



## THE ROLE OF DECISION SUPPORT SYSTEMS CENTERS TO ENHANCE ADMINISTRATIVE REFORM IN PUBLIC INSTITUTIONS - EXPLORATORY STUDY IN IRAQI PUBLIC INSTITUTIONS

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Article history:		Abstract:
<b>Received:</b>	11 <sup>th</sup> November 2021	The research identifies the importance of having a decision support system center that consists of academics, experts, and specialists in finding solutions to achieve administrative reform, which contributes to determining requirements and evaluation to support the process of administrative reform in public institutions. The study examines the lack of public institutions of the advisory and supervisory in achieving reform. In addition to the absence of vision management that aimed to identify problems and find innovative solutions to crisis Chaos and paradox that diagnosis in institutions. That required Solutions based on stability or change in the organizational life of institutions. Sample of 43 academics and managers working in public institutions and used method of statistical analysis depending on SPSS V. 23 analyze the results. This showed the vital and effective role of the decision support center in achieving administrative reform. Additionally, the study represented recommendations That advise establishing a center support decision contributes to the completion of administrative reform in Iraqi public institutions.
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### INTRODUCTION

Once it comes to making business choices, the DSSC is a critical instrument. Kumar (2006) defines DSSC as "management, information, and systems." This method assists managers in making successful judgments, planning, and initiating corporate activities. Refusal to adopt change is usually linked to the dangers and repercussions of it. Leaders who desire to conduct change may confront and experience a variety of dangers. Risks might occur due to opposition from parties that believe they will suffer due to the change. Intimidation, criminalization, or even murder are all possibilities. Reform implementation might result in either a position losing or a value losing. (Longo & Cristofoli, 2007) Every public organization, it is assumed, already has or does have a leader. Nevertheless, even when such leadership exists, it cannot always bring about positive change in the company, even when it is required. It might be more suitable for such leaders to be named managers, depending on (Kotter, 1996), since managers get the purpose of establishing stability thru the estimation methods and regulations, whereas leaders with multiple

roles will always give improvement and change that is their primary function, depending on (Yukl, 2008).

"Information is extremely crucial to an organization's existence," Murdick and Ross (1971) write. As companies develop, the pressures of size, complexity, and a faster pace of change need enough information processing capability when effective control, as a result of individual activity coordination, is achieved. Expert Systems, Management Information Systems (MIS), and Transaction Processes Systems (TPS) seem to be the three basic categories of information systems. Executive Information Systems and Decision Support Systems (DSS) are two subgroups of MIS. DSS is a higher-level computer-based system that analyzes company data to make effective business choices. DSS is utilized by all levels of a business, from top management to lower management, for strategic and operational decisions (Kostovski et al., 2017).

The decision-making process may be defined as "a cognitive process targeted at seeing and selecting superior choices or solutions that are accessible to everyone in a certain way; to attain and accomplish a goal by applying objective criteria." The decision-making process is critical to an organization's



effectiveness and efficiency; in the 1950s, Herbert A. Simon presented a model to explain organizational behavior better. Choice, Design, Diagnosis, and Intelligence, Diagnosis is the three stages of the model. Intelligence is the process of gathering and analyzing data and inputs in order to identify potential issues or opportunities. The analysis and invention of different courses of action and the development of alternatives are all part of the design process. The best option is picked and executed during the selection phase from among the available options. 2017:46 (Al Shobaki). "Most issue techniques were depending on heuristics or thumb's rules instead of formal decision rules" (Simon, 1996:271). This has ramifications for decision-making models; they should give relevant data and enable decision-making.

Research (Naidoo, 2015:31) shows that reform carrying out through the availability of the fundamentals of administrative reform (commitment, capacity, mobilization) within institutions, which is a continuous process throughout the organizational life of the institution. Here, Decision Support Center plays a vital role in achieving the reform process. It represents an important factor for the institution in achieving fundamentals of reform and helping it change and move to development and upgrading.

**Based on the above research problem,** Did the administrative reform process in Iraqi public institutions enhance and develop a Decision Support system Center that offers academic and practical consulting that helps in administrative reform. That cannot achieve reform based on internal procedures of institutions only, but through external support, advisory, and supervisory assistance depending on the transfer of countries' experiences and have a vision that contributes to practical effect for development and reform.

