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A Survey of Executive Information System Research (1982 - 1997)

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Abstract. Executive Information Systems (EIS) are gaining increased attention in the last few decades. To discover the major trends in the developments of the EIS field, we conducted a survey of EIS major subject areas, which were published between 1982 and 1997. We compiled a bibliography of 114 articles appearing in the different literature. We suggested a categorization which includes six broad categories including the following: The Nature of EIS, Criteria for Building a Successful EIS, EIS Applications, Top Management and EIS, EIS Software and Hardware, and the Future of EIS. The goal of this paper is to provide EIS practitioners and researchers with insight about the major historical trends and future directions for new theoretical developments, and to compile a systematic reference for the burgeoning literature on the EIS field.

Introduction

Executive Information System (EIS), sometimes called "Executive Support Systems", are gaining increased attention. The original term "EIS" stood for Executive Information Support System and was inserted into the glossary of the business world around 1982. The term has since been truncated in some circles of ESS, but all terms refer to the same concept. A survey of the past decades shows an increasing interest in many different subject areas of EIS. To discover the major developments of the EIS field, we conducted a survey of EIS major subject areas which was published between 1982 and 1997. We compiled a bibliography of (116) articles appearing in the different literature, excluding those listed in conference proceedings and doctoral dissertations.

Our goal is to provide EIS practitioners and researchers with insight about the major historical trends and future directions for new theoretical developments, and to compile a systematic reference for the burgeoning literature on the EIS field.

Research Methodology and Analysis

The state of Executive Information System is examined through a survey of published journal articles in the period 1982 through 1997. Nailing down the EIS concept to a single definition is difficult. Therefore, drawing on various definitions that have been suggested by Garelick [1], Madlin [2], Ree-Evans [3], Robins [4], Tunis [5], and Rockert and Delong [6], we can define EIS as a new generation of computer software which concentrates on delivering precisely that information most relevant to the executive, in the form that enhances the executive's ability to grasp the meaning, trend or pattern in that information.

The study was limited to a set of journals found at local libraries in Riyadh City. This set consisted of [54] journals (Appendix A). The rational behind choosing this number of journals was to examine how the Executive Information System was perceived in different fields of study. We checked all journals that had published at least one article. Some other recognized Management Journals were examined which seemed likely candidates for EIS research. Therefore, *Harvard Business Review, MIS Quarterly, Interfaces,* and *Decision Sciences* were scanned for any possible EIS research publications.

Although the primary purpose of this paper is to provide EIS researchers and practitioners with insight on historical trends and future directions in the field of EIS, we found it necessary to rely primarily on certain categorizations. Looking at the categorization offered by Laska and Paller [7] in their book *The EIS Book: Information Systems for Top Management* and Rockert and Delong [6] in their book *Executive Support Systems: The Emergence of Top Management Computer Use,* we suggested the following categorization which is shown in Table 1. This includes six broad categories. These categories include the following: the nature of EIS, Criteria for building a successful EIS, EIS application, Top Management and EIS, EIS Software and Hardware, and the Future of EIS.

Table 1 presents the topical breakdown of the articles between all the subject areas and provides reference to the different articles included in this paper. Table 2 presents the topical breakdown of the articles according to the year of publication. It also indicates an increased interest in the area of EIS starting in 1983 with six articles published in that year, reaching its peak in 1989 with 40 different articles.

Table 1. Subject areas categorization

S. No.	Subject areas	Reference no.	# of article	%
1	The nature of EIS	[1], [2], [3], [4], [5], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22], [23], [24], [25], [26], [27], [28], [29], [30], [31], 32], [33], [34], [(35], [36], [37], [38]	36	31.6%

Table 1. (Contd.)

