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Using DSS for Crisis Management

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This case focuses on the use of crisis management support systems in Egypt in leveraging the decision-making process in the government and the public sector for socioeconomic development. It describes the experience of the Egyptian public sector in socioeconomic decision-making and the related emergence of an information-based support organization for the government "Information and Decision Support Center". The case reflects on the type of decision-making and the crisis management mode of operation at the top policy level and the needs and requirements in terms of resources and infrastructure to support the decision-making process.

The case addresses the basics and concepts of crisis management support systems in the context of a developing country, Egypt, stemming from the experience of the Information and Decision Support Center from 1985 to date, the growing implications of the information and communication technology evolution and the lessons learned in responding to crisis management situations in supporting decision and strategic issues at the government and the public sector. The essence of the case is to address the use of advanced information systems in responding to socioeconomic development needs. The case demonstrates the use of management and decision support systems in a crisis mode that has had a number of successes over the last decade that implied concrete results within the developmental process that Egypt, a developing country, is realizing.

BACKGROUND

Decision support systems, since their inception in the 1970s, have been differently defined and conceptualized by vendors, researchers and academics (El Sherif and El Sawy, 1988). However, a general agreement states that decision support systems are computer-based systems that help decision makers confront ill-structured problems through direct

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interaction with data and analytical models (Gray, 1988 and Zmud, 1986). Generally, the focus of research and application of decision support systems has to a large extent been on individual managers and on organizational decision processes, largely for the private sector. DSS are mainly represented as providing opportunities directed toward improving the effectiveness and productivity of managers and professionals, boosting the organization's competitive edge, and rationalizing the decision-making process within an organizational context (Sprague and Watson, 1986). They aim at realizing the desire for accurate, timely and relevant information to help individual managers in organizations deal with an increasingly turbulent economic environment and the growing pressures of competition (El Sherif and El Sawy, 1988).

Much less emphasis has been given to the application of DSS in three particular areas: their use with groups (although group decision support systems nevertheless represent a significant domain of research and application); their use in the public sector, which is different in terms of implementation than the private sector (Jain, 1997); and their use to support socioeconomic development (Kamel, 1995). Moreover, the use of crisis management support systems has been recognized as gradually being integrated into strategic decision-making in organizations. However, the process of building and integrating crisis management strategic support systems within the organization has not been extensively addressed by the literature (El Sherif, 1990). Thus, this case attempts to integrate the use of DSS in crisis management and how that affects the strategic decision making process within the organization. The case builds on the experience Egypt has since the mid 1980s in building information and decision support centers in its different provinces (El Sherif and El Sawy, 1998 and Kamel, 1998). This experience has had major implications on the decentralization of decision-making in public administration leading to a comprehensive structural adjustment program in various managerial and administrative issues in the government (Kamel 1998). The experience represents a case from a developing country that capitalizes on the advances of information and decision support systems in leveraging its managerial and decision making capacities with its organizational challenges and problems that could be used for future references in further implementations on the concept.

Decision support systems, crisis management and strategic support systems form the focus of this case exposing a relatively hidden DSS domain by demonstrating the use of decision support systems by the government of Egypt in rationalizing its decision-making processes, and in better allocating scarce resources for socioeconomic development within an almost continuous crisis mode of operation (El Sherif, 1990). The importance of both the cases analyzed and the crisis management process demonstrated makes the experience unique in the context of implementation. In this case, it is the context of a developing country attempting to diffuse the use of information technology among its government and local administration departments (the public sector included) and try to convince its policy and decision makers to make use of such technologies to help achieve better developmental and growth targets.

SETTING THE STAGE

Egypt is a developing country with 68 million in population, US$1,465 per capita income, and 3% inflation rate (Kamel, 1998), it faces the common problems of developing countries such as heavy foreign debt, balance of payments deficit, high illiteracy rate, poor

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