The research aims to clarify the importance of decision support centers in public institutions, which contributes to determining the problem, solutions, and appropriate way to implement these solutions and the appropriate time for it. It also helps public institutions achieve stability or change organizational and abandon chaos that prevails in the institutions. Encourage and use innovative methods to cope with static crises by providing fundamentals of administrative reform (Intelligence, diagnosis, design, and selection) that help support better decision-making in institutions.

## **LITERATURE REVIEW**

### **1. Concept and Meaning of DSS**

A Decision Support System (DSS) seems to be a computer-based information system that uses model bases, models, and decision rules, as well as a comprehensive data system and the decision maker's

insights, to arrive at particular, effective implementation decisions in fixing issues that are not acceptable to management science designs. As a result, a DSS aids complicated decision-making and improves its efficiency (Harris, 2012)

### **1.1 Characteristics of DSS**

(Aggarwal, 2016:245) explain characteristics of DSS as below

1. Large volumes of data, such as database searches may be handled.
2. Data from many sources, involving external and internal data housed on mainframe systems and networks, is obtained and processed.
3. Allow for flexibility in report and presentation to meet the demands of the decision-maker.
4. Tables, trend lines, charts, and other graphical elements are available in graphical and textual formats.
5. Utilizing modern software applications, do elaborate, sophisticated analyses and comparisons. Supporting optimization, satisfactory, and heuristic techniques give decision-makers much freedom when tackling basic and difficult issues.
7. Perform "what-if" and goal-seeking analysis

### **1.2 Capabilities of DSS**

(Webster & Watson, 2002:26) explain Capabilities of DSS below

1. Supporting for issue-solving phases involving the monitoring, implementation, choice, design, and intelligence
2. Improving the decision-making efficacy
3. Supporting the decision-making process
4. Providing support for different levels of administrative
5. Providing support for serial and multi-resolutions, based on each other
6. Increasing oversight regulatory by the decision-makers
7. In the context of the issues, it offers new ways of thinking.
8. Encouraging the decision-maker to explore and learn new things.
9. Encourages learning or training
10. Facilitates communication

## **2. DECISION SUPPORT SYSTEM CENTER (DSSC)**

A Decision Supporting Method is a system manager and upper management use to extract information and make semi-structured and unstructured judgments. DSSC allows the decision-maker to access data and evaluate different solutions throughout the problem-solving process. (2006, Khalesizade & Kachui) . The Decision Supporting System Center has been utilized to make a broad range of choices; however, certain



judgments are more suited to the idea than others. Instead of identifying and automating the structure, DSSC represents a new approach to information systems that supports a range of unstructured decision processes (Fadainejad & Sharif, 2011).

### **2.1 Characteristics of Decision Support System Center**

The Decision Supporting System Center seems to have a variety of distinguishing features, including:

1. In both unstructured and semi-structured environments, DSSC may help.
2. DSS is a powerful problem-solving tool. It enables the user to investigate a topic that uses an analytical method combined with personal experience.
3. The Decision Support System for Center (DSSC) helps people make better decisions.
4. DSSC assists managers in making better judgments without substituting their judgment.
5. DSSC provides interactive and can handle massive amounts of data.
6. The DSSC assists at different phases of the decision-making process.

The research 'Decision Support System Center seems to be a tool for making better choices in the company' was offered by the author. The organization's current mechanism for tracking attendance has the following flaws (Jams & Kenneth, 2006):

1. Maintaining track of each employee's particular details necessitates much paperwork, and keeping track of these records is a time-consuming task.
2. In the current system, providing outdated attendance information for a specific worker seems too difficult.
3. Any error in the present system's calculations might be incorrect.
4. The present FoxPro-based system lacks well-defined approvals and security levels.
5. There were no facilities for comprehensive database backups; therefore, data loss can be a concern.

