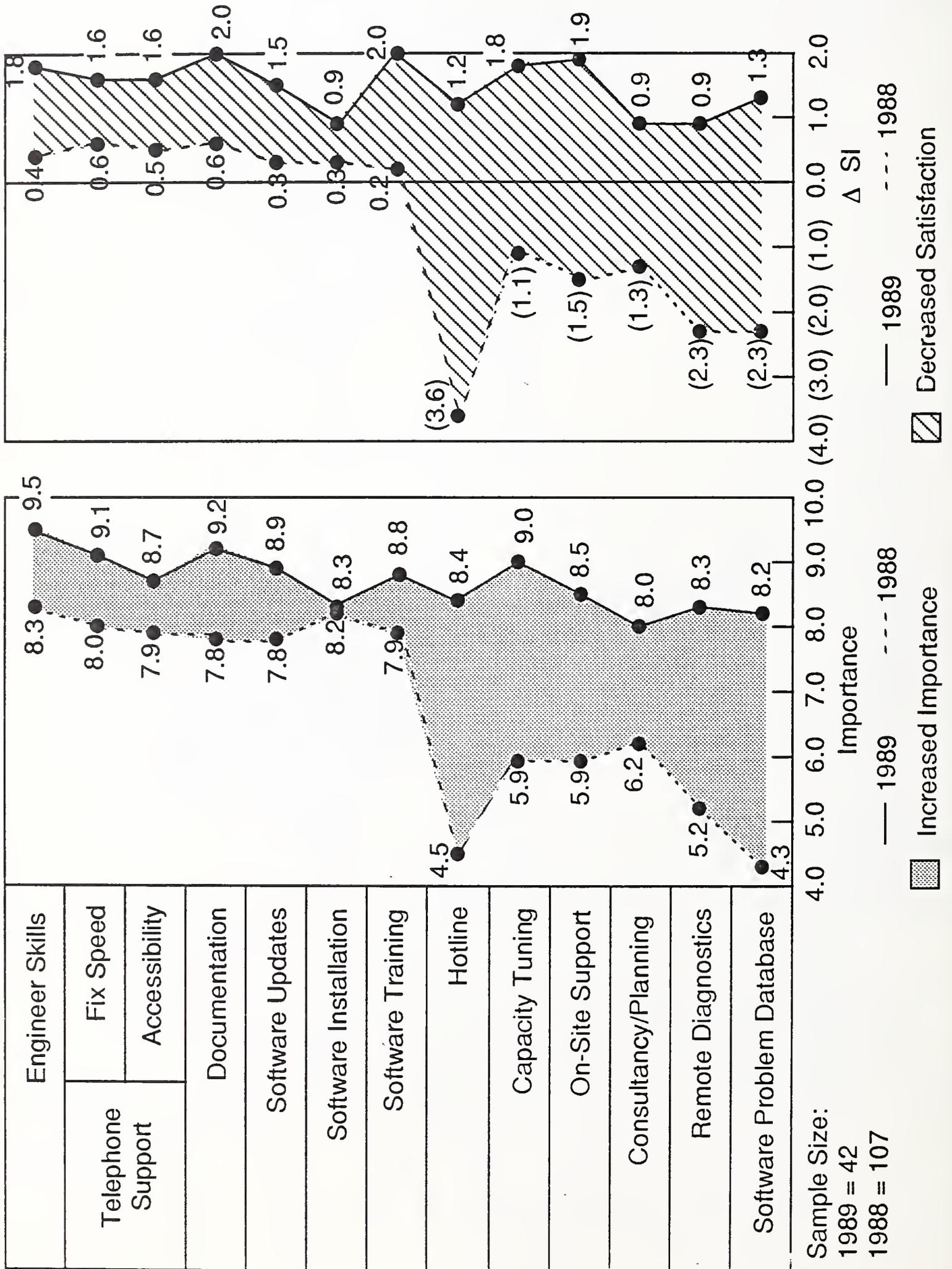


EXHIBIT VII-5

France
Hardware Service Trends, 1988-1989

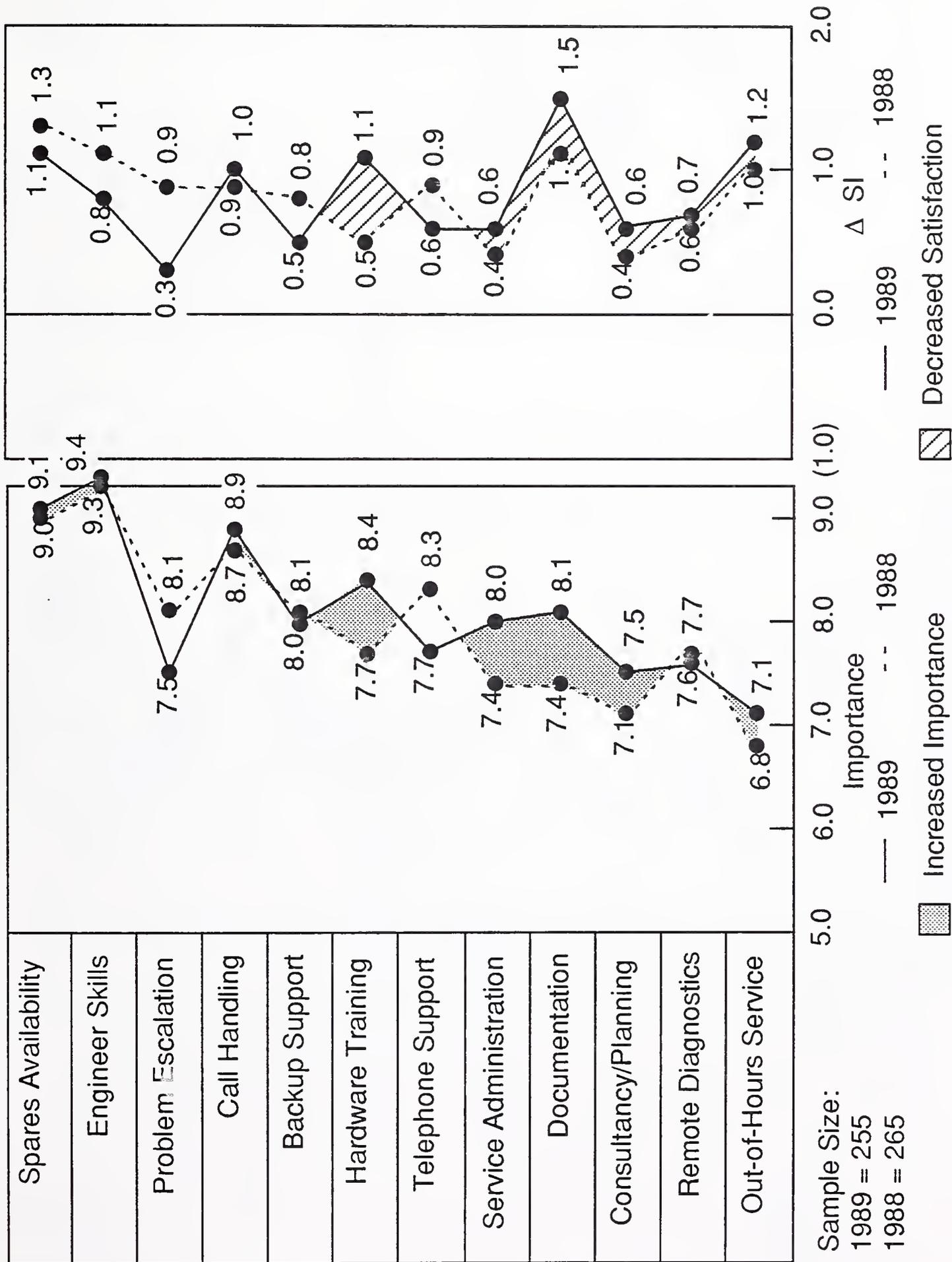


EXHIBIT VII-6

France
Software Support Trends, 1988-1989

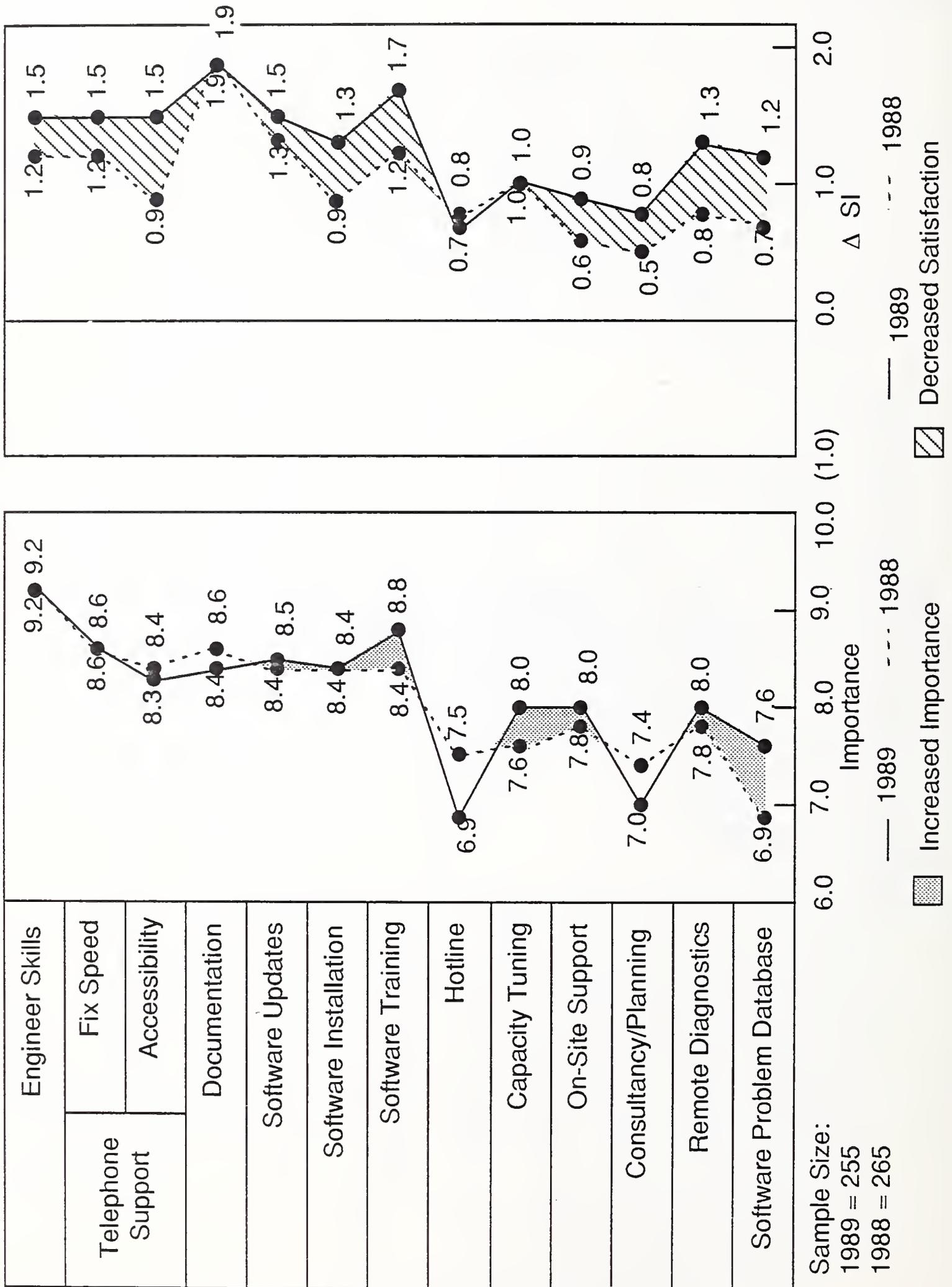


EXHIBIT VII-7

**West Germany
Hardware Service Trends, 1988-1989**

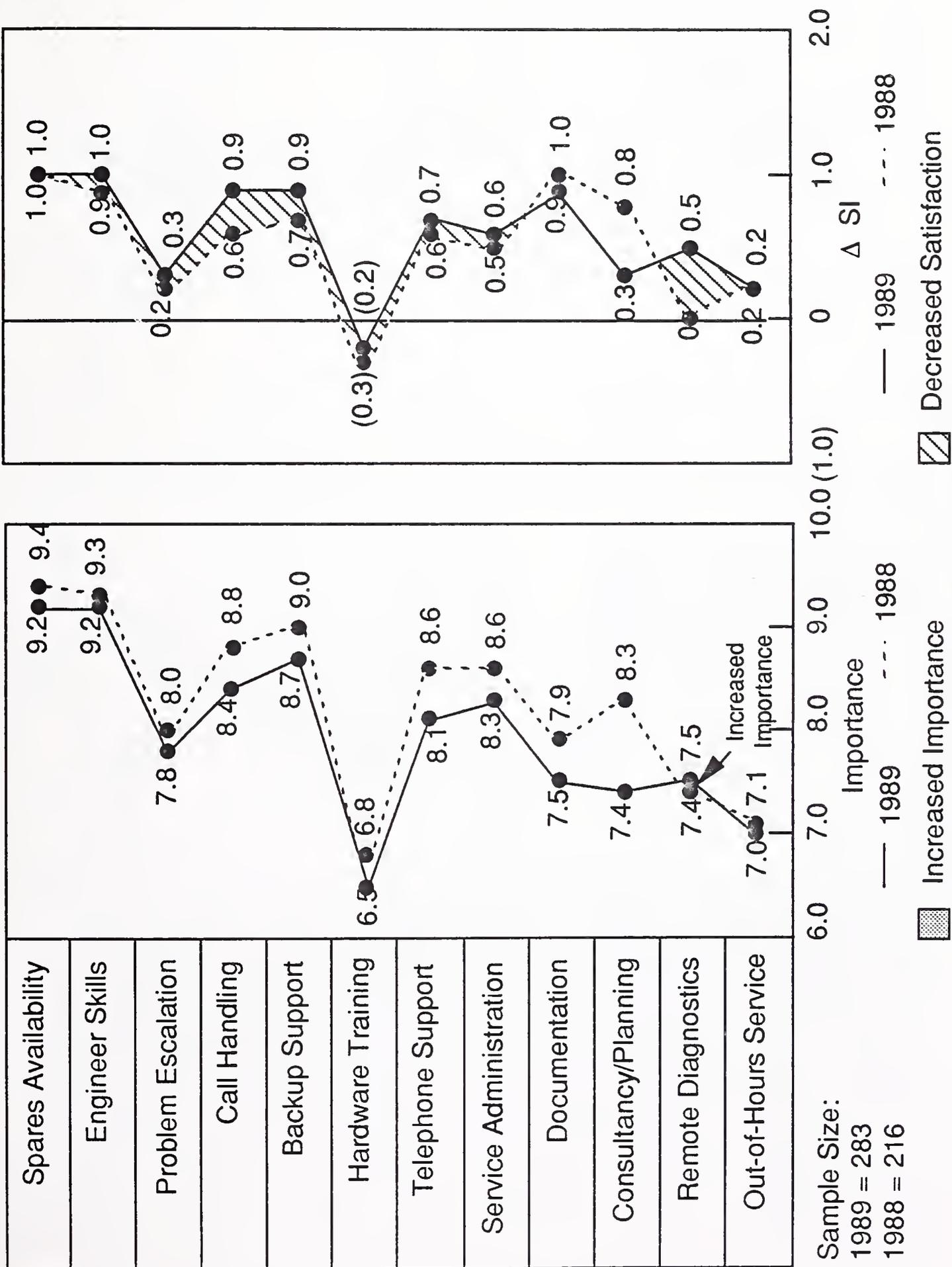


EXHIBIT VII-8

West Germany
Software Support Trends, 1988-1989

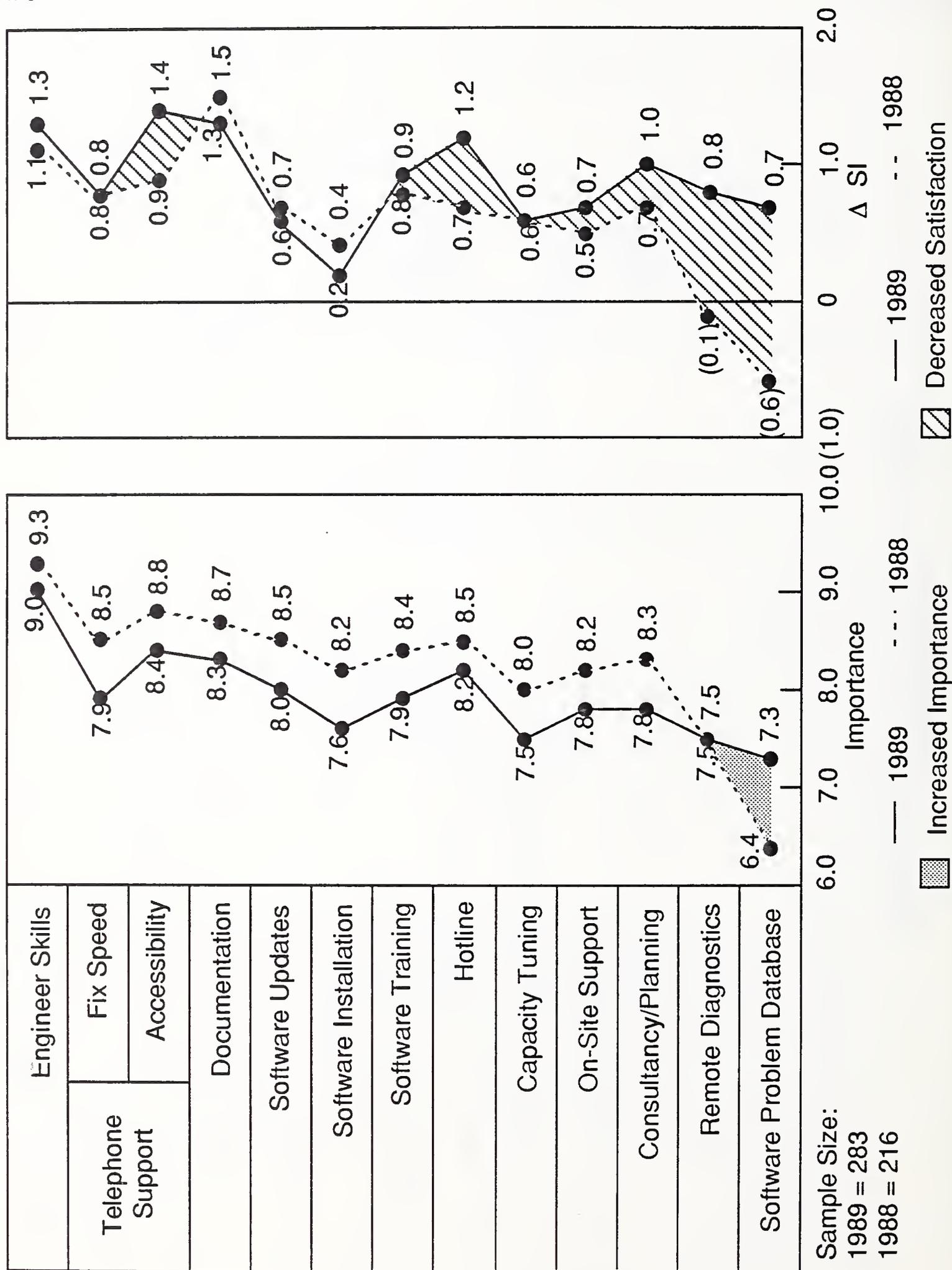


EXHIBIT VII-9

Italy
Hardware Service Trends, 1988-1989

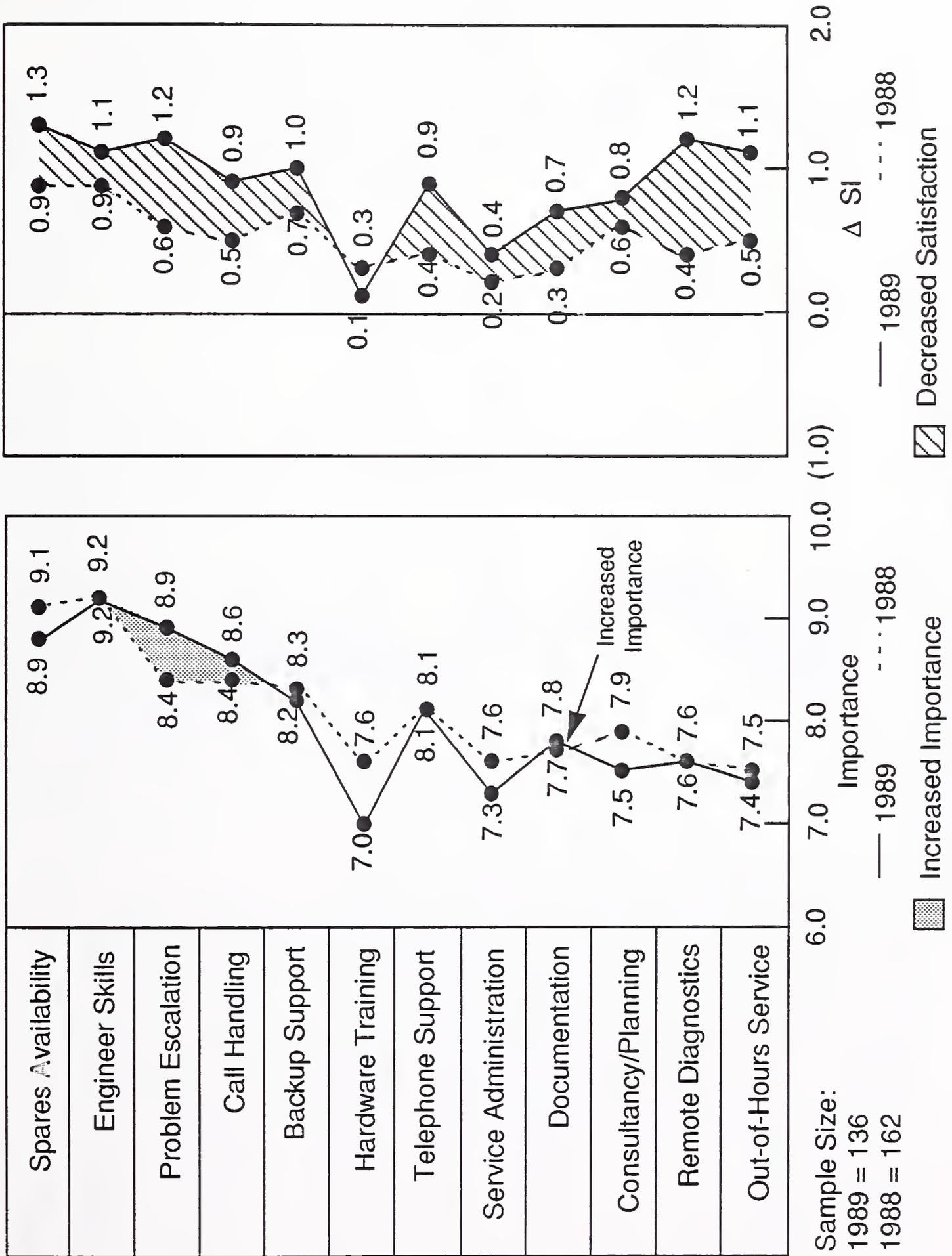


EXHIBIT VII-10

Italy
Software Support Trends, 1988-1989

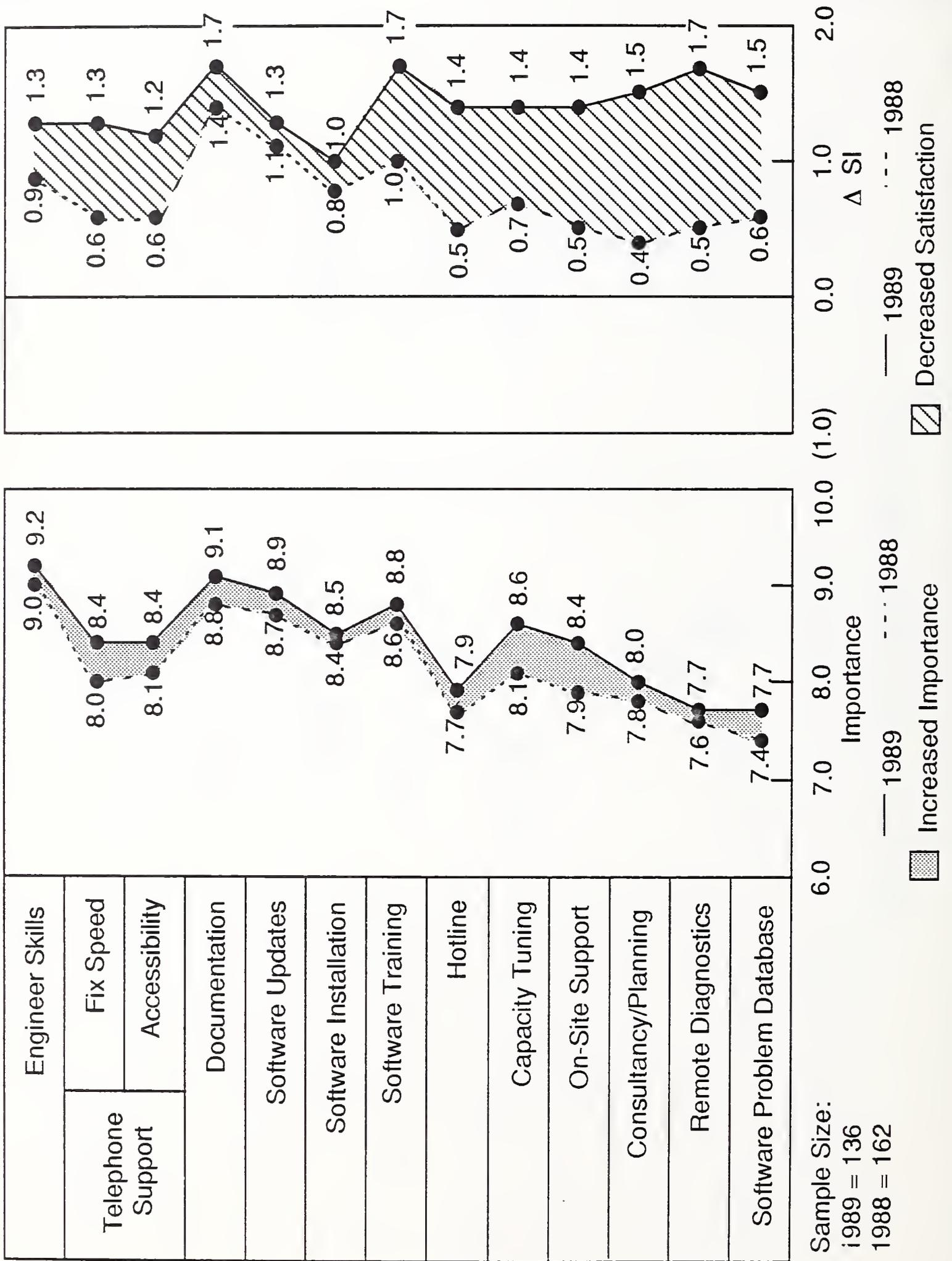


EXHIBIT VII-11

Netherlands
Hardware Service Trends, 1988-1989

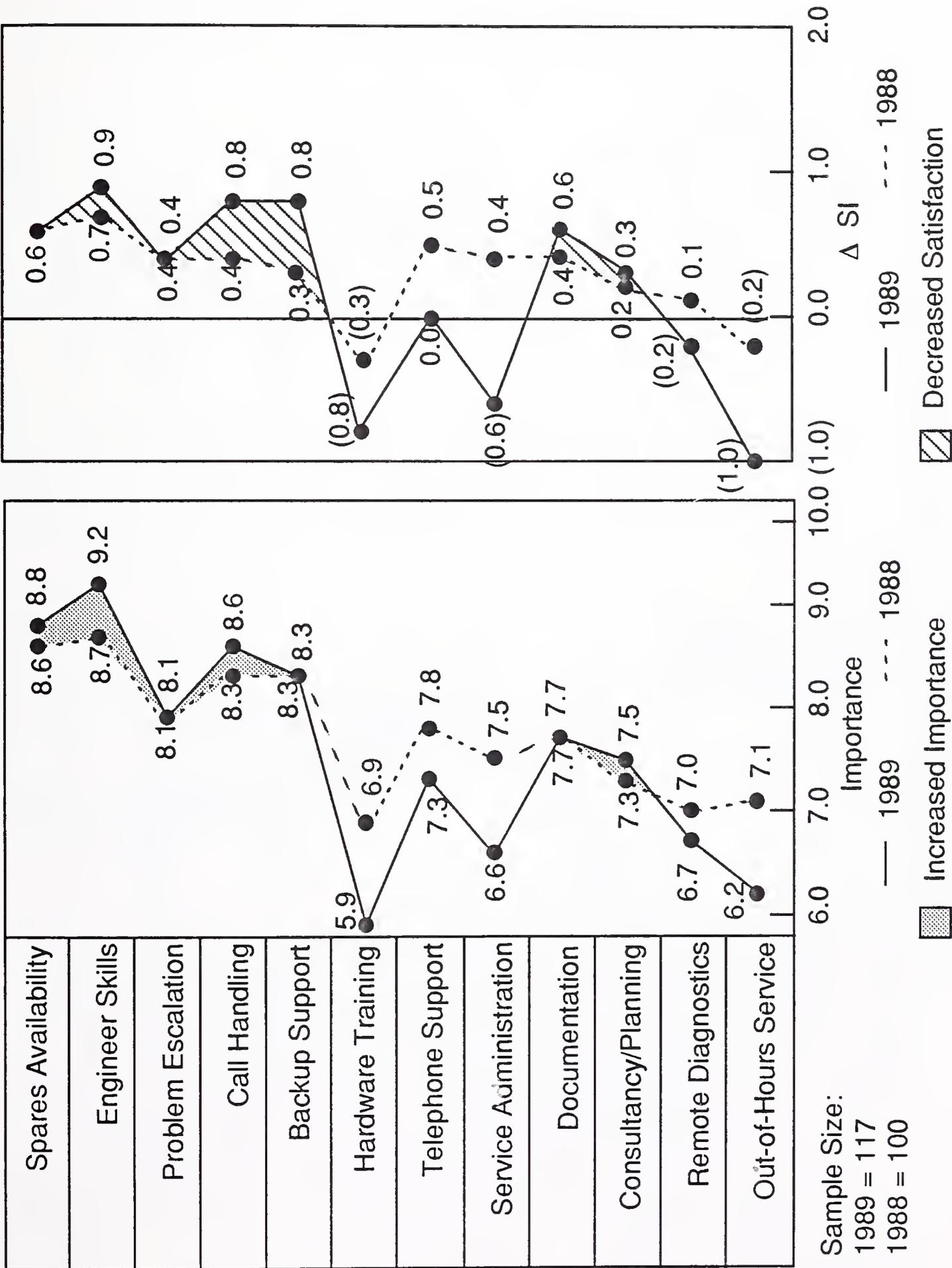


EXHIBIT VII-12

Netherlands
Software Support Trends, 1988-1989

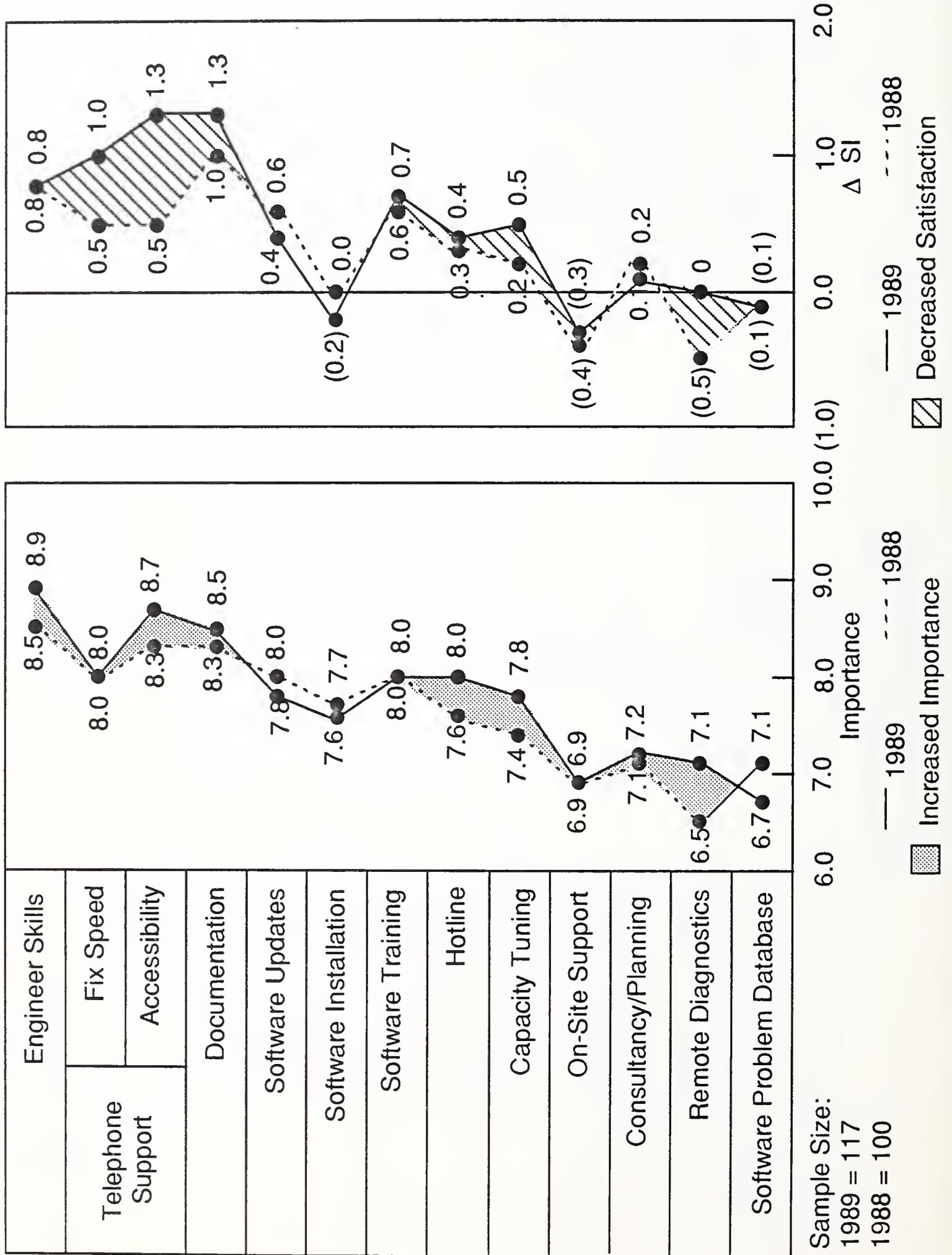


EXHIBIT VII-13

Norway
Hardware Service Trends, 1988-1989

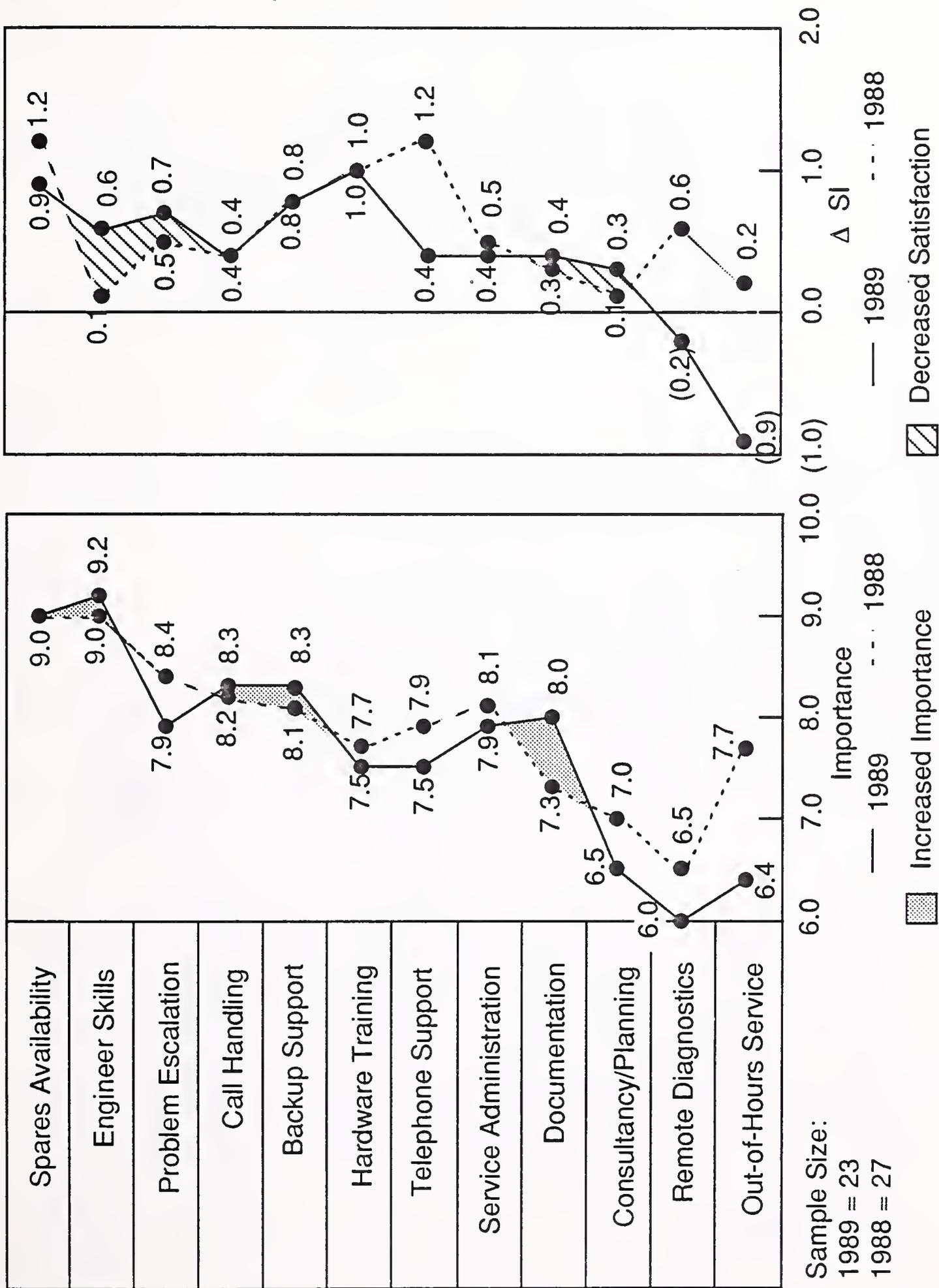


EXHIBIT VII-14

Norway
Software Support Trends, 1988-1989

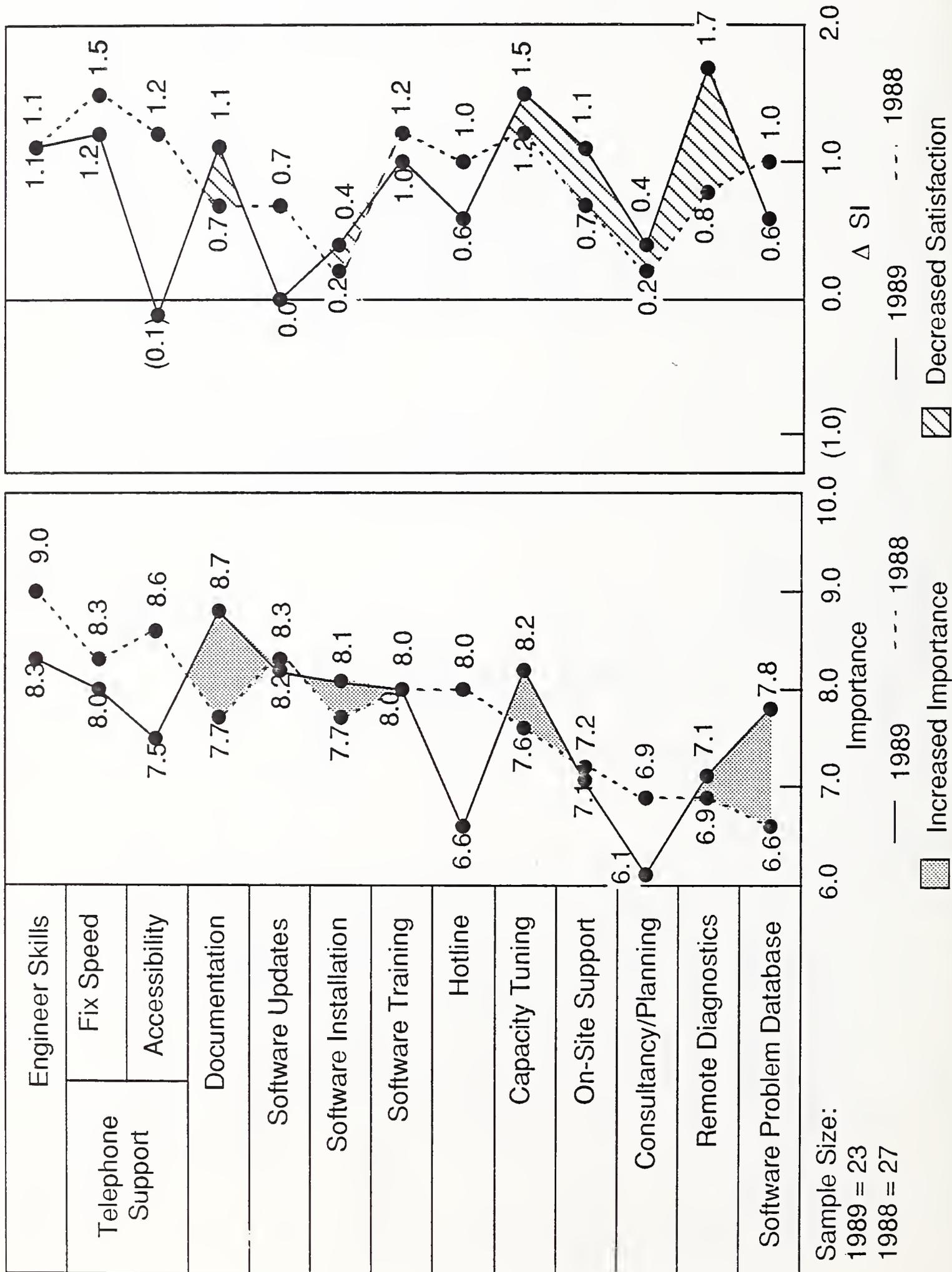


EXHIBIT VII-15

Spain