S. No.	Subject areas	Reference no.	# of article	%
2	Criteria for successful EIS	[39], [40], [41], [42], [43], [44], [45], [46], [47], [48], [49], [50], [51], [52], [53], [54], [55], [56], [57], [58], [59], [60], [61], [62], [63], [64], [65], [66], [67]	29	25.4%
3	EIS applications	[68], [69], [70], [71], [72], [73], [74], [75], [76], [77]	10	8.8%
4	Top management and EIS systems	[78], [79], [80], [81], [82], [83], [84], [85], [86], [87], [88], [89], [90], [91], [92], [93], [94], [95]	18	15.8%
5	EIS software and hardware	[96], [97], [98], [99], [100], [101], [102], [103], [104], [105], [106], [107], [108], [109], [110]	15	13.1%
6	Future of EIS	[111], [112], [113], [114], [115], [116]	6	5.3%
	Total		**114**	**100%**

Before we discuss the different subject areas it is important to point out several shortcomings of our methodology in order to correctly interpret the results of the study. (1) It is important to note that the delineation of the six subject area categories is somewhat subjective. (2) Not being able to cover all the possible journals in which EIS researchers are publishing due to the fact that some of these journals are not available at the local libraries.

Table 2 . Classification of all literature used in this study according to the year of publication

Publication year	No. of articles	%
1982	2	1.8%
1983	5	4.4%
1984	0	0%
1985	6	5.2%
1986	10	8.8%
1987	5	4.4%
1988	17	14.9%
1989	36	31.5%
1990	8	7%
1991	7	6.2%
1992	8	7%
1993	5	4.4%

Table 2. (Contd.)

Publication year	No. of articles	%
1994	1	.8%
1995	0	0%
1996	2	1.8%
1997	2	1.8%
Total	**114**	**100%**

The next section will provide an analysis of results and discussion of the different subject areas of the EIS field.

The Nature of EIS

There is a stream of literature concerned with the nature of the EIS system: Borbely [8], Weller [9], James [10], Jones [11], Denise [12], Jones [13], Jones and Mcleod [14], Watson *et al.* [15] Watson and Frolick [16, 17], Todd and Benbasat [18], and McFarlan *et al.* [19] (Table 1). This category consisted of five subject categories: The EIS concept development, early attempts to develop EIS system, EIS/DSS relationship, EIS benefits, and EIS strategic use (Table 3).

Table 3 . The nature of EIS classification

Nature of EIS	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	# of articles	Reference No.
EIS concept development	0	1	0	3	1	0	3	1	1	1	4	1	0	0	0	0	16	[2], [4], [5], [8], [9], [11], [15], [16], [17], [18], [19], [22], [21], [22], [23], [24]
Early attempts of developing EIS	0	0	0	0	2	1	1	3	0	1	0	0	0	0	1	0	9	[10], [25], [26], [27], [28], [29], [30], [31], [32]
EIS / DSS relationship	0	0	0	1	0	0	0	2	0	1	1	0	0	0	0	0	5	[4], [8], [12], [18], [33]
EIS benefits	0	1	0	0	0	1	3	2	0	0	1	0	0	1	0	0	9	[1], [3], [5], [9], [12] [34], [35], [36], [37]
EIS strategic use	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0	4	[5], [14], [22], [38]

First is the concept of EIS. According to Gillan and Mcpherson [20], it is difficult to nail down the concept of EIS using a single definition. There, an EIS in its basic form is an information system specifically designed for and tailored to the chief executives of a company, Wilder and Hildebrand [21]. Another definition of EIS is the case of technology, usually computer-based systems, to provide appropriate information and services to executives to assist them in their missions. Porter and Millar [22], Watson [23], and Brobely [24] found that definitions of EIS are as varied as the organizations that are researching, buying or building them.

There were many attempts to develop the first executive information systems. Lockheed-Georgia Corporation is considered to be among the first developers and users of EIS, EDP Analyzer [25]. The initial interest was expressed in 1975 by Robert Ormsby, when he was president of Lockheed-Georgia. Other example can be found in Sulivan - Trainor [26], Wallace [27], James [10], Business Monthly [28], Computer World[29], Gill[30], Watson and Rainer[31], and Reck and Hall [32].

The EIS/DSS relationship is very important. Robins [4], Borbely [8], Todd and Benbasat [18], and Chau [33] stated that an EIS differs from a traditional Decision Support System (DSS) in a number of ways, although the lines of demarcation are not always clear. The major difference is not in software or hardware but in intention. The first difference is that EIS was intended for the use of chief executives. The second difference is an EIS almost always will have a decision support component, but other major components also will be included.

EIS offers a wide variety of benefits that can prove invaluable to executive decision makers. Shoebridge [34], Office [35], Yong and Watson [36] and Matthew's and Shoebridge [37] mentioned a variety of benefits among them are: Time Saving, EIS provides better mental models for executive decision making, allows executives to view only 'what is' data, or data that represents the current or past conditions of the company, and extract relevant data more easily.