### **3. THE CONCEPT OF ADMINISTRATIVE REFORMS**

Attempts to propose administrative re=0omedies to issues are known as administrative reforms. Reforms might well be targeted at modifying the organization's formal structure, reorganizing, or regrouping existing divisions. Alternatively, new ones might be created while old ones are phased out. Reforms might even deal with procedures, such as initiatives to change how control was exercised or how company members interact with consumers. Organizational ideologies may also be reformed, such as new ways of viewing the organization's function and purpose or fresh

perspectives on its surroundings. These changes are sometimes described as having their worth, such as introducing more democratic institutions, procedures, or philosophies. In other circumstances, they try to increase organizational productivity or outcomes, such as through increasing efficacy or being more adaptable to changing market demands (Flinders and Skelcher 2012:330)

Reform seems to be just one method for organizations to change, and it is not always effective: some reforms cause little or no change, while certain administrative modifications in organizations were not included in any reforms (March 1981). This essay will suggest that reform may be seen as a component of organizational stability instead of change. Reforms are often shown as major one-time adjustments, and they may or may not result in changes. On the other hand, reform is often seen as a routine action. Rather than being a break in the organization's existence, reforms are routines. According to several research studies, reforms are difficult to execute (Hanf & Scharpf, 1978; Pressman & Wildavsky, 1973). I would want to emphasize how simple it is to begin reforming. Indeed, one of the causes why so few changes are ever completed, is the simplicity they may be launched. It is fairly uncommon for reformers to argue that reform is required for an organization to adapt to significant changes in its environment. I will argue that several rather banal, common, and stable components of an organization's internal life and several steady and rare properties of organizational surroundings tend to create reforms. One of these elements is the reform process: changes often lead to more reforms.

The argument will be based on specific reforms and organizational aspects; none of these are universal but adequate for effective explanatory tools in many circumstances. Administrative reforms include three fundamental features that, when combined with specific organizational traits discussed below, make it simpler to launch and implement changes in organizations. (MacCarthaigh, 2012)

One is simplicity: the reform's principles are less convoluted and more straightforward than most organizations people feel present organizational procedures are. Reform concepts were principles instead of comprehensive descriptions, theories instead of perceptions; in other words, reforms provide orderly ideas that could not encompass all of the complexities of the actual world. Second, rather than reporting on a chaotic reality, reforms are normative: they reflect efforts to restore order to it. Third, reforms are generally one-sided; they evoke a single set of consistent magnitudes and views of the world instead of organizational practices, which often have to cope



with contradictory magnitudes and perceptions by resorting to inconsistent discourse and deeds. The fourth trait of reform would be its prospective orientation: since reform is a process of formulation, persuasion, and execution instead of a one-time action, rapid results cannot be expected. Instead, it offers future advantages (Van Thiel and Lafrage, 2014:80). Because reforms incorporate both issue and solution concepts, they rely on a sufficient supply of both. If each issue and solution can be employed several times, as forgetting enables, the supply would better support numerous reforms.

### **3.1 Capacity for administrative reform**

The first factor is Iraq's 'capacity' to implement management change, ranging from conventional to NPM and post-NPM techniques. In their retrospective analysis of management development activities, McClennan and Orkin (2009) contextualized this problem well. They discovered that management development systems had essentially matched phases in the government sector.

#### **Following democratic transition.**

The first is the 'organization state,' which is marked by policy, programming, and organizational reviews, and in which the prevailing model of capacity development seemed to coincide with early functionalist concepts of management, as Jones argued. Throughout this transitional time, they define the "prevailing management development paradigm" as centered on "scientific administration, often recognized as the generic process approach." Prior to the democratic transition in Iraq, Cameron (2013, 570) classified public administration research as a "variant of scientific management," emphasizing the design and control of internal work processes. (McLennan & Orkin, 2009:1031) go on to say that "the most successful management development technique was (and still is) the introduction of new staff into the public service's culture, in terms of creating fixed processes and work styles." This means that there had been limited opportunity for a business-like approach to public administration.

Institutions' ability to own and use human resources can keep up with the demands of current management tools that leverage electronic governance and find answers to challenges that face them. Eventually, a statutory body recognized that a large percentage of senior managers cited financial management, a characteristic of conventional management, and, extra tellingly from a general populace magnitude perspective, 'strategic capability and leadership skills in an evaluation of the training requirements of organizations members (Commission:2008a).

Despite the objective to use the institutions to help the state recruit and retain scarce managerial talent, the reverse has happened in practice, with departments reporting high levels of vacancy in senior management positions (Naidoo,2008a:122). This, nevertheless, seems to contradict the previously mentioned large growth in management-level officials. A misunderstanding might partly explain the vacancy situation about the number of funded positions established by departments versus unfunded or superfluous jobs never removed. Furthermore, future studies that could provide a time series image of variations in post-establishment and the variables that influence this might assist explain the vacancy issue and offer a more realistic picture of managerial capability.