Hardware Service Trends, 1988-1989

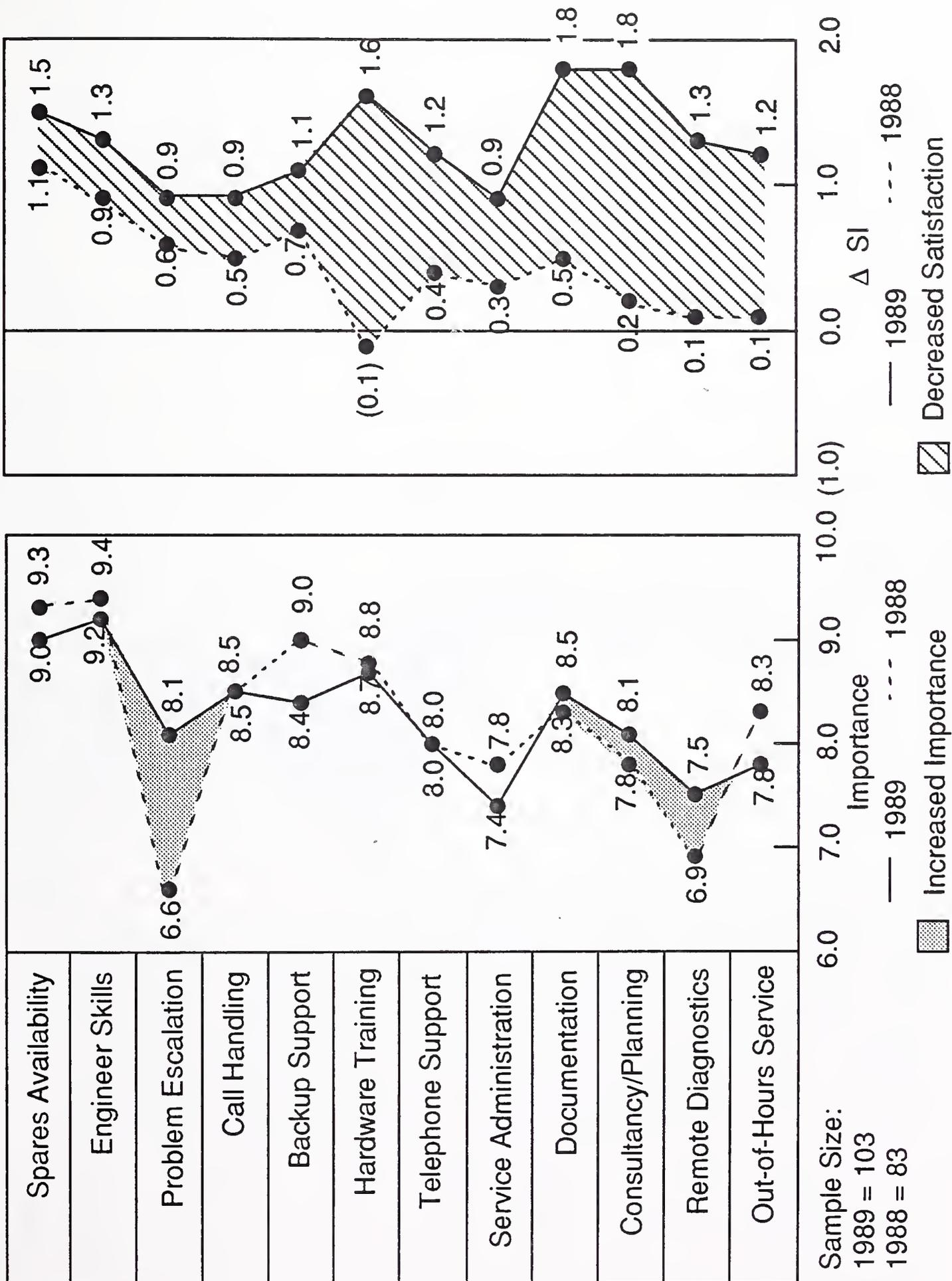
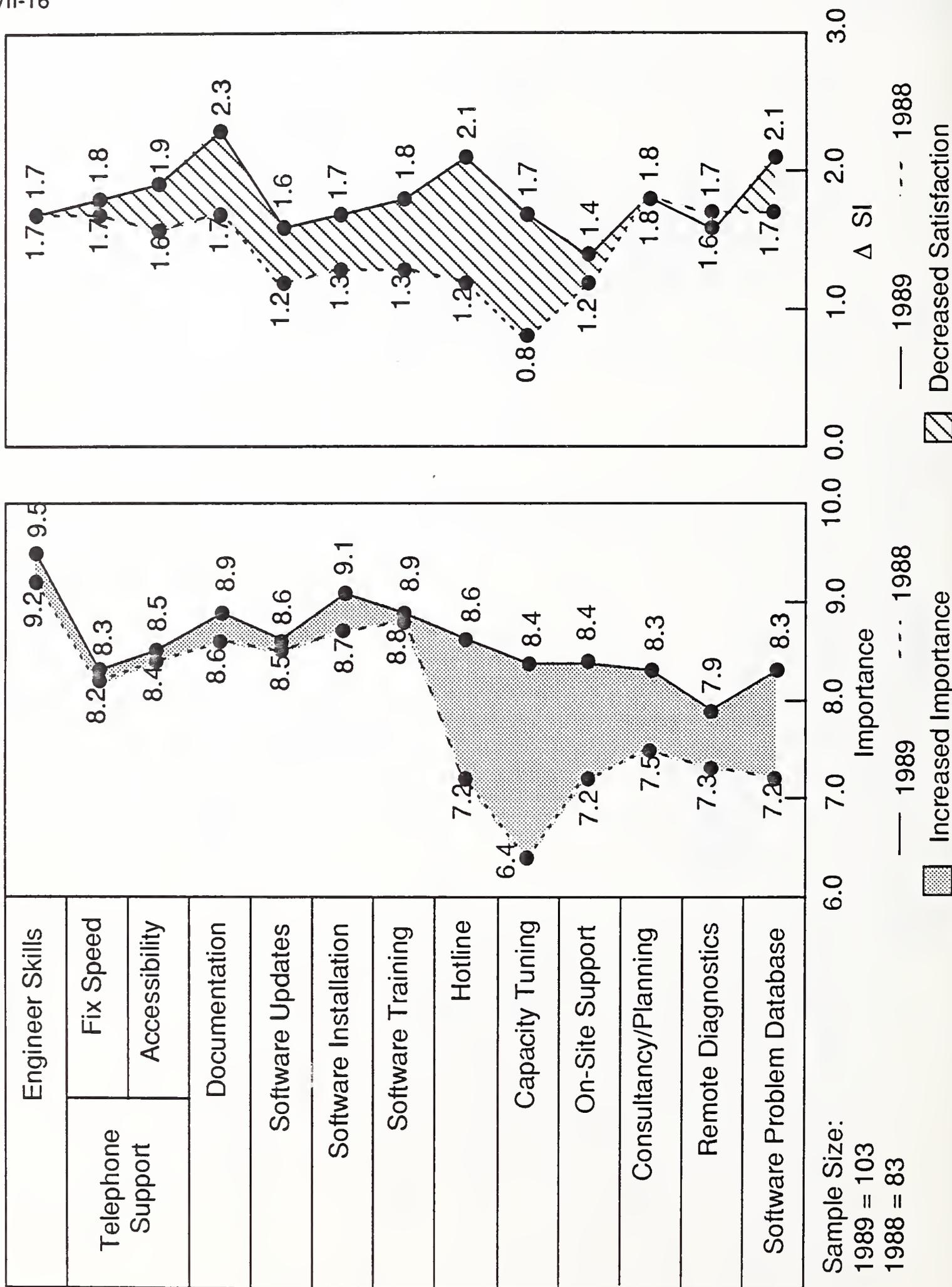


EXHIBIT VII-16

Spain
Software Support Trends, 1988-1989



Sample Size:
1989 = 103
1988 = 83

EXHIBIT VII-17

Sweden
Hardware Service Trends, 1988-1989

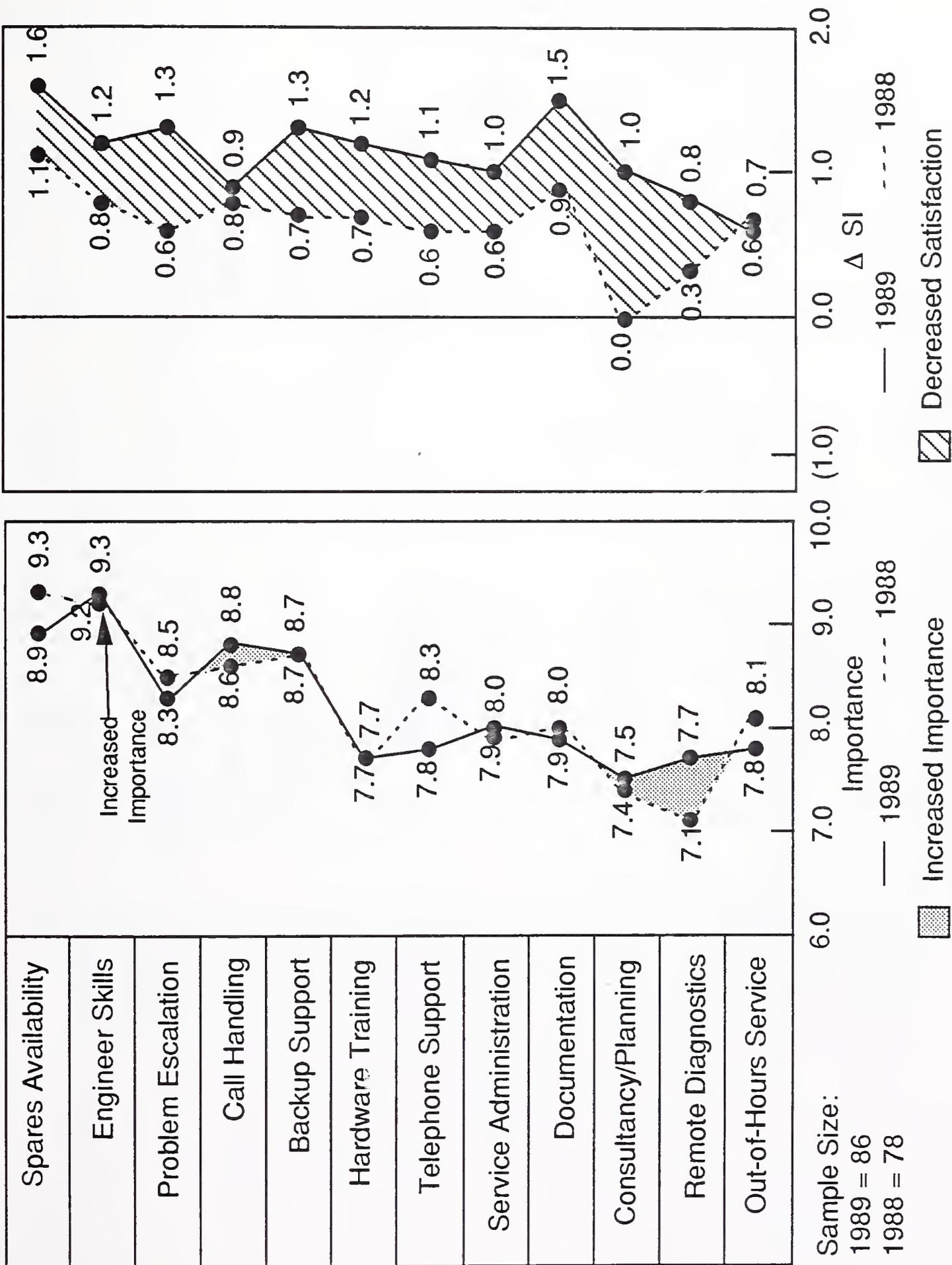


EXHIBIT VII-18

Sweden
Software Support Trends, 1988-1989

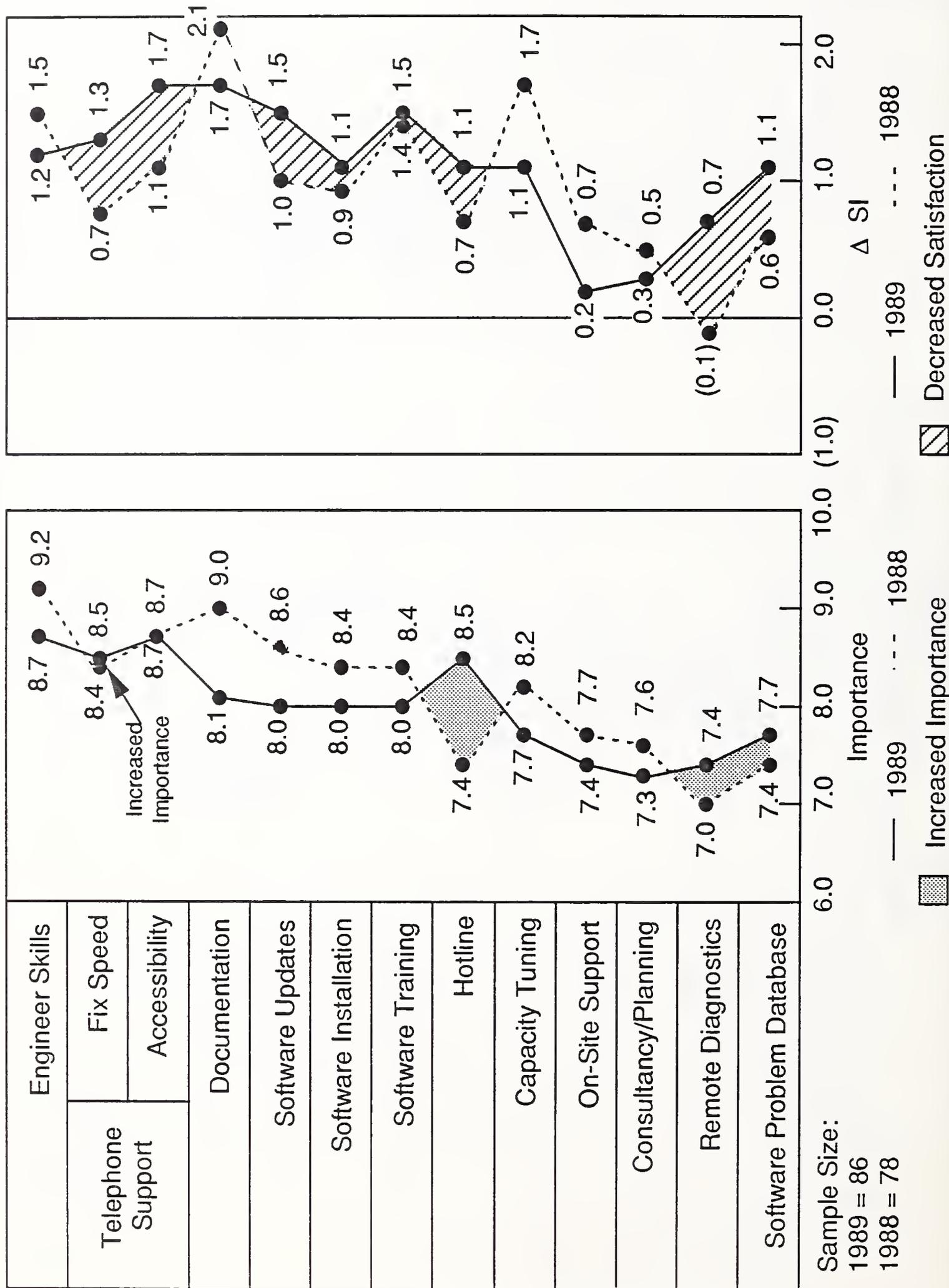


EXHIBIT VII-19

**Switzerland
Hardware Service Trends, 1988-1989**

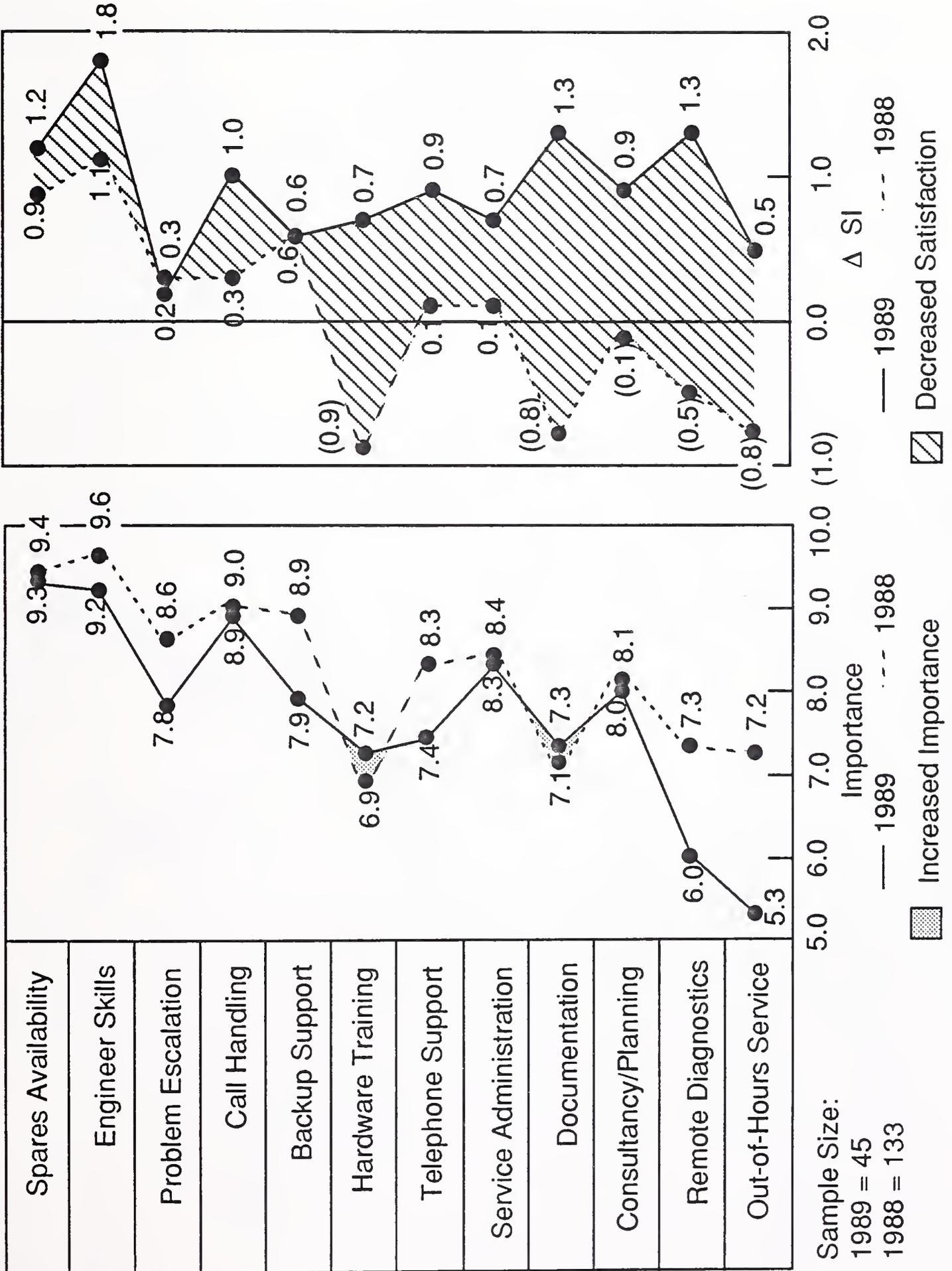


EXHIBIT VII-20

Switzerland
Software Support Trends, 1988-1989

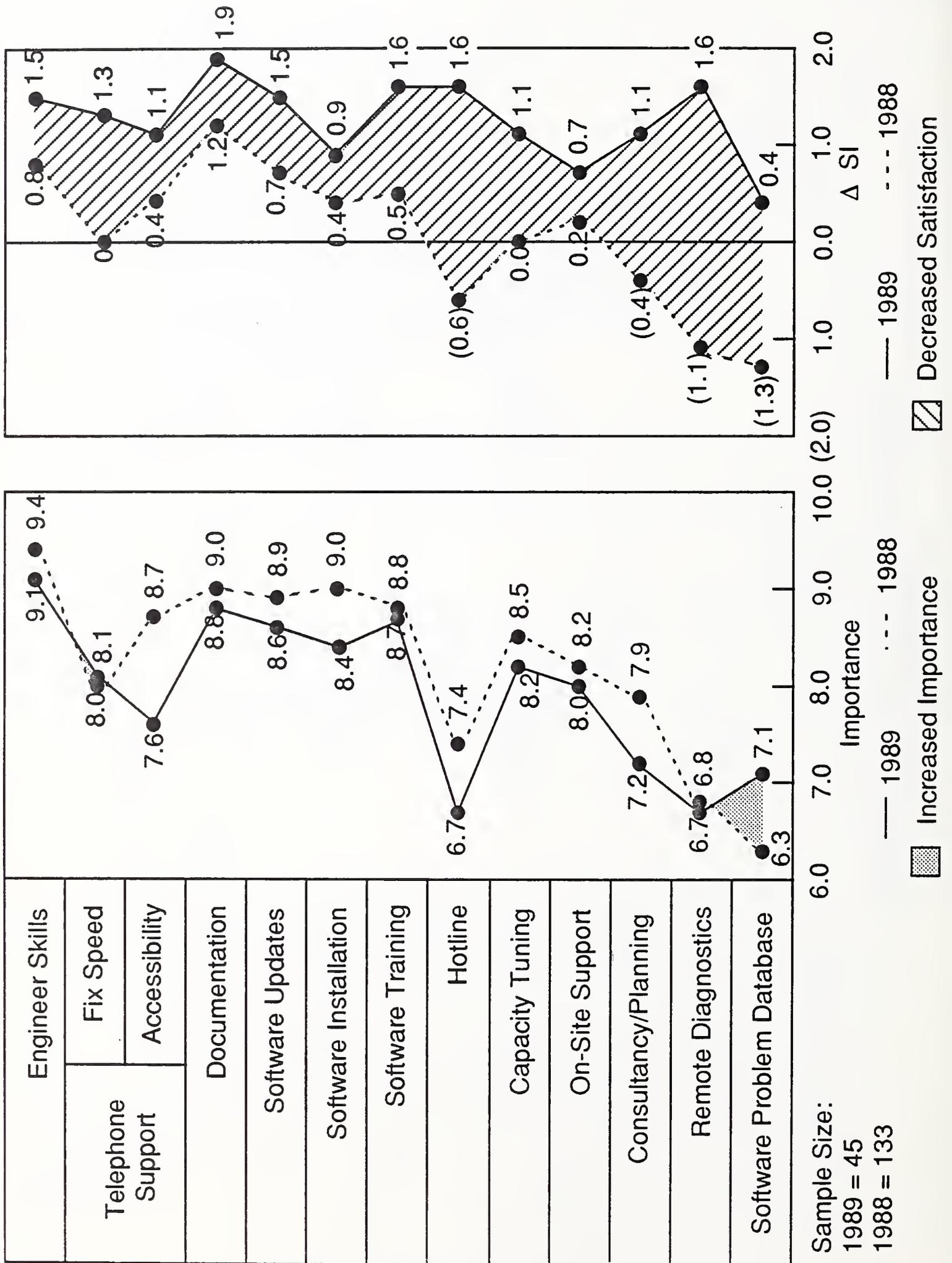


EXHIBIT VII-21

**United Kingdom
Hardware Service Trends, 1988-1989**

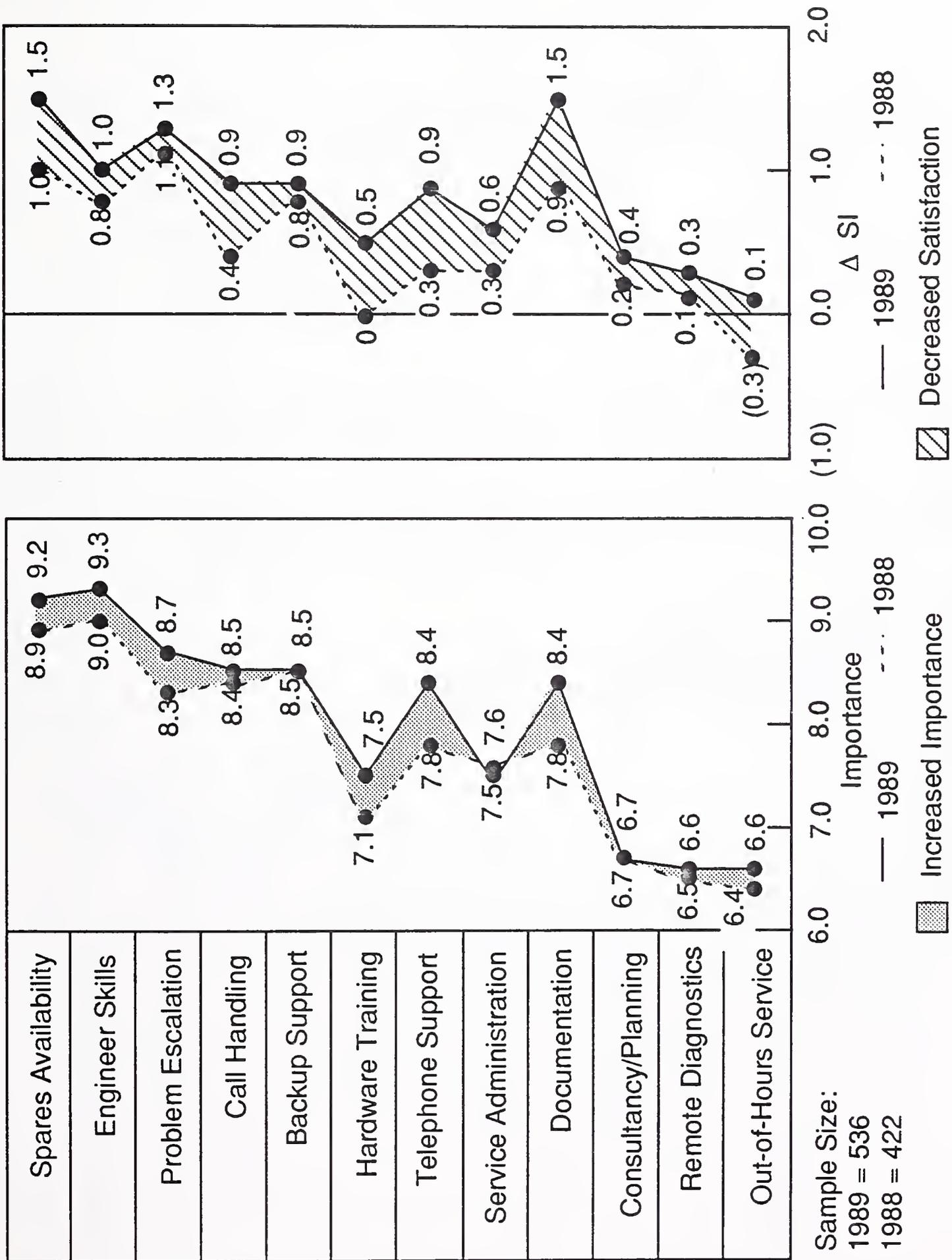
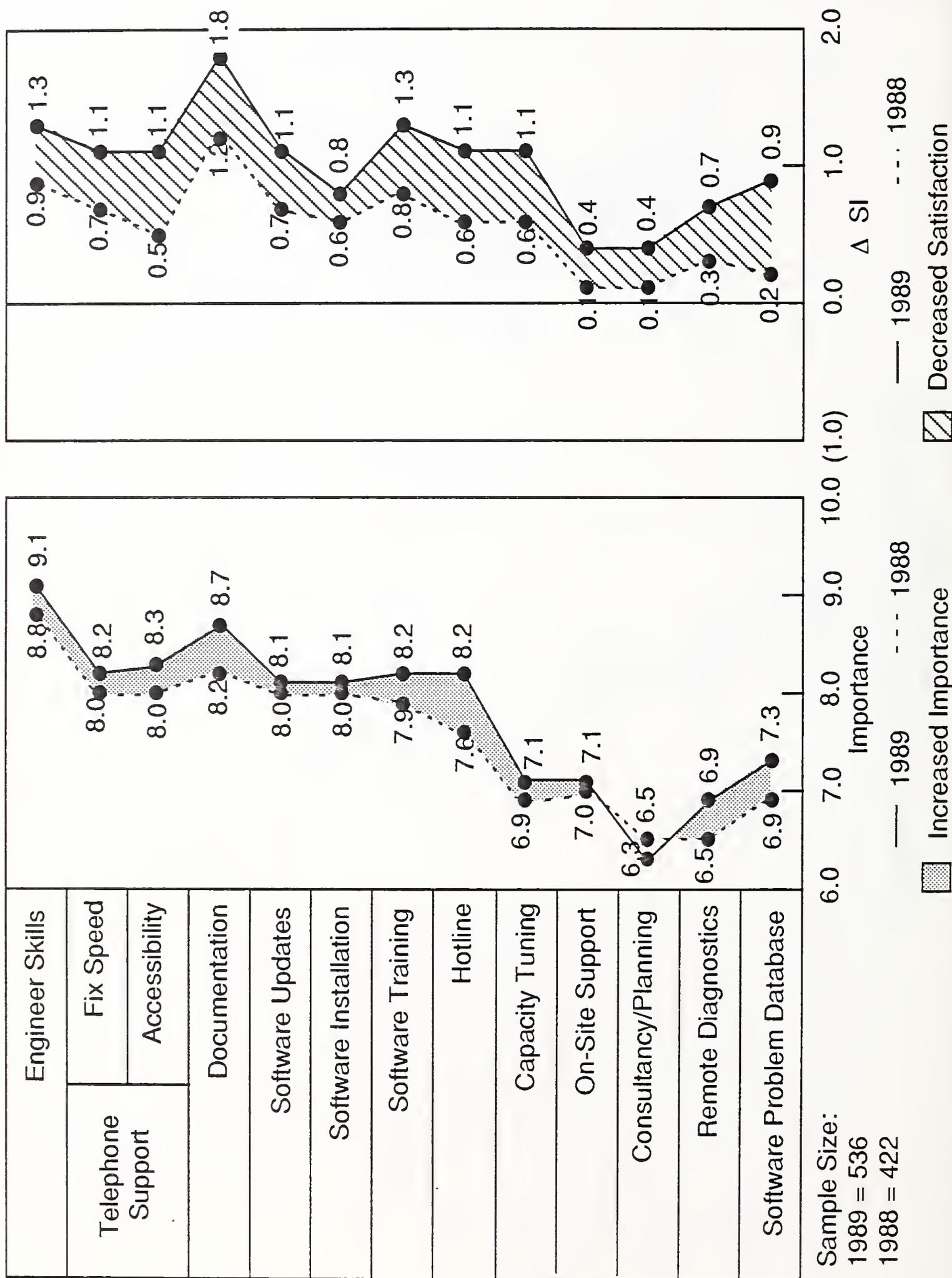


EXHIBIT VII-22

United Kingdom
Software Support Trends, 1988-1989



C System Failure Rate Trends

System failure rates perceived by users are listed by country market in Exhibit VII-23. Data in this exhibit compares system failure rates from each of ten country markets surveyed, and includes comparative 1988 data.

