

MAPS

**Service Versus
Systems for Small
Organizations**



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SERVICE VERSUS SYSTEMS
FOR
SMALL ORGANIZATIONS

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Tom Darcy

AUTHOR

Service Versus Systems for Small

TITLE

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**SERVICE VERSUS SYSTEMS
FOR
SMALL ORGANIZATIONS**

CONTENTS

		<u>Page</u>
I	INTRODUCTION.....	1
	A. Purpose	1
	B. Scope and Use	1
	C. Methodology	2
	D. Related INPUT Reports	4
II	EXECUTIVE SUMMARY	5
	A. Small Firms Are Moving Most Operations In-House	6
	B. Payroll is Least Likely to Be Done In-House	8
	C. The Changing World of Batch Delivery	10
	D. The ADP Approach to the Changing World	12
	E. Other Approaches to the Changing World	14
	F. Recommendations	16
III	MARKET ANALYSIS AND TRENDS	19
	A. Present Market Status	19
	B. Market Changes in the Next Five Years	21
	C. Major Trends	23
	D. Survey Analysis	24
IV	ANALYSIS OF KEY APPLICATIONS.....	41
	A. Applications Key to Very Small Companies	41
	B. Applications Key to Small Companies	41
	C. Ranking of Key Applications	42
	D. Future Hardware Vendor Targets	42
V	THE MICRO THREAT TO BATCH SERVICE VENDORS.....	45
	A. Expected Annual Change	45
	B. Likely Replacement Systems	46
	C. Replacement Systems Costs	47
	D. The ADP Approach	49
VI	FUTURE ALTERNATIVES FOR BATCH SERVICE VENDORS.....	51
	A. Software	51
	B. On-Line PCs	51
	C. Turnkey Systems	52

	<u>Page</u>
VII CONCLUSIONS AND RECOMMENDATIONS	53
A. Market Direction and Change	53
B. Comparative Alternatives	54
C. Recommendations	56
APPENDIX A: FIVE-YEAR FORECAST, 1984-1989	57
APPENDIX B: QUESTIONNAIRE	59

**SERVICE VERSUS SYSTEMS
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EXHIBITS

			<u>Page</u>
I	-1	Survey Response by SIC Code	3
II	-1	Small Firms Are Moving Most Operations In-House	7
	-2	Payroll Is Least Likely to Be Done In-House	9
	-3	The Changing World of Batch Delivery	11
	-4	The ADP Approach to the Changing World	13
	-5	Other Approaches to the Changing World	15
	-6	Recommendations	17
III	-1	Years of Prior Use of Outside Service	20
	-2	Average Monthly Expenditure for Outside Service	22
	-3	Average Number of Employees in Companies Surveyed	25
	-4	Application Use as a Percent of Total Use of Outside Service (50 or More Employees)	26
	-5	Application Use as a Percent of Total Use of Outside Service (Fewer than 50 Employees)	27
	-6	Expected Increase in the Use of Outside Service Annually for Next Five Years	28
	-7	Estimated Industry Growth Rate for Pure Batch Services	29
	-8	Percent of Companies Expecting to Purchase/Lease In-House Systems	31
	-9	When Will Companies That Expect to Purchase/Lease In-House Systems Do So?	32
	-10	What Type of System Will Be Chosen When Service Users Purchase/Lease In-House Systems?	33
	-11	What Will Be the Average Purchase Price for New In-House Systems (Whether Purchased or Leased)?	34
	-12	Percent of Computer Buyers Who Intend to Convert Payroll to New System	36
	-13	Percent of Service Users Who Would Use Present Methods If Offered on In-House System	37
	-14	Percent of Future Computer Buyers Who Would Use Present Methods If Offered on In-House System	38
	-15	Reasons That Service Users Began Using Service When First Initiated	40

			<u>Page</u>
IV	-I	Ranking of Key Applications on Outside Batch Service	43
V	-I	Examples of Currently Available Software Accounting Systems	48

I INTRODUCTION

A. PURPOSE

- INPUT believes that the world of batch service providers has changed dramatically over the past three years and that the traditional provider must position itself for new markets and delivery concepts for continued growth.
- This report and research was instituted to ascertain the depth and breadth of these changes and to determine the extent to which (and the methods whereby) service vendors and others can maximize existing opportunities.

B. SCOPE AND USE

- The report details findings concerning establishments with 250 or fewer employees and the use of traditional batch services.
- The report should be used by information service providers in all delivery modes as an adjunct to their own strategies when viewing this market.
- Batch service providers should review the findings carefully before promulgating new policies and strategies for the ensuing five years.

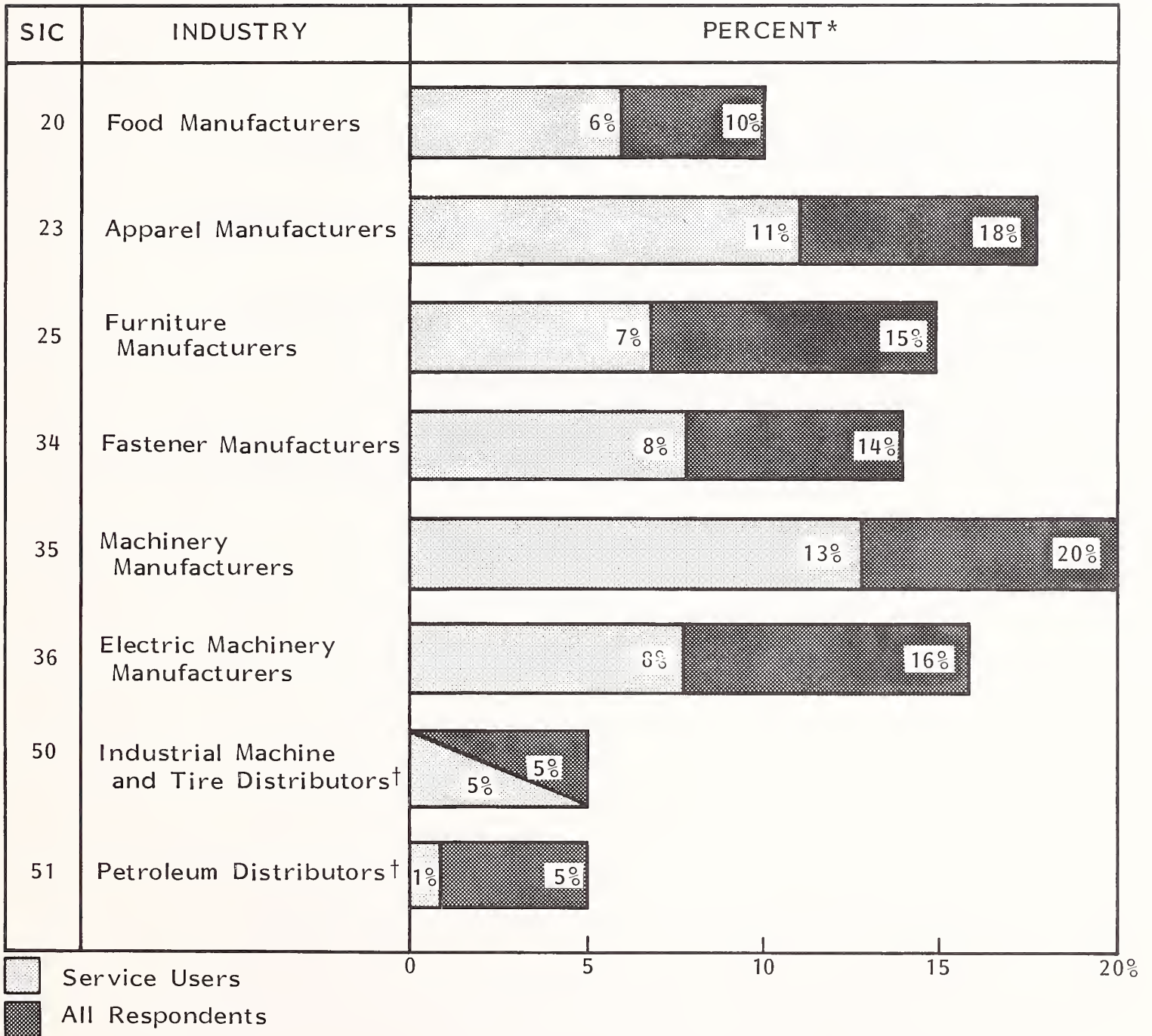
- In using the report, the reader should bear in mind that the term "very small company" refers to establishments with fewer than 50 employees. When a distinction is being made for comparative purposes, "small company" refers to firms with 50 or more employees, but fewer than 250. When no distinction is obvious, "small company" refers to the entire group of establishments with fewer than 250 employees.
- "Microcomputer" and "PC" are used interchangeably and are considered synonymous.

C. METHODOLOGY

- Senior managers of service centers were interviewed to ascertain not only their views of the market and trends, but also their general feelings about the subject of the survey and this report.
- Retail store managers, knowledgeable in other areas such as software and hardware, were interviewed.
- In-depth interviews were held with small-business users to ascertain their perspective about service offerings.
- Eighty-eight establishments of 250 or fewer employees were contacted by phone using the questionnaire in Appendix B. Fifty of these were service users. Exhibit I-1 shows the industry breakdown and service versus non-service response.

EXHIBIT I-1

SURVEY RESPONSE BY SIC CODE



*Total is greater than 100% due to rounding.

†Wholesale

D. RELATED INPUT REPORTS

- Readers should also examine Personal Computer Opportunities for Remote Computer Services Vendors, June 1983, and U.S. Information Services Markets, 1983-1988, December 1983.

- Readers are referred to the following:
 - U.S. Information Services Vertical Markets, 1984-1989.

 - U.S. Information Services Cross-Industry Markets, 1984-1989.

 - Market Opportunities for Transfer to Personal Computers.

 - Successful RCS Strategies for the Mid-80s.

 - Processing Services and Turnkey Systems Markets (1984-1989 Edition).

II EXECUTIVE SUMMARY

- This executive summary was designed to give the reader a synopsis of the salient points of the report. Readers are urged to study the entire report prior to arriving at strategic conclusions.
- In order to assist the reader in presenting this report to others, presentation material is provided on each text page of the executive summary and highlights the material on the facing exhibit. The presentation leader is encouraged to use other exhibits in the report to supplement this material.

A. SMALL FIRMS ARE MOVING MOST OPERATIONS IN-HOUSE

- Most small organizations have already moved their operations in-house, with the exception of payroll and vertical specialized applications, and are no longer using service bureaus for basic accounting applications such as billing, inventory control, accounts receivable, sales analysis, and general ledger.
- The survey indicates that 30% of all companies intend to purchase computers over the next one to five years but that they do not necessarily intend to move in-house the applications provided by the service vendor.
- The average time before the expected move to an in-house computer is 2.1 years, with smaller companies migrating slightly faster than those companies with 50 or more employees.
- Batch service organizations have been changing their service to provide customers more on-line capability resulting in reasonable success in retaining some business that might otherwise migrate to in-house minis or PCs.

SMALL FIRMS ARE MOVING MOST OPERATIONS IN-HOUSE

- **Many Small Firms Are Already Using PCs for Accounting**
- **30% of Remainder Will Purchase Computers in Approximately Two Years**
- **Batch Service Firms Are Modifying Delivery Methods to Help Slow In-House Migration**

B. PAYROLL IS LEAST LIKELY TO BE DONE IN-HOUSE

- Forty-four percent of all service respondents would duplicate their process in-house if they could. Moreover, a healthy 87% of service customers who are future computer buyers will duplicate the service offering when they buy new systems.
- This would strongly support arguments that service companies should find ways to offer software, hardware, turnkey systems, etc. to their maturing customers--especially when viewed in the light of the increased expenditures expected by the buyers of in-house systems.
- The overwhelming lead of payroll suggests the position of this application as more "solid" for the batch vendor but also suggests the already serious erosion of the accounting functions as they continue to migrate to in-house operation.
- Thirty percent of the respondent companies intend to purchase computers over the next five years, but they do not intend to move all services in-house. This indicates that the respondents were generally pleased with their services but still felt a need to purchase computers.