### **3.2 Commitment for administrative reform**

The second factor contributing to Iraq's perplexing and inefficient approach to managing change is the country's commitment. Several reviews of NPM in developing countries have specifically mentioned institutions' commitment to change (Larbi 1999; Polidano 1999; Turner 2002; McCourt 2013). Though Manning (2001) does not use the phrase 'commitment,' he does use a matrix of motives and capacity for public management change' to talk of motive or motivation for reform. It might be argued that the motivation for reform differs from the commitment to change since the former suggests what motivated the original decision to seek management improvements. This is in contrast to commitment, which implies that you have previously set a reform strategy and adhere to it. According to comparative studies, the inability to decentralize powers has been attributed to governmental mistrust of public managers, who may misuse these authorities to achieve clientelistic goals (Polidano 1999; Makumbe 1997; Taylor 2001 and McCourt 2013). Therefore, investing human resources capabilities in institutions was a critical strategy for racial change in the public sector. After twenty years, the policy reason for this process has given place to strong objections that maintaining the status quo has allowed the incumbent and its institutions to ascend to senior levels of government, not only to alter it racially. Take care of it under the 'capture' category.

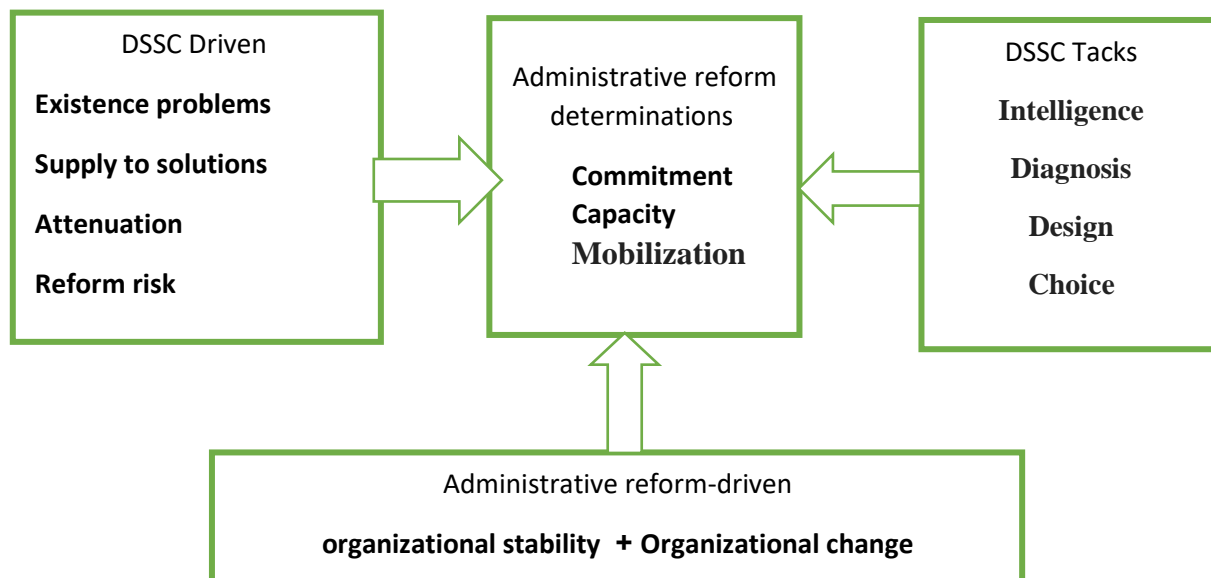
### **3.3 Mobilization for administrative reform**

The third aspect, 'Mobilization,' describes Iraq's problematic system of public management reform. I borrow the phrase from Manning's (2001) matrix of management reform preparedness that includes a reference to 'medium state Mobilization' in the 'incapable but motivated' quadrant that he applies to Iraq. Manning's term "mobilization" refers to various entities, including private companies, interest groups, and leaders, that aim to impact the activities of



government agencies inappropriately. Administrative reform achieves through the presence of motivation to achieve it is an ongoing process that requires many efforts and is not easy and will continue throughout the life of the institution, so it needs to generate continuous motivation to achieve reform (Matheson et al. 2007; Cameron 2010; Kopecký 2011; Naidoo 2013).

