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# **An Investigation of the Adoption of Disaster Recovery Planning by Health Maintenance Organizations**

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Problem Statement

Under traditional health care systems, health care costs became prohibitively high. The 'managed care' concept in health care in the form of Health Maintenance Organizations (HMOs) was developed to deliver care at a reasonable, set cost to its members. To provide enhanced care at controlled cost, HMOs use Health Management Information Systems (HMIS) extensively (for example, in the maintenance of Electronic Medical Records). As a result, the functioning of HMOs has become largely dependent on the continuous availability of HMIS. Disaster Recovery Planning (DRP) is a fundamental component of effective resource management and ensures the protection of the HMIS environment and its continuous availability in the event of a disaster. This study investigates the adoption of protective measures, in the form of DRP, by HMOs to secure their HMIS environment. The prime objective of this study is to empirically investigate the process of adoption of DRP by HMOs and to determine the major variables affecting the adoption.

This study explores five separate and related issues involved in the adoption of DRP for the protection of the HMIS environment by HMOs. The first issue examines whether the reliance of HMOs on HMIS influence the adoption of DRP. The second issue is to determine the extent of influence that HMO perception of and attitude toward risk associated with HMIS denial has on the adoption of DRP. Many researchers have described the pattern of risk preference as risk seeking or risk aversion. In this study, the significance of the risk preferences of HMOs in explaining DRP adoption is tested.

The third issue concerns the structuralist perspective of DRP adoption. This perspective assumes that adoption is determined by organizational characteristics (Slappendel, 1996). Researchers have investigated the effects of formal structural factors on adoption behaviors (Grover and Goslar, 1993, Hage and Aiken, 1967, 1969, Kimberly and Evanisko, 1981, Moch and Morse, 1977, Tornatzky and Klein, 1982, Zaltman et al., 1973). The specific variables studied in this research are organizational size, centralization, and formalization. These organizational variables were found by prior research to be significant in explaining adoption.

The fourth issue is whether environmental factors impact the adoption of DRP by HMOs. The environmental variables that researchers (Aldrich, 1979, Dimaggio and Powell, 1983, Kimberly and Evanisko, 1981, Pierce and Delbecq, 1977, Utterback, 1974) found to be significantly associated with organizational adoption are environmental uncertainty, heterogeneity, competition, and resource concentration. Environmental uncertainty and competition are tested in the present research.

The fifth issue is to determine the characteristics of DRP that influence its adoption. The characteristics presumed to be most likely to promote the adoption of DRP are: relative advantage (perceived DRP benefits), compatibility, complexity, trialability, and observability (Frambach, 1993, Iacovou et al., 1995 ).

## **Research Methodology**

The research will be conducted in two phases. The first phase of the research will utilize both telephone and personal interviews. The interviews will be conducted to gain an understanding of any aspects of the DRP decision making process not described in the literature. In order to understand the DRP decision making process, semi-structured interviews will be conducted with a purposive sample. Several interviews will be conducted with members from the information systems and operations management groups within the HMOs. The interviews will be conducted to verify the appropriateness of the variables suggested in the literature and also to identify any additional variables that may influence DRP adoption. In the second phase, data will be collected via a mail survey from HMOs across the nation. The survey will consist of multiple scale items. Each construct of interest will have multiple operational definitions. Internal consistency, determined by Cronbach alpha, will assess reliability by the amount of inter-item correlation between the variable measures. Convergent and discriminant validity will be determined through factor analysis. Multiple regression models will be used to test the research hypotheses.

References available upon request from Kakoli Bandyopadhyay