PAYROLL IS LEAST LIKELY TO BE DONE IN-HOUSE

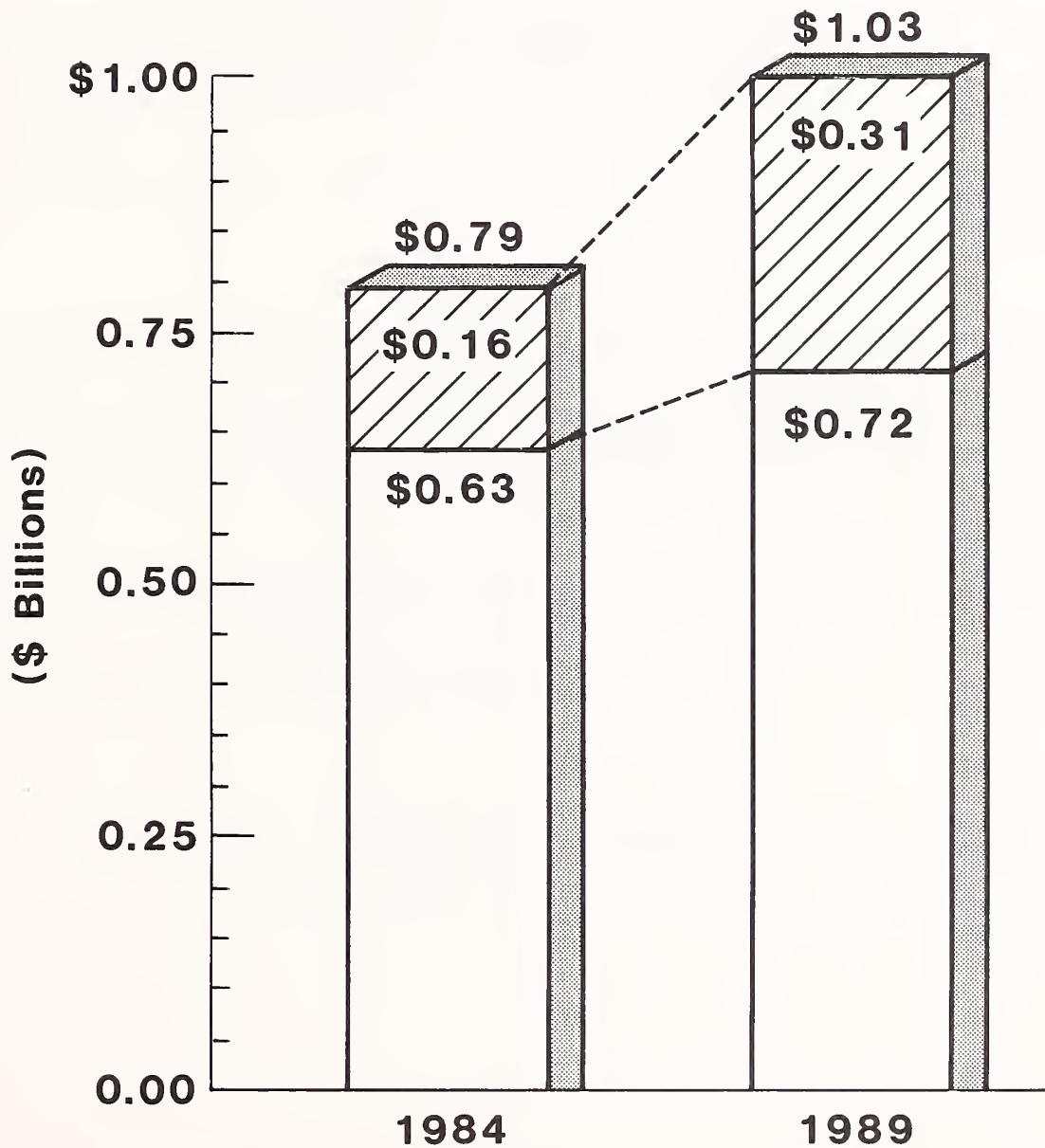
- **Most Companies Would Duplicate Batch Service Process In-House If They Could**
- **Companies Like the Service They Get But Find the Lure of Computer Ownership Irresistible**

C. THE CHANGING WORLD OF BATCH DELIVERY

- The total small business market for batch services is expected to decrease by an estimated 2.5% per year in current dollars (not adjusted for inflation).
- This erosion is not likely to get worse in the near future, so batch service vendors will have time to react.
- Some batch business will change from pure batch to on-line batch utilizing PCs or terminals in user facilities and frequently utilizing the same supplier, when the batch vendors upgrade their systems to provide this additional capability.
- Many service bureaus have for years provided methods by which batch customers could go on-line to large processors, thus satisfying some of the requirements of going in-house by providing terminals on the customer site.
- The total five-year expenditures for services have been traditional batch. These services are migrating to new delivery methods but are still in a service mode such as remote batch, on-line conversational batch, or the ADP approach (see section D of this executive summary).

THE CHANGING WORLD OF BATCH DELIVERY

(Real Dollars)



Total Service Expenditures,
Companies with Fewer than 250 Employees

Total Average Annual Growth Rate (AAGR) = 5.5%

- Traditional Batch (AAGR 2.5%)
- New Delivery Methods (AAGR 15%)

D. THE ADP APPROACH TO THE CHANGING WORLD

- A recent announcement by Automatic Data Processing (ADP) carries this philosophy a step further by providing batch service customers with an in-house system--to which ADP is on-line.
- The system, the ADP 586, costs the service customer \$1,200 per month (complete). It is based on an Altos processor and comes with complete software similar to the ADP batch offering. The system has full communications with ADP; so training, support, and troubleshooting are all provided by ADP at the customer site.
- The system is not a "distributed data processing system" allowing the customer's intelligent terminal to do some processing locally in conjunction with processing on ADP's host, but it is a fully automated local processor to which ADP maintains contact for maximum customer comfort and probable long-term loyalty.

THE ADP APPROACH TO THE CHANGING WORLD

- **The ADP 586 Satisfies Customer Urges But Keeps ADP in Control**

**Provides Revenues of \$1,200 Monthly
to Service Vendor**

- **Solves “Lack of Support” Problem Faced By Most New Users of PCs**

E. OTHER APPROACHES TO THE CHANGING WORLD

- The study clearly shows that, with a few exceptions, the traditional batch service world has changed significantly within the past three years, with most small firms having moved at least some processing in-house.
- Payroll continues as a strong service market with some general accounting use still being available to service users.
- It would now be rare to find an organization--one that has more than 20 employees--not using some form of computer, usually justified by a specialized industry-specific use such as numerical control, or bread-and-butter applications such as accounts receivable.
- An estimated 20% of batch business has migrated from pure batch to a combination of a terminal or micro on-line to mainframe, usually with the same service supplier. This segment will grow at an estimated annual rate of 15%.

OTHER APPROACHES TO THE CHANGING WORLD

- **An Estimated 20% of Former Batch Business is Now Provided On-Line By Same Supplier**
- **This Newer “Hybrid” Method Will Grow at Least 15% Per Year**

F. RECOMMENDATIONS

- The most practical approach to the changing scenario is to combine the existing service offering with some method of on-line operation.
- The service vendor should mount an aggressive campaign with existing customers, emphasizing the positive aspects of service and reinforcing the reasons for selecting the service to begin with (i.e., saving time, saving effort, saving money).
- The service alternative to data processing continues as a viable method of delivery within a narrowing envelope of clients. However, with the appropriate strategy and attendant investment for the future, outside services for data processing solutions by batch vendors will continue to be a growth business.

RECOMMENDATIONS

- **Service is Still a Strong, Viable Concept**
- **Vendors Must Modify Offerings to Satisfy Unfulfilled Urges to Be On-Line**
- **The Envelope is Narrowing, But the Business Remains Strong**

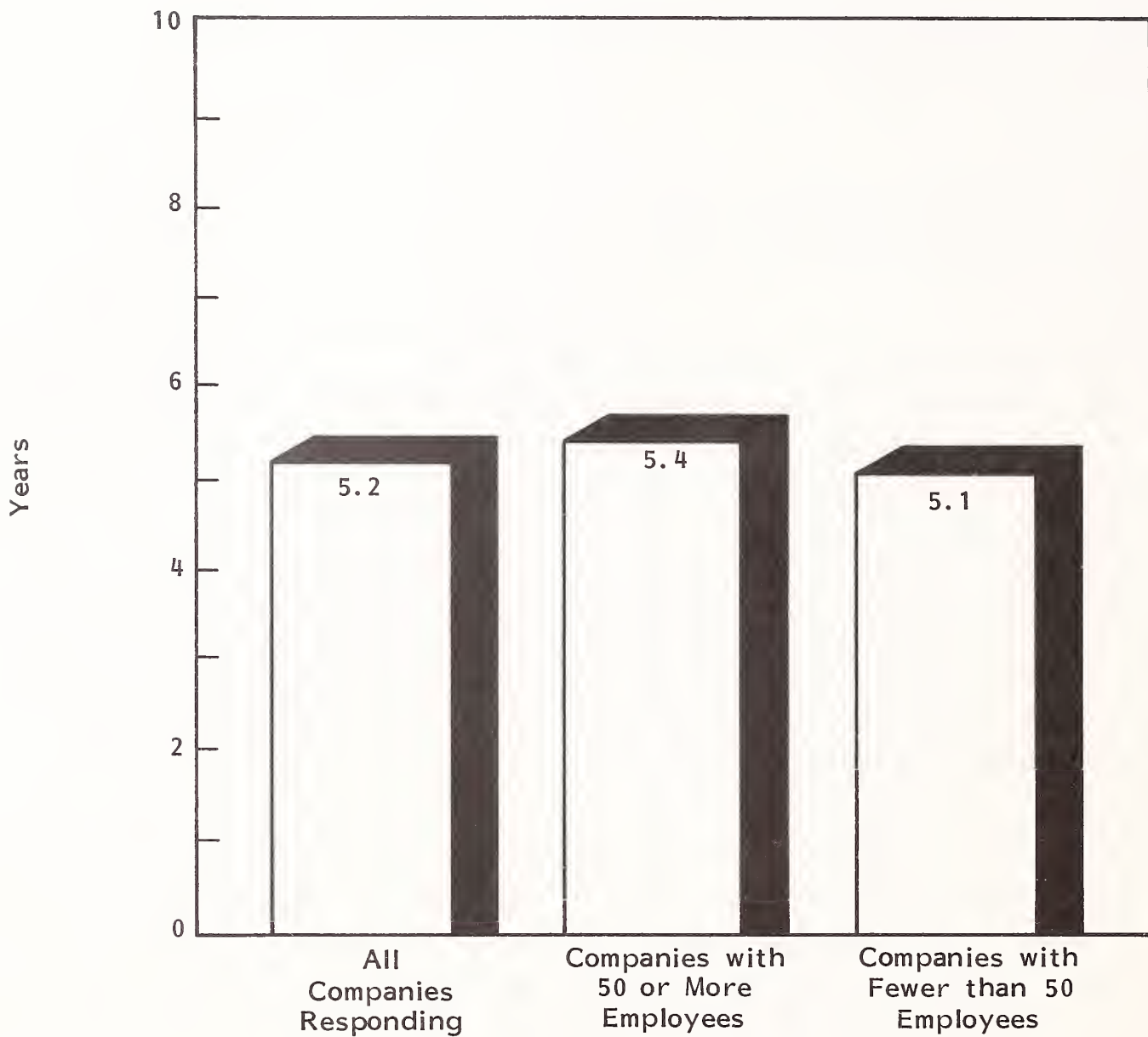
III MARKET ANALYSIS AND TRENDS

A. PRESENT MARKET STATUS

- Most small organizations have already moved their operations in-house, with the exception of payroll and vertical specialized applications, and are no longer using service bureaus for basic accounting applications such as billing, inventory control, accounts receivable, sales analysis, and general ledger.
- An exception to this is posed by the one- to four-person operations such as small retailers who are using bookkeeping services that are themselves service bureaus utilizing small personal computers. These individuals do not consider themselves to be computer service users, but rather traditional users of outside bookkeeping services.
- Other exceptions are highly specialized and rather narrow applications requiring labor for data collection or preparation, or other ancillary functions not easily accommodated on a PC. In other cases the bureau might offer special knowledge not easily computerized on a PC; examples of this are leasing processors or mortgage processors for small savings and loan organizations.
- Exhibit III-1 shows that the average user of computer service has been using the service for more than five years. This and subsequent findings tend to indicate that what remains as outside service may tend to be more solid than was the case prior to the PC explosion.