Included in Exhibit VII-23 is 1988 and 1989 data related to user perception of the cause of system failure, whether this is due to hardware- or software-related problems. This data allows comparisons between 1989 and 1988 performance.

System failure rates are based on users' perception of the number of times each year the computer system fails completely for a period of more than one hour.

To allow comparison between system failure rates and user satisfaction with system availability, 1989 data relating to satisfaction with system availability is included in Exhibit VII-23.

EXHIBIT VII-23

Country Comparison System Availability

Country	System Availability			Failures Per Year		Cause of Failure (Percent)			
						1989		1988	
	Imp.	Sat.	Δ SI	1989	1988	HW	SW	HW	SW
Belgium	9.8	9.0	0.8	4.2	2.3	54	46	84	16
France	9.4	8.6	0.8	4.1	4.3	58	42	63	37
West Germany	9.4	8.3	1.1	4.7	3.0	57	43	82	18
Italy	9.2	8.3	0.9	5.8	3.1	51	49	67	33
Netherlands	9.3	8.6	0.7	1.9	2.7	52	48	57	43
Norway	9.2	8.8	0.4	2.3	10.9	49	51	69	31
Spain	8.9	7.8	1.1	2.7	2.3	69	31	80	20
Sweden	9.1	8.3	0.8	2.5	2.4	54	46	70	30
Switzerland	9.6	8.7	0.9	4.5	2.8	52	48	70	30
United Kingdom	9.3	8.6	0.7	3.4	3.3	62	38	66	34
Population	9.3	8.5	0.8	3.8	3.3	59	41	70	30

Note: Imp. = Importance Rating

Sat. = Satisfaction Rating

Percentages have been rounded.

HW = Hardware

SW = Software

Sample Sizes:

1989 = 1,626

1988 = 1,593

D**Vendor Response and
Repair/Fix Time
Trends**

Vendor hardware service response and repair time data are listed in Exhibit VII-24, and software support response fix time in Exhibit VII-25.

Data contained within these two exhibits include 1988 data related to user perception of vendor response and repair/fix times experienced in 1988, to allow 1989 and 1988 performance to be compared. Response and repair/fix time data is listed by country, to allow comparisons to be made of vendor performance in each of the ten country markets surveyed.

Exhibits VII-24 and VII-25 also provide an indication of whether vendor performance levels in each country have improved or declined. This comparative measure is based on the overall total of response and repair/fix times related to the times users claim to have experienced in 1988 and 1989.

EXHIBIT VII-24

Country Comparison Hardware Service Response/Repair Times

Country	Response Time (Hours)			Repair Time (Hours)			1988 Experienced (Hours)		Relative Performance
	Acc.	Exp.	Δ	Acc.	Exp.	Δ	Resp.	Rep.	
Belgium	4.1	4.2	0.1	2.7	2.6	(0.1)	3.4	5.6	Better
France	4.6	5.2	0.6	4.4	3.7	(0.7)	4.9	4.0	Similar
West Germany	2.9	3.9	1.0	2.7	3.4	0.7	3.5	3.4	Worse
Italy	4.4	5.3	0.9	3.6	3.5	(0.1)	4.6	4.5	Better
Netherlands	4.4	4.3	(0.1)	3.7	3.6	(0.1)	3.2	4.0	Worse
Norway	3.5	3.5	0.0	2.8	2.2	(0.6)	4.7	2.6	Better
Spain	3.9	5.3	1.4	3.6	5.1	1.5	4.8	6.1	Better
Sweden	4.7	5.8	1.1	3.8	5.1	1.3	2.8	2.9	Worse
Switzerland	3.1	2.7	(0.4)	3.2	2.8	(0.4)	3.0	3.0	Better
United Kingdom	3.7	3.9	0.2	3.3	3.5	0.2	4.1	3.9	Better
Population	3.9	4.4	0.5	3.4	3.6	0.2	4.0	4.0	Similar

Note: () = Oversatisfied

Resp. = Response Time

Sample Sizes:

Acc. = Acceptable Time

Rep. = Repair Time

1989 = 1,626

Exp. = Experienced Time

1988 = 1,593

EXHIBIT VII-25

Country Comparison Software Support Response/Fix Times

Country	Response Time (Hours)			Fix Time (Hours)			1988 Experienced (Hours)		Relative Performance
	Acc.	Exp.	Δ	Acc.	Exp.	Δ	Resp.	Fix	
Belgium	10.3	18.4	8.1	4.1	6.7	2.6	6.9	16.6	Worse
France	8.7	8.5	(0.2)	6.0	7.0	1.0	11.0	7.1	Better
West Germany	5.6	7.8	2.2	4.4	6.1	1.7	7.4	6.5	Similar
Italy	13.8	18.7	4.9	8.0	9.6	1.6	9.6	8.7	Worse
Netherlands	9.4	10.7	1.3	4.7	6.5	1.8	11.1	6.5	Better
Norway	5.7	2.4	(3.3)	2.5	2.3	(0.2)	26.2	6.9	Better
Spain	11.0	13.5	2.5	6.6	11.5	4.9	7.4	13.3	Worse
Sweden	7.5	10.7	3.2	4.3	8.1	3.8	6.5	5.0	Worse
Switzerland	9.7	8.8	(0.9)	7.3	7.1	(0.2)	4.4	6.1	Worse
United Kingdom	9.4	12.2	2.8	4.3	5.9	1.6	11.7	6.5	Better
Population	9.0	11.2	2.2	5.1	7.0	1.9	9.5	7.7	Worse

Note: () = Oversatisfied

Resp. = Response Time

Sample Sizes:

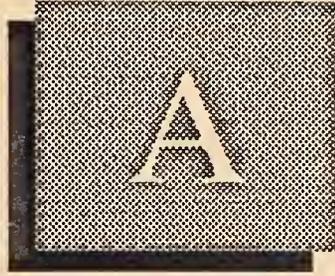
Acc. = Acceptable Time

Fix = Fix Time

1989 = 1,626

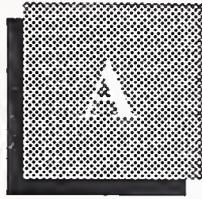
Exp. = Experienced Time

1988 = 1,593



Appendix: Western Europe User Data





Appendix: Western Europe User Data

EXHIBIT A-1

Western Europe Hardware Service Satisfaction Large Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	7.9	1.3
Engineer Skills	9.2	8.3	0.9
Problem Escalation	8.4	7.5	0.9
Call Handling	8.7	7.9	0.8
Backup Support	8.6	7.6	1.0
Hardware Training	7.4	7.1	0.3
Telephone Support	8.1	7.4	0.7
Service Administration	7.9	7.4	0.5
Documentation	8.2	7.1	1.1
Consultancy/Planning	7.5	6.9	0.6
Remote Diagnostics	7.5	7.0	0.5
Out-of-Hours Service	7.8	7.4	0.4
Average	8.2	7.5	0.7

Sample Size: 441

EXHIBIT A-2

**Western Europe
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	7.9	1.3
Engineer Skills	9.4	8.3	1.1
Problem Escalation	8.3	7.5	0.8
Call Handling	8.6	7.6	1.0
Backup Support	8.5	7.6	0.9
Hardware Training	7.5	7.0	0.5
Telephone Support	8.1	7.3	0.8
Service Administration	7.7	7.1	0.6
Documentation	8.2	6.8	1.4
Consultancy/Planning	7.2	6.6	0.6
Remote Diagnostics	7.1	6.6	0.5
Out-of-Hours Service	6.7	6.2	0.5
Average	8.1	7.2	0.9

Sample Size: 784

EXHIBIT A-3

**Western Europe
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.8	7.7	1.1
Engineer Skills	9.2	8.1	1.1
Problem Escalation	7.8	7.1	0.7
Call Handling	8.5	7.7	0.8
Backup Support	8.2	7.4	0.8
Hardware Training	7.3	6.6	0.7
Telephone Support	7.9	7.1	0.8
Service Administration	7.6	7.1	0.5
Documentation	7.7	6.5	1.2
Consultancy/Planning	7.3	6.6	0.7
Remote Diagnostics	6.6	5.9	0.7
Out-of-Hours Service	6.2	5.9	0.3
Average	7.8	7.0	0.8

Sample Size: 401

EXHIBIT A-4

**Western Europe
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.9	7.8	1.1
Telephone Support Fix Speed	8.3	7.2	1.1
Accessibility	8.3	7.2	1.1
Documentation	8.8	7.2	1.6
Software Updates	8.3	7.4	0.9
Software Installation	7.8	7.4	0.4
Software Training	8.2	7.2	1.0
Hotline	7.9	7.0	0.9
Capacity Tuning	7.8	6.7	1.1
On-Site Support	7.5	7.0	0.5
Consultancy/Planning	7.1	6.5	0.6
Remote Diagnostics	7.5	6.6	0.9
Software Problem Database	7.9	6.9	1.0
Average	8.0	7.1	0.9

Sample Size: 441

EXHIBIT A-5

**Western Europe
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.8	1.4
Telephone Support Fix Speed	8.2	7.1	1.1
Accessibility	8.4	7.0	1.4
Documentation	8.7	6.8	1.9
Software Updates	8.3	7.1	1.2
Software Installation	8.2	7.3	0.9
Software Training	8.4	7.0	1.4
Hotline	8.0	6.8	1.2
Capacity Tuning	7.7	6.6	1.1
On-Site Support	7.7	7.0	0.7
Consultancy/Planning	7.2	6.3	0.9
Remote Diagnostics	7.4	6.3	1.1
Software Problem Database	7.4	6.4	1.0
Average	8.1	6.9	1.2

Sample Size: 784

EXHIBIT A-6

**Western Europe
Software Support Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.7	1.3
Telephone Support Fix Speed	8.4	7.0	1.4
Accessibility	8.5	6.9	1.6
Documentation	8.3	6.7	1.6
Software Updates	8.2	6.9	1.3
Software Installation	8.3	7.3	1.0
Software Training	8.3	6.8	1.5
Hotline	8.0	6.7	1.3
Capacity Tuning	7.5	6.7	0.8
On-Site Support	7.5	6.8	0.7
Consultancy/Planning	7.2	6.4	0.8
Remote Diagnostics	7.1	6.3	0.8
Software Problem Database	6.9	6.1	0.8
Average	8.0	6.8	1.2

Sample Size: 401

EXHIBIT A-7

Western Europe Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	9.5	8.6	0.9
Medium	9.3	8.5	0.8
Small	9.1	8.2	0.9
Average	9.3	8.5	0.8

Sample Sizes: Large Systems = 441
 Medium Systems = 784
 Small Systems = 401
 Total = 1,626

EXHIBIT A-8

Western Europe System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	3.5	59	41
Medium	3.9	58	42
Small	3.8	60	40
Average	3.8	59	41

Sample Sizes: Large Systems = 441
 Medium Systems = 784
 Small Systems = 401
 Total = 1,626

EXHIBIT A-9

Western Europe Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	2.7	2.9	0.2	8.9	2.9	3.7	0.8	9.0	5.6	6.6	1.0
Medium	3.9	4.6	0.7	8.8	3.7	3.6	(0.1)	8.7	7.6	8.2	0.6
Small	5.1	5.6	0.5	8.7	3.6	3.7	0.1	8.7	8.7	9.3	0.6
Average	3.9	4.4	0.5	8.8	3.4	3.6	0.2	8.8	7.3	8.0	0.7

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

Sample Sizes: Large Systems = 441
Medium Systems = 784
Small Systems = 401
Total = 1,626

EXHIBIT A-10

Western Europe Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	9.0	12.2	3.2	8.3	4.6	6.7	2.1	8.8	13.6	18.9	5.3
Medium	9.0	11.2	2.2	8.5	5.2	6.8	1.6	8.6	14.2	18.0	3.8
Small	8.9	10.1	1.2	8.5	5.3	7.6	2.3	8.5	14.2	17.7	3.5
Average	9.0	11.2	2.2	8.5	5.1	7.0	1.9	8.6	14.1	18.2	4.1

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Sizes: Large Systems = 441
 Medium Systems = 784
 Small Systems = 401
 Total = 1,626

EXHIBIT A-11

Western Europe Hardware Service Vendor by System Size

CPU (Percent)					
Size	Manufacturer	Dealer	TPM	Self	Other
Large	95	2	3	1	-
Medium	92	2	4	2	-
Small	85	8	6	1	1
Average	91	4	4	1	-
Peripherals (Percent)					
Large	81	6	9	4	1
Medium	83	4	7	4	1
Small	77	9	9	3	2
Average	81	6	8	4	1

Sample Sizes: Large Systems = 441
Medium Systems = 784
Small Systems = 401
Total = 1,626

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT A-12

**Western Europe
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	77	6	4	13	-
Medium	79	8	3	9	1
Small	61	19	6	12	2
Average	74	10	4	11	1

Sample Sizes: Large Systems = 441
Medium Systems = 784
Small Systems = 401
Total = 1,626

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

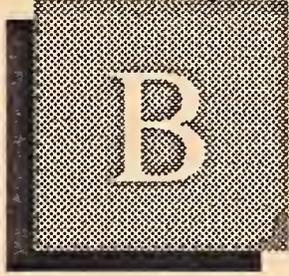
EXHIBIT A-13

Western Europe Views on Current Service Performance

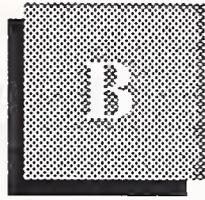
System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.2	8.2	1.0	9.2	7.8	1.4
Medium	9.1	8.1	1.0	9.0	7.8	1.2
Small	8.7	7.8	0.9	8.9	7.5	1.4
Average	9.0	8.1	0.9	9.1	7.7	1.4

Sample Sizes: Large Systems = 441
 Medium Systems = 784
 Small Systems = 401
 Total = 1,626

Imp. = Importance Rating
 Sat. = Satisfaction Rating



Appendix: Country User Data



Appendix: Country User Data

EXHIBIT B-1

Belgium Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	7.8	1.5
Engineer Skills	9.5	8.2	1.3
Problem Escalation	8.6	7.6	1.0
Call Handling	9.3	8.1	1.2
Backup Support	8.8	7.5	1.3
Hardware Training	7.9	7.2	0.7
Telephone Support	8.9	7.6	1.3
Service Administration	8.4	7.6	0.8
Documentation	9.0	7.1	1.9
Consultancy/Planning	8.5	7.1	1.4
Remote Diagnostics	7.5	6.6	0.9
Out-of-Hours Service	7.9	7.3	0.6
Average	8.7	7.5	1.2

Sample Size: 42

EXHIBIT B-2

Belgium Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.5	7.7	1.8
Telephone Support Fix Speed	9.1	7.5	1.6
Accessibility	8.7	7.1	1.6
Documentation	9.2	7.2	2.0
Software Updates	8.9	7.4	1.5
Software Installation	8.3	7.4	0.9
Software Training	8.8	6.8	2.0
Hotline	8.4	7.2	1.2
Capacity Tuning	9.0	7.2	1.8
On-Site Support	8.5	6.6	1.9
Consultancy/Planning	8.0	7.1	0.9
Remote Diagnostics	8.3	7.4	0.9
Software Problem Database	8.2	6.9	1.3
Average	8.7	7.2	1.5

Sample Size: 42

EXHIBIT B-3

Belgium System Failures and Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
4.2	54	46

System Availability		
Importance	Satisfaction	Δ SI
9.8	9.0	0.8

Sample Size: 42

EXHIBIT B-4

Belgium
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
4.1	4.2	0.1	9.2	2.7	2.6	(0.1)	9.4	6.8	6.8	0.0

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
10.3	18.4	8.1	8.9	4.1	6.7	2.6	8.8	14.4	25.1	10.7

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 42

EXHIBIT B-5

**Belgium
Hardware and Software Service Vendors**

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
93	2	5	-	-
Peripherals (Percent)				
88	2	7	2	-

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
76	5	5	15	2

Sample Size: 42

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-6

**Belgium
Views on Current Service Performance**

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.1	8.1	1.0	8.8	7.5	1.3

Sample Size: 42

EXHIBIT B-7

France Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	8.0	1.1
Engineer Skills	9.4	8.6	0.8
Problem Escalation	7.5	7.2	0.3
Call Handling	8.9	7.9	1.0
Backup Support	8.0	7.5	0.5
Hardware Training	8.4	7.3	1.1
Telephone Support	7.7	7.1	0.6
Service Administration	8.0	7.4	0.6
Documentation	8.1	6.6	1.5
Consultancy/Planning	7.5	6.9	0.6
Remote Diagnostics	7.6	6.9	0.7
Out-of-Hours Service	7.1	5.9	1.2
Average	8.1	7.3	0.8

Sample Size: 255

EXHIBIT B-8

France Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.7	1.5
Telephone Support Fix Speed	8.6	7.1	1.5
Accessibility	8.3	6.8	1.5
Documentation	8.4	6.5	1.9
Software Updates	8.5	7.0	1.5
Software Installation	8.4	7.1	1.3
Software Training	8.8	7.1	1.7
Hotline	6.9	6.2	0.7
Capacity Tuning	8.0	7.0	1.0
On-Site Support	8.0	7.1	0.9
Consultancy/Planning	7.0	6.2	0.8
Remote Diagnostics	8.0	6.7	1.3
Software Problem Database	7.6	6.4	1.2
Average	8.2	6.9	1.3

Sample Size: 255

EXHIBIT B-9

**France
System Failures and
Satisfaction with System Availability**

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
4.1	58	42

System Availability		
Importance	Satisfaction	Δ SI
9.4	8.6	0.8

Sample Size: 255

EXHIBIT B-10

France
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
4.6	5.2	0.6	8.8	4.4	3.7	(0.7)	8.7	9.0	8.9	(0.1)

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
8.7	8.5	(0.2)	8.6	6.0	7.0	1.0	8.6	14.7	15.5	0.8

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 255

EXHIBIT B-11

France
Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
86	5	7	1	-
Peripherals (Percent)				
78	8	10	4	-

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
69	17	3	14	-

Sample Size: 255

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-12

France
Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.1	8.1	1.0	9.1	7.8	1.3

Sample Size: 255

EXHIBIT B-13

West Germany
Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	8.2	1.0
Engineer Skills	9.2	8.2	1.0
Problem Escalation	7.8	7.5	0.3
Call Handling	8.4	7.5	0.9
Backup Support	8.7	7.8	0.9
Hardware Training	6.5	6.7	(0.2)
Telephone Support	8.1	7.4	0.7
Service Administration	8.3	7.7	0.6
Documentation	7.5	6.6	0.9
Consultancy/Planning	7.4	7.1	0.3
Remote Diagnostics	7.5	7.0	0.5
Out-of-Hours Service	7.0	6.8	0.2
Average	8.0	7.4	0.6

Sample Size: 283

EXHIBIT B-14

West Germany Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.7	1.3
Telephone Support Fix Speed	7.9	7.1	0.8
Accessibility	8.4	7.0	1.4
Documentation	8.3	7.0	1.3
Software Updates	8.0	7.4	0.6
Software Installation	7.6	7.4	0.2
Software Training	7.9	7.0	0.9
Hotline	8.2	7.0	1.2
Capacity Tuning	7.5	6.9	0.6
On-Site Support	7.8	7.1	0.7
Consultancy/Planning	7.8	6.8	1.0
Remote Diagnostics	7.5	6.7	0.8
Software Problem Database	7.3	6.6	0.7
Average	8.0	7.1	0.9

Sample Size: 283

EXHIBIT B-15

West Germany System Failures and Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
4.7	57	43

System Availability		
Importance	Satisfaction	Δ SI
9.4	8.3	1.1

Sample Size: 283

EXHIBIT B-16

West Germany
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
2.9	3.9	1.0	8.9	2.7	3.4	0.7	9.0	5.6	7.3	1.7

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
5.6	7.8	2.2	8.7	4.4	6.1	1.7	8.8	10.0	13.9	3.9

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 283

EXHIBIT B-17

**West Germany
Hardware and Software Service Vendors**

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
94	1	2	3	-
Peripherals (Percent)				
82	8	2	7	2

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
80	12	3	5	-

Sample Size: 283

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-18

West Germany Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.0	8.0	1.0	9.2	7.6	1.6

Sample Size: 283

EXHIBIT B-19

Italy Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.9	7.6	1.3
Engineer Skills	9.2	8.1	1.1
Problem Escalation	8.9	7.7	1.2
Call Handling	8.6	7.7	0.9
Backup Support	8.2	7.2	1.0
Hardware Training	7.0	6.9	0.1
Telephone Support	8.1	7.2	0.9
Service Administration	7.3	6.9	0.4
Documentation	7.8	7.1	0.7
Consultancy/Planning	7.5	6.7	0.8
Remote Diagnostics	7.6	6.4	1.2
Out-of-Hours Service	7.4	6.3	1.1
Average	8.1	7.2	0.9

Sample Size: 136

EXHIBIT B-20

Italy
Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.9	1.3
Telephone Support Fix Speed	8.4	7.1	1.3
Accessibility	8.4	7.2	1.2
Documentation	9.1	7.4	1.7
Software Updates	8.9	7.6	1.3
Software Installation	8.5	7.5	1.0
Software Training	8.8	7.1	1.7
Hotline	7.9	6.5	1.4
Capacity Tuning	8.6	7.2	1.4
On-Site Support	8.4	7.0	1.4
Consultancy/Planning	8.0	6.5	1.5
Remote Diagnostics	7.7	6.0	1.7
Software Problem Database	7.7	6.2	1.5
Average	8.4	7.1	1.3

Sample Size: 136

EXHIBIT B-21

Italy
System Failures and
Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
5.8	51	49

System Availability		
Importance	Satisfaction	Δ SI
9.2	8.3	0.9

Sample Size: 136

EXHIBIT B-22

Italy
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
4.4	5.3	0.9	9.0	3.6	3.5	(0.1)	9.1	8.0	8.8	0.8

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
13.8	18.7	4.9	8.2	8.0	9.6	1.6	8.9	21.8	28.3	6.5

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 136

EXHIBIT B-23

Italy Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
94	4	1	1	-
Peripherals (Percent)				
85	5	8	1	1

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
70	8	5	15	1

Sample Size: 136

Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-24

Italy Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
8.7	8.1	0.6	9.3	7.8	1.5

Sample Size: 136

EXHIBIT B-25

Netherlands Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.8	8.2	0.6
Engineer Skills	9.2	8.3	0.9
Problem Escalation	8.1	7.7	0.4
Call Handling	8.6	7.8	0.8
Backup Support	8.3	7.5	0.8
Hardware Training	5.9	6.7	(0.8)
Telephone Support	7.3	7.3	0.0
Service Administration	6.6	7.2	(0.6)
Documentation	7.7	7.1	0.6
Consultancy/Planning	7.5	7.2	0.3
Remote Diagnostics	6.7	6.9	(0.2)
Out-of-Hours Service	6.2	7.2	(1.0)
Average	7.6	7.5	0.1

Sample Size: 117

EXHIBIT B-26

Netherlands Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.9	8.1	0.8
Telephone Support Fix Speed	8.0	7.0	1.0
Accessibility	8.7	7.4	1.3
Documentation	8.5	7.2	1.3
Software Updates	7.8	7.4	0.4
Software Installation	7.6	7.8	(0.2)
Software Training	8.0	7.3	0.7
Hotline	8.0	7.6	0.4
Capacity Tuning	7.8	7.3	0.5
On-Site Support	6.9	7.2	(0.3)
Consultancy/Planning	7.2	7.1	0.1
Remote Diagnostics	7.1	7.1	0.0
Software Problem Database	6.7	6.8	(0.1)
Average	7.8	7.3	0.5

Sample Size: 117

EXHIBIT B-27

**Netherlands
System Failures and
Satisfaction with System Availability**

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
1.9	52	48

System Availability		
Importance	Satisfaction	Δ SI
9.3	8.6	0.7

Sample Size: 117

EXHIBIT B-28

Netherlands
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
4.4	4.3	(0.1)	8.6	3.7	3.6	(0.1)	8.4	8.1	7.9	(0.2)

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
9.4	10.7	1.3	7.9	4.7	6.5	1.8	8.5	14.1	17.2	3.1

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 117

EXHIBIT B-29

**Netherlands
Hardware and Software Service Vendors**

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
82	7	10	-	1
Peripherals (Percent)				
69	12	15	1	3

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
63	11	10	12	3

Sample Size: 117

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-30

**Netherlands
Views on Current Service Performance**

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
8.5	8.0	0.5	8.7	7.7	1.0

Sample Size: 117

EXHIBIT B-31

Norway Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.0	8.1	0.9
Engineer Skills	9.2	8.6	0.6
Problem Escalation	7.9	7.2	0.7
Call Handling	8.3	7.9	0.4
Backup Support	8.3	7.5	0.8
Hardware Training	7.5	6.5	1.0
Telephone Support	7.5	7.1	0.4
Service Administration	7.9	7.5	0.4
Documentation	8.0	7.6	0.4
Consultancy/Planning	6.5	6.2	0.3
Remote Diagnostics	6.0	6.2	(0.2)
Out-of-Hours Service	6.4	7.3	(0.9)
Average	7.7	7.3	0.4

Sample Size: 23

EXHIBIT B-32

Norway Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.3	7.2	1.1
Telephone Support Fix Speed	8.0	6.8	1.2
Accessibility	7.5	7.6	(0.1)
Documentation	8.7	7.6	1.1
Software Updates	8.2	8.2	0.0
Software Installation	8.1	7.7	0.4
Software Training	8.0	7.0	1.0
Hotline	6.6	6.0	0.6
Capacity Tuning	8.2	6.7	1.5
On-Site Support	7.1	6.0	1.1
Consultancy/Planning	6.1	5.7	0.4
Remote Diagnostics	7.1	5.4	1.7
Software Problem Database	7.8	7.2	0.6
Average	7.7	6.8	0.9

Sample Size: 23

EXHIBIT B-33

Norway
System Failures and
Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
2.3	49	51

System Availability		
Importance	Satisfaction	ΔSI
9.2	8.8	0.4

Sample Size: 23

EXHIBIT B-34

Norway
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
3.5	3.5	0.0	8.6	2.8	2.2	(0.6)	8.1	6.3	5.7	(0.6)

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
5.7	2.4	(3.3)	8.0	2.5	2.3	(0.2)	8.8	8.2	4.7	(3.5)

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 23

EXHIBIT B-35

Norway Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
91	4	-	4	-
Peripherals (Percent)				
52	17	13	13	4

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
70	13	4	9	4

Sample Size: 23

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-36

Norway Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.4	8.3	1.1	9.1	7.5	1.6

Sample Size: 23

EXHIBIT B-37

Spain
Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.0	7.5	1.5
Engineer Skills	9.2	7.9	1.3
Problem Escalation	8.1	7.2	0.9
Call Handling	8.5	7.6	0.9
Backup Support	8.4	7.3	1.1
Hardware Training	8.7	7.1	1.6
Telephone Support	8.0	6.8	1.2
Service Administration	7.4	6.5	0.9
Documentation	8.5	6.7	1.8
Consultancy/Planning	8.1	6.3	1.8
Remote Diagnostics	7.5	6.2	1.3
Out-of-Hours Service	7.8	6.6	1.2
Average	8.3	7.0	1.3

Sample Size: 103

EXHIBIT B-38

Spain
Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.5	7.8	1.7
Telephone Support Fix Speed	8.3	6.5	1.8
Accessibility	8.5	6.6	1.9
Documentation	8.9	6.6	2.3
Software Updates	8.6	7.0	1.6
Software Installation	9.1	7.4	1.7
Software Training	8.9	7.1	1.8
Hotline	8.6	6.5	2.1
Capacity Tuning	8.4	6.7	1.7
On-Site Support	8.4	7.0	1.4
Consultancy/Planning	8.3	6.5	1.8
Remote Diagnostics	7.9	6.3	1.6
Software Problem Database	8.3	6.2	2.1
Average	8.6	6.8	1.8

Sample Size: 103

EXHIBIT B-39

Spain
System Failures and
Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
2.7	69	31

System Availability		
Importance	Satisfaction	Δ SI
8.9	7.8	1.1

Sample Size: 103

EXHIBIT B-40

Spain
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
3.9	5.3	1.4	8.7	3.6	5.1	1.5	8.6	7.5	10.4	2.9

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
11.0	13.5	2.5	8.6	6.6	11.5	4.9	8.7	17.6	25.0	7.4

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

Sample Size: 103

EXHIBIT B-41

Spain Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
89	7	4	-	-
Peripherals (Percent)				
86	8	3	1	2

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
74	1	6	19	0

Sample Size: 103

Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-42

Spain Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
8.5	7.7	0.8	9.1	7.7	1.4

Sample Size: 103

EXHIBIT B-43

Sweden
Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.9	7.3	1.6
Engineer Skills	9.3	8.1	1.2
Problem Escalation	8.3	7.0	1.3
Call Handling	8.8	7.9	0.9
Backup Support	8.7	7.4	1.3
Hardware Training	7.7	6.5	1.2
Telephone Support	7.8	6.7	1.1
Service Administration	8.0	7.0	1.0
Documentation	7.9	6.4	1.5
Consultancy/Planning	7.5	6.5	1.0
Remote Diagnostics	7.7	6.9	0.8
Out-of-Hours Service	7.8	7.2	0.6
Average	8.2	7.1	1.1