The impact of EIS can be measured by the dollar savings of time and money it brings about. These figures are an indication only of the system's efficiency. The key impact of EIS, however, lies in increasing the effectiveness, not just the efficiency of the executive, Tyran *et al.* [38]. EIS can be measured by its impact on several possible areas of strategic positioning among which are seizing opportunities, managing a situation and preventing catastrophes.

Criteria for Building a Successful EIS

There is another stream of literature concerned with finding criteria to develop a successful EIS, Gulden [39], Boltz [40], Perlman [41], Antonoff [42], Barrow [43], Booker[44], and Moad[45]. Successful implementation of EIS is not an easy job for any organization. The success or failure of an EIS ultimately depends on how well the implementation process is managed in terms of both the technology and the user.

Because no two EIS's are exactly alike, neither are the methods for implementing them. However, the following factors can help to implement a successful EIS (Table 4).

Table 4 . Different factors necessary for successful EIS

Criteria for building a successful EIS	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	# of articles	Reference No.
Find an executive champion	0	0	0	0	2	1	1	0	1	0	1	0	0	0	0	0	6	[40], [41], [43], [46], [47], [55]
Communicate to overcome resistance	0	1	0	0	1	1	0	2	1	0	0	0	0	0	0	0	6	[40], [43], [48], [49], [50], [57]
Data integrity	0	0	0	0	1	1	1	2	2	1	1	0	0	0	0	0	9	[40], [41], [43], [44], [47], [48], [51], [52], [53]
Maint.simplicity	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	3	[43], [54], [57]
Use Misexpertise	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	3	[43], [47], [55]
Developing a small but signficant prototype	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	[43], [56], [57]
Plan for future	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	[43], [57]
Training and support	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	[41], [58]
Appropriate technology	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	4	[40], [47], [59], [60]

Finding an executive champion

Bergeron *et al.* [46] and Coffey [47] believe that there must be a personal commitment to the EIS process from a number of top management. This executive should be actively interested in the system and must be willing to spend a considerable amount of time with the development team and system.

Communicate to overcome resistance

O'shea [48], Rifkin [49] and Hogue and Watson [50] found that to overcome negative feelings, you should make the executives feel that they own the system and that they are active participants in its creation and growth. Also, you should educate the

executives by showing them how the system helps them to access and monitor critical business information.

Data integrity

According to Wetherbe[51], Burkan [52] and Watson and Glover [53] data integrity is one of the keys to a successful EIS. When you have a tightly integrated database already, you have a let up on anyone else trying to put together an EIS. The system must have physical and technical ability to provide access to reliable current data.

Maintain simplicity

Don't overwhelm the user with technology; it is better to err on the simple side, Houdeshel and Watson [54].

Use MIS expertise

Rinaldi [55] stated that using the expertise of the appropriate information system staff who have business as well as technical ability and can communicate effectively with senior management will increase the chances of a successful EIS.

Developing a small but significant prototype

According to Armstrong [56] the prototype need not be perfect, but it should be an example, you can use to garner the executive's interest.

Plan for the future

Rinaldi [57] believes that we should think about the growth before it happens, determining the type of applications that will be added next and how they will be implemented. All this should be linked to business objectives.

Training and support

The Labor- intensive "coaching" made for support will be more appropriate for executives, Leibs [58] They will be more interested if someone can demonstrate exactly how the system helps get the job done.

Appropriate technology

Dixon and Darwin [59], and Frolick [60] mentioned that ease of use, response time and high quality of primary output are requirements for successful EIS.

The above factors increase the chances for implementing a successful EIS. There is another stream of literature which examine some related issues of implementing and developing EIS, Fireworker [61], Cole [62], Frenkel [63], Joslow[64], Elshorif and Elsawy [65], Weinberg [66] and Al-Shidadi [67]. Some of these issues are concerned with explaining some of the problems that decrease the chances to implement and build a successful EIS, discussing some design future and issues, and providing some examples of successful EIS.