EXHIBIT III-1

YEARS OF PRIOR USE OF OUTSIDE SERVICE



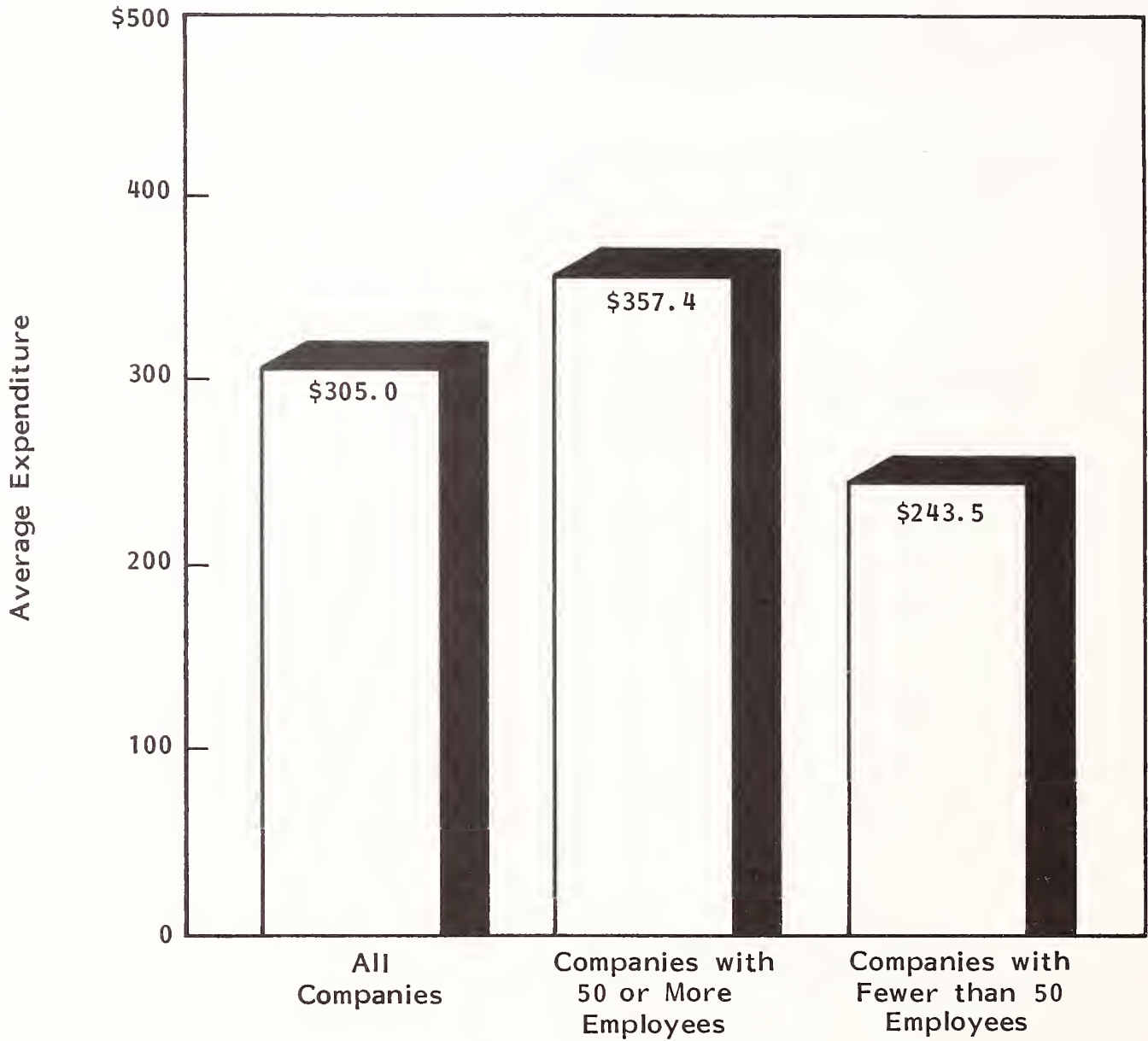
- Exhibit III-2 indicates that slightly more than \$300 per month is spent on outside service by small organizations. The results show that organizations with fewer than 50 employees spend approximately \$7 per month per employee on service (based on an average of 34.2 employees per company). Companies with more than 50 employees spend about \$3.4 per month per employee for service (based on an average of 103.9 employees per company).
- This can be explained to some degree through economies of scale, but it also indicates a stronger need in the smaller organizations not yet able to justify the cost of a dedicated system.

B. MARKET CHANGES IN THE NEXT FIVE YEARS

- The survey indicates that 30% of all companies intend to purchase computers over the next one to five years but that they do not necessarily intend to move service applications in-house.
- The average time a company takes to move to an in-house computer is 2.1 years. Smaller companies migrate slightly faster than those companies having 50 or more employees, probably because the smaller companies can utilize a simple operation on a PC easier than the larger firms can.
- The majority of the firms interviewed, if they intend to go in-house, were buying for the first time.

EXHIBIT III-2

AVERAGE MONTHLY EXPENDITURE FOR OUTSIDE SERVICE



C. MAJOR TRENDS

- Almost all companies are now reviewing their computer needs in light of available technology and the present advertising pressures in the general media.
- All suppliers seem to be emphasizing the more spectacular uses for their systems and almost ignoring the day-to-day applications--probably because the advertising agencies find it easier to be more creative about production lines than to find something to say about general ledger or payroll.
- The system suppliers are not ignoring the requirement to have a full line of business packages available on their systems. But they usually leave software to third parties, offering the software as optional at point of purchase or bundled as a sales inducement.
- Over 90% of the smaller (PC) systems sold to small businesses are sold through retail computer outlets, with the attendant lack of support and knowledge of the buyer's real requirements as well as after-purchase interest in the buyer's problems.
- This trend will continue for the foreseeable future. However, competitive pressure will eventually force the suppliers to find ways to eliminate the problems that buyers encounter.
- This leaves some time for the service industry to counter with alternatives that make the transition to in-house more effective for the user and more profitable for the service companies (see Chapter IV).
- Batch service organizations have been changing their service to provide customers more on-line capability resulting in reasonable success in retaining some business that might otherwise migrate to in-house minis or PCs.

D. SURVEY ANALYSIS

- The survey showed some differences between companies of fewer than 50 employees and companies of 50 or more employees, but most differences are explained by size difference alone as opposed to significantly differing attitudes.
- This lack of difference serves to corroborate the overall soundness of the result, in that it could be viewed as two different surveys to similar populations--surveys that yield statistically equal results.
- Fifty-four percent of the companies responding had 50 or more employees, and 46% had fewer than 50 employees.
- The reader is cautioned to remember that the survey was aimed at small companies. Firms that were known to have more than 500 employees were not contacted. The average number of employees at the companies surveyed is shown in Exhibit III-3.
- Fifty-seven percent of the total respondents used some form of outside service.
- The average expenditure was \$350 per month. As might be expected, larger firms spent more and smaller firms spent less. (Refer back to Exhibit III-2.)
- Over 90% of the service users were payroll customers. Less than 30% were accounting application customers, with the largest portion (8% totally) using general ledger, as shown in Exhibits III-4 and III-5.
- The average growth reported was 2.2% per year, as shown in Exhibits III-6 and III-7. Respondents were encouraged to consider an increase in the use of the service and a natural expansion of their companies. These estimates are based on current (noninflationary) dollars.

EXHIBIT III-3

AVERAGE NUMBER OF EMPLOYEES IN COMPANIES SURVEYED

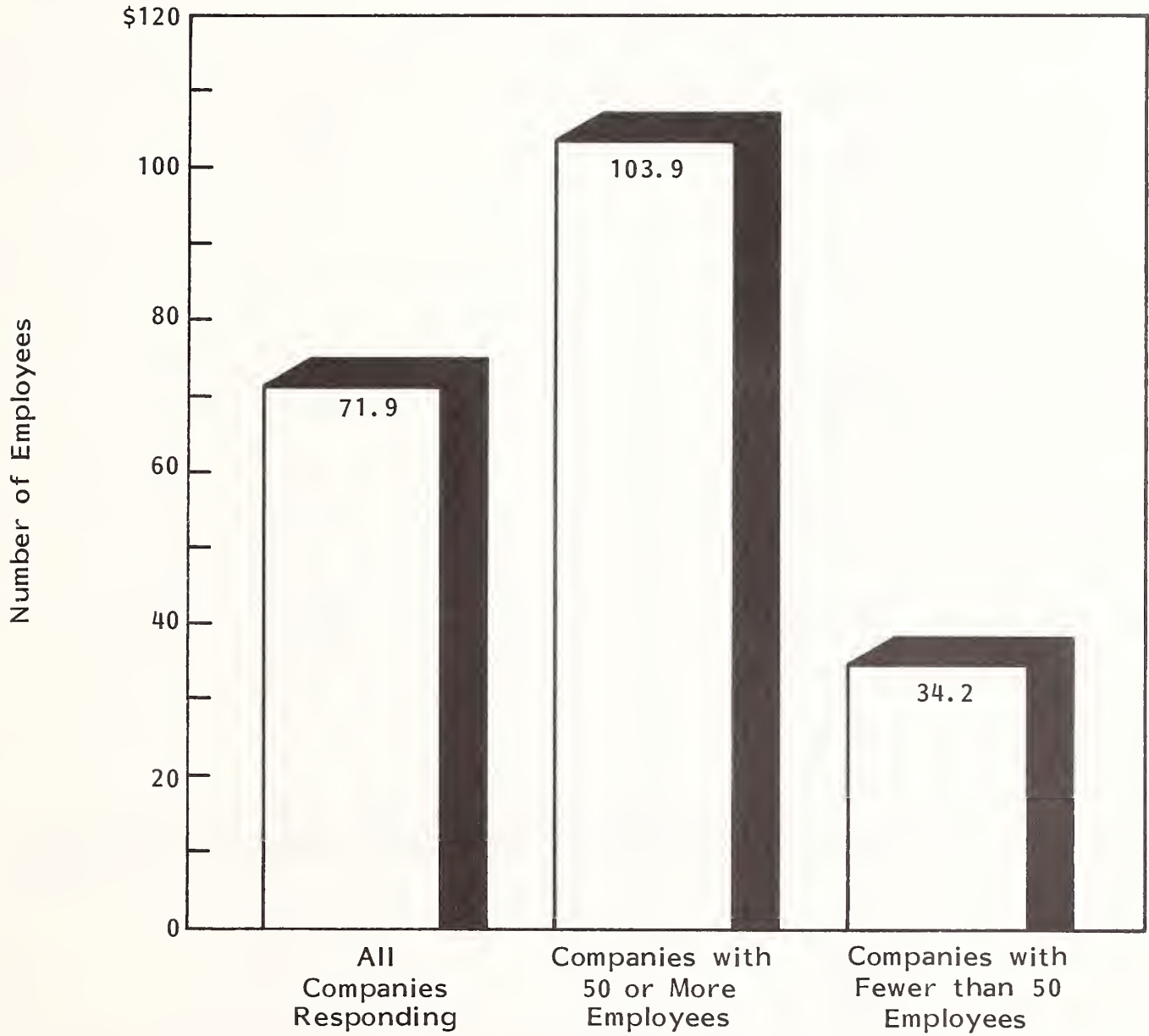
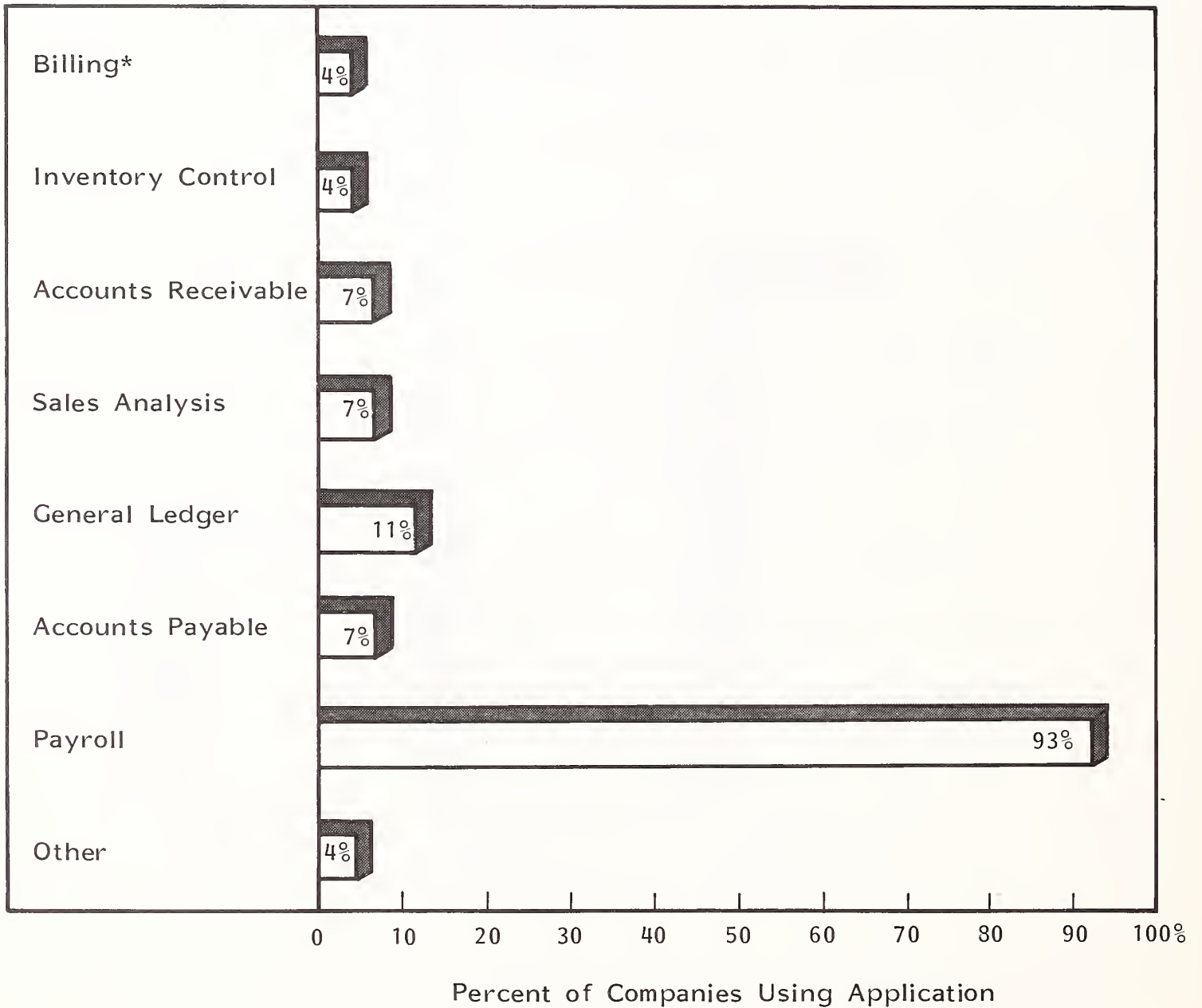