Sample Size: 86

EXHIBIT B-44

Sweden Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.7	7.5	1.2
Telephone Support Fix Speed	8.5	7.2	1.3
Accessibility	8.7	7.0	1.7
Documentation	8.1	6.4	1.7
Software Updates	8.0	6.5	1.5
Software Installation	8.0	6.9	1.1
Software Training	8.0	6.5	1.5
Hotline	8.5	7.4	1.1
Capacity Tuning	7.7	6.6	1.1
On-Site Support	7.4	7.2	0.2
Consultancy/Planning	7.3	7.0	0.3
Remote Diagnostics	7.4	6.7	0.7
Software Problem Database	7.7	6.6	1.1
Average	8.0	6.9	1.1

Sample Size: 86

EXHIBIT B-45

Sweden
System Failures and
Satisfaction with System Availability

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
2.5	54	46

System Availability		
Importance	Satisfaction	Δ SI
9.1	8.3	0.8

Sample Size: 86

EXHIBIT B-46

Sweden
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
4.7	5.8	1.1	8.8	3.8	5.1	1.3	8.8	8.5	10.9	2.4

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
7.5	10.7	3.2	8.8	4.3	8.1	3.8	9.0	11.8	18.8	7.0

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

Sample Size: 86

EXHIBIT B-47

Sweden Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
87	7	5	1	-
Peripherals (Percent)				
81	11	6	2	-

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
61	20	11	7	1

Sample Size: 86

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-48

Sweden Views on Current Service Performance

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
8.6	8.0	0.6	8.9	7.3	1.6

Sample Size: 86

EXHIBIT B-49

Switzerland Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	8.1	1.2
Engineer Skills	9.2	7.4	1.8
Problem Escalation	7.8	7.6	0.2
Call Handling	8.9	7.9	1.0
Backup Support	7.9	7.3	0.6
Hardware Training	7.2	6.5	0.7
Telephone Support	7.4	6.5	0.9
Service Administration	8.3	7.6	0.7
Documentation	7.3	6.0	1.3
Consultancy/Planning	8.0	7.1	0.9
Remote Diagnostics	6.0	4.7	1.3
Out-of-Hours Service	5.3	4.8	0.5
Average	7.7	6.8	0.9

Sample Size: 45

EXHIBIT B-50

Switzerland Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.6	1.5
Telephone Support Fix Speed	8.1	6.8	1.3
Accessibility	7.6	6.5	1.1
Documentation	8.8	6.9	1.9
Software Updates	8.6	7.1	1.5
Software Installation	8.4	7.5	0.9
Software Training	8.7	7.1	1.6
Hotline	6.7	5.1	1.6
Capacity Tuning	8.2	7.1	1.1
On-Site Support	8.0	7.3	0.7
Consultancy/Planning	7.2	6.1	1.1
Remote Diagnostics	6.7	5.1	1.6
Software Problem Database	7.1	6.7	0.4
Average	7.9	6.7	1.2

Sample Size: 45

EXHIBIT B-51

**Switzerland
System Failures and
Satisfaction with System Availability**

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
4.5	52	48

System Availability		
Importance	Satisfaction	Δ SI
9.6	8.7	0.9

Sample Size: 45

EXHIBIT B-52

Switzerland
Hardware Response and Repair Times
Software Response and Fix Times

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
3.1	2.7	(0.4)	8.9	3.2	2.8	(0.4)	9.0	6.3	5.5	(0.8)

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
9.7	8.8	(0.9)	8.6	7.3	7.1	(0.2)	9.0	17.0	15.9	(1.1)

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

Sample Size: 45

EXHIBIT B-53

**Switzerland
Hardware and Software Service Vendors**

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
87	9	4	-	-
Peripherals (Percent)				
84	9	7	-	-

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
73	16	-	9	2

Sample Size: 45

- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-54

**Switzerland
Views on Current Service Performance**

Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.0	8.0	1.0	9.4	7.9	1.5

Sample Size: 45

EXHIBIT B-55

United Kingdom Hardware Service Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	7.7	1.5
Engineer Skills	9.3	8.3	1.0
Problem Escalation	8.7	7.4	1.3
Call Handling	8.5	7.6	0.9
Backup Support	8.5	7.6	0.9
Hardware Training	7.5	7.0	0.5
Telephone Support	8.4	7.5	0.9
Service Administration	7.5	6.9	0.6
Documentation	8.4	6.9	1.5
Consultancy/Planning	6.7	6.3	0.4
Remote Diagnostics	6.6	6.3	0.3
Out-of-Hours Service	6.6	6.5	0.1
Average	8.0	7.2	0.8

Sample Size: 536

EXHIBIT B-56

United Kingdom Software Support Satisfaction

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.8	1.3
Telephone Support Fix Speed	8.2	7.1	1.1
Accessibility	8.3	7.2	1.1
Documentation	8.7	6.9	1.8
Software Updates	8.1	7.0	1.1
Software Installation	8.1	7.3	0.8
Software Training	8.2	6.9	1.3
Hotline	8.2	7.1	1.1
Capacity Tuning	7.1	6.0	1.1
On-Site Support	7.1	6.7	0.4
Consultancy/Planning	6.3	5.9	0.4
Remote Diagnostics	6.9	6.2	0.7
Software Problem Database	7.3	6.4	0.9
Average	7.9	6.9	1.0

Sample Size: 536

EXHIBIT B-57

**United Kingdom
System Failures and
Satisfaction with System Availability**

Failures Per Annum	Failures (Percent)	
	Hardware Breaks	Software Failures
3.4	62	38

System Availability		
Importance	Satisfaction	Δ SI
9.3	8.6	0.7

Sample Size: 536

EXHIBIT B-58

**United Kingdom
Hardware Response and Repair Times
Software Response and Fix Times**

Hardware Service										
Response Times				Repair Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
3.7	3.9	0.2	8.7	3.3	3.5	0.2	8.8	7.0	7.4	0.4

Software Support										
Response Times				Fix Times				Totals (Hours)		
Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
9.4	12.2	2.8	8.3	4.3	5.9	1.6	8.4	13.7	18.1	4.4

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

Sample Size: 536

EXHIBIT B-59

United Kingdom Hardware and Software Service Vendors

Hardware Service Vendor				
CPU (Percent)				
Manufacturer	Dealer	TPM	Self	Other
93	1	4	1	1
Peripherals (Percent)				
83	1	10	3	2

Software Service Vendor				
Percent				
Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
80	6	3	10	1

Sample Size: 536

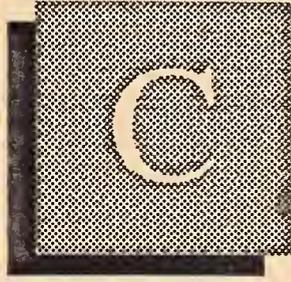
- Notes: i. Percentages have been rounded.
ii. Multiple responses allowed.

EXHIBIT B-60

United Kingdom Views on Current Service Performance

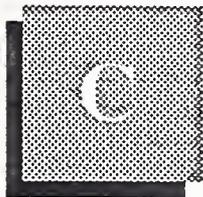
Hardware Service			Software Support		
Importance Rating	Satisfaction Rating	Δ SI	Importance Rating	Satisfaction Rating	Δ SI
9.3	8.1	1.2	9.0	7.8	1.2

Sample Size: 536



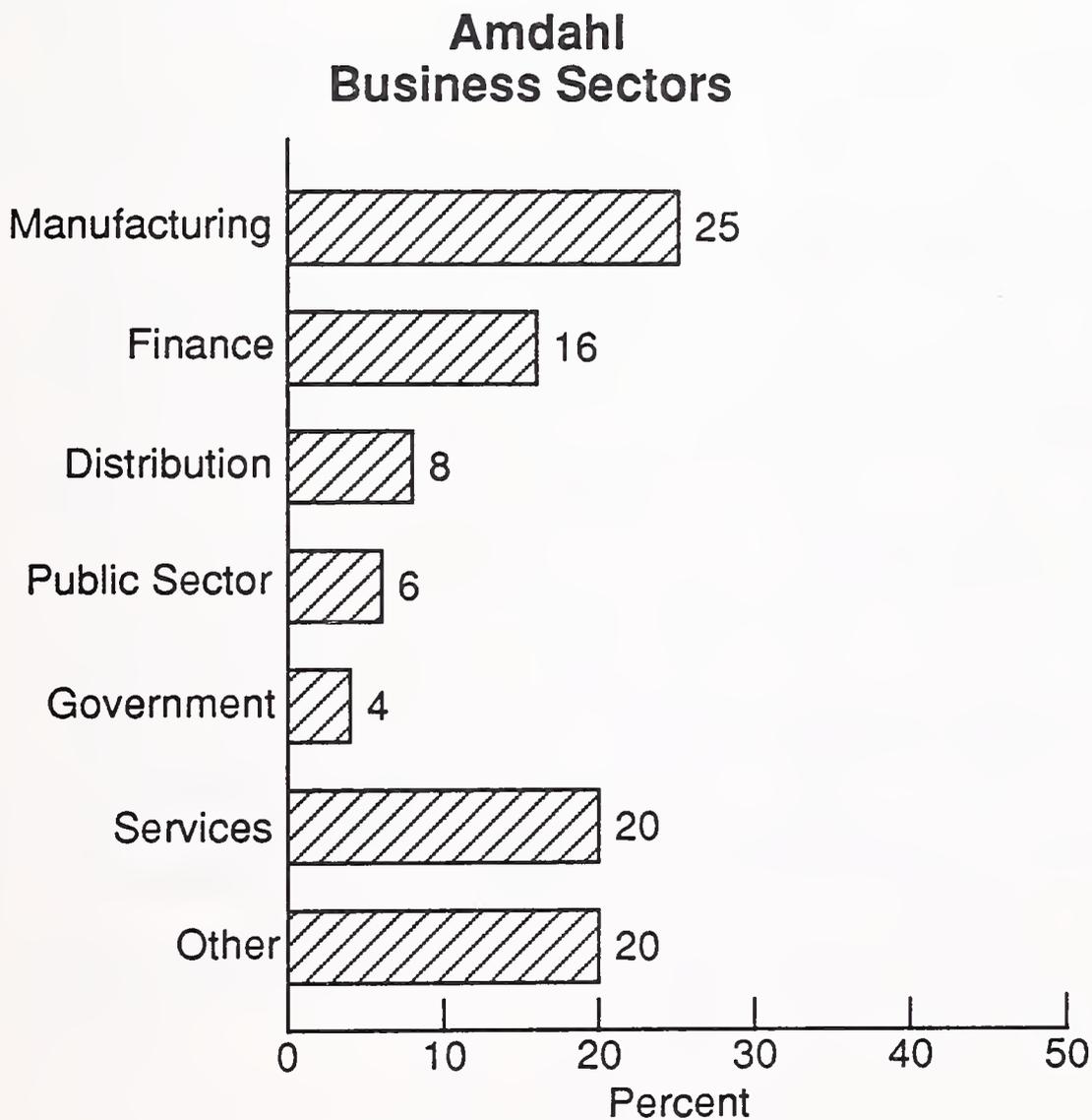
Appendix: Vendor User Data

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Appendix: Vendor User Data

EXHIBIT C-1



Sample Sizes: Large Systems = 80
 Medium Systems = -
 Small Systems = -
 Total = 80

EXHIBIT C-2

**Amdahl
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.4	8.8	0.6
Engineer Skills	9.3	8.7	0.6
Problem Escalation	8.5	8.2	0.3
Call Handling	9.0	8.5	0.5
Backup Support	8.9	8.4	0.5
Hardware Training	7.9	7.9	0.0
Telephone Support	8.4	8.2	0.2
Service Administration	8.0	7.7	0.3
Documentation	7.8	7.4	0.4
Consultancy/Planning	8.1	7.8	0.3
Remote Diagnostics	7.8	7.5	0.3
Out-of-Hours Service	8.9	8.4	0.5
Average	8.5	8.1	0.4

Sample Size: 80

EXHIBIT C-3

**Amdahl
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.9	1.3
Telephone Support Fix Speed	8.3	7.3	1.0
Accessibility	8.6	7.5	1.1
Documentation	8.7	7.4	1.3
Software Updates	8.5	7.8	0.7
Software Installation	8.3	7.7	0.6
Software Training	8.5	7.1	1.4
Hotline	7.8	6.9	0.9
Capacity Tuning	8.0	7.2	0.8
On-Site Support	8.5	7.9	0.6
Consultancy/Planning	7.7	7.2	0.5
Remote Diagnostics	8.1	7.2	0.9
Software Problem Database	8.3	7.4	0.9
Average	8.4	7.4	1.0

Sample Size: 80

EXHIBIT C-4

**Amdahl
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	2.4	47	53
Medium	-	-	-
Small	-	-	-
Average	2.4	47	53

Sample Size: 80

EXHIBIT C-5

**Amdahl
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	9.6	8.8	0.8
Medium	-	-	-
Small	-	-	-
Average	9.6	8.8	0.8

Sample Size: 80

EXHIBIT C-6

Amdahl Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	2.0	2.2	0.2	9.4	3.8	3.9	0.1	9.3	5.8	6.1	0.3
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	-	-	-	-	-	-	-	-	-	-	-
Average	2.0	2.2	0.2	9.4	3.8	3.9	0.1	9.3	5.8	6.1	0.3

Sample Size: 80

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-7

Amdahl Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	7.5	9.9	2.4	8.7	5.8	8.0	2.2	9.2	13.3	17.9	4.6
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	-	-	-	-	-	-	-	-	-	-	-
Average	7.5	9.9	2.4	8.7	5.8	8.0	2.2	9.2	13.3	17.9	4.6

Sample Size: 80

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-8

**Amdahl
Hardware Service Vendor
by System Size**

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	98	1	1	-	-
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	98	1	1	-	-
Peripherals (Percent)					
Large	88	3	8	1	1
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	88	3	8	1	1

Sample Size: 80

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-9

**Amdahl
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	64	8	15	21	-
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	64	8	15	21	-

Sample Size: 80

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-10

**Amdahl
Views on Current
Service Performance**

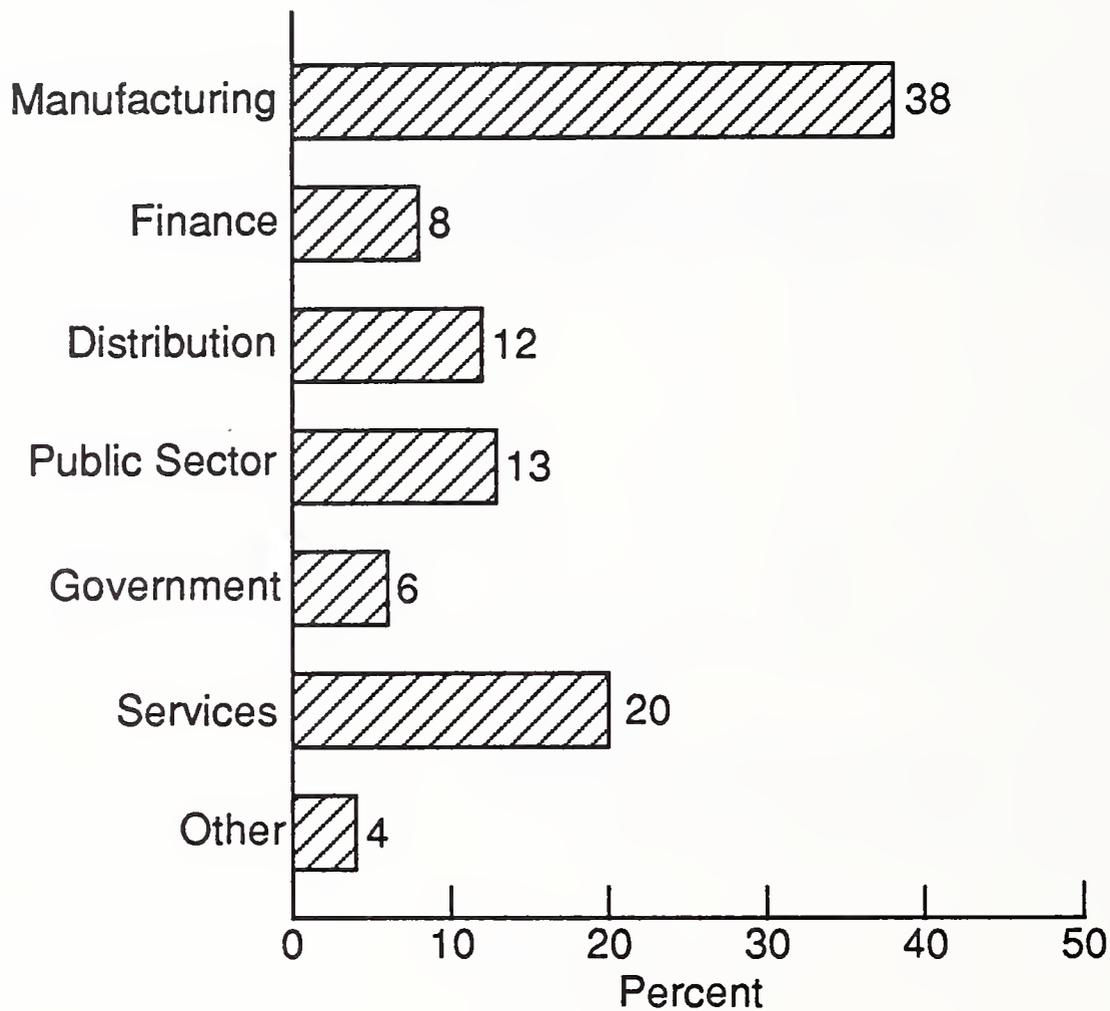
System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.6	8.7	0.9	9.5	8.1	1.4
Medium	-	-	-	-	-	-
Small	-	-	-	-	-	-
Average	9.6	8.7	0.9	9.5	8.1	1.4

Sample Size: 80

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-11

Bull Business Sectors



Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

EXHIBIT C-12

**Bull
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.8	7.2	1.6
Engineer Skills	8.9	8.0	0.9
Problem Escalation	8.4	7.2	1.2
Call Handling	8.6	7.5	1.1
Backup Support	8.4	7.6	0.8
Hardware Training	7.7	7.0	0.7
Telephone Support	8.0	7.1	0.9
Service Administration	8.0	6.9	1.1
Documentation	7.5	6.5	1.0
Consultancy/Planning	7.8	6.5	1.3
Remote Diagnostics	7.8	7.2	0.6
Out-of-Hours Service	7.8	6.9	0.9
Average	8.2	7.2	1.0

Sample Size: 30

EXHIBIT C-13

Bull
Hardware Service Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.0	7.5	1.5
Engineer Skills	9.0	7.7	1.3
Problem Escalation	8.2	7.3	0.9
Call Handling	8.3	6.9	1.4
Backup Support	7.9	7.2	0.7
Hardware Training	6.7	6.8	(0.1)
Telephone Support	7.6	6.7	0.9
Service Administration	7.1	6.4	0.7
Documentation	7.6	6.3	1.3
Consultancy/Planning	7.1	6.6	0.5
Remote Diagnostics	7.0	6.4	0.6
Out-of-Hours Service	6.5	6.7	(0.2)
Average	7.7	6.9	0.8

Sample Size: 55

EXHIBIT C-14

**Bull
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.5	7.6	0.9
Engineer Skills	9.0	8.0	1.0
Problem Escalation	7.6	6.7	0.9
Call Handling	8.4	8.0	0.4
Backup Support	8.4	7.6	0.8
Hardware Training	7.1	6.5	0.6
Telephone Support	7.3	6.7	0.6
Service Administration	7.7	7.2	0.5
Documentation	7.8	6.9	0.9
Consultancy/Planning	7.4	6.6	0.8
Remote Diagnostics	6.3	5.2	1.1
Out-of-Hours Service	5.7	4.7	1.0
Average	7.6	6.9	0.7

Sample Size: 43

EXHIBIT C-15

Bull
Software Support Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	8.1	1.1
Telephone Support Fix Speed	8.5	7.4	1.1
Accessibility	8.6	7.0	1.6
Documentation	8.7	6.3	2.4
Software Updates	8.4	6.8	1.6
Software Installation	8.0	7.4	0.6
Software Training	8.7	7.1	1.6
Hotline	7.9	7.2	0.7
Capacity Tuning	8.1	6.5	1.6
On-Site Support	8.1	6.7	1.4
Consultancy/Planning	7.5	7.0	0.5
Remote Diagnostics	8.4	6.6	1.8
Software Problem Database	8.2	7.5	0.7
Average	8.3	7.0	1.3

Sample Size: 30

EXHIBIT C-16

Bull
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.8	1.2
Telephone Support Fix Speed	7.9	7.2	0.7
Accessibility	8.2	7.2	1.0
Documentation	8.5	6.6	1.9
Software Updates	7.9	7.0	0.9
Software Installation	8.4	7.6	0.8
Software Training	8.6	7.1	1.5
Hotline	7.7	6.4	1.3
Capacity Tuning	7.8	6.4	1.4
On-Site Support	7.8	7.0	0.8
Consultancy/Planning	7.2	6.5	0.7
Remote Diagnostics	7.6	5.9	1.7
Software Problem Database	7.4	6.3	1.1
Average	8.0	6.8	1.2

Sample Size: 55

EXHIBIT C-17

Bull
Software Support Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.8	7.8	1.0
Telephone Support Fix Speed	7.9	6.4	1.5
Accessibility	8.3	7.1	1.2
Documentation	8.7	6.8	1.9
Software Updates	8.0	6.9	1.1
Software Installation	8.2	7.3	0.9
Software Training	8.5	6.8	1.7
Hotline	7.8	6.5	1.3
Capacity Tuning	7.7	7.0	0.7
On-Site Support	7.8	7.1	0.7
Consultancy/Planning	7.6	6.7	0.9
Remote Diagnostics	6.6	5.7	0.9
Software Problem Database	7.0	6.3	0.7
Average	7.9	6.8	1.1

Sample Size: 43

EXHIBIT C-18

Bull System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	2.3	65	35
Medium	5.2	63	37
Small	5.7	54	46
Average	4.7	61	39

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

EXHIBIT C-19

Bull Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	9.2	8.6	0.6
Medium	9.2	8.4	0.8
Small	9.0	8.2	0.8
Average	9.1	8.4	0.7

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

EXHIBIT C-20

Bull Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	2.6	3.0	0.4	8.9	2.9	4.5	1.6	9.1	5.5	7.5	2.0
Medium	2.9	3.6	0.7	8.6	2.8	2.9	0.1	8.7	5.7	6.5	0.8
Small	5.0	5.4	0.4	8.7	3.1	2.7	(0.4)	8.8	8.1	8.1	0.0
Average	3.5	4.1	0.6	8.7	2.9	3.2	0.3	8.8	6.4	7.3	0.9

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-21

Bull Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	8.7	18.8	10.1	7.7	5.7	15.9	10.2	8.7	14.4	34.7	20.3
Medium	9.7	10.0	0.3	8.4	4.8	6.1	1.3	8.6	14.5	16.1	1.6
Small	11.5	9.5	(2.0)	8.2	3.8	6.9	3.1	8.8	15.3	16.4	1.1
Average	10.0	11.6	1.6	8.2	4.6	8.5	3.9	8.7	14.6	20.4	5.8

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-22

**Bull
Hardware Service Vendor
by System Size**

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	90	7	-	3	-
Medium	100	-	-	-	-
Small	93	2	5	-	-
Average	95	2	2	1	-
Peripherals (Percent)					
Large	87	7	3	3	-
Medium	96	-	-	2	2
Small	93	-	5	2	-
Average	93	2	2	2	1

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-23

**Bull
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	87	-	-	13	-
Medium	94	-	2	4	-
Small	65	16	2	16	-
Average	83	6	2	10	-

Sample Sizes: Large Systems = 30
Medium Systems = 55
Small Systems = 43
Total = 128

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-24

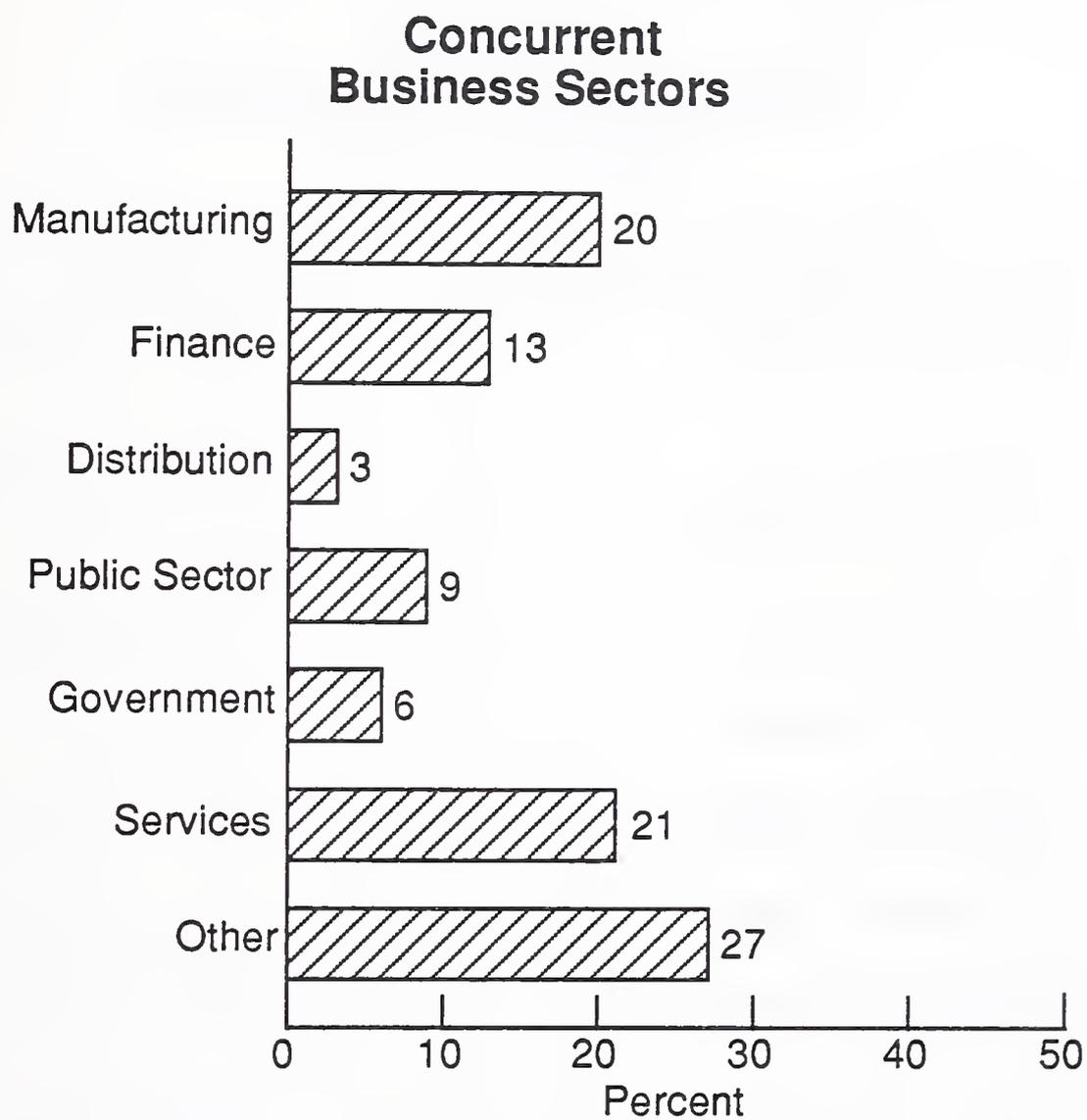
Bull Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	8.8	8.0	0.8	9.1	8.0	1.1
Medium	8.8	7.8	1.0	9.2	7.4	1.8
Small	8.3	7.6	0.7	8.7	7.4	1.3
Average	8.7	7.8	0.9	9.0	7.5	1.5

Sample Sizes: Large Systems = 30
 Medium Systems = 55
 Small Systems = 43
 Total = 128

Imp. = Importance Rating
 Sat. = Satisfaction Rating

EXHIBIT C-25



Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

EXHIBIT C-26

**Concurrent
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.4	7.3	2.1
Engineer Skills	9.5	8.4	1.1
Problem Escalation	9.3	7.7	1.6
Call Handling	8.9	8.2	0.7
Backup Support	9.0	7.3	1.7
Hardware Training	6.5	6.2	0.3
Telephone Support	8.8	7.8	1.0
Service Administration	7.7	7.6	0.1
Documentation	8.6	6.9	1.7
Consultancy/Planning	7.1	6.3	0.8
Remote Diagnostics	6.4	6.4	0.0
Out-of-Hours Service	8.1	7.6	0.5
Average	8.4	7.4	1.0

Sample Size: 30

EXHIBIT C-27

**Concurrent
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	8.1	1.2
Engineer Skills	9.4	8.5	0.9
Problem Escalation	8.8	8.2	0.6
Call Handling	9.1	8.2	0.9
Backup Support	8.9	8.2	0.7
Hardware Training	7.4	6.5	0.9
Telephone Support	8.2	8.1	0.1
Service Administration	8.3	7.3	1.0
Documentation	8.8	6.9	1.9
Consultancy/Planning	7.8	6.3	1.5
Remote Diagnostics	6.7	5.5	1.2
Out-of-Hours Service	7.0	5.7	1.3
Average	8.4	7.4	1.0

Sample Size: 63

EXHIBIT C-28

**Concurrent
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.6	1.5
Engineer Skills	9.6	7.8	1.8
Problem Escalation	8.6	8.0	0.6
Call Handling	8.9	8.1	0.8
Backup Support	8.8	7.5	1.3
Hardware Training	7.4	5.6	1.8
Telephone Support	8.5	7.1	1.4
Service Administration	8.5	7.4	1.1
Documentation	8.9	7.1	1.8
Consultancy/Planning	7.8	6.1	1.7
Remote Diagnostics	6.5	5.0	1.5
Out-of-Hours Service	4.4	5.5	(1.1)
Average	8.2	7.0	1.2

Sample Size: 17

EXHIBIT C-29

Concurrent Software Support Satisfaction Large Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.4	8.3	1.1
Telephone Support Fix Speed	8.5	7.1	1.4
Accessibility	8.3	6.7	1.6
Documentation	9.0	7.2	1.8
Software Updates	8.7	8.0	0.7
Software Installation	7.6	7.6	0.0
Software Training	7.2	6.3	0.9
Hotline	8.0	6.8	1.2
Capacity Tuning	8.0	6.2	1.8
On-Site Support	8.3	7.3	1.0
Consultancy/Planning	7.0	6.7	0.3
Remote Diagnostics	6.0	3.3	2.7
Software Problem Database	7.9	5.9	2.0
Average	8.1	6.9	1.2

Sample Size: 30

EXHIBIT C-30

**Concurrent
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.3	7.7	1.6
Telephone Support Fix Speed	8.2	7.2	1.0
Accessibility	8.6	7.3	1.3
Documentation	9.4	6.4	3.0
Software Updates	8.6	7.0	1.6
Software Installation	7.5	7.0	0.5
Software Training	8.2	6.6	1.6
Hotline	8.3	6.9	1.4
Capacity Tuning	7.7	6.6	1.1
On-Site Support	7.9	7.2	0.7
Consultancy/Planning	7.7	6.1	1.6
Remote Diagnostics	7.5	6.1	1.4
Software Problem Database	7.6	6.0	1.6
Average	8.2	6.8	1.4

Sample Size: 63

EXHIBIT C-31

Concurrent Software Support Satisfaction Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.6	7.4	1.2
Telephone Support Fix Speed	7.4	5.8	1.6
Accessibility	7.6	5.0	2.6
Documentation	8.9	6.7	2.2
Software Updates	8.8	6.8	2.0
Software Installation	8.4	7.2	1.2
Software Training	8.9	5.9	3.0
Hotline	8.0	6.0	2.0
Capacity Tuning	7.1	7.1	0.0
On-Site Support	8.3	6.5	1.8
Consultancy/Planning	6.8	5.1	1.7
Remote Diagnostics	5.8	5.9	(0.1)
Software Problem Database	7.0	5.7	1.3
Average	7.9	6.3	1.6

Sample Size: 17

EXHIBIT C-32

Concurrent System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	2.4	83	17
Medium	3.6	70	30
Small	2.8	94	6
Average	3.2	77	23

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

EXHIBIT C-33

Concurrent Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	9.5	8.6	0.9
Medium	9.5	8.9	0.6
Small	9.2	8.4	0.8
Average	9.5	8.7	0.8

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

EXHIBIT C-34

Concurrent Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	3.4	2.5	(0.9)	9.2	3.4	4.4	1.0	9.1	6.8	6.9	0.1
Medium	5.3	6.0	0.7	8.8	5.5	4.5	(1.0)	8.6	10.8	10.5	(0.3)
Small	6.5	8.0	1.5	8.8	4.3	5.7	1.4	8.6	10.8	13.7	2.9
Average	4.9	5.3	0.4	8.9	4.7	4.6	(0.1)	8.8	9.6	9.9	0.3

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-35

Concurrent Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	12.8	19.3	6.5	8.6	4.1	5.5	1.4	8.7	16.9	24.8	7.9
Medium	13.8	17.2	3.4	8.2	7.0	6.3	(0.7)	8.3	20.8	23.5	2.7
Small	8.4	7.3	(1.1)	7.8	3.8	3.0	(0.8)	8.5	12.2	10.3	(1.9)
Average	12.8	16.8	4.0	8.3	5.7	5.7	0.0	8.5	18.5	22.5	4.0

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-36

Concurrent Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	93	-	-	7	-
Medium	94	-	-	6	-
Small	94	6	-	-	-
Average	94	1	-	5	-
Peripherals (Percent)					
Large	82	4	-	11	4
Medium	67	3	6	22	2
Small	75	13	6	6	-
Average	72	5	5	17	2

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-37

Concurrent Software Service Vendor by System Size

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	90	-	3	10	-
Medium	79	5	0	16	2
Small	65	-	6	24	6
Average	80	3	2	16	2