EIS Application

This stream of literature is concerned with the EIS applications, Celfaud [68], Filley[69], Francis [70] and Hamilton [71] Executive Information Systems are increasingly used in different industries. According to Table 5, Executive Information Systems are used in the following industries: Financial industry, Lieb Gillease [72], and Singleton *et al.* [73]; Transportation industry, Schenk and Holzbach [74]; energy development industry, Belcher and Watson [75]; and food industry, Madlin [2]. There are many real examples of successful implementation of such systems. Among those successful examples are Phillips [66]; Wallace [27]; Midland Bank, Robins [40], Polaroid Company, Computer World [29]; Gillette Company, Sullivan-Trainor [26]; Hertz Inc, Business month[28]; Hardees Fast Food; Madlin [2]; and others, Kraemar *et al.* [76], and Weelderen and Sol [77] (Appendix B). Most of these systems are designed to provide a real time data that helps top managers solve certain problems.

Table 5 . EIS application

EIS application	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	#of articles	Reference No.
1) Financial Industry																		
a- banking	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0		[29], [73]
b-insurance	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	(6)	[11], [64]00
c- finance	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0		[45], [72]
2) Transport industry																		
a-car rental	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		[28]
b- railroad	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	(8)	[71]
c-aircraft industry	0	0	0	1	1	0	0	1	2	0	0	1	0	0	0	0		[25], [55], 56], [69], [74] [85]
3) Food industry																		
a-fast food ind.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	(2)	[2]
b-snack food	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		[70]
4) Energy																		
a-oil industry	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0		[55], [78]
b-chemical industry	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	(7)	[75], [111]
c - others	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0		[45], [66], [98]
5) Government application	0	1	0	0	0	0	2	0	1	0	0	1	0	0	0	0	5	[35], [45], [65], [76] [102]
6) Miscellaneous	0	0	0	0	2	0	1	1	0	0	0	1	0	0	0	0	5	[26], [55], [68], [77], [78]

Top Management and EIS

Large number of studies and articles have examined the reaction of many Chief Executive Officers (CEO) towards the Executive Information System, Wallis [78], Williamson [79], Ostraszewski [80], Rockert and Treacy [81], Nelson [82], Armstrong [83], Violano [84], and Raths[85]. Table 6 provides a complete listing of related dealing with the relationship between top management and EIS according to the year of publication.

Table 6. Classification of related literature of the relationship between top management and EIS according to the year of publishing

Year of publication	Reference	No. of articles
1982	Rockert and Treacy [81] Kotter [86]	2
1983	Infosystems [87], Ostrazewski [80]	2
1985	Elsawy [88]	1
1986	Friend [89]	1
1988	The Economist [90]	1
1989	Nelson[82], Raths[85], Violano[84], Wallis[78], Wang[91], Willianson[79], Stecklow [92]	7
1990	Armstrong[83], Friend[93]	2
1991	Jarvenpaa [94]	1
1993	Kraemer [76]	1
1997	Vandenbosch and Huff [95]	1
	Total	**19**

Many CEO's do not want a computer to make their decisions nor do they want a computer for word processing or office automation. They do not want to spend their time plugging numbers into spreadsheets. Most do not want or need a computer-based Executive Support System. CEOs cherish tradition; they rely on verbal and paper-based reports from their financial analysis and key executives. However, many CEOs who 10 years ago would not have dreamed of touching a keyboard, are using PCs and specially designed software to gain insight into their company's operations.

The Executive Information System is growing in popularity as a senior management tool, offering features more appropriate to the needs of top executives than do decision support systems (DSS). Executive Information System delivers up-to-date corporate information directly to executives' desktop computer, rather than the familiar printout and notebook. Executives who have adopted it appreciate the immediacy of information, and the ability to ask for deeper details. This system has given many companies enormous competitive leverage.

CEOs are now being drawn into the information technology (IT) and especially EIS revolution for the following reasons:

1. They see the outside world as increasingly turbulent. To monitor it requires more and more information which old-style paper-based systems are incapable of handling.
2. The streamlining of most corporations has left executives with smaller support staff, just when they are launching more products into more markets than ever before. This squeeze has added to the attraction of it for senior executives.
3. Supplier of IT hardware and software are making machines that are even more "executive friendly".