EXHIBIT III-4

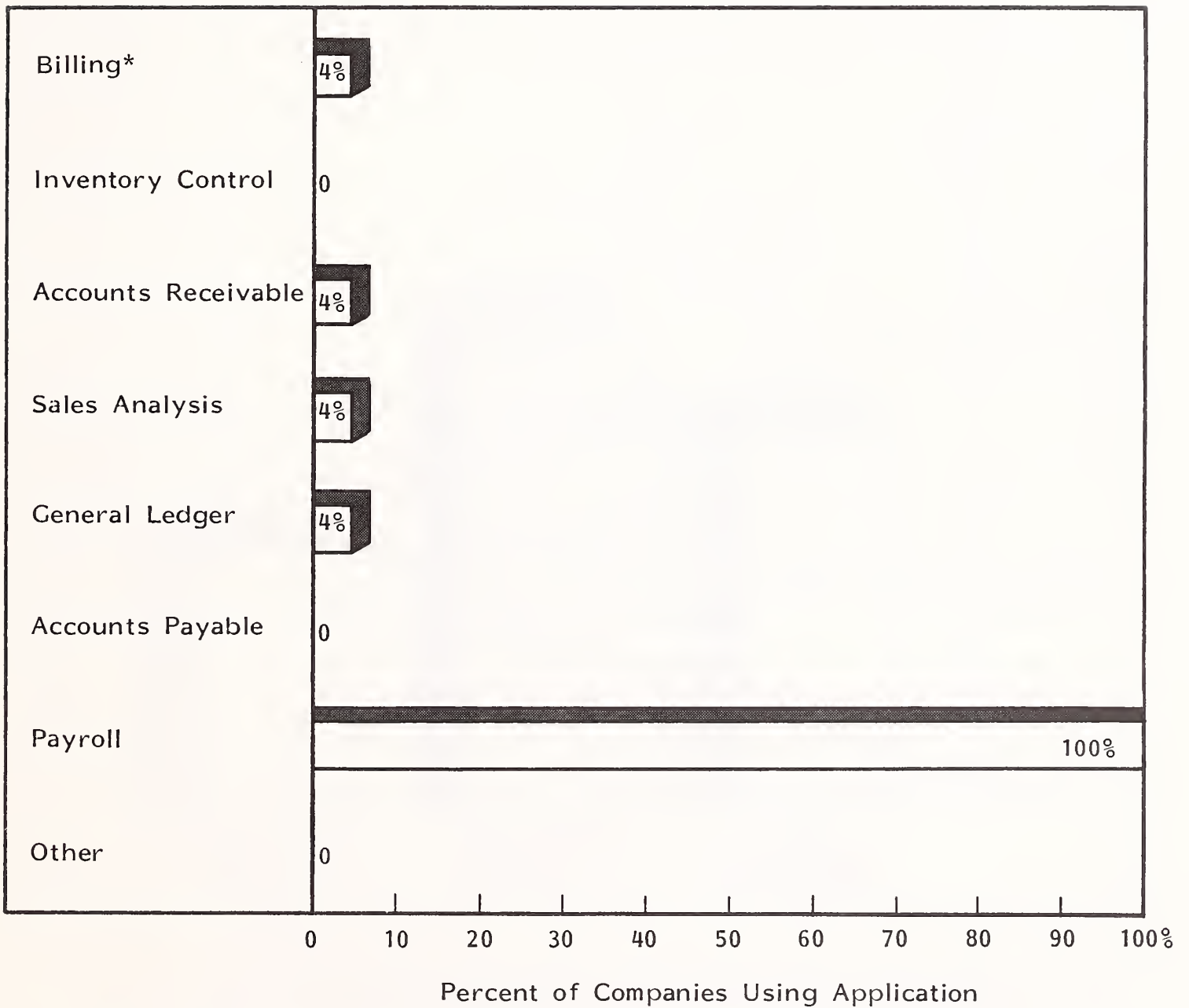
APPLICATION USE AS A PERCENT OF TOTAL
USE OF OUTSIDE SERVICE
(50 or More Employees)



* Includes Order Entry

EXHIBIT III-5

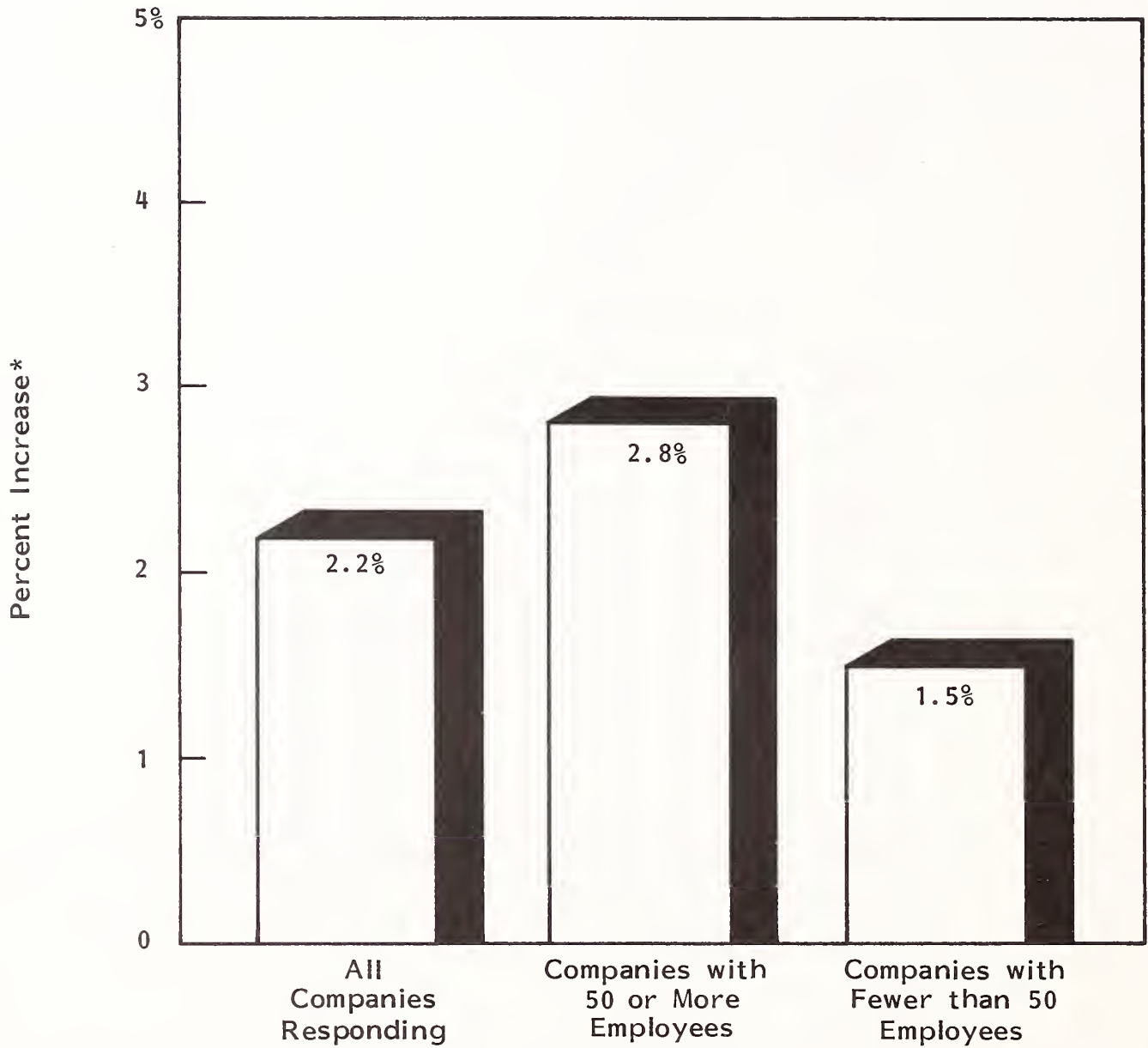
APPLICATION USE AS A PERCENT OF TOTAL
USE OF OUTSIDE SERVICE
(Fewer than 50 Employees)



* Includes Order Entry

EXHIBIT III-6

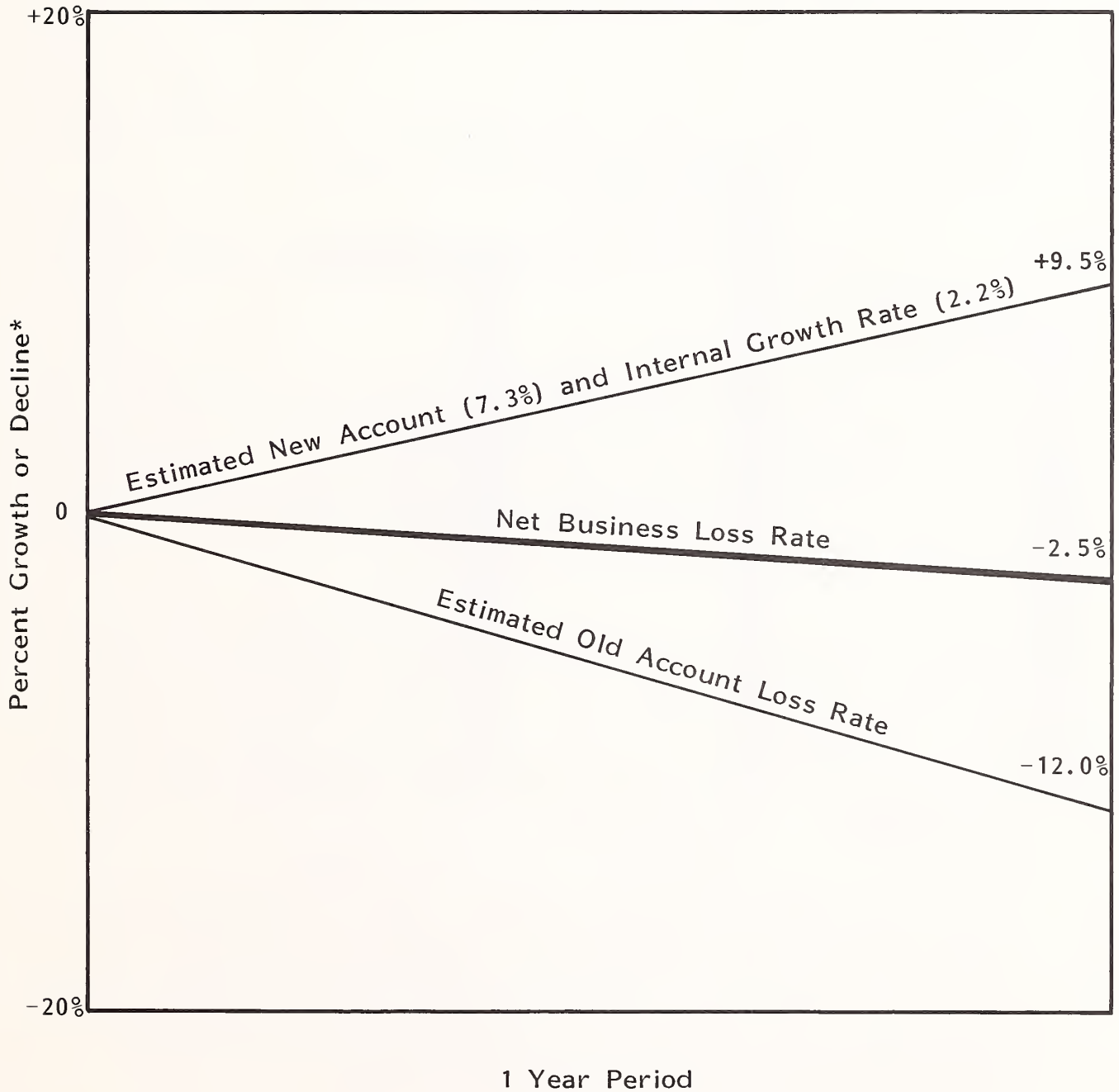
EXPECTED INCREASE IN THE USE OF OUTSIDE SERVICE ANNUALLY
FOR NEXT FIVE YEARS



*Percentages reflect estimates based on current (noninflationary) dollars.

EXHIBIT III-7

ESTIMATED INDUSTRY GROWTH RATE FOR
PURE BATCH SERVICES



*Percentages reflect estimates based on current (noninflationary) dollars.

- Exhibit III-7 illustrates the slow decline of the pure batch market on a year-by-year basis. The growth rate of 9.5% is based on the expected internal growth of 2.2% and a new account growth rate of 7.3%, both from the survey. However, in addition to this, the account loss rate of 12%, derived from the survey, yields a net loss annual rate of 2.5%, unadjusted for inflation. Utilizing an annual projected inflation rate of 5%, this yields a real dollar forecast of 2.5% growth per annum, which is reflected in the forecast in Appendix A.
- Exhibit III-8 shows that 30% of all respondents intend, at some time, to replace outside computer service with their own systems.
 - The corollary shows, surprisingly, that 70% never intend to abandon outside services.
 - Of those intending to replace the service, the average time until replacement is 2.1 years, as shown in Exhibit III-9. Since the respondents were thinking in terms of when they would be likely to procure a replacement system, as opposed to when it would be fully operational, the result is probably more like 2.5 years.
- Surprisingly, 60% of the respondents, as shown in Exhibit III-10, expect to procure a system larger than a PC. In addition, most of these respondents have a reasonably educated idea of the cost. No respondent expected to procure multiple PCs or to use excess capacity on a system procured for some other purpose.
- The average respondent expects to spend a total of \$21,600 for a system, as shown in Exhibit III-11. Although this is probably low for what will eventually be spent, it does represent the fact that most respondents have probably been approached by sales people or have had discussions with associates in similar businesses to gain some insight into the likely costs.