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-38

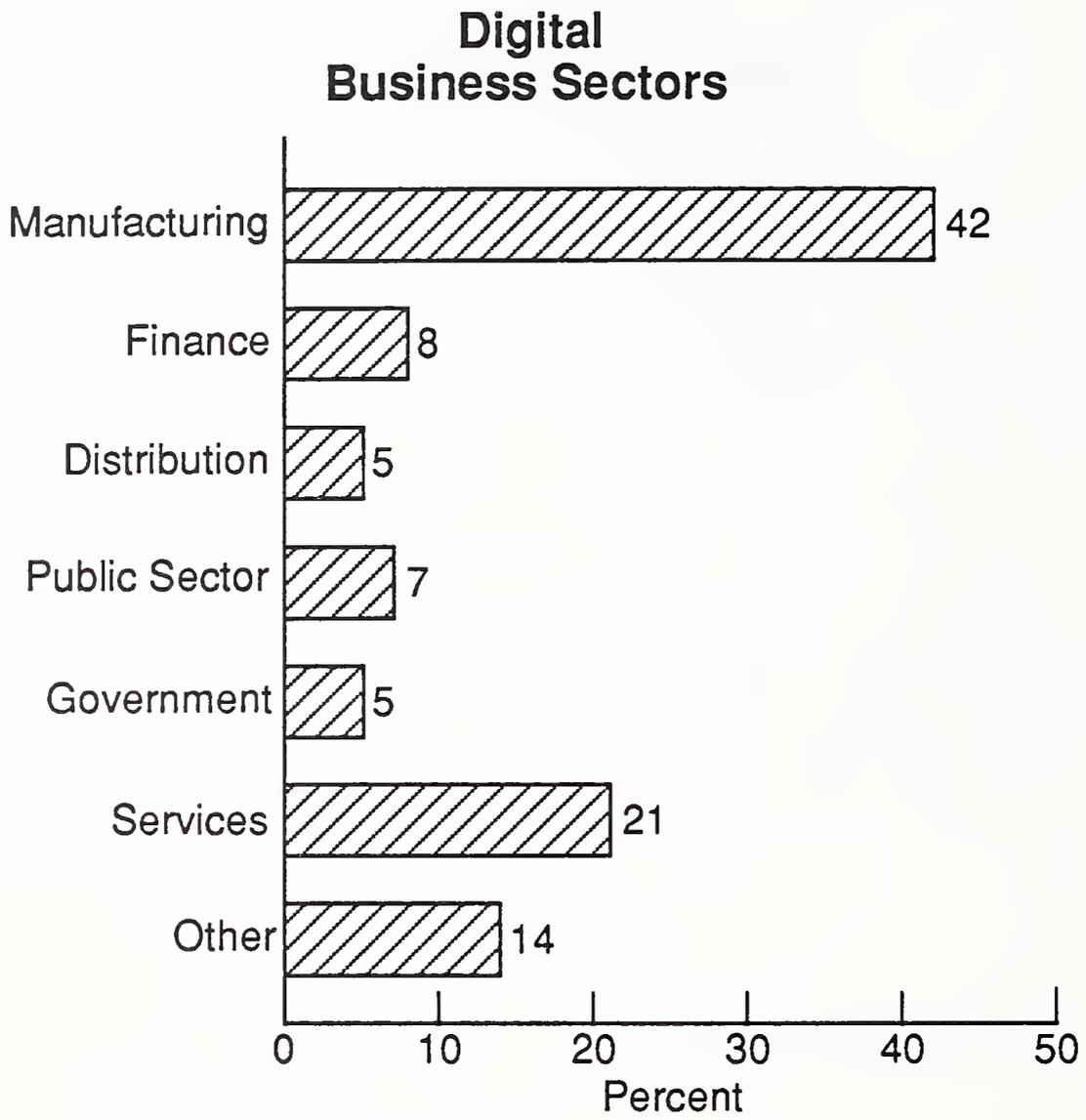
Concurrent Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.4	8.0	1.4	9.8	7.7	2.1
Medium	9.3	8.6	0.7	9.0	8.7	0.3
Small	9.1	8.4	0.7	8.8	7.2	1.6
Average	9.3	8.4	0.9	9.2	8.2	1.0

Sample Sizes: Large Systems = 30
 Medium Systems = 63
 Small Systems = 17
 Total = 110

Imp. = Importance Rating
 Sat. = Satisfaction Rating

EXHIBIT C-39



Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

EXHIBIT C-40

**Digital
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.5	7.9	1.6
Engineer Skills	9.2	8.1	1.1
Problem Escalation	8.3	7.4	0.9
Call Handling	8.5	7.9	0.6
Backup Support	8.5	7.6	0.9
Hardware Training	7.1	7.0	0.1
Telephone Support	7.6	7.0	0.6
Service Administration	7.7	7.2	0.5
Documentation	8.2	7.1	1.1
Consultancy/Planning	6.9	6.3	0.6
Remote Diagnostics	7.3	6.8	0.5
Out-of-Hours Service	6.9	7.2	(0.3)
Average	8.0	7.3	0.7

Sample Size: 54

EXHIBIT C-41

**Digital
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.0	8.1	0.9
Engineer Skills	9.2	8.2	1.0
Problem Escalation	8.2	7.8	0.4
Call Handling	8.1	7.4	0.7
Backup Support	8.5	7.4	1.1
Hardware Training	7.1	6.0	1.1
Telephone Support	7.2	7.3	(0.1)
Service Administration	7.6	7.2	0.4
Documentation	7.6	6.8	0.8
Consultancy/Planning	7.1	6.7	0.4
Remote Diagnostics	7.1	7.0	0.1
Out-of-Hours Service	6.4	6.5	(0.1)
Average	7.7	7.2	0.5

Sample Size: 40

EXHIBIT C-42

**Digital
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.2	7.5	0.7
Engineer Skills	9.1	8.4	0.7
Problem Escalation	6.8	6.9	(0.1)
Call Handling	8.3	7.5	0.8
Backup Support	8.4	8.2	0.2
Hardware Training	6.2	5.9	0.3
Telephone Support	7.1	6.6	0.5
Service Administration	6.8	6.8	0.0
Documentation	7.4	6.6	0.8
Consultancy/Planning	7.2	6.8	0.4
Remote Diagnostics	6.3	6.6	(0.3)
Out-of-Hours Service	5.6	6.0	(0.4)
Average	7.3	7.0	0.3

Sample Size: 40

EXHIBIT C-43

**Digital
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.5	1.5
Telephone Support Fix Speed	8.4	7.2	1.2
Accessibility	8.6	7.1	1.5
Documentation	9.1	7.4	1.7
Software Updates	8.2	7.1	1.1
Software Installation	7.4	7.5	(0.1)
Software Training	7.9	7.3	0.6
Hotline	7.7	6.9	0.8
Capacity Tuning	7.3	6.3	1.0
On-Site Support	6.9	6.6	0.3
Consultancy/Planning	6.5	6.0	0.5
Remote Diagnostics	7.5	7.0	0.5
Software Problem Database	7.4	6.2	1.2
Average	7.9	6.9	1.0

Sample Size: 54

EXHIBIT C-44

**Digital
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.7	1.4
Telephone Support Fix Speed	8.0	6.9	1.1
Accessibility	8.6	6.9	1.7
Documentation	8.4	6.9	1.5
Software Updates	7.8	7.2	0.6
Software Installation	8.4	7.5	0.9
Software Training	8.5	7.3	1.2
Hotline	7.3	6.6	0.7
Capacity Tuning	7.7	6.7	1.0
On-Site Support	7.7	7.0	0.7
Consultancy/Planning	7.6	6.4	1.2
Remote Diagnostics	8.1	6.4	1.7
Software Problem Database	6.7	6.4	0.3
Average	8.0	6.9	1.1

Sample Size: 40

EXHIBIT C-45

**Digital
Software Support Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.7	1.5
Telephone Support Fix Speed	9.1	6.6	2.5
Accessibility	8.0	7.1	0.9
Documentation	7.5	7.0	0.5
Software Updates	7.6	7.5	0.1
Software Installation	7.6	7.0	0.6
Software Training	7.4	6.6	0.8
Hotline	7.7	6.7	1.0
Capacity Tuning	7.0	6.7	0.3
On-Site Support	7.2	6.3	0.9
Consultancy/Planning	6.9	5.9	1.0
Remote Diagnostics	6.7	5.8	0.9
Software Problem Database	6.6	5.3	1.3
Average	7.6	6.7	0.9

Sample Size: 40

EXHIBIT C-46

Digital System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	4.2	73	27
Medium	4.3	58	42
Small	3.0	42	58
Average	3.8	60	40

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

EXHIBIT C-47

Digital Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	9.6	8.8	0.8
Medium	9.2	8.5	0.7
Small	8.7	7.8	0.9
Average	9.2	8.4	0.8

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

EXHIBIT C-48

Digital Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	3.5	3.6	0.1	8.8	3.1	4.8	1.7	9.3	6.6	8.4	1.8
Medium	4.0	3.7	(0.3)	8.5	3.9	3.4	(0.5)	8.7	7.9	7.1	(0.8)
Small	5.4	4.8	(0.6)	7.9	3.9	4.5	0.6	8.3	9.3	9.3	0.0
Average	4.2	4.0	(0.2)	8.4	3.6	4.3	0.7	8.8	7.8	8.3	0.5

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-49

Digital Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	7.0	9.1	2.1	8.3	4.7	6.3	1.6	9.0	11.7	15.4	3.7
Medium	7.3	11.0	3.7	8.6	6.8	6.0	(0.8)	8.6	14.1	17.0	2.9
Small	6.1	8.2	2.1	8.2	4.9	12.2	7.3	7.9	11.0	20.4	9.4
Average	6.8	9.4	2.6	8.3	5.3	8.1	2.8	8.5	12.1	17.5	5.4

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-50

Digital Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	89	2	6	4	-
Medium	78	5	13	5	-
Small	82	8	8	-	3
Average	83	5	8	3	1
Peripherals (Percent)					
Large	72	6	13	6	4
Medium	73	8	15	5	-
Small	66	17	11	3	3
Average	71	9	13	5	2

Sample Sizes: Large Systems = 54
Medium Systems = 40
Small Systems = 40
Total = 134

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-51

Digital Software Service Vendor by System Size

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	66	9	4	21	-
Medium	58	13	5	18	5
Small	38	40	10	10	3
Average	55	20	6	17	2

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-52

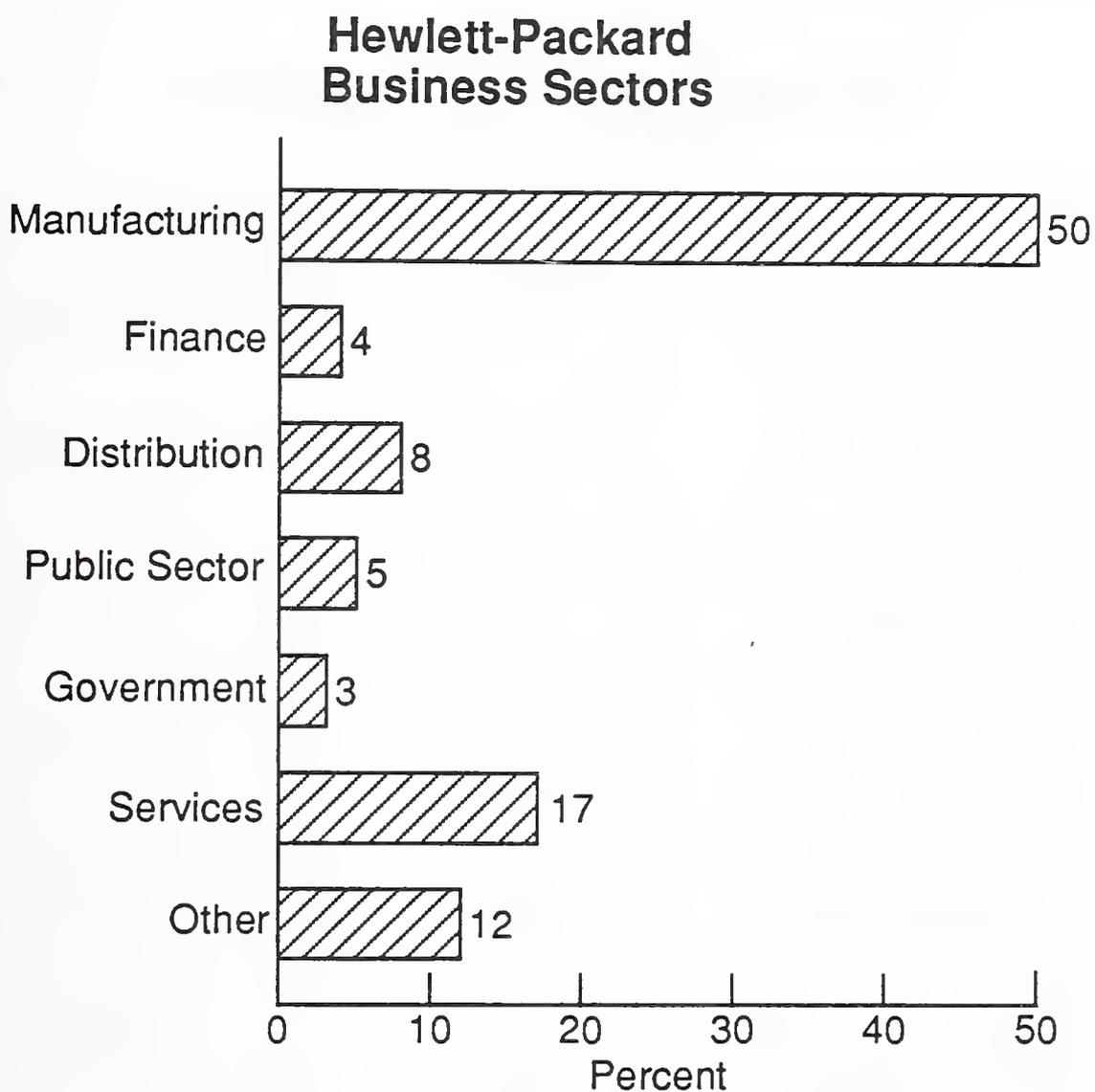
Digital Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.3	8.0	1.3	9.0	7.7	1.3
Medium	8.8	7.8	1.0	8.8	7.9	0.9
Small	8.3	7.5	0.8	8.2	7.1	1.1
Average	8.8	7.8	1.0	8.7	7.6	1.1

Sample Sizes: Large Systems = 54
 Medium Systems = 40
 Small Systems = 40
 Total = 134

Imp. = Importance Rating
 Sat. = Satisfaction Rating

EXHIBIT C-53



Sample Sizes: Large Systems = -
 Medium Systems = 90
 Small Systems = 2
 Total = 92

EXHIBIT C-54

**Hewlett-Packard
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	8.5	0.8
Engineer Skills	9.4	8.7	0.7
Problem Escalation	8.4	7.9	0.5
Call Handling	8.7	7.8	0.9
Backup Support	8.3	7.7	0.6
Hardware Training	7.4	7.2	0.2
Telephone Support	8.2	7.5	0.7
Service Administration	7.8	7.3	0.5
Documentation	8.2	6.9	1.3
Consultancy/Planning	7.2	6.7	0.5
Remote Diagnostics	7.8	7.4	0.4
Out-of-Hours Service	6.9	6.3	0.6
Average	8.1	7.5	0.6

Sample Size: 90

EXHIBIT C-55

Hewlett-Packard Software Support Satisfaction Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.9	1.3
Telephone Support Fix Speed	8.3	7.6	0.7
Accessibility	8.1	7.3	0.8
Documentation	8.5	6.9	1.6
Software Updates	8.3	7.3	1.0
Software Installation	8.5	7.4	1.1
Software Training	8.4	7.2	1.2
Hotline	7.7	6.9	0.8
Capacity Tuning	7.8	7.0	0.8
On-Site Support	7.8	7.3	0.5
Consultancy/Planning	7.1	6.1	1.0
Remote Diagnostics	8.1	7.2	0.9
Software Problem Database	7.4	6.9	0.5
Average	8.1	7.1	1.0

Sample Size: 90

EXHIBIT C-56

Hewlett-Packard System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	-	-	-
Medium	3.7	45	55
Small	-	-	-
Average*	3.8	46	54

Sample Sizes: Medium Systems = 90
 Small Systems = 2
 Total = 92

*Average figures include two small systems.

EXHIBIT C-57

Hewlett-Packard Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	-	-	-
Medium	9.5	8.8	0.7
Small	-	-	-
Average*	9.5	8.8	0.7

Sample Sizes: Medium Systems = 90
 Small Systems = 2
 Total = 92

*Average figures include two small systems.

EXHIBIT C-58

Hewlett-Packard Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	4.6	4.1	(0.5)	8.8	3.7	3.0	(0.7)	8.6	8.3	7.1	(1.2)
Small	-	-	-	-	-	-	-	-	-	-	-
Average*	4.8	4.3	(0.5)	8.8	4.3	4.2	(0.1)	8.7	9.1	8.5	(0.6)

Sample Sizes: Medium Systems = 90

Small Systems = 2

Total = 92

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

*Average figures include 2 small systems.

EXHIBIT C-59

Hewlett-Packard Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	9.7	8.3	(1.4)	8.2	6.1	6.2	0.1	8.3	15.8	14.5	(1.3)
Small	-	-	-	-	-	-	-	-	-	-	-
Average*	9.8	8.4	(1.4)	8.2	6.3	7.5	1.2	8.3	16.1	15.9	(0.2)

Sample Sizes: Medium Systems = 90

Small Systems = 2

Total = 92

Acc. = Acceptable Time

Exp. = Experienced Time

Imp. = Importance Rating

*Average figures include 2 small systems.

EXHIBIT C-60

Hewlett-Packard Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	-	-	-	-	-
Medium	87	6	7	1	-
Small	-	-	-	-	-
Average	87	5	7	1	-
Peripherals (Percent)					
Large	-	-	-	-	-
Medium	83	6	8	2	1
Small	-	-	-	-	-
Average	84	5	8	2	1

Sample Sizes: Medium Systems = 90

Small Systems = 2

Total = 92

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-61

Hewlett-Packard Software Service Vendor by System Size

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	-	-	-	-	-
Medium	69	16	4	11	-
Small	-	-	-	-	-
Average*	69	15	4	11	-

Sample Sizes: Medium Systems = 90

Small Systems = 2

Total = 92

Notes: (i) Percentages Have Been Rounded.

(ii) Multiple Responses Allowed.

*Average figures include 1 small system.

EXHIBIT C-62

Hewlett-Packard Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	-	-	-	-	-	-
Medium	9.1	8.5	0.6	9.1	7.8	1.3
Small	-	-	-	-	-	-
Average*	9.1	8.4	0.7	9.1	7.8	1.3

Sample Sizes: Medium Systems = 90

Small Systems = 2

Total = 92

Imp. = Importance Rating

Sat. = Satisfaction Rating

*Average figures include 2 small systems.

EXHIBIT C-63

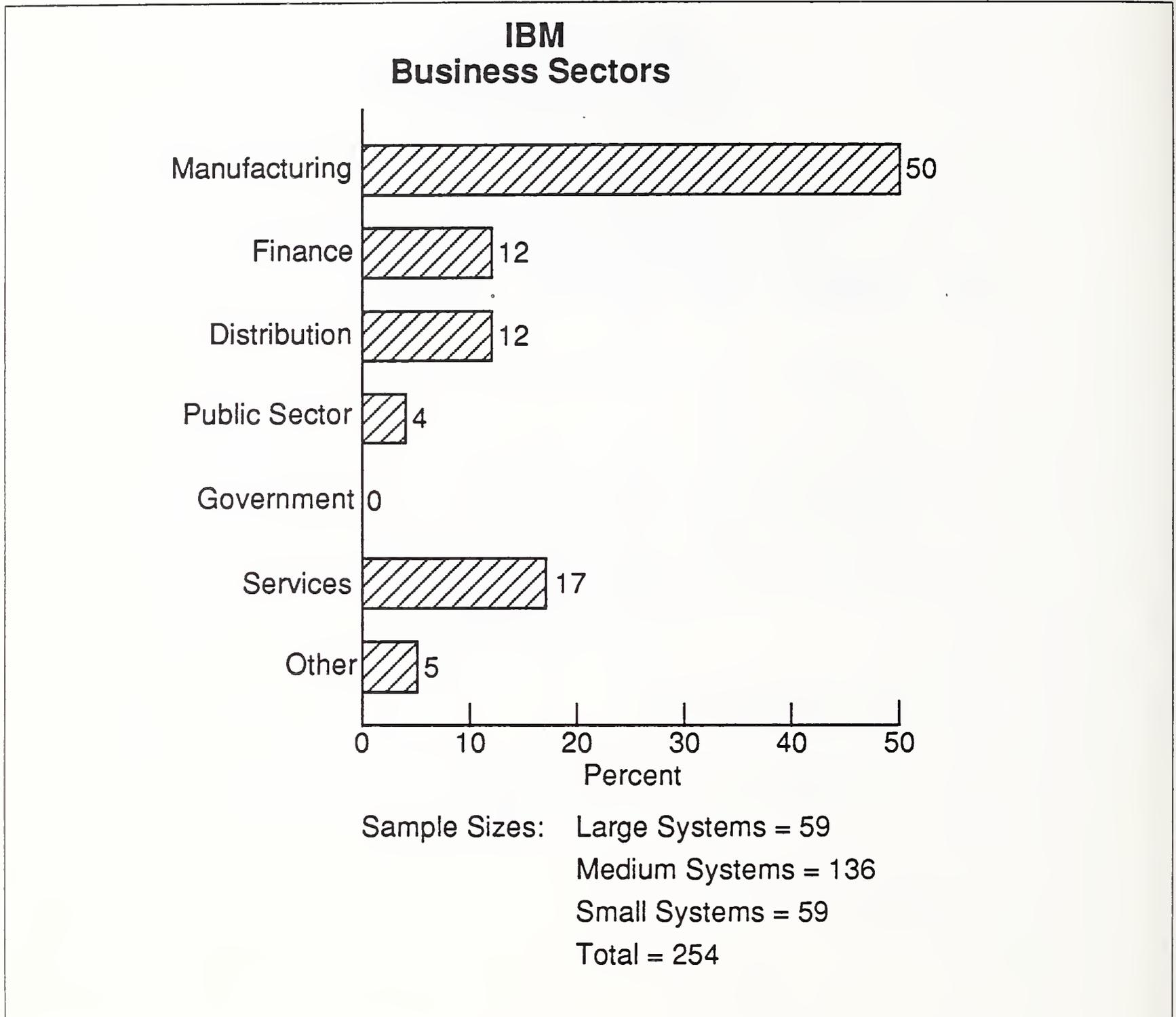


EXHIBIT C-64

IBM
Hardware Service Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	8.0	1.1
Engineer Skills	9.3	8.4	0.9
Problem Escalation	8.4	7.4	1.0
Call Handling	8.9	8.0	0.9
Backup Support	8.5	7.6	0.9
Hardware Training	7.8	7.2	0.6
Telephone Support	7.4	7.0	0.4
Service Administration	8.3	7.6	0.7
Documentation	8.5	7.9	0.6
Consultancy/Planning	7.8	7.3	0.5
Remote Diagnostics	7.6	7.3	0.3
Out-of-Hours Service	8.1	6.9	1.2
Average	8.3	7.6	0.7

Sample Size: 59

EXHIBIT C-65

IBM
Hardware Service Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	8.1	1.1
Engineer Skills	9.4	8.6	0.8
Problem Escalation	8.1	7.4	0.7
Call Handling	8.7	7.7	1.0
Backup Support	8.4	7.4	1.0
Hardware Training	7.7	7.2	0.5
Telephone Support	8.0	6.9	1.1
Service Administration	7.6	7.2	0.4
Documentation	8.1	7.0	1.1
Consultancy/Planning	7.2	6.7	0.5
Remote Diagnostics	6.9	6.0	0.9
Out-of-Hours Service	7.3	6.8	0.5
Average	8.1	7.3	0.8

Sample Size: 136

EXHIBIT C-66

IBM
Hardware Service Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	8.3	0.9
Engineer Skills	9.3	7.8	1.5
Problem Escalation	8.1	7.1	1.0
Call Handling	8.4	7.3	1.1
Backup Support	7.8	6.5	1.3
Hardware Training	7.7	6.9	0.8
Telephone Support	8.1	6.7	1.4
Service Administration	7.5	7.1	0.4
Documentation	7.5	6.7	0.8
Consultancy/Planning	7.3	6.3	1.0
Remote Diagnostics	6.6	5.4	1.2
Out-of-Hours Service	6.2	5.7	0.5
Average	7.8	6.9	0.9

Sample Size: 59

EXHIBIT C-67

IBM
Software Support Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.7	7.5	1.2
Telephone Support Fix Speed	8.3	6.9	1.4
Accessibility	8.2	7.1	1.1
Documentation	8.7	7.5	1.2
Software Updates	8.2	7.5	0.7
Software Installation	8.4	7.3	1.1
Software Training	8.3	7.0	1.3
Hotline	7.8	6.8	1.0
Capacity Tuning	7.9	6.7	1.2
On-Site Support	7.6	6.9	0.7
Consultancy/Planning	7.4	6.4	1.0
Remote Diagnostics	7.4	5.8	1.6
Software Problem Database	8.3	7.0	1.3
Average	8.1	7.0	1.1

Sample Size: 59

EXHIBIT C-68

IBM
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.2	7.9	1.3
Telephone Support Fix Speed	7.8	6.5	1.3
Accessibility	7.8	6.5	1.3
Documentation	8.7	7.2	1.5
Software Updates	8.3	7.5	0.8
Software Installation	8.2	7.5	0.7
Software Training	8.6	7.0	1.6
Hotline	7.9	6.7	1.2
Capacity Tuning	8.1	6.9	1.2
On-Site Support	7.9	6.8	1.1
Consultancy/Planning	7.4	6.5	0.9
Remote Diagnostics	7.1	5.7	1.4
Software Problem Database	7.7	6.8	0.9
Average	8.1	6.9	1.2

Sample Size: 136

EXHIBIT C-69

IBM
Software Support Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.7	1.3
Telephone Support Fix Speed	8.2	6.7	1.5
Accessibility	8.3	6.9	1.4
Documentation	8.2	6.8	1.4
Software Updates	8.0	7.2	0.8
Software Installation	7.9	7.4	0.5
Software Training	8.4	6.7	1.7
Hotline	8.3	6.4	1.9
Capacity Tuning	7.7	6.8	0.9
On-Site Support	7.8	6.6	1.2
Consultancy/Planning	6.9	6.0	0.9
Remote Diagnostics	7.6	6.0	1.6
Software Problem Database	6.9	5.7	1.2
Average	8.0	6.7	1.3

Sample Size: 59

EXHIBIT C-70

**IBM
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	3.7	43	57
Medium	3.3	58	42
Small	2.7	54	46
Average	3.2	53	47

Sample Sizes: Large Systems = 59
 Medium Systems = 136
 Small Systems = 59
 Total = 254

EXHIBIT C-71

**IBM
Satisfaction with System Availability**

System Size	Importance	Satisfaction	ΔSI
Large	9.3	8.5	0.8
Medium	9.3	8.6	0.7
Small	9.1	8.6	0.5
Average	9.3	8.6	0.7

Sample Sizes: Large Systems = 59
 Medium Systems = 136
 Small Systems = 59
 Total = 254

EXHIBIT C-72

IBM Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	1.8	2.2	0.4	8.8	2.1	2.6	0.5	9.0	3.9	4.8	0.9
Medium	2.8	3.7	0.9	8.9	3.6	3.0	(0.6)	8.8	6.4	6.7	0.3
Small	6.0	7.3	1.3	8.8	3.4	2.5	(0.9)	8.7	9.4	9.8	0.4
Average*	3.3	4.2	0.9	8.8	3.2	2.8	(0.4)	8.8	6.5	7.0	0.5

Sample Sizes: Large Systems = 59
 Medium Systems = 136
 Small Systems = 59
 Total = 254

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-73

IBM Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	8.7	7.9	(0.8)	8.3	3.9	4.6	0.7	8.9	12.6	12.5	(0.1)
Medium	9.0	12.1	3.1	8.5	6.0	7.1	1.1	8.7	15.0	19.2	4.2
Small	8.3	10.7	2.4	8.5	4.3	4.0	(0.3)	8.6	12.6	14.7	2.1
Average	8.8	10.6	1.8	8.4	5.1	5.7	0.6	8.7	13.9	16.3	2.4

Sample Sizes: Large Systems = 59
 Medium Systems = 136
 Small Systems = 59
 Total = 254

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-74

IBM Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	90	2	8	-	-
Medium	84	4	10	2	-
Small	69	8	20	2	-
Average	82	5	12	2	-
Peripherals (Percent)					
Large	66	14	14	3	3
Medium	69	9	15	6	1
Small	61	10	25	2	2
Average	66	10	17	4	2

Sample Sizes: Large Systems = 59
Medium Systems = 136
Small Systems = 59
Total = 254

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-75

**IBM
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	69	10	3	17	-
Medium	76	3	6	13	1
Small	54	25	7	12	2
Average	70	10	6	14	1

Sample Sizes: Large Systems = 59
Medium Systems = 163
Small Systems = 59
Total = 254

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-76

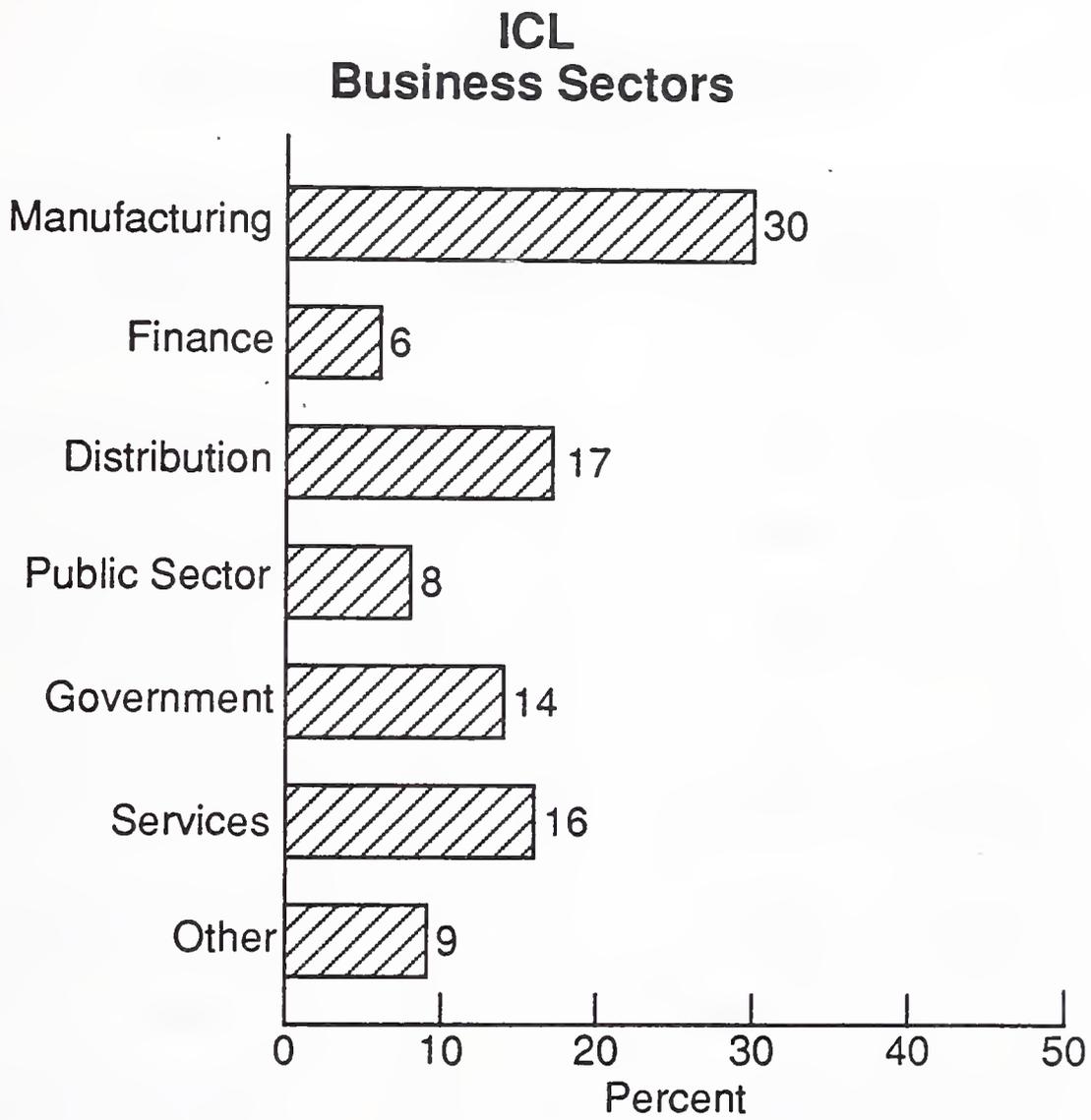
IBM Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.0	8.4	0.6	9.1	7.7	1.4
Medium	9.1	8.3	0.8	9.0	8.0	1.0
Small	8.5	8.2	0.3	9.1	7.6	1.5
Average*	9.0	8.3	0.7	9.0	7.8	1.2

Sample Sizes: Large Systems = 59
Medium Systems = 136
Small Systems = 59
Total = 254

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-77



Sample Sizes: Large Systems = 49
 Medium Systems = 55
 Small Systems = 81
 Total = 185

EXHIBIT C-78

ICL
Hardware Service Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.0	2.1
Engineer Skills	8.8	7.6	1.2
Problem Escalation	8.4	7.5	0.9
Call Handling	8.6	7.4	1.2
Backup Support	8.6	7.5	1.1
Hardware Training	7.6	7.0	0.6
Telephone Support	8.3	7.2	1.1
Service Administration	7.8	7.2	0.6
Documentation	8.4	6.4	2.0
Consultancy/Planning	6.8	6.5	0.3
Remote Diagnostics	8.1	7.4	0.7
Out-of-Hours Service	7.9	7.2	0.7
Average	8.2	7.2	1.0

Sample Size: 49

EXHIBIT C-79

ICL
Hardware Service Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.6	1.5
Engineer Skills	9.1	8.1	1.0
Problem Escalation	8.2	7.0	1.2
Call Handling	8.3	7.2	1.1
Backup Support	8.2	6.9	1.3
Hardware Training	7.7	7.4	0.3
Telephone Support	7.6	6.8	0.8
Service Administration	7.0	6.7	0.3
Documentation	8.3	6.8	1.5
Consultancy/Planning	6.6	6.0	0.6
Remote Diagnostics	7.1	6.8	0.3
Out-of-Hours Service	5.9	5.9	0.0
Average	7.8	7.0	0.8