EIS Software and Hardware

Most top managers in large companies have moved slowly to use computers in the Executive Suite, despite rapid advances in hardware and software technology. Different literatures have examined many related issues concerning EIS software and hardware (Table 7). Some of these issues are software and hardware capabilities, Churbuck [96], Evans [97], Kallaman [98], O'shea [99); and modern office technology [100]; cost of software and hardware, Davis [101], Jones[11], Mohan [102], Brody[103], and Alexander [104]; vendors of EIS, Main [105], Churbuck [96]; and hardware choice issues, Casey [106], Druckman [107], Mark [108], Weinberg [66], Harvey [109], and House [110].

Table 7. EIS software and hardware

EIS software and hardware	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	# of article	Reference No.
Software and hardware capabilities	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5	[96], [97], [98], [99], [100]
Cost of software and hardware	0	0	0	0	0	0	2	3	1	0	0	0	0	0	0	0	6	[11], [99], [101], [102], [02], [103], [104]
Vendors of EIS	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	5	[11], [25], [96], [102], [102], [103], [104]
Hardware choices	0	0	0	0	0	1	2	2	0	1	0	0	0	0	1	0	6	[66], [106], [107], [108], [109], [110]

Decades after computers transformed back-office operations, years after they started helping middle managers, computers are finally arriving on top executives' desks. Until recently, no system processed the combination of sophistication and simplicity that corporations demanded.

In the mid-1980s, the right ingredients finally came together : powerful PCs and workstations that could shape masses of numbers into simple, colorful Tables and charts; the touch screen and the mouse interconnections that could wave a single network out of a company's different hardware and databases; and the software that turned it all into a system.

Gone are the days when Personal Computer software manufactuers merely offered to help managers become familiar with basic word processing and learn a couple of user friendly spreadsheet or graphic applications. Now, software manufacturers and developers are making ever more outlandish claims about how their computer programs and their systems increase productivity, boost your memory and intellectual capabilities and change your life generally. The success of these systems is evident in the sales of the two chief suppliers, Comshare and Pilot Executive Software. The market remains small but is growing rapidly each year. The commercial executive information system costs range from US$ 200, to US$ 500, but the cost of these systems is decreasing rapidly. Among the major EIS capabilities are electronics mail, project management, on-line data service, query and reporting, voice-mail, and graphic packages.

Future of The EIS

Information Systems (IS) managers are beginning to realize that they face some key issues before they can develop the much-needed Executive Information Systems. Some of these issues are discussed in several studies, Laster [111] (Table 8). Meador[112] found that a major issue is the use of artificial intelligence which will play a role in EIS data retrieval, problem exploratory explanation, expert consultation, communication support, teaching and automatic programming of applications. Eisenhardt [113] believes that another major issue is the need for more speedy and sophisticated systems. Meander [112] added that IS managers must recognize that EIS technology cannot be limited to top executives, but must be extended to a wide range of management levels. Another issue was discussed by Mark[114] and Violano[115] is the need to develop new applications which conform to the same user interface . IS managers should realize that access to data from outside the organization is becoming increasingly important for senior management [110]. Gauthier [116] believes that a major issue for developing future EIS is to overcome the problem of some existing software and provide real integrated modeling tools.

Table 8 . Issues for developing future EIS

EIS future issues	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	# of articles	Reference No.
Increase speed and sophistication	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3	[113], [114], [116]
New application which conforms to the same user interference	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	[114], [115]
The use of artificial intelligence	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	[112]
Expand the use of EIS to other data management levels	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	[112]
Increase the importance of outside data for senior management	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	[112]
Overcome some existing problems	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	[116]

Conclusion

This paper has examined the major developments in the field of Executive Information Systems through a survey of journal publications. This paper covers the period from 1982 to 1997. Our findings indicate that an increased interest in the use of Executive Information Systems can be tested through the increased use of these systems

by many organizations in different industries. Another finding is that the use of EIS will not be limited to the top executives only. Many examples indicate the increased use of these systems by other managers on different management levels. Finally, there was increasing interest among the big schools and businesses- Harvard Business School and Sloan Management School -- on the early stage of development of the EIS concept. However, there were few numbers of articles and research papers published from these schools recently. The vast majority of the articles are published in what are called Trade Journals (Appendix B). The issue of developing a theoretical framework for EIS was not discussed in any of these articles, which makes it a good area for future research.