EXHIBIT III-8

PERCENT OF COMPANIES EXPECTING TO
PURCHASE/LEASE IN-HOUSE SYSTEMS

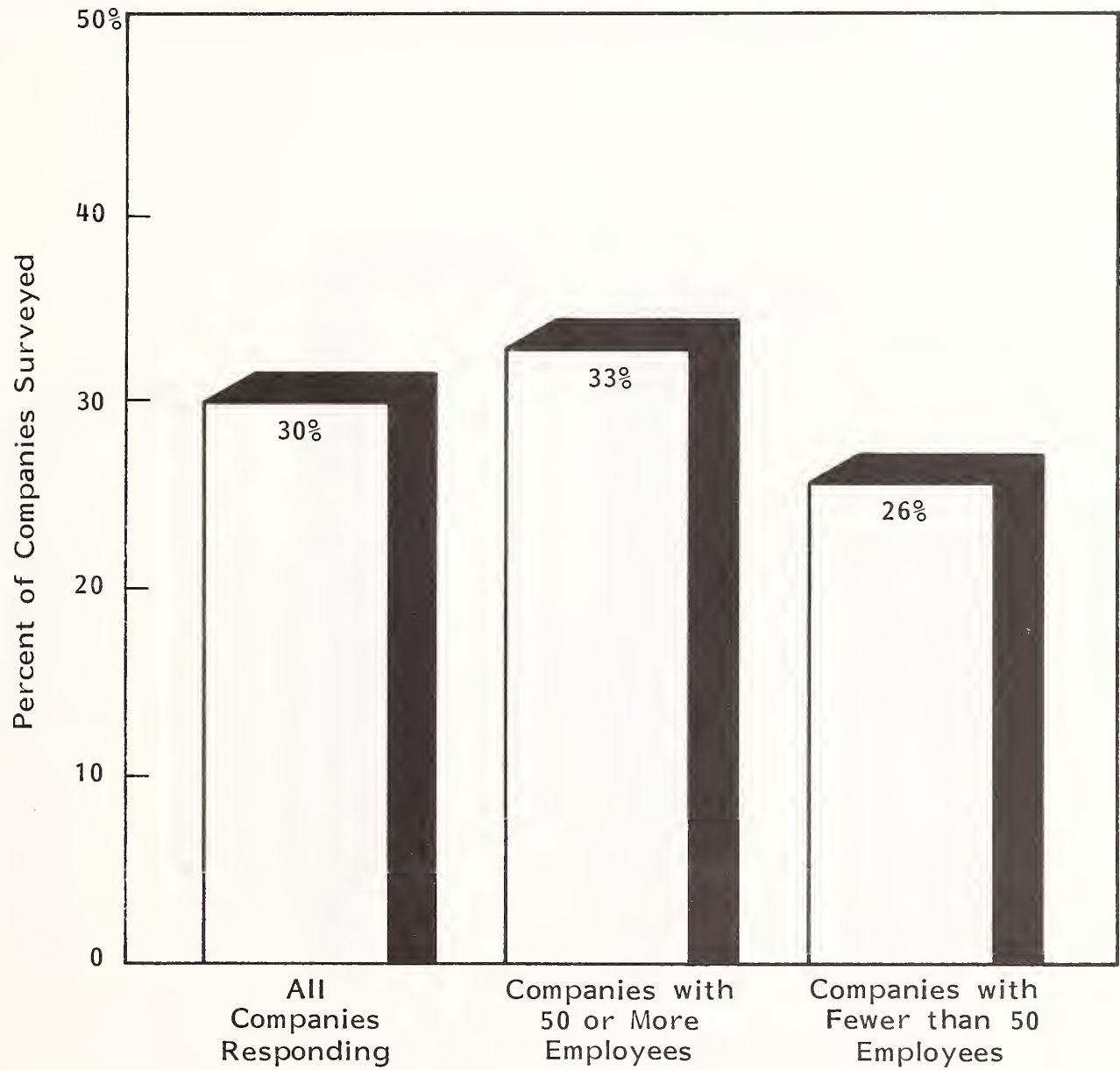
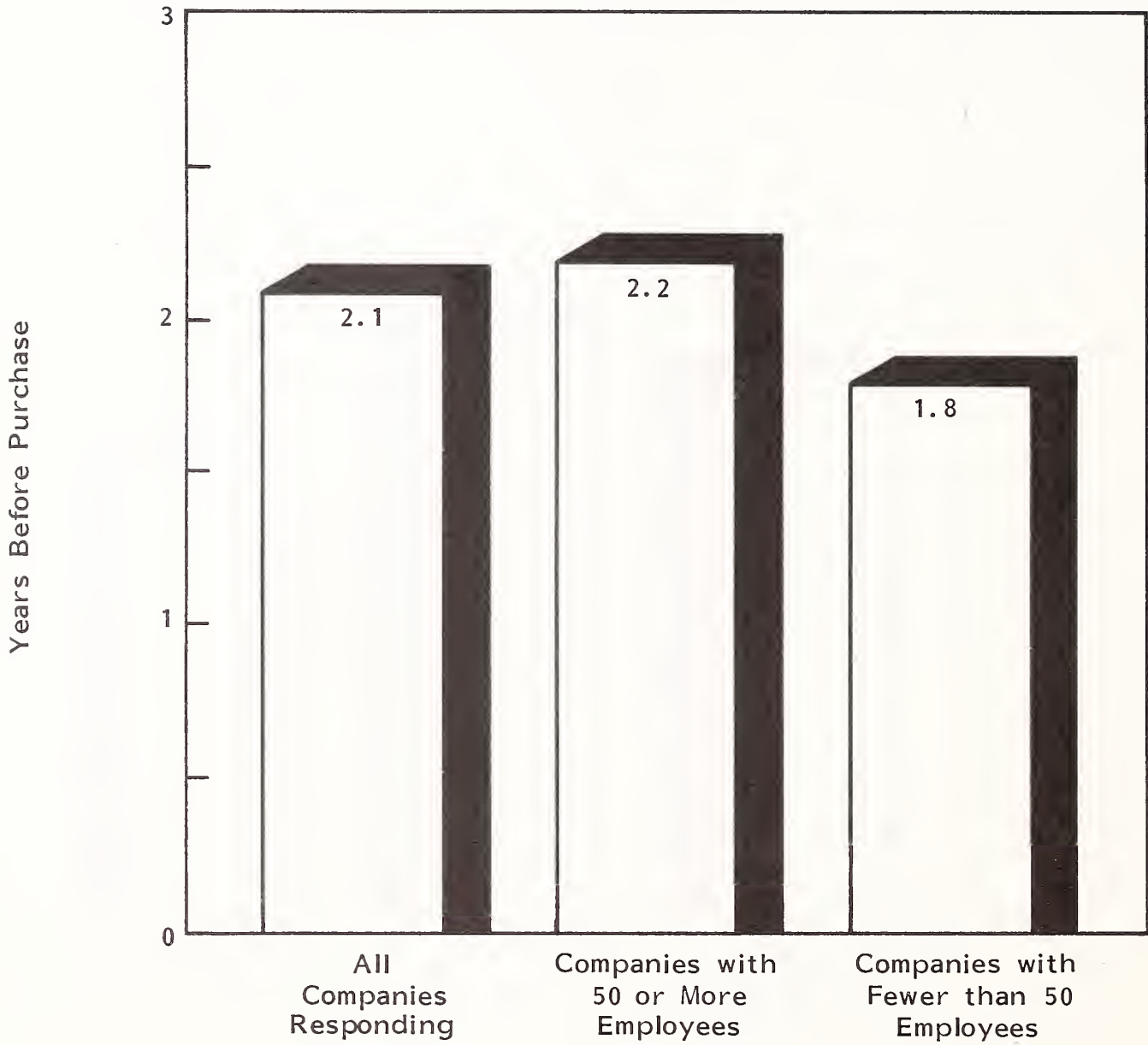


EXHIBIT III-9

WHEN WILL COMPANIES THAT EXPECT TO
PURCHASE/LEASE IN-HOUSE SYSTEMS DO SO?



WHAT TYPE OF SYSTEM WILL BE CHOSEN WHEN SERVICE USERS PURCHASE/LEASE IN-HOUSE SYSTEMS?

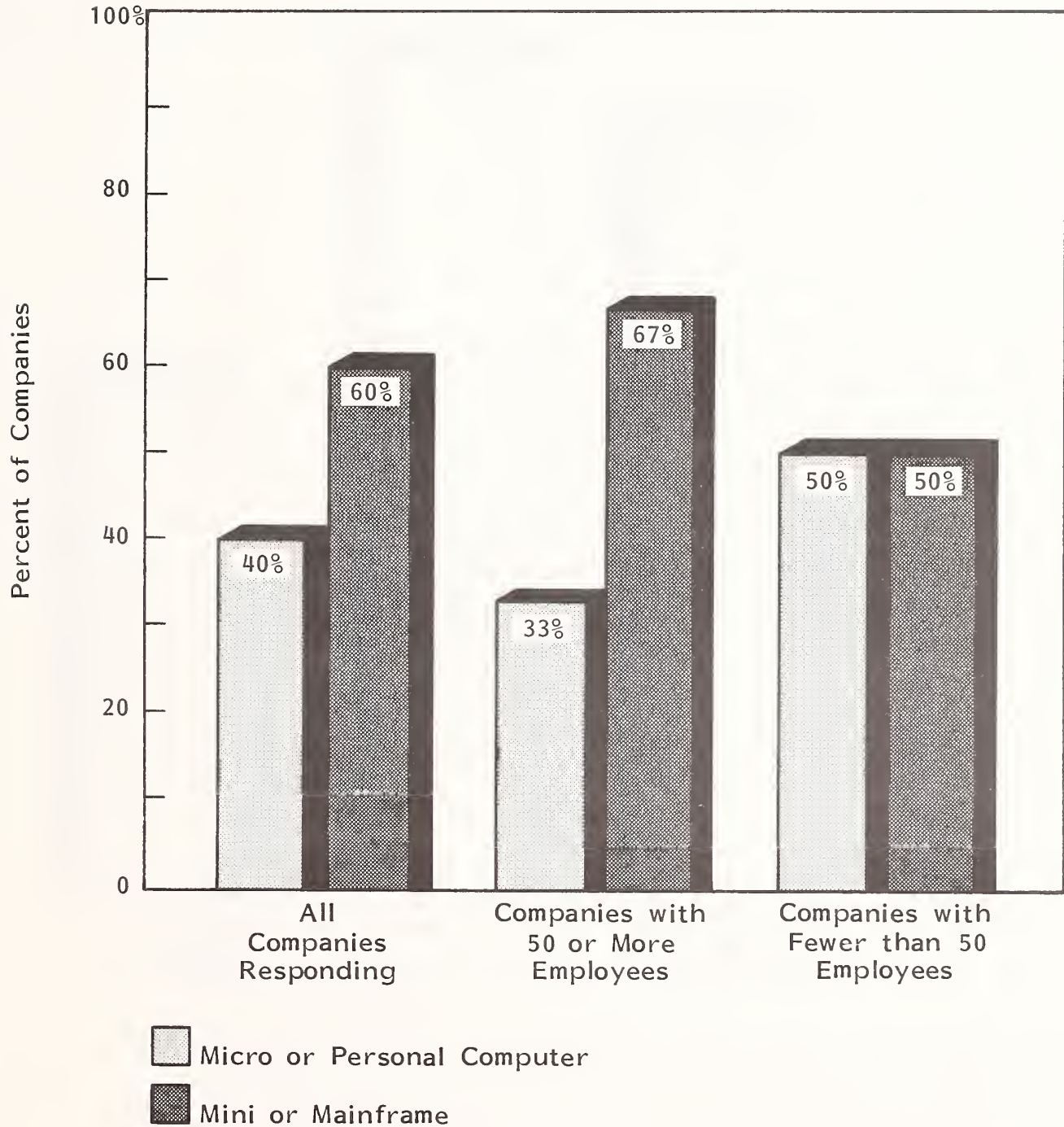
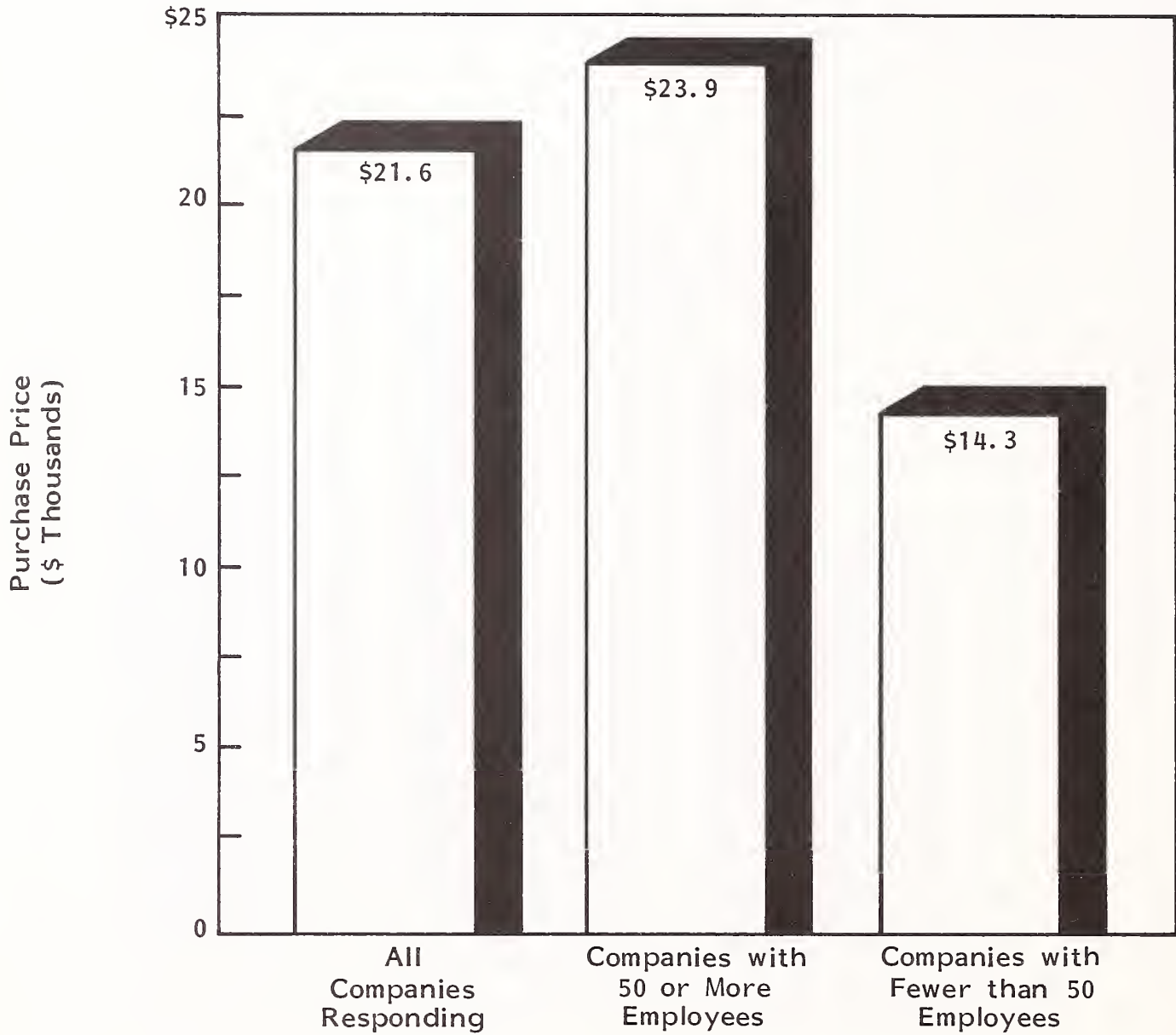