Sample Size: 55

EXHIBIT C-80

ICL
Hardware Service Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.5	7.5	1.0
Engineer Skills	8.9	8.1	0.8
Problem Escalation	7.7	7.0	0.7
Call Handling	8.2	7.9	0.3
Backup Support	7.5	7.3	0.2
Hardware Training	7.5	7.3	0.2
Telephone Support	7.7	7.3	0.4
Service Administration	7.4	7.4	0.0
Documentation	7.5	6.6	0.9
Consultancy/Planning	6.9	6.7	0.2
Remote Diagnostics	6.8	6.7	0.1
Out-of-Hours Service	7.0	6.8	0.2
Average	7.7	7.3	0.4

Sample Size: 81

EXHIBIT C-81

ICL
Software Support Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.4	7.4	1.0
Telephone Support Fix Speed	7.7	7.0	0.7
Accessibility	7.9	7.0	0.9
Documentation	9.0	7.0	2.0
Software Updates	8.2	7.3	0.9
Software Installation	7.7	7.3	0.4
Software Training	8.2	7.2	1.0
Hotline	7.5	6.9	0.6
Capacity Tuning	7.6	6.3	1.3
On-Site Support	7.0	6.4	0.6
Consultancy/Planning	6.5	6.2	0.3
Remote Diagnostics	8.2	7.3	0.9
Software Problem Database	8.4	7.4	1.0
Average	7.9	7.0	0.9

Sample Size: 49

EXHIBIT C-82

ICL
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.9	7.4	1.5
Telephone Support Fix Speed	7.6	6.4	1.2
Accessibility	8.2	6.2	2.0
Documentation	8.8	6.4	2.4
Software Updates	7.8	6.5	1.3
Software Installation	8.5	6.9	1.6
Software Training	8.2	6.5	1.7
Hotline	7.5	6.0	1.5
Capacity Tuning	6.8	4.9	1.9
On-Site Support	6.4	6.2	0.2
Consultancy/Planning	6.0	5.1	0.9
Remote Diagnostics	7.1	5.8	1.3
Software Problem Database	6.8	6.0	0.8
Average	7.6	6.2	1.4

Sample Size: 55

EXHIBIT C-83

ICL
Software Support Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.7	7.4	1.3
Telephone Support Fix Speed	8.5	7.2	1.3
Accessibility	8.8	6.6	2.2
Documentation	8.1	6.4	1.7
Software Updates	8.4	6.2	2.2
Software Installation	8.5	7.1	1.4
Software Training	8.4	6.7	1.7
Hotline	7.7	6.4	1.3
Capacity Tuning	7.1	6.6	0.5
On-Site Support	7.2	7.0	0.2
Consultancy/Planning	7.2	6.7	0.5
Remote Diagnostics	7.7	6.5	1.2
Software Problem Database	6.8	6.4	0.4
Average	8.0	6.7	1.3

Sample Size: 81

EXHIBIT C-84

**ICL
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	3.0	57	43
Medium	1.9	47	53
Small	2.2	47	53
Average	2.3	50	50

Sample Sizes: Large Systems = 49
 Medium Systems = 55
 Small Systems = 81
 Total = 185

EXHIBIT C-85

**ICL
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	9.4	8.5	0.9
Medium	9.1	8.4	0.7
Small	9.1	8.3	0.8
Average	9.2	8.3	0.9

Sample Sizes: Large Systems = 49
 Medium Systems = 55
 Small Systems = 81
 Total = 185

EXHIBIT C-86

ICL Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	2.4	2.0	(0.4)	8.8	2.3	2.0	(0.3)	9.0	4.7	4.0	(0.7)
Medium	3.9	4.5	0.6	8.9	3.2	3.7	0.5	8.9	7.1	8.2	1.1
Small	6.9	6.9	0.0	8.8	4.2	3.5	(0.7)	8.7	11.1	10.4	(0.7)
Average	4.8	4.8	0.0	8.8	3.4	3.1	(0.3)	8.8	8.2	7.9	0.3

Sample Sizes: Large Systems = 49
 Medium Systems = 55
 Small Systems = 81
 Total = 185

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-87

ICL Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	7.6	9.2	1.6	8.2	2.6	2.5	(0.1)	8.5	10.2	11.7	1.5
Medium	8.9	14.7	5.8	8.6	4.1	5.5	1.4	8.9	13.0	20.2	7.2
Small	10.3	12.9	2.6	8.8	5.9	6.5	0.6	8.3	16.2	19.4	3.2
Average	9.3	12.6	3.3	8.6	4.5	5.2	0.7	8.5	13.8	17.8	4.0

Sample Sizes: Large Systems = 49
 Medium Systems = 55
 Small Systems = 81
 Total = 185

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-88

ICL
Hardware Service Vendor
by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	100	-	-	-	-
Medium	95	2	2	-	2
Small	81	15	2	1	-
Average	90	7	2	1	1
Peripherals (Percent)					
Large	98	-	2	-	-
Medium	95	4	2	-	-
Small	74	16	5	2	2
Average	86	8	3	1	1

Sample Sizes: Large Systems = 49
Medium Systems = 55
Small Systems = 81
Total = 185

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-89

ICL
Software Service Vendor
by System Size

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	82	2	4	12	-
Medium	75	15	2	9	-
Small	39	33	15	13	-
Average	61	19	8	11	-

Sample Sizes: Large Systems = 49
Medium Systems = 55
Small Systems = 81
Total = 185

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-90

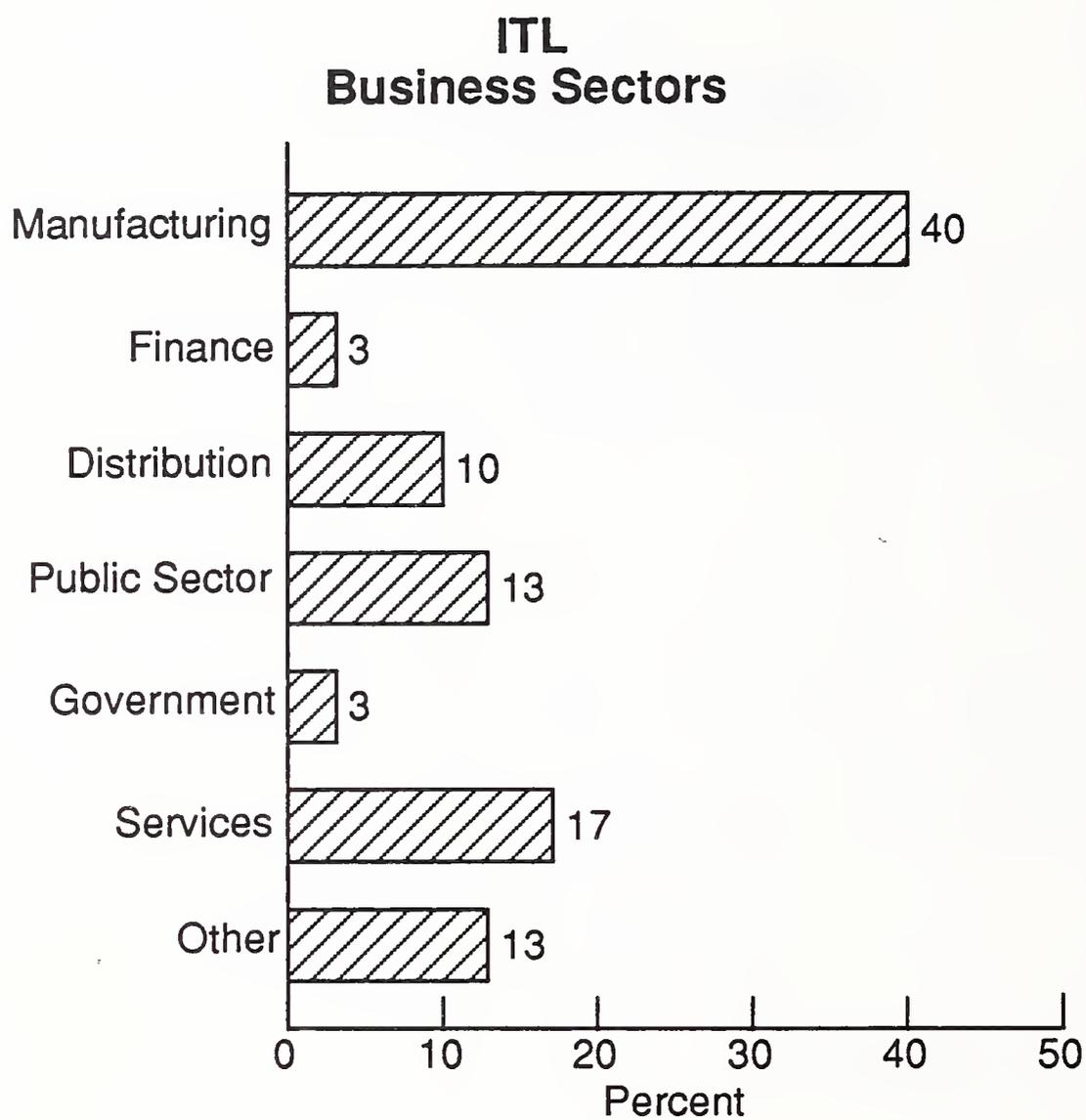
ICL Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.1	8.0	1.1	9.1	7.9	1.2
Medium	9.2	7.8	1.4	9.0	7.2	1.8
Small	8.8	7.7	1.1	8.8	7.2	1.6
Average*	9.0	7.8	1.2	8.9	7.4	1.5

Sample Sizes: Large Systems = 49
Medium Systems = 55
Small Systems = 81
Total = 185

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-91



Sample Sizes: Large Systems = -
 Medium Systems = 30
 Small systems = -
 Total = 30

EXHIBIT C-92

ITL
Hardware Service Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.9	1.2
Engineer Skills	9.4	8.2	1.2
Problem Escalation	8.0	7.0	1.0
Call Handling	8.0	7.3	0.7
Backup Support	7.9	7.0	0.9
Hardware Training	7.0	6.9	0.1
Telephone Support	8.4	7.4	1.0
Service Administration	7.6	7.3	0.3
Documentation	7.6	6.5	1.1
Consultancy/Planning	6.2	5.6	0.6
Remote Diagnostics	5.5	5.1	0.4
Out-of-Hours Service	5.6	4.9	0.7
Average	7.5	6.9	0.6

Sample Size: 30

EXHIBIT C-93

ITL
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.6	1.5
Telephone Support Fix Speed	8.0	7.0	1.0
Accessibility	8.3	7.0	1.3
Documentation	7.5	6.2	1.3
Software Updates	7.6	5.8	1.8
Software Installation	7.8	6.6	1.2
Software Training	7.7	6.0	1.7
Hotline	7.6	7.0	0.6
Capacity Tuning	6.3	5.5	0.8
On-Site Support	7.2	6.0	1.2
Consultancy/Planning	5.5	5.4	0.1
Remote Diagnostics	5.7	5.1	0.6
Software Problem Database	6.4	5.7	0.7
Average	7.3	6.3	1.0

Sample Size: 30

EXHIBIT C-94

**ITL
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	-	-	-
Medium	3.1	50	50
Small	-	-	-
Average	3.1	50	50

Sample Size: 30

EXHIBIT C-95

**ITL
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	-	-	-
Medium	9.3	8.3	1.0
Small	-	-	-
Average	9.3	8.3	1.0

Sample Size: 30

EXHIBIT C-96

ITL
Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	5.8	6.8	1.0	8.5	3.5	2.2	(1.3)	8.5	9.3	9.0	(0.3)
Small	-	-	-	-	-	-	-	-	-	-	-
Average	5.8	6.8	1.0	8.5	3.5	2.2	(1.3)	8.5	9.3	9.0	(0.3)

Sample Size: 30

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-97

ITL
Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	15.0	20.8	5.8	8.0	4.0	10.0	6.0	7.9	19.0	30.8	11.8
Small	-	-	-	-	-	-	-	-	-	-	-
Average	15.0	20.8	5.8	8.0	4.0	10.0	6.0	7.9	19.0	30.8	11.8

Sample Size: 30

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-98

ITL
Hardware Service Vendor
by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	-	-	-	-	-
Medium	100	0	0	0	0
Small	-	-	-	-	-
Average	100	0	0	0	0
Peripherals (Percent)					
Large	-	-	-	-	-
Medium	90	0	7	0	3
Small	-	-	-	-	-
Average	90	0	7	0	3

Sample Size: 30

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-99

**ITL
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	-	-	-	-	-
Medium	80	10	0	7	3
Small	-	-	-	-	-
Average	80	10	0	7	3

Sample Size: 30

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-100

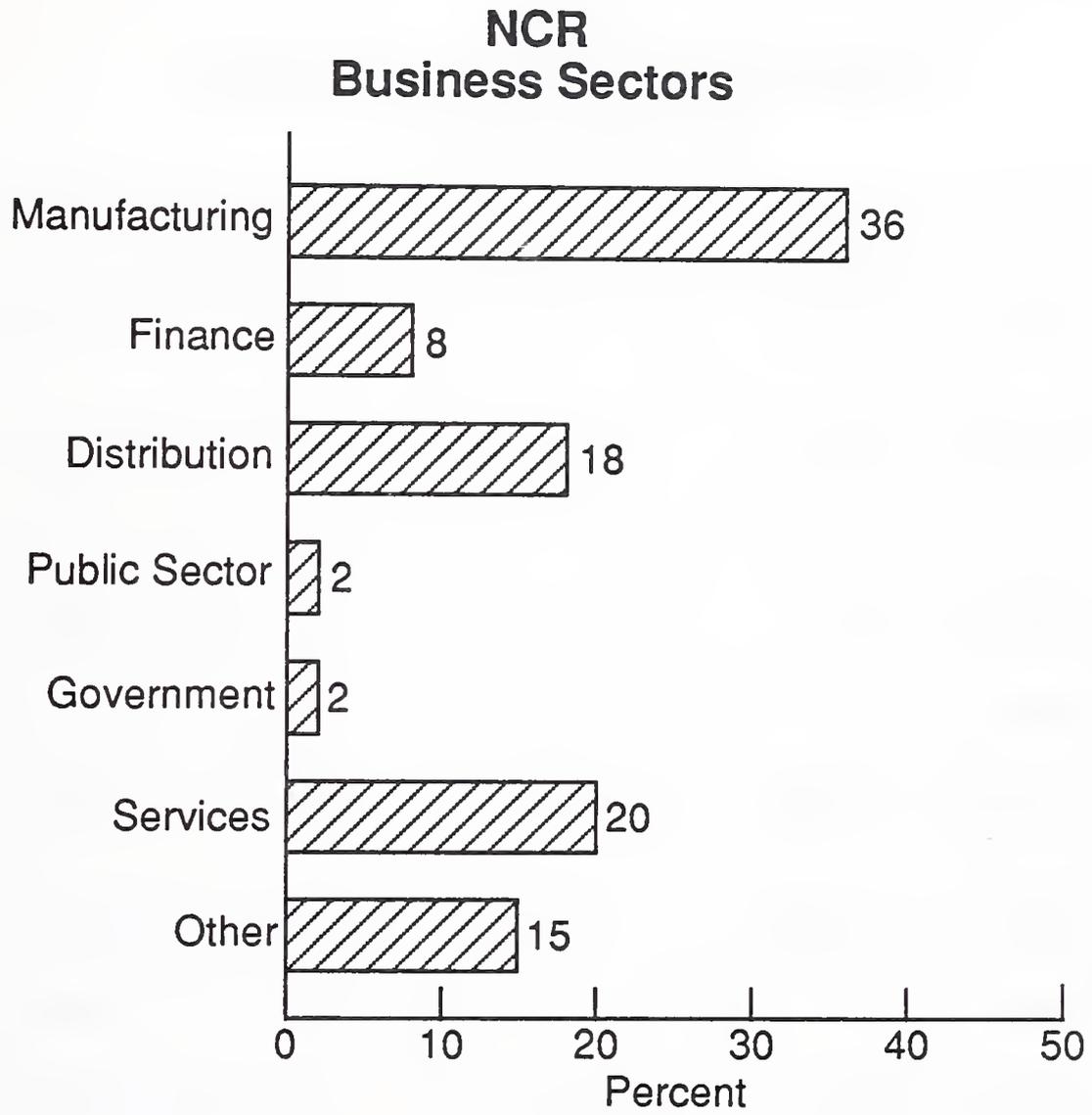
**ITL
Views on Current
Service Performance**

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	-	-	-	-	-	-
Medium	9.4	8.1	1.3	8.8	7.5	1.3
Small	-	-	-	-	-	-
Average	9.4	8.1	1.3	8.8	7.5	1.3

Sample Size: 30

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-101



Sample Sizes: Large Systems = 7
 Medium Systems = 44
 Small Systems = 10
 Total = 61

EXHIBIT C-102

NCR
Hardware Service Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.9	7.6	2.3
Engineer Skills	9.9	7.7	2.2
Problem Escalation	6.8	4.3	2.5
Call Handling	8.7	6.9	1.8
Backup Support	8.3	8.4	(0.1)
Hardware Training	5.2	7.4	(2.2)
Telephone Support	6.9	7.4	(0.5)
Service Administration	7.4	8.4	(1.0)
Documentation	8.3	7.7	0.6
Consultancy/Planning	7.7	7.8	(0.1)
Remote Diagnostics	5.0	6.3	(1.3)
Out-of-Hours Service	7.0	6.5	0.5
Average	7.7	7.2	0.5

Sample Size: 7

EXHIBIT C-103

NCR
Hardware Service Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.4	7.6	1.8
Engineer Skill's	9.5	8.0	1.5
Problem Escalation	7.5	6.5	1.0
Call Handling	8.3	7.1	1.2
Backup Support	8.1	7.2	0.9
Hardware Training	7.5	6.7	0.8
Telephone Support	7.9	7.0	0.9
Service Administration	7.6	7.2	0.4
Documentation	8.6	6.1	2.5
Consultancy/Planning	7.2	6.5	0.7
Remote Diagnostics	6.9	6.6	0.3
Out-of-Hours Service	5.8	4.5	1.3
Average	7.9	6.8	1.1

Sample Size: 44

EXHIBIT C-104

NCR
Hardware Service Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.5	8.4	0.1
Engineer Skills	9.0	8.4	0.6
Problem Escalation	7.4	6.7	0.7
Call Handling	7.9	7.6	0.3
Backup Support	7.9	7.9	0.0
Hardware Training	5.9	6.7	(0.8)
Telephone Support	7.4	8.1	(0.7)
Service Administration	6.1	7.1	(1.0)
Documentation	8.2	6.7	1.5
Consultancy/Planning	7.7	6.9	0.8
Remote Diagnostics	6.3	6.0	0.3
Out-of-Hours Service	4.9	4.4	0.5
Average	7.3	7.3	0.0

Sample Size: 10

EXHIBIT C-105

NCR
Software Support Satisfaction
Large Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.3	7.6	1.7
Telephone Support Fix Speed	8.9	7.6	1.3
Accessibility	8.9	7.6	1.3
Documentation	9.9	8.6	1.3
Software Updates	7.6	8.0	(0.4)
Software Installation	4.6	6.0	(1.4)
Software Training	8.1	7.7	0.4
Hotline	7.6	9.3	(1.7)
Capacity Tuning	6.4	6.1	0.3
On-Site Support	6.7	6.6	0.1
Consultancy/Planning	6.7	6.3	0.4
Remote Diagnostics	5.2	7.2	(2.0)
Software Problem Database	7.9	5.4	2.5
Average	7.5	7.2	0.3

Sample Size: 7

EXHIBIT C-106

NCR
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.4	7.9	1.5
Telephone Support Fix Speed	8.4	6.6	1.8
Accessibility	8.5	6.9	1.6
Documentation	9.1	6.3	2.8
Software Updates	8.3	7.0	1.3
Software Installation	8.2	7.0	1.2
Software Training	8.5	7.0	1.5
Hotline	8.4	6.8	1.6
Capacity Tuning	7.3	6.2	1.1
On-Site Support	8.0	6.9	1.1
Consultancy/Planning	6.9	5.7	1.2
Remote Diagnostics	7.7	6.5	1.2
Software Problem Database	7.2	5.5	1.7
Average	8.2	6.7	1.5

Sample Size: 44

EXHIBIT C-107

NCR
Software Support Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.8	8.0	0.8
Telephone Support Fix Speed	8.7	7.0	1.7
Accessibility	7.9	6.4	1.5
Documentation	8.9	7.0	1.9
Software Updates	8.8	7.7	1.1
Software Installation	7.8	6.6	1.2
Software Training	8.3	6.0	2.3
Hotline	7.9	6.7	1.2
Capacity Tuning	6.7	5.7	1.0
On-Site Support	6.3	4.9	1.4
Consultancy/Planning	5.1	5.6	(0.5)
Remote Diagnostics	6.9	6.4	0.5
Software Problem Database	5.7	6.3	(0.6)
Average	7.5	6.5	1.0

Sample Size: 10

EXHIBIT C-108

**NCR
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	7.6	40	60
Medium	4.2	66	34
Small	3.1	48	52
Average*	4.4	61	39

Sample Sizes: Large Systems = 7
 Medium Systems = 44
 Small Systems = 10
 Total = 61

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-109

**NCR
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	9.3	7.7	1.6
Medium	9.5	8.3	1.2
Small	9.3	8.3	1.0
Average*	9.5	8.2	1.3

Sample Sizes: Large Systems = 7
 Medium Systems = 44
 Small Systems = 10
 Total = 61

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-110

NCR Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	2.0	4.8	2.8	7.6	1.3	8.0	6.7	8.4	3.3	12.8	9.5
Medium	3.0	4.1	1.1	8.8	3.3	4.3	1.0	8.5	6.3	8.4	2.1
Small	4.3	4.9	0.6	8.7	3.1	2.2	(0.9)	8.3	7.4	7.1	(0.3)
Average*	3.1	4.3	1.2	8.6	3.0	4.4	1.4	8.5	6.1	8.7	2.6

Sample Sizes: Large Systems = 7
Medium Systems = 44
Small Systems = 10
Total = 61

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-111

NCR Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	12.8	14.6	1.8	8.5	2.2	8.0	5.8	8.3	15.0	22.6	7.6
Medium	8.9	13.2	4.3	8.3	4.0	9.7	5.7	8.5	12.9	22.9	10.0
Small	8.7	5.9	(2.8)	8.3	4.0	3.5	(0.5)	7.8	12.7	9.4	(3.3)
Average*	9.3	11.8	2.5	8.3	3.8	8.4	4.6	8.4	13.1	20.2	7.1

Sample Sizes: Large Systems = 7
 Medium Systems = 44
 Small Systems = 10
 Total = 61

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-112

NCR
Hardware Service Vendor
by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	100	-	-	-	-
Medium	98	-	2	-	-
Small	100	-	-	-	-
Average	98	-	2	-	-
Peripherals (Percent)					
Large	86	-	-	14	-
Medium	95	-	5	-	-
Small	90	-	10	-	-
Average*	93	-	5	2	-

Sample Sizes: Large Systems = 7
Medium Systems = 44
Small Systems = 10
Total = 61

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-113

**NCR
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	100	-	-	-	-
Medium	75	16	2	7	-
Small	50	20	-	20	10
Average*	74	15	2	8	2

Sample Sizes: Large Systems = 7
 Medium Systems = 44
 Small Systems = 10
 Total = 61

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-114

NCR
Views on Current
Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.6	8.0	1.6	9.7	6.6	3.1
Medium	8.8	7.9	0.9	9.0	6.8	2.2
Small	9.0	7.7	1.3	8.9	7.7	1.2
Average*	8.9	7.9	1.0	9.0	6.9	2.1

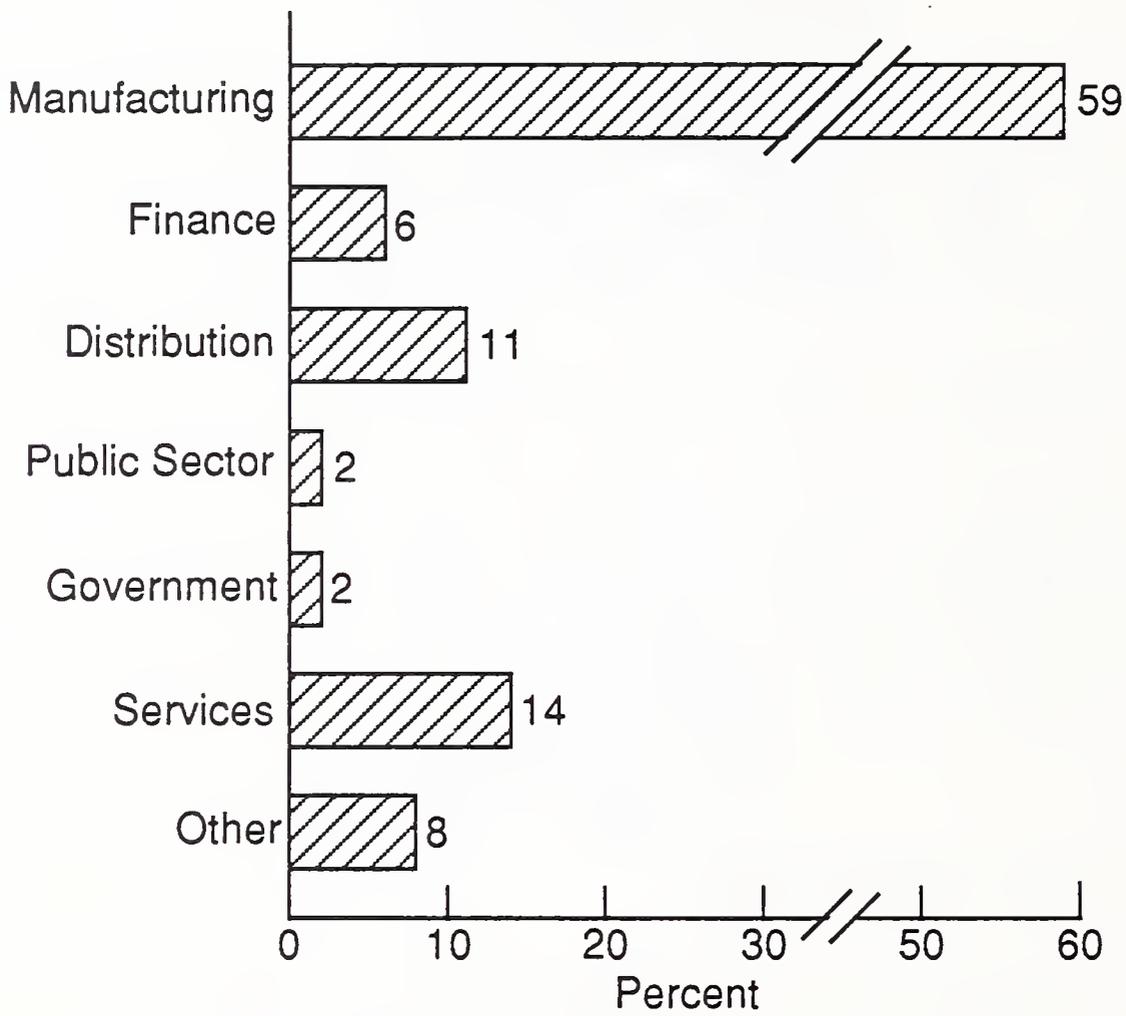
Sample Sizes: Large Systems = 7
Medium Systems = 44
Small Systems = 10
Total = 61

Imp. = Importance Rating
Sat. = Satisfaction Rating

*Average figures include 7 large systems and 10 small systems.

EXHIBIT C-115

Nixdorf Business Sectors



Sample Sizes: Large Systems = -
 Medium Systems = 59
 Small Systems = 7
 Total = 66

EXHIBIT C-116

**Nixdorf
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.6	1.5
Engineer Skills	9.3	8.1	1.2
Problem Escalation	7.7	6.7	1.0
Call Handling	8.6	7.0	1.6
Backup Support	8.7	7.5	1.2
Hardware Training	7.3	6.4	0.9
Telephone Support	8.5	7.7	0.8
Service Administration	8.1	7.4	0.7
Documentation	7.9	6.3	1.6
Consultancy/Planning	7.0	6.6	0.4
Remote Diagnostics	8.2	7.4	0.8
Out-of-Hours Service	6.0	5.0	1.0
Average	8.0	7.0	1.0

Sample Size: 59

EXHIBIT C-117

**Nixdorf
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.4	9.3	0.1
Engineer Skills	9.7	8.9	0.8
Problem Escalation	8.7	10.0	(1.3)
Call Handling	9.7	8.4	1.3
Backup Support	9.0	8.0	1.0
Hardware Training	7.7	7.2	0.5
Telephone Support	9.6	8.3	1.3
Service Administration	8.7	7.5	1.2
Documentation	5.5	5.0	0.5
Consultancy/Planning	6.2	4.8	1.4
Remote Diagnostics	9.0	8.4	0.6
Out-of-Hours Service	5.3	5.5	(0.2)
Average	8.3	7.6	0.7

Sample Size: 7

EXHIBIT C-118

**Nixdorf
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.4	1.7
Telephone Support Fix Speed	8.4	7.2	1.2
Accessibility	8.8	7.2	1.6
Documentation	8.4	6.2	2.2
Software Updates	8.2	6.5	1.7
Software Installation	7.9	6.8	1.1
Software Training	8.1	6.9	1.2
Hotline	8.2	6.8	1.4
Capacity Tuning	7.3	6.4	0.9
On-Site Support	7.2	6.4	0.8
Consultancy/Planning	7.1	5.8	1.3
Remote Diagnostics	8.2	7.1	1.1
Software Problem Database	7.1	6.3	0.8
Average	8.0	6.7	1.3

Sample Size: 59

EXHIBIT C-119

**Nixdorf
Software Support Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	10.0	8.3	1.7
Telephone Support Fix Speed	10.0	7.7	2.3
Accessibility	10.0	7.0	3.0
Documentation	5.3	5.4	(0.1)
Software Updates	9.2	4.2	5.0
Software Installation	10.0	6.8	3.2
Software Training	9.7	7.8	1.9
Hotline	8.0	7.4	0.6
Capacity Tuning	10.0	7.8	2.2
On-Site Support	9.7	7.7	2.0
Consultancy/Planning	7.6	6.3	1.3
Remote Diagnostics	8.3	7.1	1.2
Software Problem Database	5.2	5.4	(0.2)
Average	8.7	6.9	1.8

Sample Size: 7

EXHIBIT C-120

Nixdorf System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	-	-	-
Medium	5.9	50	50
Small	8.8	27	73
Average*	6.2	46	54

Sample Sizes: Large = -
 Medium = 59
 Small = 7
 Total = 66

*Average figures include 7 small systems.

EXHIBIT C-121

Nixdorf Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	-	-	-
Medium	9.2	8.1	1.1
Small	10.0	9.0	1.0
Average*	9.3	8.2	1.1

Sample Sizes: Large Systems = -
 Medium Systems = 59
 Small Systems = 7
 Total = 66

*Average figures include 7 small systems.

EXHIBIT C-122

Nixdorf Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	4.2	7.0	2.8	9.0	3.8	3.2	(0.6)	8.5	8.0	10.2	2.2
Small	5.4	5.5	0.1	9.7	3.3	2.0	(1.3)	8.7	8.7	7.5	(1.2)
Average*	4.3	6.8	2.5	9.1	3.7	3.1	(0.6)	8.5	8.0	9.9	1.9

Sample Sizes: Large Systems = -
Medium Systems = 59
Small Systems = 7
Total = 66

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

*Average figures include 7 small systems.

EXHIBIT C-123

Nixdorf Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	6.2	6.2	0.0	8.9	3.8	4.6	0.8	8.5	10.0	10.8	0.8
Small	11.0	18.7	7.7	10.0	6.6	9.8	3.2	10.0	17.6	28.5	10.9
Average*	6.8	7.5	0.7	9.0	4.1	5.1	1.0	8.7	10.9	12.6	1.7

Sample Sizes: Large Systems = -
 Medium Systems = 59
 Small Systems = 7
 Total = 66

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

*Average figures include 7 small systems.

EXHIBIT C-124

**Nixdorf
Hardware Service Vendor
by System Size**

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	-	-	-	-	-
Medium	97	2	-	2	-
Small	100	-	-	-	-
Average	97	2	-	2	-
Peripherals (Percent)					
Large	-	-	-	-	-
Medium	97	2	-	2	-
Small	100	-	-	-	-
Average*	97	2	-	2	-

Sample Sizes: Large Systems = --
 Medium Systems = 59
 Small Systems = 7
 Total = 66

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

*Average figures include 7 small systems.

EXHIBIT C-125

**Nixdorf
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	-	-	-	-	-
Medium	90	7	2	2	-
Small	71	29	-	-	-
Average*	88	9	2	2	-

Sample Sizes: Large Systems = --
 Medium Systems = 59
 Small Systems = 7
 Total = 66

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

*Average figures include 7 small systems.