Continuous control is the need of Iraqi institutions to implement the requirements of administrative reform and change in the way of thinking leaders in institutions. The research shows the relationship between variables and how decision support systems center affects administrative reform in Figure 1



**Figure 1.** Relationship between for Decision Support system Center and Administrative Reform

#### 4. CRITICAL THINKING: THE IDEA OF RESEARCH AND PREVIOUS STUDIES

The study is a new idea in administrative literature and is also associated with many previous studies (Hanf & Scharpf, 1978), (Pressman & Wildavsky, 1973), (Simon,1996), McClennan and Orkin (2009) (Yukl 2008), (Naidoo,2013, 2015),(Al Shobaki,2017). However, the difference from other studies is in establishing a center for supporting the decision that contributes to solving administrative crises (disaster) that Suffer by most institutions and finding solutions to achieve administrative reform. Therefore, the study is consistent with the previous ideas for achieving administrative reform to a formal consultative body to contribute to it that can answer what administrative reform means. Are the requirements of administrative reform, and how to achieve administrative reform?

The idea of the study also shows the importance of investing human intellectual capital (Think Tank) who is capable of finding solutions to the crises that institutions suffer from and helping them achieve administrative reform and sustainable development.

Establishing a specialized center in achieving administrative reform and addressing administrative

crises in institutions is an important need, as our problem is administrative and lacks human resources investments in finding solutions. Such a center has existed since the 1940s in the USA and has been established in Egypt since the mid-1980s.

#### 5. METHODOLOGY

##### Measurement Scales 5.1

In developing scales dimensions of assessing DSSC, we used measures from Ebrine J.A& Marakas, J(2010), Khalesizade, S.M & Kachui, R.(2006) and Kumar, P. K. (2006)., measures the usability of Administrative reform Cameron, R. (2013), Naidoo, V. (2014) and Manning, N. (2001). Respondents were to show their agreements and disagreements to the item statements in all the scales using the five-point Likert scale: 4- Strongly Agree, 3- Agree, 2- Disagree, 1- Strongly Disagree, and 0- Not Applicable

##### 5.2 STUDY LIMITS AND SCOPE

**5.2.1 Subject (Academic) limitations:** The research aimed to look at the prerequisites for using decision support systems centers in Iraqi government entities.

**5.2.2 Limitations of Human:** The investigation was conducted on administrative and academic managers working in Iraqi public institutions.

**5.2.3 Institutional Limit:** The investigation has been conducted on Iraqi public institutions (Iraqi exchange market Institutions and public universities)

**5.2.4 Place Limitations:** The investigation has been conducted in the State of Iraqi, and the investigation has been limited to Iraqi exchange market Institutions and public universities).

**5.2.5 Temporal limitation:** The investigation was conducted, preliminary data have been collected about

the (Iraqi exchange market Institutions, and statistical analyses have been conducted throughout 2017.

### 5.3 Theory and Hypotheses

Figure 1 depicts the fundamental model for this study. It aids in determining the direct impact of the DSSC on administrative change. The model's ideas are discussed in the next portion of this article. They have been selected depending on their theoretical interest and mobilization in earlier works that might assist in placing this study's findings into context with those of past studies.



**Figure 2.** *The hypothesis mode*

#### 5.3.1 Hypothesis

According to the existing research, there seem to be equivocal and contradictory findings on the link between CEO and crisis-handling style, with strategic planning as a mediator. Depending on the literature review we offered. ***The main hypothesis of the research did the Existence decision support system center helps Iraqi public institutions in administrative reform.***

#### 5.4 Sample

Academics and Managers from Iraqi public institutions working Iraqi exchange market and public universities

used the random sample method to select for participation. To execute the study, 47 questionnaires were distributed to patricide in person, 43 of which were completed and returned.

## 6. METHOD OF ANALYSIS

### 6.1. Findings

The participants' demographic information was seen in the section. In all, 43 academics and managers took part in the research. Table 1 shows the demographic patterns and features of the study questions.