EXHIBIT III-11

WHAT WILL BE THE AVERAGE PURCHASE PRICE FOR
NEW IN-HOUSE SYSTEMS (WHETHER PURCHASED OR LEASED)?



- It is interesting to note that the average service user spends \$305/month on service but expects to purchase a system that will cost \$514/month to purchase if amortized over five years at 15% interest. It is highly likely that the justification for this discrepancy is that the buyers will put other new applications on their in-house systems.
- The question regarding target applications for the new system became (due to the preponderance of payroll users) a question of who would convert payroll to in-house systems. As Exhibit III-12 shows, a relatively small percentage--40%--of those who intend to buy computers would also do their payroll on the new system.
- Another view of the same question shows that only 12% of all respondents, including those who did not intend to buy computers, expect to migrate away from payroll service in the next five years.
- This following question was asked of all respondents, whether or not they intended to buy a system: If you could do the same thing you are doing with your service on your own computer, would you? The results show a potential threat as well as a potential opportunity to service vendors.
 - Forty-four percent of all service respondents, as shown in Exhibit III-13, would duplicate their process in-house if they could.
 - Moreover, a healthy 87% of service customers who are future computer buyers would duplicate the service offering when they buy a new system, as Exhibit III-14 depicts.
 - This would strongly support arguments that service companies should find ways to offer software, hardware, turnkey systems, etc. to their maturing customers--especially when viewed in the light of the increased expenditures expected by the buyers of in-house systems.

EXHIBIT III-12

PERCENT OF COMPUTER BUYERS WHO INTEND TO
CONVERT PAYROLL TO NEW SYSTEM

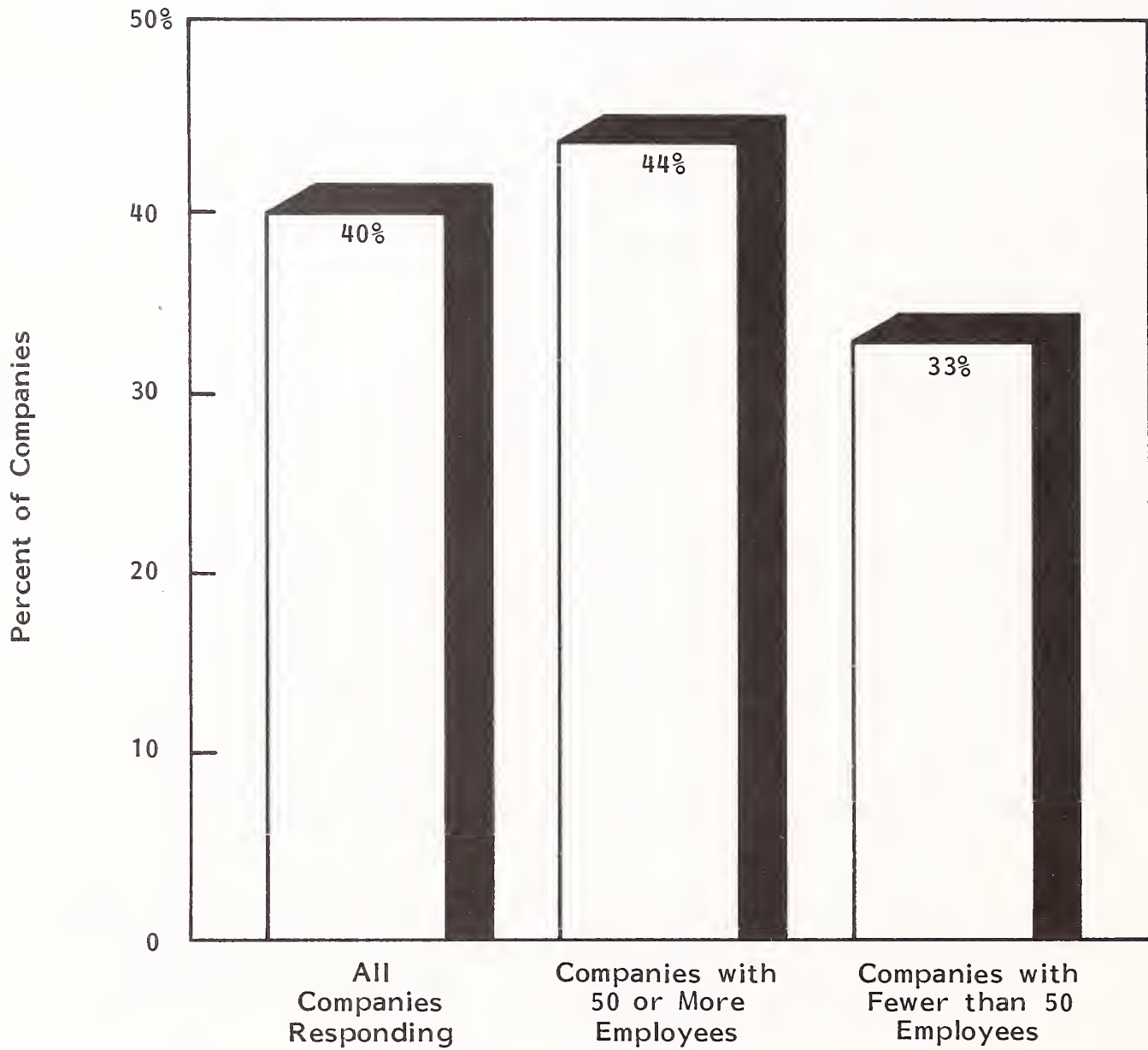


EXHIBIT III-13

PERCENT OF SERVICE USERS WHO WOULD USE
PRESENT METHODS IF OFFERED ON IN-HOUSE SYSTEM

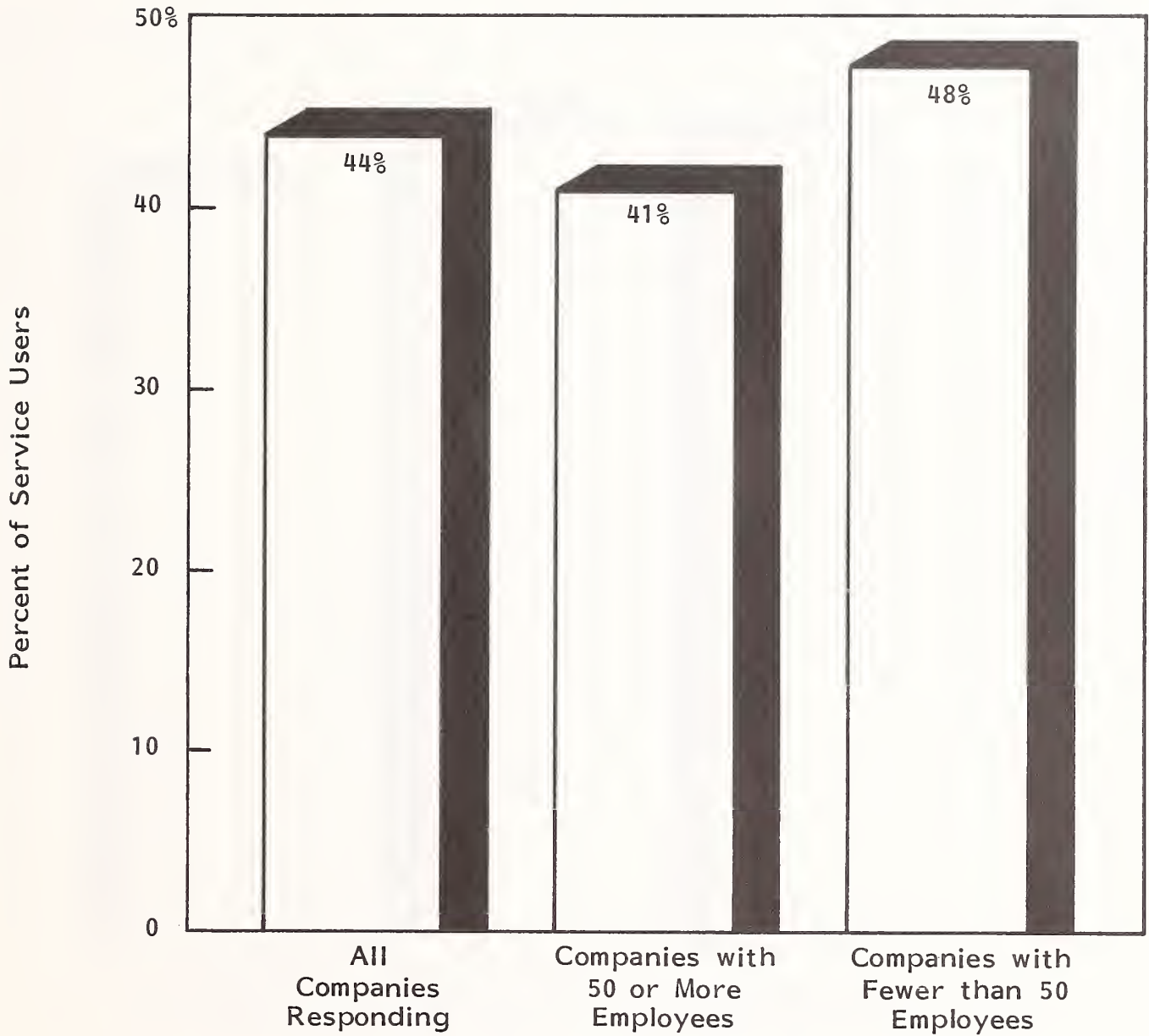
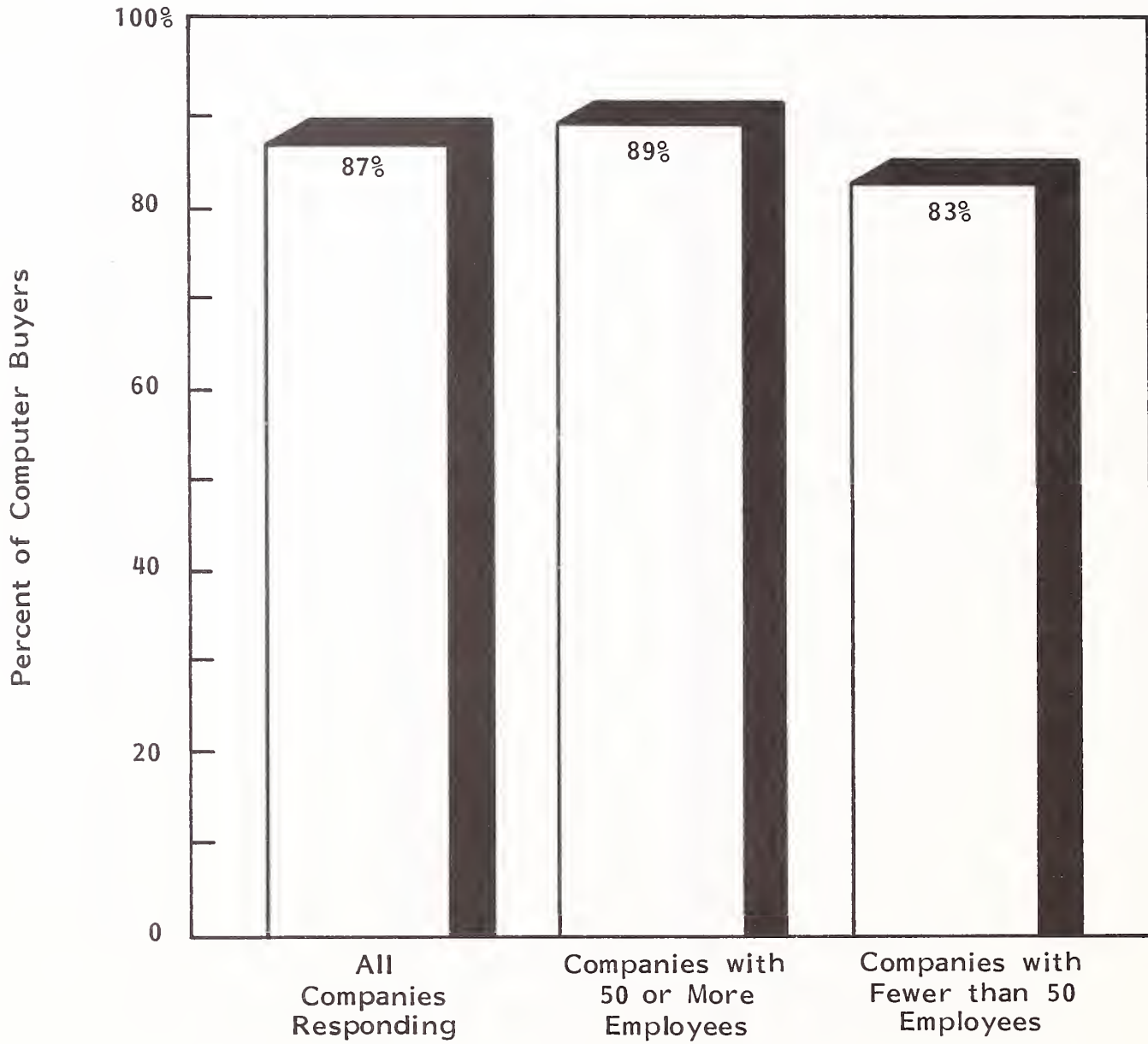