EXHIBIT C-126

**Nixdorf
Views on Current
Service Performance**

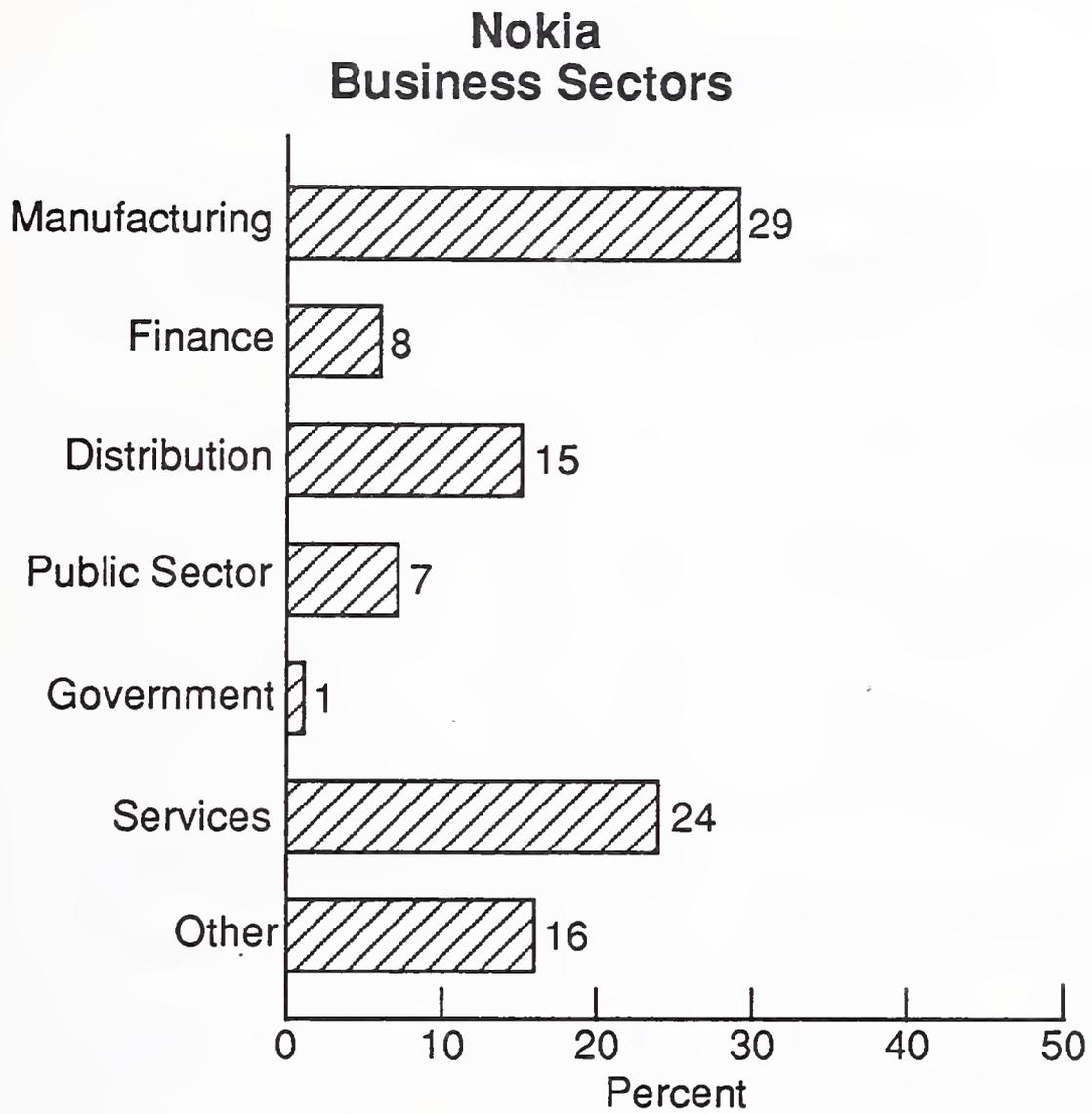
System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	-	-	-	-	-	-
Medium	9.1	7.4	1.7	9.0	7.5	1.5
Small	7.9	8.6	(0.7)	10.0	7.2	2.8
Average*	9.0	7.5	1.5	9.1	7.5	1.6

Sample Sizes: Large Systems = --
 Medium Systems = 59
 Small Systems = 7
 Total = 66

Imp. = Importance Rating
 Sat. = Satisfaction Rating

*Average figures include 7 small systems.

EXHIBIT C-127



Sample Sizes: Large Systems = --
 Medium Systems = --
 Small Systems = 77
 Total = 77

EXHIBIT C-128

Nokia
Hardware Service Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.9	7.7	1.2
Engineer Skills	9.2	7.8	1.4
Problem Escalation	7.8	6.9	0.9
Call Handling	8.4	7.5	0.9
Backup Support	8.7	7.7	1.0
Hardware Training	7.2	6.1	1.1
Telephone Support	8.2	7.3	0.9
Service Administration	7.9	6.9	1.0
Documentation	7.5	6.1	1.4
Consultancy/Planning	7.1	6.7	0.4
Remote Diagnostics	6.8	6.1	0.7
Out-of-Hours Service	7.5	6.7	0.8
Average	8.0	7.0	1.0

Sample Size: 77

EXHIBIT C-129

Nokia
Software Support Satisfaction
Small Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.8	1.3
Telephone Support Fix Speed	8.1	7.3	0.8
Accessibility	8.2	7.2	1.0
Documentation	8.1	6.5	1.6
Software Updates	8.3	6.6	1.7
Software Installation	8.6	7.6	1.0
Software Training	8.0	6.6	1.4
Hotline	8.0	7.2	0.8
Capacity Tuning	7.8	6.3	1.5
On-Site Support	7.9	7.1	0.8
Consultancy/Planning	7.7	6.7	1.0
Remote Diagnostics	7.1	6.7	0.4
Software Problem Database	7.4	5.9	1.5
Average	8.1	6.9	1.2

Sample Size: 77

EXHIBIT C-130

**Nokia
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	-	-	-
Medium	-	-	-
Small	5.2	71	29
Average	5.2	71	29

Sample Size: 77

EXHIBIT C-131

**Nokia
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	-	-	-
Medium	-	-	-
Small	9.4	8.0	1.4
Average	9.4	8.0	1.4

Sample Size: 77

EXHIBIT C-132

Nokia
Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	3.5	4.0	0.5	8.9	2.5	2.9	0.4	8.9	6.0	6.9	0.9
Average	3.5	4.0	0.5	8.9	2.5	2.9	0.4	8.9	6.0	6.9	0.9

Sample Size: 77

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-133

Nokia
Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	7.3	7.2	(0.1)	8.8	3.5	5.2	1.7	8.8	10.8	12.4	1.6
Average	7.3	7.2	(0.1)	8.8	3.5	5.2	1.7	8.8	10.8	12.4	1.6

Sample Size: 77

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-134

Nokia Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	-	-	-	-	-
Medium	-	-	-	-	-
Small	95	3	1	-	1
Average	95	3	1	-	1
Peripherals (Percent)					
Large	-	-	-	-	-
Medium	-	-	-	-	-
Small	91	4	3	1	1
Average	91	4	3	1	1

Sample Size: 77

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-135

**Nokia
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	-	-	-	-	-
Medium	-	-	-	-	-
Small	88	4	-	11	-
Average	88	4	-	11	-

Sample Size: 77

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-136

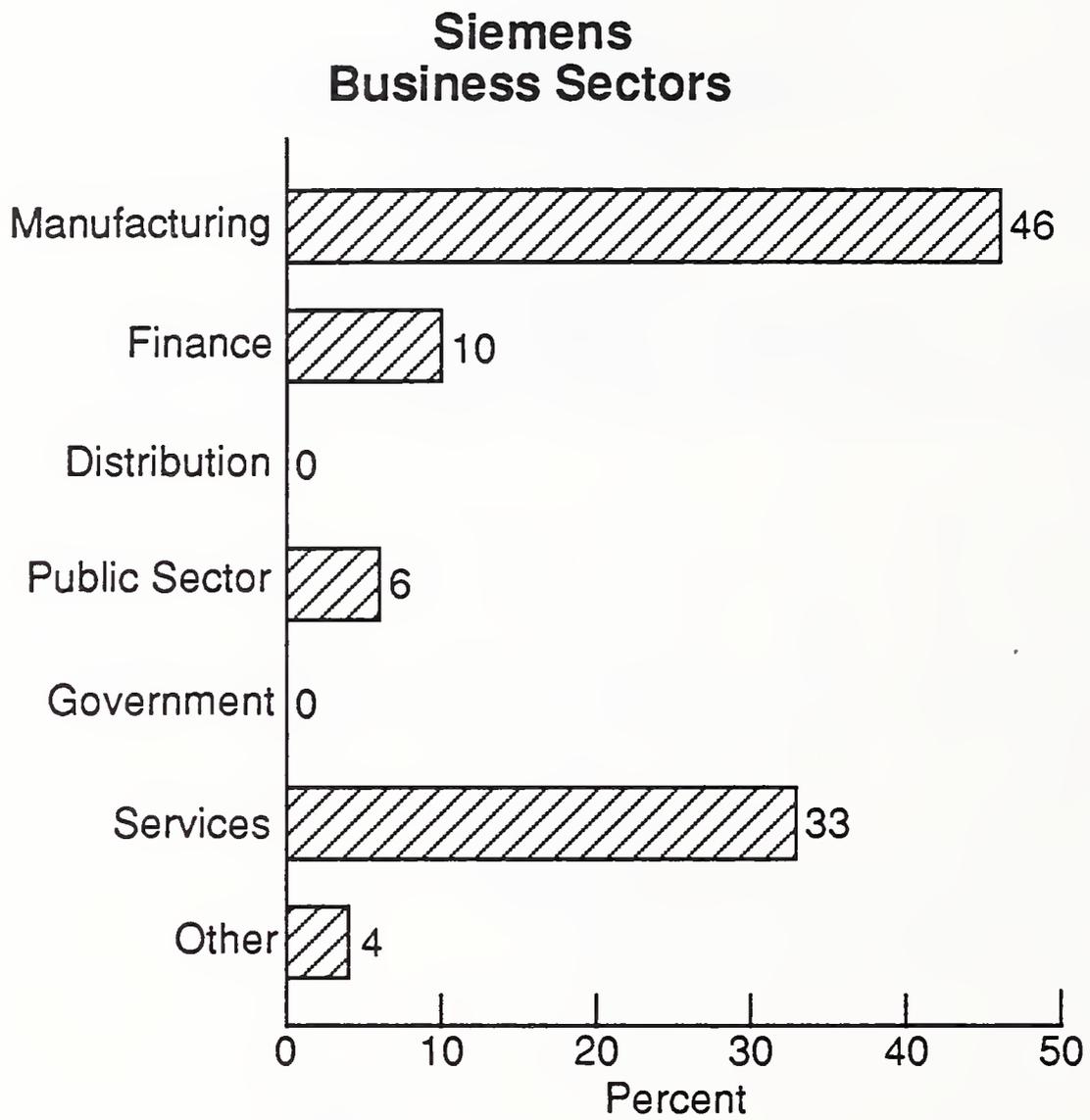
**Nokia
Views on Current
Service Performance**

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	-	-	-	-	-	-
Medium	-	-	-	-	-	-
Small	9.0	7.8	1.2	9.2	7.8	1.4
Average	9.0	7.8	1.2	9.2	7.8	1.4

Sample Size: 77

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-137



Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

EXHIBIT C-138

**Siemens
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	8.4	0.9
Engineer Skills	9.5	8.6	0.9
Problem Escalation	8.3	8.1	0.2
Call Handling	9.0	8.3	0.7
Backup Support	8.6	8.1	0.5
Hardware Training	6.7	6.8	(0.1)
Telephone Support	8.3	7.3	1.0
Service Administration	8.7	7.8	0.9
Documentation	8.1	7.3	0.8
Consultancy/Planning	8.3	7.1	1.2
Remote Diagnostics	8.1	7.7	0.4
Out-of-Hours Service	8.4	8.1	0.3
Average	8.4	7.8	0.6

Sample Size: 16

EXHIBIT C-139

**Siemens
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	8.3	0.9
Engineer Skills	8.9	8.5	0.4
Problem Escalation	8.2	8.2	0.0
Call Handling	8.6	8.2	0.4
Backup Support	8.5	8.7	(0.2)
Hardware Training	7.8	7.9	(0.1)
Telephone Support	7.8	7.8	0.0
Service Administration	8.1	8.1	0.0
Documentation	7.8	6.9	0.9
Consultancy/Planning	8.3	7.9	0.4
Remote Diagnostics	8.7	8.3	0.4
Out-of-Hours Service	8.2	7.8	0.4
Average	8.3	8.0	0.3

Sample Size: 24

EXHIBIT C-140

**Siemens
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.2	7.8	1.4
Engineer Skills	9.7	8.6	1.1
Problem Escalation	7.8	6.9	0.9
Call Handling	8.3	7.7	0.6
Backup Support	9.0	8.2	0.8
Hardware Training	6.6	6.7	(0.1)
Telephone Support	7.9	7.7	0.2
Service Administration	8.2	7.0	1.2
Documentation	8.1	6.0	2.1
Consultancy/Planning	6.7	7.3	(0.6)
Remote Diagnostics	6.2	3.9	2.3
Out-of-Hours Service	6.0	5.9	0.1
Average	7.8	7.0	0.8

Sample Size: 9

EXHIBIT C-141

**Siemens
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.3	8.1	1.2
Telephone Support Fix Speed	8.1	7.3	0.8
Accessibility	8.5	7.9	0.6
Documentation	9.1	7.6	1.5
Software Updates	8.1	7.8	0.3
Software Installation	7.4	7.5	(0.1)
Software Training	7.6	7.1	0.5
Hotline	8.9	7.6	1.3
Capacity Tuning	8.5	7.6	0.9
On-Site Support	8.5	8.1	0.4
Consultancy/Planning	8.1	7.4	0.7
Remote Diagnostics	7.8	7.4	0.4
Software Problem Database	6.8	6.0	0.8
Average	8.2	7.5	0.7

Sample Size: 16

EXHIBIT C-142

**Siemens
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.8	8.6	0.2
Telephone Support Fix Speed	8.4	7.4	1.0
Accessibility	8.1	7.5	0.6
Documentation	8.9	7.5	1.4
Software Updates	8.3	8.0	0.3
Software Installation	8.0	7.6	0.4
Software Training	8.6	7.3	1.3
Hotline	8.3	7.5	0.8
Capacity Tuning	8.1	7.5	0.6
On-Site Support	9.0	8.0	1.0
Consultancy/Planning	8.5	7.6	0.9
Remote Diagnostics	7.5	6.9	0.6
Software Problem Database	7.8	6.9	0.9
Average	8.3	7.6	0.7

Sample Size: 24

EXHIBIT C-143

**Siemens
Software Support Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.6	7.7	0.9
Telephone Support Fix Speed	7.9	6.9	1.0
Accessibility	8.3	6.6	1.7
Documentation	8.6	7.2	1.4
Software Updates	8.7	7.3	1.4
Software Installation	8.1	8.2	(0.1)
Software Training	7.8	6.8	1.0
Hotline	7.8	7.6	0.2
Capacity Tuning	7.7	7.6	0.1
On-Site Support	6.3	6.7	(0.4)
Consultancy/Planning	7.8	7.9	(0.1)
Remote Diagnostics	6.4	7.0	(0.6)
Software Problem Database	6.1	5.5	0.6
Average	7.7	7.2	0.5

Sample Size: 9

EXHIBIT C-144

Siemens System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	8.3	50	50
Medium	2.1	45	55
Small	6.4	52	48
Average	5.0	48	52

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

EXHIBIT C-145

Siemens Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	9.6	8.8	0.8
Medium	9.4	8.3	1.1
Small	9.2	8.0	1.2
Average	9.4	8.4	1.0

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

EXHIBIT C-146

Siemens Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	3.2	6.0	2.8	8.5	3.4	3.5	0.1	9.3	6.6	9.5	2.9
Medium	2.2	2.5	0.3	8.6	2.7	4.8	2.1	8.4	4.9	7.3	2.4
Small	3.2	3.2	0.0	8.0	2.3	2.9	0.6	8.9	5.5	6.1	0.6
Average	2.7	3.8	1.1	8.5	2.9	4.0	1.1	8.8	5.6	7.8	2.2

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-147

Siemens Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	5.0	3.3	(1.7)	8.9	9.6	10.1	0.5	9.1	14.6	13.4	(1.2)
Medium	8.3	9.0	0.7	9.1	4.7	3.3	(1.4)	9.1	13.0	12.3	(0.7)
Small	2.7	3.0	0.3	8.6	2.5	2.6	0.1	8.4	5.2	5.6	0.4
Average	6.4	6.2	(0.2)	8.9	5.8	5.1	(0.7)	8.9	12.2	11.3	(0.9)

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-148

Siemens Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	100	-	-	-	-
Medium	96	-	-	4	-
Small	100	-	-	-	-
Average	98	-	-	2	-
Peripherals (Percent)					
Large	94	6	-	-	-
Medium	91	4	-	-	4
Small	75	13	-	13	-
Average	89	6	-	2	2

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-149

**Siemens
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	94	6	-	-	-
Medium	96	4	-	-	-
Small	88	13	-	-	-
Average	94	6	-	-	-

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-150

Siemens Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.3	8.7	0.6	9.8	8.5	1.3
Medium	8.7	8.0	0.7	9.5	8.3	1.2
Small	8.7	8.0	0.7	9.5	7.6	1.9
Average	8.9	8.2	0.7	9.6	8.3	1.3

Sample Sizes: Large Systems = 16
 Medium Systems = 24
 Small Systems = 9
 Total = 49

Imp. = Importance Rating
 Sat. = Satisfaction Rating

EXHIBIT C-151

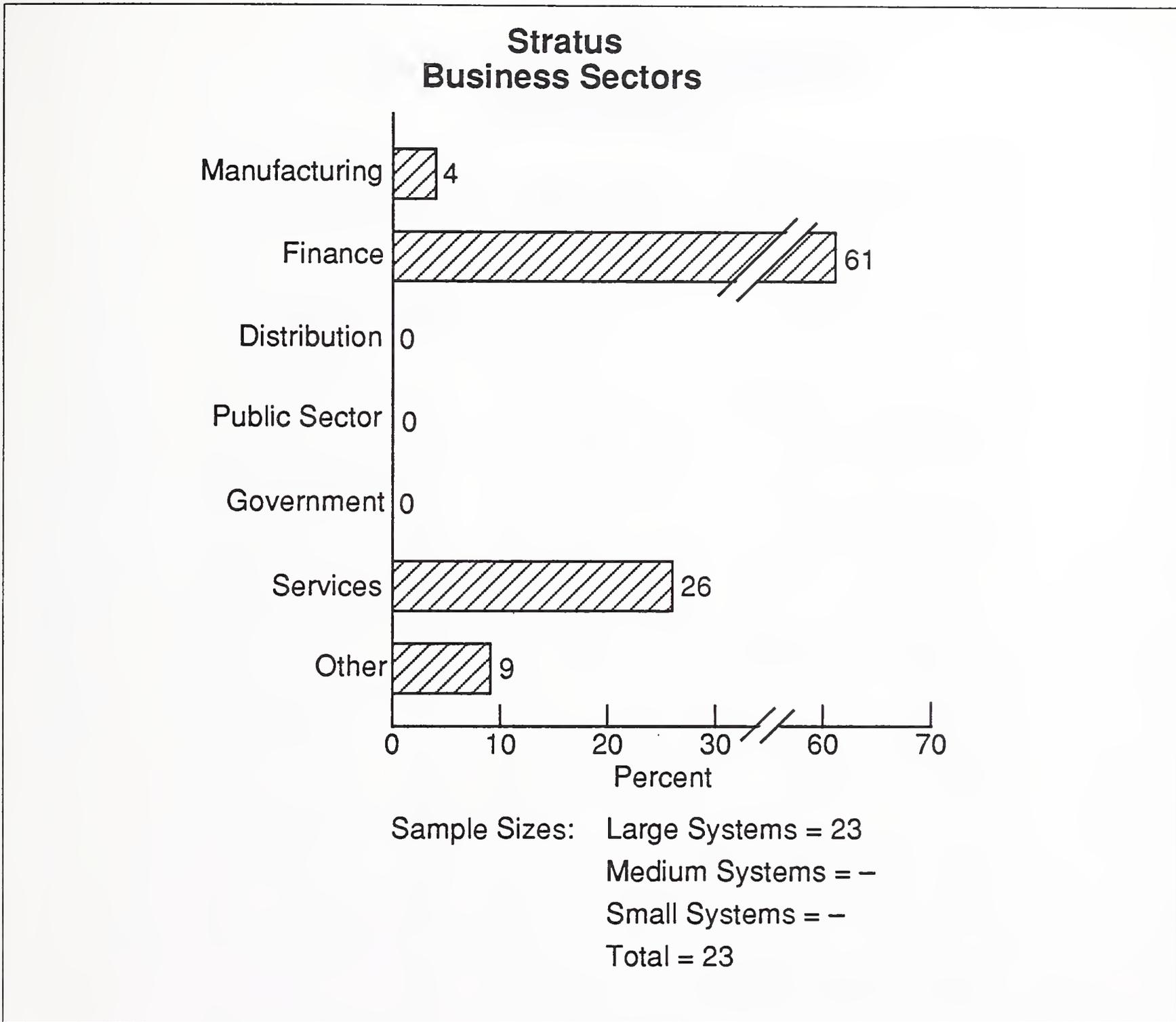


EXHIBIT C-152

**Stratus
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	8.7	9.1	(0.4)
Engineer Skills	9.0	8.6	0.4
Problem Escalation	8.8	8.0	0.8
Call Handling	9.0	8.7	0.3
Backup Support	8.4	7.9	0.5
Hardware Training	6.1	6.9	(0.8)
Telephone Support	9.3	8.7	0.6
Service Administration	7.7	8.1	(0.4)
Documentation	8.8	7.4	1.4
Consultancy/Planning	7.3	7.1	0.2
Remote Diagnostics	9.0	9.0	0.0
Out-of-Hours Service	6.8	6.6	0.2
Average	8.2	8.0	0.2

Sample Size: 23

EXHIBIT C-153

**Stratus
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	8.5	8.1	0.4
Telephone Support Fix Speed	8.9	8.6	0.3
Accessibility	9.4	8.8	0.6
Documentation	8.5	7.3	1.2
Software Updates	7.8	8.2	(0.4)
Software Installation	6.7	8.0	(1.3)
Software Training	7.9	7.9	0.0
Hotline	8.8	8.8	0.0
Capacity Tuning	7.1	7.2	(0.1)
On-Site Support	6.3	7.4	(1.1)
Consultancy/Planning	6.6	6.5	0.1
Remote Diagnostics	8.7	8.6	0.1
Software Problem Database	7.4	7.5	(0.1)
Average	7.9	7.9	0.0

Sample Size: 23

EXHIBIT C-154

**Stratus
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	0.3	55	45
Medium	-	-	-
Small	-	-	-
Average	0.3	55	45

Sample Size: 23

EXHIBIT C-155

**Stratus
Satisfaction with System Availability**

System Size	Importance	Satisfaction	ΔSI
Large	9.8	9.4	0.4
Medium	-	-	-
Small	-	-	-
Average	9.8	9.4	0.4

Sample Size: 23

EXHIBIT C-156

**Stratus
Hardware Response and Repair Times**

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	5.7	6.4	0.7	8.3	3.3	3.2	(0.1)	8.6	9.0	9.6	0.6
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	-	-	-	-	-	-	-	-	-	-	-
Average	5.7	6.4	0.7	8.3	3.3	3.2	(0.1)	8.6	9.0	9.6	0.6

Sample Size: 23

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-157

**Stratus
Software Response and Fix Times**

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	10.8	13.9	3.1	7.9	3.3	2.7	(0.6)	8.6	14.1	16.6	2.5
Medium	-	-	-	-	-	-	-	-	-	-	-
Small	-	-	-	-	-	-	-	-	-	-	-
Average	10.8	13.9	3.1	7.9	3.3	2.7	(0.6)	8.6	14.1	16.6	2.5

Sample Size: 23

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-158

**Stratus
Hardware Service Vendor
by System Size**

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	91	-	9	-	-
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	91	-	9	-	-
Peripherals (Percent)					
Large	52	-	43	5	-
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	52	-	43	5	-

Sample Size: 23

Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-159

**Stratus
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	96	-	-	4	-
Medium	-	-	-	-	-
Small	-	-	-	-	-
Average	96	-	-	4	-

Sample Size: 23

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-160

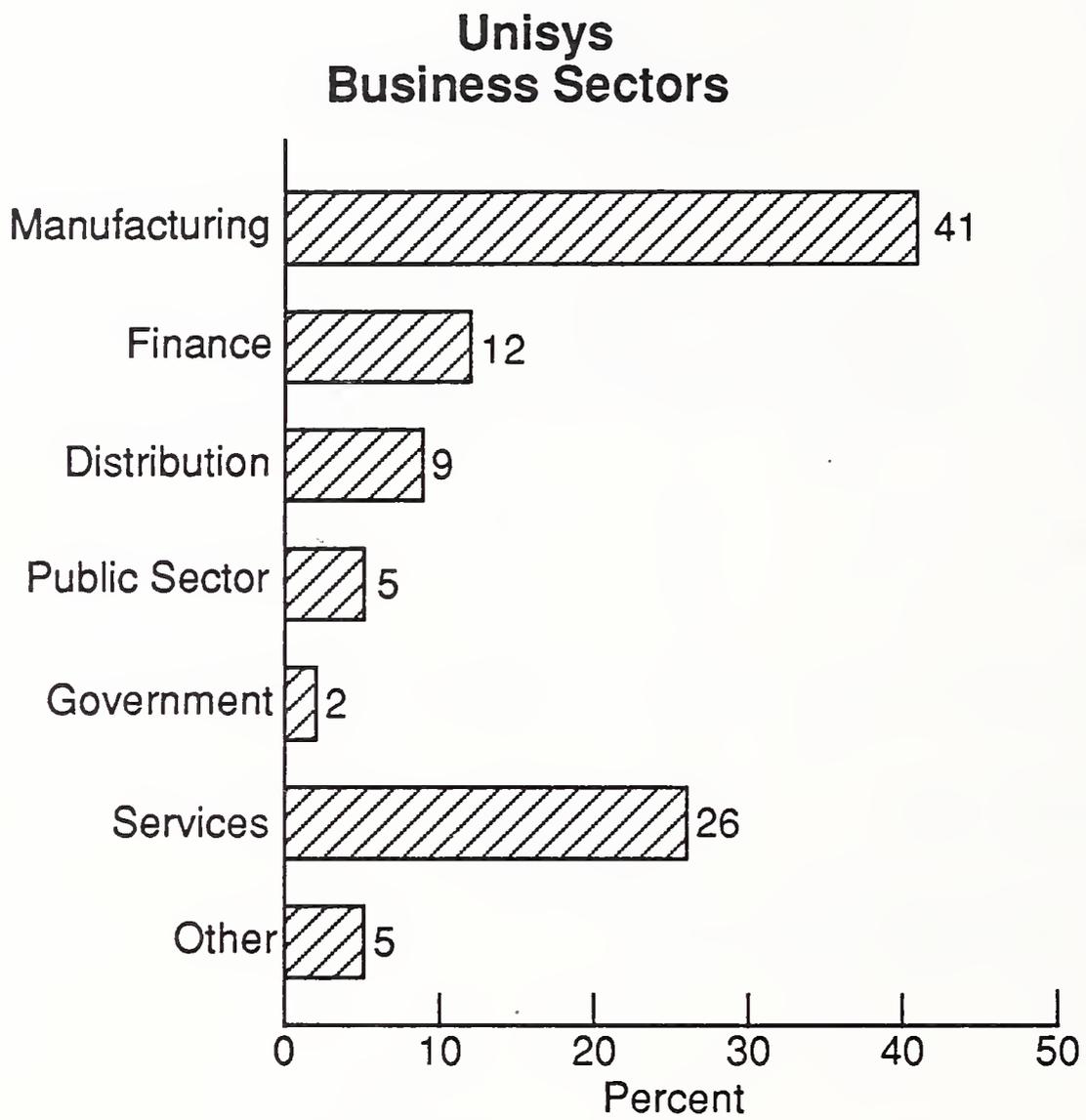
**Stratus
Views on Current
Service Performance**

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.0	8.4	0.6	9.4	8.7	0.7
Medium	-	-	-	-	-	-
Small	-	-	-	-	-	-
Average	9.0	8.4	0.6	9.4	8.7	0.7

Sample Size: 23

Imp. = Importance Rating
Sat. = Satisfaction Rating

EXHIBIT C-161



Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

EXHIBIT C-162

**Unisys
Hardware Service Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.4	7.6	1.8
Engineer Skills	9.4	8.3	1.1
Problem Escalation	8.5	6.7	1.8
Call Handling	8.4	7.5	0.9
Backup Support	8.3	6.7	1.6
Hardware Training	7.5	6.9	0.6
Telephone Support	8.0	7.2	0.8
Service Administration	7.9	7.1	0.8
Documentation	8.1	7.2	0.9
Consultancy/Planning	7.9	6.9	1.0
Remote Diagnostics	7.1	5.7	1.4
Out-of-Hours Service	7.7	7.4	0.3
Average	8.2	7.1	1.1

Sample Size: 52

EXHIBIT C-163

**Unisys
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.1	7.5	1.6
Engineer Skills	9.5	7.9	1.6
Problem Escalation	8.8	7.7	1.1
Call Handling	8.5	7.6	0.9
Backup Support	8.6	7.3	1.3
Hardware Training	7.2	6.7	0.5
Telephone Support	7.9	6.9	1.0
Service Administration	7.9	7.4	0.5
Documentation	8.3	7.0	1.3
Consultancy/Planning	7.5	6.3	1.2
Remote Diagnostics	6.7	5.4	1.3
Out-of-Hours Service	7.2	7.0	0.2
Average	8.1	7.1	1.0

Sample Size: 58

EXHIBIT C-164

**Unisys
Hardware Service Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.0	7.2	1.8
Engineer Skills	9.6	8.1	1.5
Problem Escalation	8.1	7.3	0.8
Call Handling	9.2	7.7	1.5
Backup Support	8.1	6.9	1.2
Hardware Training	6.5	6.4	0.1
Telephone Support	8.0	7.2	0.8
Service Administration	7.6	6.2	1.4
Documentation	8.0	6.8	1.2
Consultancy/Planning	7.7	6.7	1.0
Remote Diagnostics	7.5	6.3	1.2
Out-of-Hours Service	5.4	5.7	(0.3)
Average	7.9	6.9	1.0

Sample Size: 20

EXHIBIT C-165

**Unisys
Software Support Satisfaction
Large Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.1	7.9	1.2
Telephone Support Fix Speed	8.2	7.5	0.7
Accessibility	8.3	7.7	0.6
Documentation	9.0	7.2	1.8
Software Updates	8.5	7.5	1.0
Software Installation	8.7	7.3	1.4
Software Training	8.6	7.3	1.3
Hotline	7.8	7.0	0.8
Capacity Tuning	7.7	7.2	0.5
On-Site Support	7.8	7.2	0.6
Consultancy/Planning	7.5	6.6	0.9
Remote Diagnostics	7.3	6.0	1.3
Software Problem Database	8.0	7.0	1.0
Average	8.2	7.2	1.0

Sample Size: 52

EXHIBIT C-166

**Unisys
Software Support Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.0	7.6	1.4
Telephone Support Fix Speed	8.1	6.4	1.7
Accessibility	8.4	6.3	2.1
Documentation	8.6	7.3	1.3
Software Updates	8.1	7.2	0.9
Software Installation	7.9	7.4	0.5
Software Training	8.7	7.1	1.6
Hotline	8.4	6.7	1.7
Capacity Tuning	8.5	7.2	1.3
On-Site Support	7.6	6.8	0.8
Consultancy/Planning	7.3	6.3	1.0
Remote Diagnostics	6.9	5.1	1.8
Software Problem Database	8.1	6.8	1.3
Average	8.1	6.8	1.3

Sample Size: 58

EXHIBIT C-167

**Unisys
Software Support Satisfaction
Small Systems**

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.6	8.3	1.3
Telephone Support Fix Speed	8.7	7.1	1.6
Accessibility	9.1	6.9	2.2
Documentation	8.8	6.9	1.9
Software Updates	8.6	7.6	1.0
Software Installation	8.5	7.4	1.1
Software Training	8.4	7.2	1.2
Hotline	8.6	6.5	2.1
Capacity Tuning	8.6	6.9	1.7
On-Site Support	7.6	6.2	1.4
Consultancy/Planning	6.8	6.2	0.6
Remote Diagnostics	8.0	6.3	1.7
Software Problem Database	7.1	6.9	0.2
Average	8.4	7.0	1.4

Sample Size: 20

EXHIBIT C-168

**Unisys
System Failures
System Size Analysis**

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	5.9	60	40
Medium	4.2	61	39
Small	7.3	78	22
Average	5.3	63	37

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

EXHIBIT C-169

**Unisys
Satisfaction with System Availability**

System Size	Importance	Satisfaction	Δ SI
Large	9.7	8.4	1.3
Medium	9.6	8.3	1.3
Small	9.5	8.3	1.2
Average	9.6	8.3	1.3

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

EXHIBIT C-170

Unisys Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	1.8	2.3	0.5	9.1	2.5	4.4	1.9	9.0	4.3	6.7	2.4
Medium	3.0	4.9	1.9	9.0	3.2	3.4	0.2	8.9	6.2	8.3	2.1
Small	3.2	4.3	1.1	8.9	3.5	3.6	0.1	9.1	6.7	7.9	1.2
Average	2.6	3.7	1.1	9.0	3.0	3.8	0.8	9.0	5.6	7.5	1.9

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-171

Unisys Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	11.4	17.7	6.3	8.5	5.4	5.8	0.4	9.0	16.8	23.5	6.7
Medium	10.1	17.6	7.5	8.9	4.3	12.1	7.8	8.9	14.4	29.7	15.3
Small	13.1	15.9	2.8	8.0	13.9	19.5	5.6	9.0	27.0	35.4	8.4
Average	11.1	17.4	6.3	8.6	6.3	10.8	4.5	9.0	17.4	28.2	10.8

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

Acc. = Acceptable Time
 Exp. = Experienced Time
 Imp. = Importance Rating

EXHIBIT C-172

**Unisys
Hardware Service Vendor
by System Size**

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	100	-	-	-	-
Medium	100	-	-	-	-
Small	85	5	10	-	-
Average	98	1	2	-	-
Peripherals (Percent)					
Large	92	6	-	2	-
Medium	95	3	-	-	2
Small	75	5	20	-	-
Average	91	5	3	1	1

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-173

**Unisys
Software Service Vendor
by System Size**

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	82	4	-	14	-
Medium	83	2	-	16	-
Small	85	5	-	0	10
Average	83	3	-	12	2

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-174

Unisys Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	9.1	7.9	1.2	9.2	7.6	1.6
Medium	9.0	7.8	1.2	9.3	7.8	1.5
Small	8.9	7.2	1.7	8.8	6.8	2.0
Average	9.0	7.8	1.2	9.2	7.6	1.6

Sample Sizes: Large Systems = 52
 Medium Systems = 58
 Small Systems = 20
 Total = 130