**Table1:** Descriptive Statistics Regarding Research Specimen

Requirements		N	%	Requirements		N	%
Gender	Male	35	81	education	Bachelor	15	35
	Female	8	19		Master	3	7
	Total	43	100		PhD	25	58
Age	36 – 45	7	17	Service period	Total	43	100
	46 -55	23	53		6 - 10	6	13
	56+	13	30		11- 15	12	29
	Total	43	100		21 and above	25	58
					Total	43	100
business education	Yes	27	62				
	No	16	38				
	Total	43	100				

Once the demographic characteristics of the participants have been analyzed, as shown in Table I, the bulk of them were male (81 percent), and those aged 36 to 45 have been determined to be 17 percent. Once the educational backgrounds of the individuals

were examined, 53 percent had a Bachelor's degree, and 58 percent had a Ph.D. Once the service lengths of participants in their organizations were examined, those who worked 21 years or more came top, followed by those who had worked 11-15 years. Approximately 62

percent of the participants reported that they had received business training. Depending on the findings of Table 1, the participants in the research are experts and experienced. The study's managers have experience in administrative efforts and improvement in effective organizations, academics working in Iraqi government universities, and administration specialists; they represent a specific number, but their opinions could be generalized based on their managerial experience.

SPSS 23 (Statistically Package for Social Science) and Microsoft Office excel 2010 were utilized to analyze the data. Non-parametrical statistic tests utilizing descriptive and inferential statistics, person association, and regression analysis were the main statistical tools used. Eventually, the data were interpreted at a 5percentage level of significance, in which a magnitude of  $p \leq 0.05$  was regarded significant and a magnitude of  $p \leq 0.01$  was considered extremely significant.

**Table 2.** demonstrates the associations of the variables utilized in this investigation.

Variables	Mean	SD	1	2
Decision support system center	3.47	0.6	1	
Administrative reform	3.67	0.7	0.58	1

The correlation coefficients demonstrate that the dependent and independent variables have positive and substantial associations. Table 2 shows that there might be a link between the administrative reform and Decision Support System Center ( $r = 0.58$ ;  $p$  less than 0.01).

## 6.2 Regression Analysis

Table 3 displays the findings of multiple regressions utilized to examine the association between Administrative Reform and Decision Support System Center based on the findings of simple regressions.

**Table 3.** Regression results

Independent factors	Administrative reform		
	B	t-value	Sig
Decision support system center	0.43	7.00	0.00

Note: The regression analysis was carried out independently for each independent and independent variable.

**Table 4.** Finding of indirect impact.

Model	Factor	R2	F	S.Error	$\beta$	t-value	Sig.
1	Decision support system center	0.31	48.52	0.06	0.02	0.32	0.75
	Administrative reform			0.07	0.55	9.16	0.00

To recapitulate, the results showed that Decision Support System Center has an indirect effect on Administrative reform. Decision Support System Center was positively and significantly related to Administrative reform. Based on findings (table 3), the present study approves the research hypotheses. There is a positive correlation between Decision Support System Center and Administrative reform. The positive relationship shows that Decision Support System Center facilitates Administrative reform.

## 7. CONCLUSION

The study reached many conclusions after analyzing the finding obtained because of the test relationship

between the influence of study variables and opinions of academicians and managers that represent the sample who took their views on the test of the relationship between the existence of a decision support center and achieving administrative reform in Iraqi public institutions. The study uses administrative reform as one dimension variable and for decision support center that has a strong impact on administrative reform. Furthermore, these results are realistic and consistent with the previous studies. The present research substantially adds to the Iraqi public institutions by examining the link between Administrative Reform and Decision Support System Center and developing and experimentally testing a



model. The findings of this study back up the premise that administrative change has a bigger impact when companies may reorganize and reallocate existing resources. The stronger the link between the administrative reform and Decision Support System Center, the more resources are available, and the mechanisms for optimal resource use are in place.

## 8. RECOMMENDATIONS AND IMPLICATIONS

It is one of the first investigations to link crisis management styles to processes of strategical planning and CEO competence KSA, not only in Iraqi currency markets businesses but also in other countries. This work contributes to a practical and theoretical approach to strategic crisis management in corporations. It offers practical counsel to business leaders and organizations and strategic studies scholars. The lists are some of the recommendations drawn from this research:

1. The importance of having decision-support centers achieve reform in institutions, preferably with broad powers and supported by the governmental authorities to facilitate its work.
2. Employ experienced academic experts.
3. Every Administrative Reform in Public Institutions attempt to achieve has failed because of reliance on the internal efforts of the institution and dispense advice and support in decision-making.
4. The Decision Support Center has been an advisory body for all institutions and Applied in developed countries since the 1980s.
5. Administrative reform is an ongoing process that requires continuous evaluation and reliable oversight that Supervisory this process.
6. The decision support center represents an administrative Inventory to solve problems facing institutions if most problems of administrative reform in Iraqi public institutions are general for all of them.

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