EXHIBIT III-14

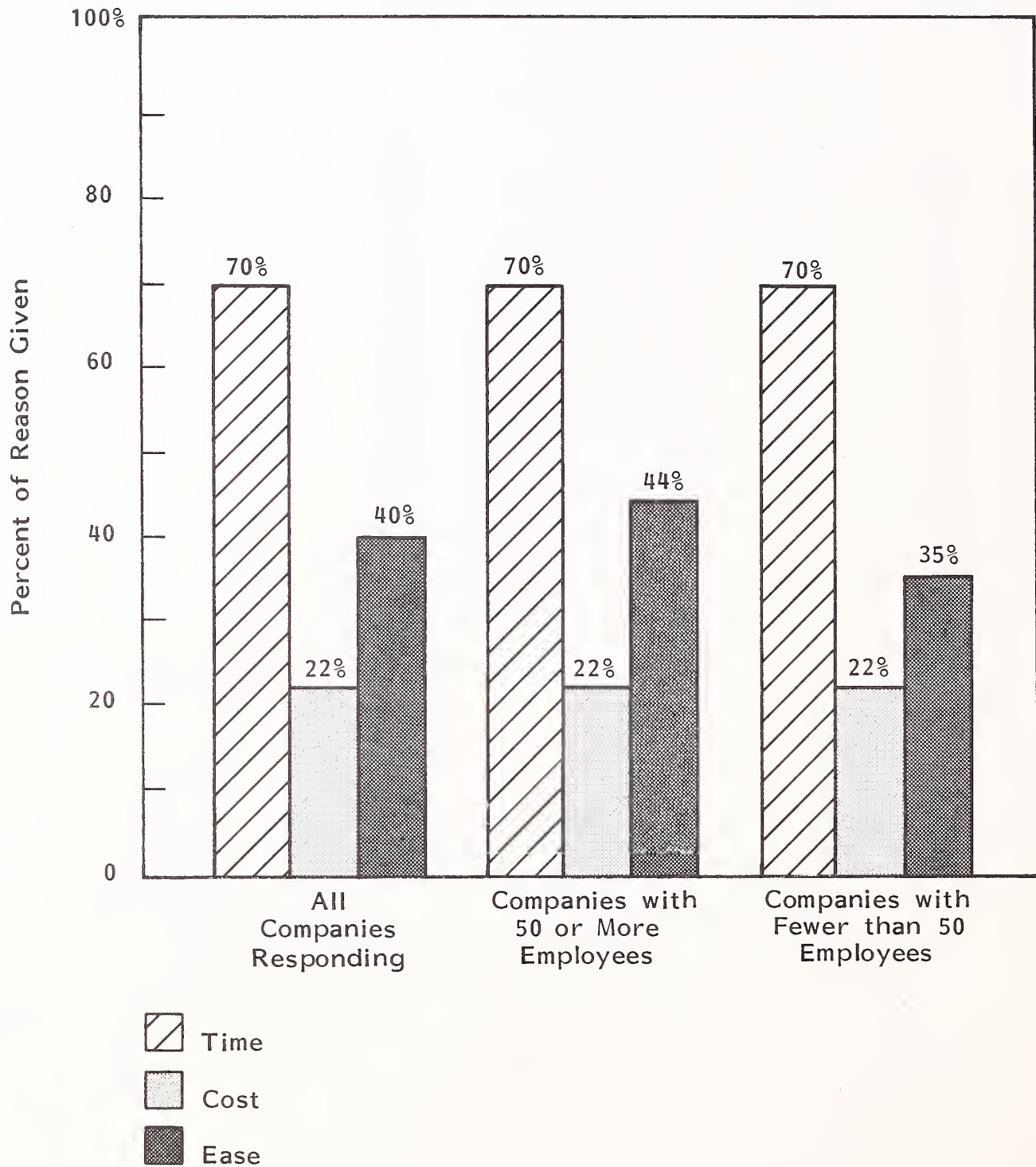
PERCENT OF FUTURE COMPUTER BUYERS WHO WOULD USE
PRESENT METHODS IF OFFERED ON IN-HOUSE SYSTEM



- The overwhelming response (70% of all respondents) to the free-form question "Why did you start using a service in the first place?" was "To save time." The next most frequent response (40%) was "for ease of use." (Multiple responses allow more than 100% total.) The least frequent, but still significant response (22%) was "to save money." Exhibit III-15 displays these percentages. This general positive feeling toward service is corroborated by the small number (12%) who intend to automate payroll.
- These results tend to corroborate the advertised value of service offerings when compared to in-house systems. That is, if you can save time, trouble, and money, why do it yourself?

EXHIBIT III-15

REASONS THAT SERVICE USERS BEGAN USING
SERVICE WHEN FIRST INITIATED



IV ANALYSIS OF KEY APPLICATIONS

A. APPLICATIONS KEY TO VERY SMALL COMPANIES

- Companies of fewer than 50 employees that use batch services are the most dedicated users of payroll, with 100% reported usage. It is strongly suspected that this group also uses general ledger and other accounting services but is unaware that they are using computer services when their bookkeeping firms supply them with periodic reports. Only 9% of this group plans to go in-house with their payroll at any time in the near future, even though 26% plan to purchase computers within three years.
- The average expenditure per month for the very small user is \$243.5 per month, or \$7 per employee per month (refer back to Exhibit III-2).

B. APPLICATIONS KEY TO SMALL COMPANIES

- The larger firms are also extensive users of payroll, with 93% of the service customers indicating usage. These firms also indicated approximately 20% use of other applications, with the majority using general ledger applications. However, this group was more inclined to take their applications in-house, with 33% planning to purchase computers within three years and 15% planning to implement payroll when they do.

- It is important to note that these firms all intend to implement their accounting functions if they buy computers (excluding payroll).
- The larger firms spend \$357.4 per month on services, for an average of \$3.4 per month per employee (refer back to Exhibit III-2).

C. RANKING OF KEY APPLICATIONS

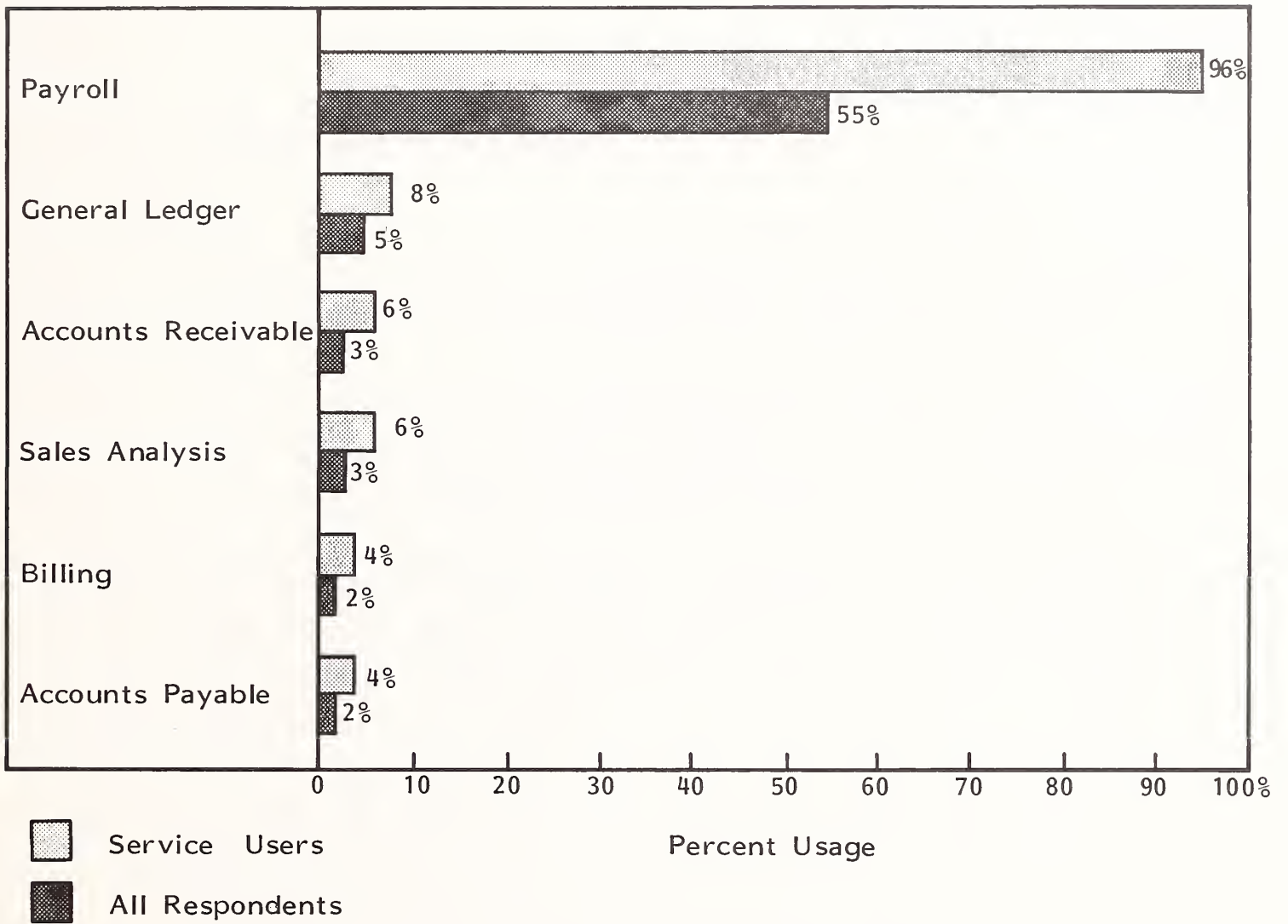
- Exhibit IV-1 shows the ranking of the key outside service applications as a function of total usage for both service users and all respondents.
- The overwhelming lead of payroll suggests the position of this application as more "solid" for the batch vendor but also suggests the already serious erosion of the accounting functions as they continue to migrate to in-house operation.

D. FUTURE HARDWARE VENDOR TARGETS

- The overwhelming number of potential payroll customers in the U.S. is estimated by the U.S. Department of Commerce to be in excess of 4.5 million firms, 99% of which have fewer than 250 employees and 87% with fewer than 520 employees. Thus it is likely that increasing pressure will be applied by micro manufacturers and software designers to penetrate this market.

EXHIBIT IV-1

RANKING OF KEY APPLICATIONS ON OUTSIDE BATCH SERVICE



V THE MICRO THREAT TO BATCH SERVICE VENDORS

A. EXPECTED ANNUAL CHANGE

- The total small business market for batch services is expected to decrease by an estimated 2.5% per year in current dollars. (Refer to Exhibit III-7.)
- Based on previously discussed survey findings, the erosion of the small business market for batch services is not likely to get worse in the near future. This will allow batch service vendors time to react.
- Some batch business will change from pure batch to on-line batch utilizing PCs or terminals in user facilities and frequently utilizing the same supplier, when the batch vendors upgrade their systems to provide this additional capability.
- It is estimated that 20% of the service delivered to the small organization by the traditional batch vendor is currently delivered as some form of remote operation (remote batch, local processing on-line to batch, etc.). This portion is expected to grow at 15% per annum (refer back to Exhibit II-3).