Appendix (A). List of all organizations used in this study

Organization name	Reference No.
Pillips	[27]
Polaroid Co.	[29]
Gillette	[26]
Hertz	[28]
Hardees	[2]
Kraft Inc.	[68]
Frito Lay Inc.	[70]
Boeing Co.	[69]
Combustion Engineering Inc.	[45]
G.M.	[45]
Government Printing Office	[45]
Rockwell International Corp.	[56]
Shell Oil Co.	[55]
Dallas based Mary Kay Cosmetics Inc.	[55]
New England Insurance	[64]
Lockheed-Georgia	[25]
Xerox Co.	[78]

Appendix (B). List of all publication journals used in this study

No.	Journal name	Year of publication															
		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	# of articles
1	Accountancy	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	3
2	Academy of Journal Management	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3	Across the Board	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4	Advertising Age	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5	Banker Monthly	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
6	Best Reviews	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7	Business Horizons	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8	Business Month	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
9	Business Week	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
10	Canadian Business	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
11	Computer World	0	0	0	0	4	0	1	6	2	0	2	0	0	0	0	0	15
12	Cornell H.R.A. Quarterly (The)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
13	Datamation	0	0	0	0	0	0	1	5	2	0	0	0	0	0	0	0	8
14	Data Communication	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
15	Decision Science	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
16	EDP Analyzer	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
17	The Economist	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
18	Euromoney	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
19	Executive Journal (The)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
20	Forbes	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		1

Appendix (B). (Contd.)

No.	Journal name	Year of publication																# of articles
		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
20	Forbes	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
21	Fortune	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
22	Harvard Business Review	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
23	IE	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
24	IEEE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
25	I/S Analyzer	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
26	Industry Week	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
27	Information Center Quarterly	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
28	Information and Management	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
29	Information Strategy	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
30	Information Week	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
31	Inforsystems	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	4
32	Interface	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3
33	Inforword	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
34	International Management	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
35	J.of Information System Many.	0	0	0	0	1	0	0	2	1	0	1	0	0	0	0	0	5
36	J.of Information System	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
37	J. of Management Decision System	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
38	J.of System Management	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1

Appendix (B). (Contd.)

No.	Journal name	Year of publication																# of articles
		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
39	King Saud University Journal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
40	Lotus	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
41	Long Range Planning	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
42	Management Review	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
43	Management Today	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
44	MIS Quarterly	0	1	0	1	0	1	2	1	1	3	2	3	0	0	0	1	16
45	Modern Office Technology	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3
46	National Underwriter	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
47	Office(The)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
48	Office	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
49	On Line	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
50	PC/Computing	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
51	Personal Computing	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
52	Sam Advanced Management Journal	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
53	Store	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
54	The Journal	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1

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نظرة شاملة للأبحاث في مجال نظم المعلومات لمنفذي الإدارة العليا في الفترة ما بين ١٩٨٢-١٩٩٧م

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ملخص البحث. زاد الاهتمام في العقدين السابقين بنظام المعلومات لمنفذي الإدارة العليا. وللتعرف على التطورات الرئيسية في هذا المجال، تم عمل بحث مكتبي شامل لأهم المقالات التي اهتمت بنظام المعلومات لمنفذي الإدارة العليا، والتي بلغ عددها ١١٤ مقالا، والتي نشرت في دوريات مختلفة في الفترة ما بين ١٩٨٢-١٩٩٧م. ولقد تم تصنيف هذه المقالات تحت ستة موضوعات رئيسية هي: مفهوم نظام المعلومات لمنفذي الإدارة العليا، الأسلوب المناسب لبناء نظام معلومات لمنفذي الإدارة، تطبيقات نظام المعلومات لمنفذي الإدارة العليا للمشروع، الأجهزة والبرامج الخاصة بنظام المعلومات لمنفذي الإدارة العليا، مستقبل نظام المعلومات لمنفذي الإدارة العليا. وهدف هذا البحث إلى توفير المهتمين في مجال نظام المعلومات لمنفذي الإدارة العليا بأهم المقالات التي تحدثت عن التطورات التاريخية والحالية والاتجاهات المستقبلية، بالإضافة إلى ذلك توفيرها لمرجع علمي منظم لأهم المقالات التي تم نشرها عن نظام المعلومات لمنفذي الإدارة العليا.