Imp. = Importance Rating
 Sat. = Satisfaction Rating

EXHIBIT C-175

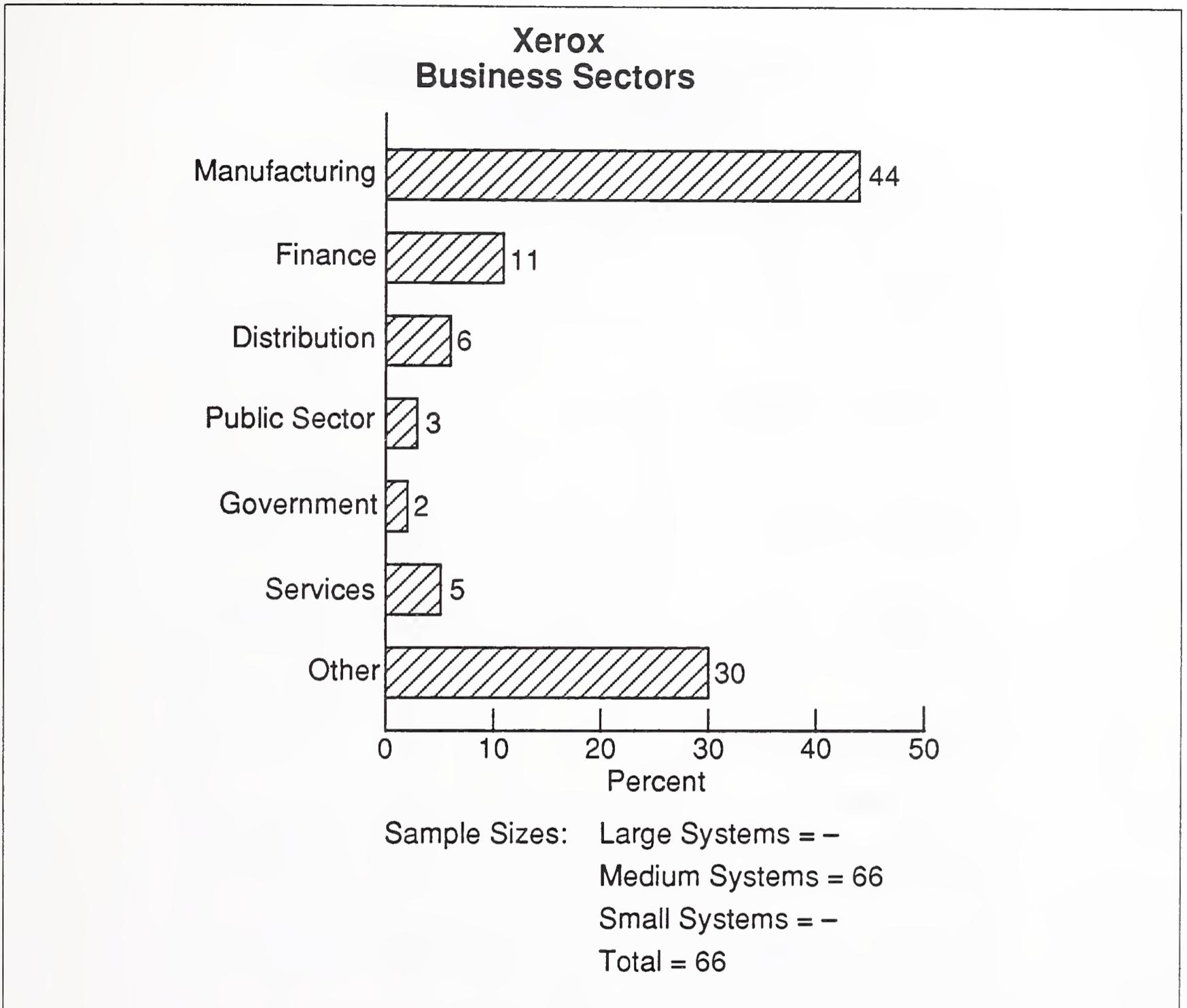


EXHIBIT C-176

**Xerox
Hardware Service Satisfaction
Medium Systems**

Service Item	Importance	Satisfaction	Δ SI
Spares Availability	9.3	8.0	1.3
Engineer Skills	9.7	8.9	0.8
Problem Escalation	9.1	7.9	1.2
Call Handling	9.4	8.1	1.3
Backup Support	9.3	8.2	1.1
Hardware Training	8.5	7.7	0.8
Telephone Support	9.3	7.9	1.4
Service Administration	7.7	6.0	1.7
Documentation	8.8	7.2	1.6
Consultancy/Planning	7.4	7.4	0.0
Remote Diagnostics	7.9	7.8	0.1
Out-of-Hours Service	7.6	7.1	0.5
Average	8.9	7.8	1.1

Sample Size: 66

EXHIBIT C-177

Xerox
Software Support Satisfaction
Medium Systems

Service Item	Importance	Satisfaction	Δ SI
Engineer Skills	9.5	8.4	1.1
Telephone Support Fix Speed	9.2	7.9	1.3
Accessibility	9.4	7.7	1.7
Documentation	9.1	7.4	1.7
Software Updates	9.3	7.6	1.7
Software Installation	9.0	7.8	1.2
Software Training	8.4	8.0	0.4
Hotline	9.2	7.7	1.5
Capacity Tuning	6.8	6.6	0.2
On-Site Support	8.6	7.5	1.1
Consultancy/Planning	8.1	7.6	0.5
Remote Diagnostics	7.8	7.6	0.2
Software Problem Database	8.6	7.0	1.6
Average	9.0	7.7	1.3

Sample Size: 66

EXHIBIT C-178

Xerox System Failures System Size Analysis

System Size	Failures Per Annum	Failures (Percent)	
		Hardware Breaks	Software Failures
Large	-	-	-
Medium	6.4	61	39
Small	-	-	-
Average	6.4	61	39

Sample Size: 66

EXHIBIT C-179

Xerox Satisfaction with System Availability

System Size	Importance	Satisfaction	Δ SI
Large	-	-	-
Medium	9.2	8.8	0.4
Small	-	-	-
Average	9.2	8.8	0.4

Sample Size: 66

EXHIBIT C-180

Xerox Hardware Response and Repair Times

System Size	Response Times				Repair Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	4.3	4.4	0.1	9.2	4.4	4.2	(0.2)	9.3	8.7	8.6	(0.1)
Small	-	-	-	-	-	-	-	-	-	-	-
Average	4.3	4.4	0.1	9.2	4.4	4.2	(0.2)	9.3	8.7	8.6	(0.1)

Sample Size: 66

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-181

Xerox Software Response and Fix Times

System Size	Response Times				Fix Times				Totals (Hours)		
	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ	Imp.	Acc.	Exp.	Δ
Large	-	-	-	-	-	-	-	-	-	-	-
Medium	4.9	6.3	1.4	9.1	6.6	6.6	0.0	9.2	11.5	12.9	1.4
Small	-	-	-	-	-	-	-	-	-	-	-
Average	4.9	6.3	1.4	9.1	6.6	6.6	0.0	9.2	11.5	12.9	1.4

Sample Size: 66

Acc. = Acceptable Time
Exp. = Experienced Time
Imp. = Importance Rating

EXHIBIT C-182

Xerox Hardware Service Vendor by System Size

CPU (Percent)					
System Size	Manufacturer	Dealer	TPM	Self	Other
Large	-	-	-	-	-
Medium	95	2	3	-	-
Small	-	-	-	-	-
Average	95	2	3	-	-
Peripherals (Percent)					
Large	-	-	-	-	-
Medium	94	3	3	-	-
Small	-	-	-	-	-
Average	94	3	3	-	-

Sample Size: 66

- Notes: (i) Percentages Have Been Rounded.
(ii) Multiple Responses Allowed.

EXHIBIT C-183

Xerox Software Service Vendor by System Size

System Size	Percent				
	Hardware Manufacturer	Software House	Software Product Vendor	In-House	VAR
Large	-	-	-	-	-
Medium	95	2	2	2	-
Small	-	-	-	-	-
Average	95	2	2	2	-

Sample Size: 66

- Notes: (i) Percentages Have Been Rounded.
 (ii) Multiple Responses Allowed.

EXHIBIT C-184

Xerox Views on Current Service Performance

System Size	Hardware			Software		
	Imp.	Sat.	Δ SI	Imp.	Sat.	Δ SI
Large	-	-	-	-	-	-
Medium	9.4	8.6	0.8	9.3	8.6	0.7
Small	-	-	-	-	-	-
Average	9.4	8.6	0.8	9.3	8.6	0.7

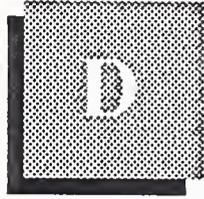
Sample Size: 66

Imp. = Importance Rating
 Sat. = Satisfaction Rating



Appendix: Additional Statistical Data





Appendix: Additional Statistical Data

EXHIBIT D-1

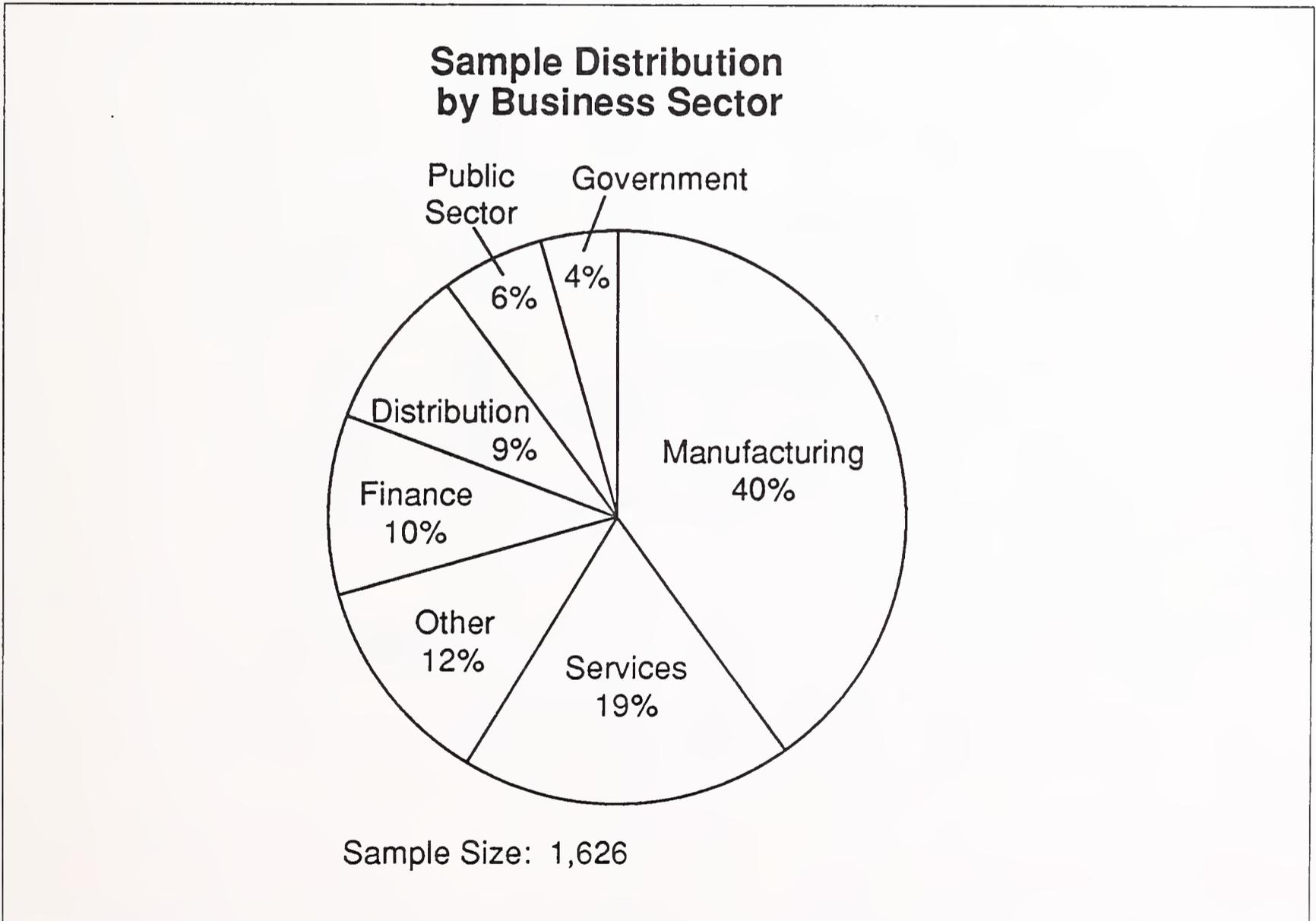


EXHIBIT D-2

Cell Size by Country

Country	Cell Size
Belgium	42
France	255
Germany	283
Italy	136
Netherlands	117
Norway	23
Spain	103
Sweden	86
Switzerland	45
United Kingdom	536
Total	1,626

EXHIBIT D-3

Cell Sizes by Company

Vendor	Large	Medium	Small	Total
Amdahl	80	-	-	80
Bull	30	55	43	128
Concurrent	30	63	17	110
Digital	54	40	40	134
Hewlett-Packard	-	90	2	92
IBM	59	136	59	254
ICL	49	55	81	185
ITL	-	30	-	30
NCR	7	44	10	61
Nixdorf	-	59	7	66
Nokia	-	-	77	77
Siemens	16	24	9	49
Stratus	23	-	-	23
Unisys	52	58	20	130
Xerox	-	66	-	66
Other Vendors	41	64	36	141
Total	441	784	401	1,626

EXHIBIT D-4

Overall Hardware Service Standard Error

		Sample	Average	Standard Deviation	Standard Error
Spares Availability	Imp.	1,597	9.1	1.36	0.03
	Sat.	1,548	7.8	1.90	0.05
Engineer Skills	Imp.	1,613	9.3	1.11	0.03
	Sat.	1,599	8.2	1.54	0.04
Problem Escalation	Imp.	1,385	8.2	2.04	0.05
	Sat.	1,297	7.4	2.01	0.06
Call Handling	Imp.	1,566	8.6	1.56	0.04
	Sat.	1,547	7.7	1.86	0.05
Backup Support	Imp.	1,504	8.4	1.88	0.05
	Sat.	1,420	7.5	2.01	0.05
Training on Hardware	Imp.	1,463	7.4	2.60	0.07
	Sat.	1,345	6.9	2.40	0.06
Telephone Support	Imp.	1,561	8.1	2.28	0.06
	Sat.	1,490	7.3	2.25	0.06
Service Administration	Imp.	1,474	7.7	2.04	0.05
	Sat.	1,431	7.2	1.94	0.05
Documentation	Imp.	1,571	8.0	2.23	0.06
	Sat.	1,539	6.8	2.16	0.05
Consultancy/Planning	Imp.	1,433	7.3	2.34	0.06
	Sat.	1,364	6.7	2.32	0.06
Remote Diagnostics	Imp.	1,366	7.1	2.87	0.08
	Sat.	1,163	6.6	2.94	0.09
Out-of-Hours Service	Imp.	1,436	6.9	3.01	0.08
	Sat.	1,216	6.5	3.13	0.09

EXHIBIT D-5

Overall Software Support Standard Error

		Sample	Average	Standard Deviation	Standard Error
Engineer Skill	Imp.	1,553	9.1	1.47	0.04
	Sat.	1,507	7.8	1.80	0.05
Telephone Fix Speed	Imp.	1,458	8.2	2.13	0.06
	Sat.	1,387	7.1	2.14	0.06
Telephone Access.	Imp.	1,478	8.4	2.18	0.06
	Sat.	1,392	7.1	2.26	0.06
Documentation	Imp.	1,561	8.6	1.69	0.04
	Sat.	1,537	6.9	2.01	0.05
Software Updates	Imp.	1,550	8.3	1.79	0.05
	Sat.	1,515	7.2	2.07	0.05
Software Installation	Imp.	1,472	8.1	2.20	0.06
	Sat.	1,419	7.4	2.11	0.06
Software Training	Imp.	1,464	8.3	1.94	0.05
	Sat.	1,406	7.0	2.04	0.05
Hotline	Imp.	1,399	8.0	2.53	0.07
	Sat.	1,295	6.9	2.52	0.07
Capacity Tuning	Imp.	1,284	7.7	2.32	0.07
	Sat.	1,227	6.7	2.39	0.07
On Site Support	Imp.	1,429	7.6	2.55	0.07
	Sat.	1,332	6.9	2.48	0.07
Consultancy/Planning	Imp.	1,399	7.1	2.60	0.07
	Sat.	1,312	6.4	2.51	0.07
Remote Diagnostics	Imp.	1,333	7.4	2.81	0.08
	Sat.	1,156	6.4	2.87	0.09
Software Problem Database	Imp.	1,290	7.5	2.69	0.08
	Sat.	1,110	6.5	2.69	0.08

EXHIBIT D-6

Overall Hardware Response Times Standard Error

		Sample	Average	Standard Deviation	Standard Error
Large Systems	Acc.	424	2.7	3.4	0.16
	Exp.	408	2.9	3.8	0.19
Medium Systems	Acc.	764	3.9	3.8	0.14
	Exp.	738	4.6	6.1	0.22
Small Systems	Acc.	390	5.1	5.4	0.27
	Exp.	368	5.6	7.1	0.37
Belgium	Acc.	38	4.1	5.3	0.86
	Exp.	33	4.2	6.2	1.09
France	Acc.	242	4.6	5.5	0.35
	Exp.	227	5.2	7.9	0.52
Germany	Acc.	269	2.9	2.9	0.18
	Exp.	259	3.9	5.0	0.31
Italy	Acc.	133	4.4	4.6	0.39
	Exp.	130	5.3	5.9	0.52
Netherlands	Acc.	114	4.4	5.1	0.48
	Exp.	109	4.3	4.9	0.47
Norway	Acc.	23	3.5	2.7	0.56
	Exp.	20	3.5	2.9	0.65
Spain	Acc.	103	3.9	4.8	0.47
	Exp.	97	5.3	7.8	0.79
Sweden	Acc.	85	4.7	5.6	0.61
	Exp.	76	5.8	9.2	1.06
Switzerland	Acc.	41	3.1	4.9	0.77
	Exp.	41	2.7	5.0	0.78
United Kingdom	Acc.	530	3.7	3.2	0.14
	Exp.	522	3.9	4.3	0.19

EXHIBIT D-7

Overall Hardware Repair Times Standard Error

		Sample	Average	Standard Deviation	Standard Error
Large Systems	Acc.	401	2.9	3.5	0.17
	Exp.	377	3.7	5.9	0.30
Medium Systems	Acc.	717	3.7	4.0	0.15
	Exp.	690	3.6	4.9	0.19
Small Systems	Acc.	356	3.6	4.8	0.25
	Exp.	344	3.7	7.1	0.38
Belgium	Acc.	35	2.7	2.4	0.40
	Exp.	30	2.6	2.3	0.43
France	Acc.	219	4.4	5.7	0.38
	Exp.	216	3.7	5.8	0.39
Germany	Acc.	253	2.7	2.6	0.17
	Exp.	239	3.4	3.7	0.24
Italy	Acc.	128	3.6	4.1	0.36
	Exp.	128	3.5	3.6	0.32
Netherlands	Acc.	107	3.7	3.0	0.29
	Exp.	96	3.6	3.7	0.38
Norway	Acc.	22	2.8	2.0	0.43
	Exp.	20	2.2	2.2	0.49
Spain	Acc.	94	3.6	6.2	0.64
	Exp.	85	5.1	12.3	1.34
Sweden	Acc.	72	3.8	4.6	0.54
	Exp.	66	5.1	8.6	1.06
Switzerland	Acc.	39	3.2	4.0	0.63
	Exp.	40	2.8	5.0	0.80
United Kingdom	Acc.	505	3.3	3.5	0.15
	Exp.	491	3.5	5.4	0.24

EXHIBIT D-8

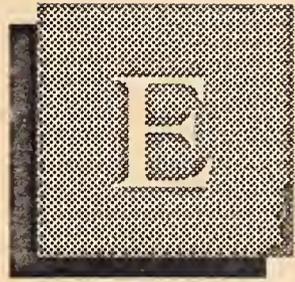
Overall Software Response Times Standard Error

		Sample	Average	Standard Deviation	Standard Error
Large Systems	Acc.	344	9.0	13.5	0.73
	Exp.	313	12.2	20.8	1.17
Medium Systems	Acc.	664	9.0	13.4	0.52
	Exp.	573	11.2	20.1	0.84
Small Systems	Acc.	324	8.9	12.0	0.67
	Exp.	279	10.1	15.1	0.90
Belgium	Acc.	33	10.3	10.6	1.85
	Exp.	27	18.4	22.1	4.26
France	Acc.	193	8.7	12.2	0.88
	Exp.	169	8.5	15.0	1.16
Germany	Acc.	237	5.6	9.0	0.59
	Exp.	215	7.8	14.3	0.98
Italy	Acc.	115	13.8	16.7	1.55
	Exp.	100	18.7	24.2	2.42
Netherlands	Acc.	92	9.4	14.9	1.56
	Exp.	71	10.6	18.0	2.13
Norway	Acc.	21	5.7	4.3	0.94
	Exp.	16	2.4	2.5	0.62
Spain	Acc.	84	11.0	16.0	1.74
	Exp.	71	13.5	20.5	2.43
Sweden	Acc.	73	7.5	9.8	1.15
	Exp.	63	10.7	15.7	1.98
Switzerland	Acc.	39	9.7	22.6	3.61
	Exp.	37	8.8	22.4	3.69
United Kingdom	Acc.	445	9.4	12.6	0.60
	Exp.	396	12.2	21.1	1.06

EXHIBIT D-9

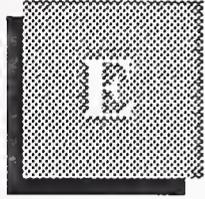
Overall Software Fix Times Standard Error

		Sample	Average	Standard Deviation	Standard Error
Large Systems	Acc.	351	4.6	6.8	0.36
	Exp.	289	6.7	13.4	0.79
Medium Systems	Acc.	666	5.2	7.9	0.31
	Exp.	565	6.8	13.4	0.57
Small Systems	Acc.	325	5.3	7.9	0.44
	Exp.	277	7.6	14.6	0.88
Belgium	Acc.	32	4.1	3.4	0.61
	Exp.	24	6.7	9.7	1.98
France	Acc.	178	6.0	8.0	0.60
	Exp.	161	7.0	12.9	1.02
Germany	Acc.	240	4.4	8.0	0.52
	Exp.	207	6.1	13.6	0.95
Italy	Acc.	121	8.0	11.8	1.07
	Exp.	104	9.6	14.0	1.38
Netherlands	Acc.	99	4.7	3.5	0.35
	Exp.	72	6.5	14.1	1.67
Norway	Acc.	18	2.5	1.1	0.26
	Exp.	13	2.3	2.3	0.63
Spain	Acc.	82	6.6	10.2	1.12
	Exp.	74	11.5	20.6	2.39
Sweden	Acc.	69	4.3	3.6	0.43
	Exp.	60	8.1	15.1	1.95
Switzerland	Acc.	40	7.3	17.1	2.70
	Exp.	39	7.1	18.1	2.89
United Kingdom	Acc.	463	4.3	4.6	0.22
	Exp.	377	5.9	11.5	0.59



Appendix: Customer Service Definitions





Appendix: Customer Service Definitions

A

Market Segments

- *Hardware Maintenance* - Refers to the repair or preventive routine maintenance of computer systems hardware or hardware components including associated supporting activities such as telephone support, problem analysis, hardware diagnostics, etc.
- *Software Service/Support* - Embraces software maintenance activities that relate to operating systems software (not applications software), including associated supporting activities such as telephone support, problem analysis, software diagnostics, etc.
- *Professional Services* - Within the definition of customer services, this segment of the market refers to those elements of professional services that are delivered and revenueed exclusively as a customer service activity.

Examples of customer service professional services are as follows:

- Cabling
 - Consultancy
 - Network planning
 - Network management
 - Systems software evaluation
 - Facilities management
 - Problem management
 - Configuration planning
 - Environmental planning
 - Installation
- *Education and Training* - Within the definition of customer services, this segment of the market refers to those elements of education and training that are delivered and revenueed exclusively as a customer services activity. Education and training activities are defined as those relating to computer hardware or operating systems software (not

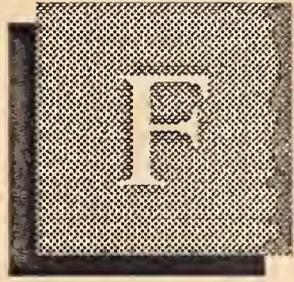
applications software). This aspect of customer services would normally comprise:

- User hardware maintenance, "housekeeping," support training, operator training
- User operating systems software maintenance, "housekeeping," support training and operator training

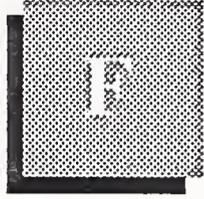
B

Activity Segments

- *Large System* - A system considered by the hardware vendor as forming part of that vendor's large system product range, for example, IBM 309X and 308X.
- *Medium System* - A system considered by the hardware vendor as forming part of that vendor's medium system product range, for example, IBM 43XX and S38.
- *Small System* - A system considered by the hardware vendor as forming part of that vendor's small system product range, for example, IBM S36 and S34.
- *Personal Computer* - A micro-based computer system operating in either a networked or standalone mode, for example, IBM PS2.
- *Data Communications* - Data communications equipment—for example, modems, MUXs and communications processors (excluding PABX equipment), and any associated operating systems level software.



Appendix: User Questionnaire



Appendix: User Questionnaire

1. What is the make and model number of the main computer on your site, and how many do you have?

Make _____
 Model _____
 Units _____

2. Do you have a second system? What is the make and model number of that, and how many do you have?

Make _____
 Model _____
 Units _____

All the following questions that I am going to ask are related to the main system (**Read out make and model number of Q1 above**).

3. So that we can ensure that we get a proper cross-section of industry and commerce, can you tell me what is the main business sector of your company?

Manufacturing	1
Finance	2
Distribution	3
Public sector	4
Government	5
Services	6
Other (Write In)	_____

Business Sector

4. What is the principal use to which you put the computer?

- Administration 1
- Product design 2
- Software development 3
- Real time 4
- Industrial automation 5
- Other 6

Business Use

5. How many of each of the following units do you have attached to your main system?

- Local VDUs/PCs/workstations _____
- Remote VDUs/PCs/workstations _____
- Printers _____
- Disc drives _____

System Size

We classify system size according to the total installed (sales) value of the CPU and all the attached local and remote peripherals, into:

U.S. Dollars:

Large: \$500K or more **Medium:** \$75K to \$499K **Small:** less than \$75K

6. In which range is your system?

- Large 1
- Medium 2
- Small 3

7. Who services the CPU? (Read Out)

- Manufacturer 1
- Dealer 1
- Third-party maintenance 1
- Own company 1
- Other (Write In) _____

8. Who services the peripherals? (Read Out)

- Manufacturer 1
- Dealer 1
- Third-party maintenance 1
- Own company 1
- Other (Write In) _____

9. What type of maintenance contract do you have?

- Full contract 1
- Warranty 1
- Time-and-material 1
- Other 1

10. If you have had a warranty on your CPU in the last two years, how long was it in months?

_____ Months

(If respondent answered “yes” to third-party maintenance Q7 and Q8 then ask the following questions, otherwise go on to Q13.)

Third-party Maintenance

The following questions apply to your CPU model _____ and your peripherals.

11. Why do you use TPM?

	CPU	Peripheral	CPU and Peripheral
Lower cost	1	2	3
Local service	1	2	3
One source	1	2	3
TPM does a better job than manufacturer	1	2	3
TPM offers more flexible contract	1	2	3
Other (Write In)	_____		

(If the respondent quotes cost as a reason under Q11 ask Q12.)

12. What percentage saving did you make from your original contract by going to a TPM? _____%

Go to Q14.

13. Is there any reason why you do not use a TPM?

	CPU	Peripheral
Satisfied with the maker	1	1
Manufacturer has an advantage	1	1
TPM can't support operating software	1	1
Tied to maker with contract	1	1
Fear of vendor response	1	1
Considered and rejected TPM	1	1
TPM financial weakness	1	1
Unaware of TPMs	1	1
Other (Write In)	1	1

14. Would you prefer all hardware and software maintenance and support to be provided by one vendor at each site?

- Yes 1
- No 2

15. Would you prefer that vendor to be

- The manufacturer of your main hardware 1
- A value-added reseller 2
- A TPM 3
- One of your hardware suppliers 4

Hardware Service

As you are the manager of the computer hardware at your company, I would like to ask you some questions concerning the service you get from your maintenance vendor, and the degree of satisfaction you have with the service.

All the questions with ratings are scaled from 0 to 10, where 0 represents zero importance or satisfaction, 5 is average and 10 represents top importance or fully satisfied.

16. What is your rating of the importance of hardware maintenance to your business? And what is your satisfaction with it?

Importance rating _____
 Satisfaction rating _____

17. If we define **systems availability** as the percent of your normal working hours that the system is operational (disregard noncritical peripheral breaks), what percentage has that been for your system over the last twelve months? How many hours per day do you need the system?

Percentage _____
Hours per day _____

18. How many times each year does your system fail completely for periods over one hour?

Times per year _____

19. What are the percentages of the breaks that are hardware-originated and software-originated?

Hardware _____ %
Software _____ %

20. What is your rating for the importance of **systems availability**? What is your satisfaction with it?

Importance rating _____
Satisfaction rating _____

21. Defining **hardware response time** as the time it takes between reporting a fault and the arrival of the service engineer on-site (in working hours, that is to say that 8 hours = 1 day), what response time do you find acceptable and what did you actually experience as an average over the preceding 12 months?

Acceptable _____
Experienced _____

22. How important is the "acceptable" response time to you on the 0 to 10 rating?

Response rating _____

23. If **repair time** is defined as the time taken to get the system fully operable from engineer arrival on-site, then what time (in working hours) do you find acceptable, and what did you experience in the preceding 12 months? [Note: 8 hours = 1 working day.]

Acceptable _____
Experienced _____

24. How important is **repair time** to you on a 0 to 10 rating?

Repair importance rating _____

25. I would now like to go through a short list of hardware service aspects for your main system (reconfirm main system) and ask you to give an importance and satisfaction rating for each.

	Importance	Satisfaction
Spares availability	_____	_____
Engineer skill	_____	_____
Problem escalation	_____	_____
Call handling	_____	_____
Backup support	_____	_____
Training on hardware	_____	_____
Telephone support	_____	_____
Service administration	_____	_____
Documentation	_____	_____
Consultancy/planning	_____	_____
Remote diagnostics	_____	_____
Out-of-hours service	_____	_____

Hardware Service Pricing

26. What percentage increase or decrease did you pay for your hardware maintenance in 1988?

Increase _____ %
 Decrease _____ %
 No change _____ %

27. What do you expect the price changes for hardware maintenance will be in the future in percentage terms per annum?

Increase _____ %
 Decrease _____ %
 No change _____ %

28. Expressing the maintenance charges as a percentage of the overall system hardware cost, what approximate percent do you feel you ought to be paying, and what do you actually pay?

Expect _____ %
 Actual _____ %

29. How important do you rate **hardware maintenance pricing**, and how satisfied are you with the current levels?

Importance rating _____
Satisfaction rating _____

30. Would you prefer **hardware maintenance** offerings to be bundled or would you prefer individual prices?

Individual prices 1
Bundled 2
Don't know 3

31. Which of the following statements reflects your views on **hardware maintenance**?

Good value 1
Expensive but worth it 1
Expensive but not worth it 1
Too expensive 1
Don't know 1
Other 1

Systems Software Operating Systems Support

I would like to ask you some questions concerning the services you get from your software support vendor and the degree of satisfaction you have with the service.

Please note that these questions **do not** relate to application software.

All the questions with ratings are scaled from 0 to 10, where 0 represents zero importance or satisfaction, 5 is average, and 10 represents top importance or fully satisfied.

32. Who supports the system software on your main system?

Hardware manufacturer 1
Software house 1
Software product vendor 1
In-house 1
Value-added reseller 1
None of the above 1

33. What is your rating for the importance of operating system software service to your business, and what is your satisfaction with it?

Importance rating _____
Satisfaction rating _____

34. What percentage of systems software problems are solved by telephone, and how long (on average) does this take in elapsed time?

Solved by phone _____ %
 Elapsed time _____ hours

35. For those problems not possible to solve over the phone, what **response time** would you find acceptable and what time (on average and in working hours) have you experienced over the last 12 months (take **response time** to mean from time of call to the arrival on site of the engineer).

Acceptable _____
 Experienced _____

36. How important is your "acceptable" response time to you on the 0 to 10 rating?

Importance rating _____

37. If **fix time** is defined as the time taken to get the system fully operable from engineer arrival on site, then what time (in working hours) do you find acceptable, and what did you experience in the preceding 12 months?

Acceptable _____
 Experienced _____

38. How important is **fix time** to you in a 0 to 10 rating?

Importance rating _____

39. I would now like to go through a short list of operating systems software aspects and ask you to give an importance and a satisfaction rating for each.

	Importance	Satisfaction
Engineer skill	_____	_____
Telephone fix speed	_____	_____
Telephone access	_____	_____
Documentation	_____	_____
Software updates	_____	_____
Software installation	_____	_____
Software training	_____	_____
Hotline	_____	_____
Capacity tuning	_____	_____
On-site support	_____	_____
Consultancy/planning	_____	_____
Remote diagnostics	_____	_____
Software problem database	_____	_____

Operating Software Support Pricing

40. What percentage increase or decrease did you pay for your software support in 1988?

Increase _____ %
 Decrease _____ %
 No change _____ %

41. What do you expect the price changes for software support will be in the future in percentage terms per annum?

Increase _____ %
 Decrease _____ %
 No change _____ %

42. Expressing the software support charges as a percentage of the overall system software cost, what approximate percentage do you feel you should be paying, and what do you actually pay?

Expect _____ %
 Actual _____ %

43. How important do you rate operating software support pricing, and how satisfied are you with the current levels?

Importance rating _____
 Satisfaction rating _____

44. Would you prefer software support offerings to be bundled or would you prefer individual prices?

Individual prices 1
 Bundled 2
 Don't know 3

45. Which, if any, of the following statements reflect your views on software support pricing?

Good value 1
 Expensive but worth it 1
 Expensive but not worth it 1
 Too expensive 1
 No opinion 1
 Other (Write In) 1

Other Services (Both Hardware and Software)

I am particularly interested in your views on other services or modified current service offerings that your service suppliers could provide, that would help to improve the running of your systems.

46. Please say which of the following services you have, and which you would like if the price were right, giving a **level of interest (LOI)** rating against each, in the range 0 to 10, where 0 = no interest, 5 = average interest and 10 = must have:

	Have	Do Not Have	LOI
Configuration planning	1	2	_____
Capacity planning	1	2	_____
Environmental planning	1	2	_____
Cabling	1	2	_____
Software evaluation	1	2	_____
Training	1	2	_____
Consultancy	1	2	_____
Network planning	1	2	_____
Network management	1	2	_____
Disaster recovery	1	2	_____
Media services (supplies)	1	2	_____
Facilities management	1	2	_____
Problem management	1	2	_____