B. LIKELY REPLACEMENT SYSTEMS

- Very small firms will probably select PC devices with very simple software "set" for accounting functions (including inventory control).
- The system will likely be purchased at a retail store, and the purchaser will experience difficulty in installing and operating the system for two to three months.
- The software "set" will most likely be "integrated"--i.e., the accounts payable and accounts receivable will interact automatically with the general ledger, etc.
- Users will discover that no one is interested in their problems after they have bought the systems, and the systems will not do exactly what the users thought they would.
- Once the system is operational, the user will become increasingly dependent on it; and when the system has a major malfunction, it will seriously impact the user's income.
- The user will learn from this experience and will reach agreement with another user to back up the system. But there will be enough incompatibility to make futile this first experience at backup use.
- Users will realize that they are completely on their own and that the only true backup is a redundant system--an alternative that is too expensive. They will finally decide to risk failure with no alternative.
- A company with 50 or more employees will purchase a multiterminal system that may be based on an extended PC or a very small minicomputer.

- The system will most likely be purchased from an OEM vendor that will assist the user to some degree with installation and operation.
- The software will be written and supplied by the OEM vendor as a value-added package.
- The vendor will find a backup alternative. But time, distance, and incompatibility will keep the user from implementing it.
- In all cases, it is likely that the user will hire a consultant or a full-time systems assistant whom the user will not expect to retain at additional cost beyond original expectations.
- Exhibit V-1 describes examples of available software for payroll and accounting and their potential effectiveness.

C. REPLACEMENT SYSTEMS COSTS

- The firm with fewer than 50 employees expects to spend an estimated \$14,000, or more than \$300 per month, for an in-house system.
- The larger firm expects to spend approximately \$24,000, or almost \$600 per month, for a system.
- With the exception of the probable personnel costs that may accrue in order to make the system operational in the beginning, the expected expenditures are reasonable.

EXHIBIT V-1

EXAMPLES OF CURRENTLY AVAILABLE
SOFTWARE ACCOUNTING SYSTEMS

Software Vendors	Applications							Rating*			Price	Provided For:
Dow Jones	X	X	X	X	X	X		H	M	H	X	IBM, Apple, and Texas Instruments
Silicon Office	X	X	X	X	X	X		M	L	H	X	Data Base System; Each Module Is Custom
Accounting Partner		X	X	X	X	X	X	H	M	H	X	For All CPM/DOS
Hardisk Accounting	X	X	X		X	X	N/A	H	H	M	X	IBM and Apple Only
Versa Business			X		X	X	X	M	L	H	X	Most PCs
State of the Art	X	X	X	X	X	X	X	H	M	H	X	IBM and Apple Only
The Business Library	X	X	X	X				M	H	M	X	IBM Only
B.P.I.	X	X	X	X	X	X	X	H	M	H	X	Most PCs

	Billing		Inventory Control		Accounts Receivable		Sales Analysis		General Ledger		Accounts Payable		Payroll		Degree of Integration		Flexibility		Ease to Install		< \$5,000†		> \$5,000†
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*Rating: H = High, M = Medium, L = Low, N/A = Information Unavailable.

†Includes Minimum Hardware

D. THE ADP APPROACH

- Automatic Data Processing (ADP) has for several years studied the problem of migration from traditional batch to in-house systems as part of ADP's on-going strategy. It must be assumed, as the company continues to grow and show profit, that these strategies are well thought out, even if all of their attempts have not been successful.
- ADP continues to offer extensive tax services along with the payroll offering, which relieves the customer from the burden of reporting and even assumes the late reporting penalties in many cases.
- By assuming the responsibility for the tax consequences of its larger customers, ADP not only assures continued loyalty but gains additional income by stretching the tax payment time to the maximum, assuring maximum use of its customer's money.
- Many service bureaus, ADP included, have for years provided methods by which batch customers could go on-line to large processors, thus satisfying some of the requirements of going in-house by providing terminals on the customer site.
- A recent announcement by ADP carries this philosophy a step further by providing batch service customers with an in-house system--to which ADP is on-line.
- The system, the ADP 586, costs \$1,200 per month including hardware, software, and normal service. It is based on an Altos processor and comes with complete software similar to the ADP batch offering. The system has full communications with ADP, so training, support, and troubleshooting are all provided by ADP at the customer site.

- The system is not a "distributed data processing system" that allows the customer's intelligent terminal to do some processing locally in conjunction with processing on ADP's host. Rather, it is a fully automated local processor to which ADP maintains contact for maximum customer comfort and probable long-term loyalty.
- By taking this approach, ADP is showing recognition of all the attendant problems faced by migrating batch customers. In addition, it helps customers in an orderly transition to full local processing and at the same time retains them as ADP customers by maintaining contact for service and support. Customers will know that they are always in contact with suppliers via their systems.
- Most other smaller batch service operators are offering, or planning to offer, some form of on-line activity that closely complements their present batch offering, but ADP's venture appears to be unique and aggressive.

VI FUTURE ALTERNATIVES FOR BATCH SERVICE VENDORS

A. SOFTWARE

- Vendors should prepare to be able to offer their software in a form as close as possible to their present batch service offerings.
- The software offering should be clearly documented and attractively packaged, and the vendors should provide updates in order to maintain some customer control.
- Software should be priced at a high premium, due to the extra value to the potential user of maximum simplicity in conversion from a familiar system.
- Software should be offered only to existing clients, and only if there are no other alternatives.

B. ON-LINE PCs

- At a minimum, vendors should prepare to offer the batch service on-line and have the client perform certain limited local processing such as data preparation, error checking, and check printing.

- Vendors should package the system so the customer buys the entire capability from the vendor, including the PC, the software, the communications link, training, and troubleshooting.
- Vendors should offer reliable PCs from extremely stable hardware firms, such as IBM.

C. TURNKEY SYSTEMS

- The most likely successor is a turnkey system operating entirely at the client's site, with continued vendor relationship for service and support.
- Such a system should be marketed as the vendor's product relocated at the client's site, and as an adjunct to the vendor's existing service offering for an ongoing monthly fee.
- Advertising and promotion should be carefully worded so as not to change the concept of vendor support as well as continued ease of use and time savings that originally prompted the use of batch service.

VII CONCLUSIONS AND RECOMMENDATIONS

A. MARKET DIRECTION AND CHANGE

- The study clearly shows that with a few exceptions the traditional batch service world has changed significantly within the past three years, with most small firms having moved at least some processing in-house.
- Payroll continues to be a strong service market, and some general accounting use is still available to service users.
- It would now be rare to find an organization (one having more than 20 employees) not using some form of computer, usually justified by a specialized industry-specific use such as numerical control, or bread-and-butter applications such as accounts receivable.
- An estimated 20% of batch business has migrated from pure batch to a combination of a terminal or micro on-line to a mainframe, usually with the same service supplier. This segment will grow at an estimated annual rate of 15%.
- Most batch service centers are now offering, with some success, a form of remote computing service to the same customer base in order to grow and forestall migration to in-house systems.

B. COMPARATIVE ALTERNATIVES

- The alternatives facing the pure batch vendor today are as follows:
 - Do nothing.
 - Sell the business.
 - Reduce costs and maximize profits.
 - Grow through merger/acquisition.
 - Modify the offering to accommodate the customer's desire to own a computer.
 - Enter the in-house turnkey computer market and compete with existing offering.
- Doing nothing could be an attractive alternative, but since the net effect is an actual loss of business when inflation is taken into account, a long-term reduction in marketing costs should be considered.
- Doing nothing should be considered only by the small organization that has close control over the operation and is satisfied to go nowhere.
- Selling the business has become an increasingly attractive alternative, especially for the small closely held service center that sells to the larger competitor. In situations in which the number of buyers has diminished, there are still some service organizations (ADP is among them) that wish to grow through acquisition.

- Reducing costs and increasing profits has become an alternative for the larger supplier that chooses to make the service center operation a "cash cow" to finance another business venture.
 - The usual cost reductions come in severely reduced marketing and systems upgrades.
 - Although this is the most painless way to reduce costs, it assures the organization of potentially accelerating the loss curve, which should be gradual.
- Growth through acquisition is attractive to the large service vendor, but it is usually coupled with some form of strategic change, such as the alternatives listed below.
- Modifying the system to accommodate the customer's desire to have an in-house computer has become an attractive alternative to many service vendors. The success of this alternative has been modest to good: modest success is represented by merely placing a terminal in the user location and replacing the vendor delivery service, and good success is represented by allowing the user some form of local processing and control.
- A few service firms actually have established new divisions to sell standalone systems that directly compete with the service offering, even to the point of using the service customer list as sales targets. Although this approach may yield quick sales for the new offering, it must be accompanied by an aggressive attempt to sell new clients as well.

C. RECOMMENDATIONS

- The most practical approach to the changing scenario is to combine the existing service offering with some method of on-line operation.
- The resultant offering should be as compatible as possible with the existing offering to maximize client comfort in making the switch, if and when the client does make the switch.
- The service vendor should mount an aggressive campaign to existing customers, emphasizing the positive aspects of service and reinforcing the original reasons for selecting service--i.e., saving time, effort, and money.
- ADP's approach (which provides turnkey systems that are similar to ADP's existing offering and that ADP can monitor by being on-line to the customer) should be carefully studied as a high-growth opportunity. However, it may be some time before this approach is low enough in cost to satisfy the requirements of the small business firms targeted in this study.
- The service alternative to in-house data processing continues as a viable method of delivery within a narrowing envelope of clients. However, with the appropriate strategy and attendant investment for the future, outside services for data processing solutions by batch vendors will continue to be a growth business.

APPENDIX A:

FIVE-YEAR FORECAST, 1984-1989
 INFORMATION SERVICES FOR SMALL ORGANIZATIONS - BATCH AND BATCH-DERIVED DELIVERY
 (\$ Millions, Adjusted for Inflation)

SERVICE DELIVERY SECTOR	1983		1984		1985		1986		1987		1988		1989		AACR*
	\$	Percent Growth	\$	Percent Growth	\$	Percent Growth	\$	Percent Growth	\$	Percent Growth	\$	Percent Growth	\$	Percent Growth	
Pure Batch Sales to Small Organizations	617	2.5%	633	2.5%	648	2.5%	665	2.5%	681	2.5%	698	2.5%	716	2.5%	2.5%
Batch Migrating to Other Delivery Method	134	15.0	158	15.0	181	15.0	208	15.0	240	15.0	276	15.0	317	15.0	15.0
Total Service to Small Organizations	751	4.9%	791	4.7%	830	4.9%	874	5.2%	921	5.4%	975	5.6%	\$1,033	5.5%	5.5%
INPUT 1984 Cross-Industry Batch Forecast (All Companies)	\$1,394	9.0%	\$1,525	7.6%	\$1,652	6.7%	\$1,772	5.9%	\$1,885	5.1%	\$1,987	3.6%	\$2,063	6.2%	6.2%

*Average Annual Growth Rate

APPENDIX B
SURVEY QUESTIONNAIRE
SYSTEMS VERSUS SERVICE

DATE: _____ INTERVIEWER: _____ PRIMARY SIC: _____

1. Which of the following categories best describes your firm in number of employees?

- _____ Less than 20 Employees
- _____ 20 to 500 Employees
- _____ More than 500 Employees

2. Do you ever use an outside computer service for such applications as payroll or any other uses?

_____ Yes _____ No

If yes, how long have you used this service? _____ years.

3. Which of the following best describes the average monthly expenditure for the service?

- _____ Less than \$100
- _____ \$100 to \$500
- _____ \$500 to \$1,500
- _____ More than \$1,500

4. Which of the following applications are performed by your service?

- | | |
|---------------------------|-------------------------------|
| _____ Billing | _____ General Ledger |
| _____ Inventory Control | _____ Accounts Payable |
| _____ Accounts Receivable | _____ Payroll/Human Resources |
| _____ Sales Analysis | _____ Other |

5. Which of these applications is the most critical to your business? _____

6. To what extent do you expect your use of the service to grow on an annual basis? _____ % (+ or -)

7. Do you ever plan to replace your service with your own computer?

_____ Yes _____ No

If yes: _____ Within 1 Year

_____ 1 to 3 Years

_____ 3 or More Years

8. What kind of computer would replace your service?

_____ A microcomputer such as an IBM PC

_____ More than one PC

_____ Something on a larger scale, such as a multiterminal system

_____ Excess capacity on a computer you are already using for something else

_____ Other _____

9. Which of the following best describes your anticipated computer investment, whether you buy or lease?

_____ Less than \$10,000

_____ \$10,000 to \$50,000

_____ More than \$50,000

10. Which application do you expect to automate first on your new system?

First _____

Second _____

Never _____

11. If you could duplicate the process of your existing service on your own computer, would you? _____ Yes _____ No

12. Why did you start using the service in the first place? _____

Interviewer Comments: _____

SERVICE VERSUS SYSTEMS FOR SMALL ORGANIZATIONS

ABSTRACT

This report deals with processing services to companies with less than 250 employees. The basis for the findings was a random survey of companies with as few as 10 employees up to the maximum of 250. In addition, providers of processing services to this community were surveyed as were providers of microcomputers and software.

The findings of the survey indicate that the traditional role of the processing services vendor is changing. The report discusses the market and market trends, analyzes key applications, and reviews the microcomputer threat to the market. The report also indicates the future alternatives for processing services vendors and makes recommendations for implementing these alternatives.

This report contains 60 pages, including 24 exhibits.

