

From Our Readers

An Opinion . . . Comment on Critical Success Factors Work

At the Third International Conference on Information Systems in Ann Arbor in December 1982, Jack Rockart of MIT discussed his paper entitled "The Changing Role of the Information Systems Executive: A Critical Success Factors Perspective" [7]. In the question-answer session which followed, someone commented that the Critical Success Factors (CSF) method did not appear to be a scientific tool, implying that the results obtained might be more a function of interviewer perception than an accurate representation of reality. As I recall, Professor Rockart's response was that, as applied in this study, the CSF method was a form of descriptive research, a necessary and unavoidable step in the development of theory. The implication of interviewer perception was not directly addressed.

In this context, the questioner's concern was that two interviewers, each applying the CSF method with a different group from the same population (in this case, IS managers), might develop dissimilar results. In the interest of exploring this issue a little further, I compared the results of the Rockart study with those presented by Professor E.W. Martin of Indiana University in his article "Critical Success Factors of Chief MIS/DP Executives" [4]. In each case, the authors cite and describe the critical success factors revealed in their interviews with senior information systems managers.

Table 1 displays the CSFs determined by Rockart's group, which included Christine V. Bullen and Judith A. Quillard as interviewers, and by E.W. Martin.

Table 1. Critical Success Factors of MIS Executives

Rockart CSFs	Martin CSFs
— Service (Operations and Development)	— Data Processing Operations
— Communication	— System Development
— Human Resources	— Relationships with the Management of the Parent Organization
— Repositioning the IS function	— Human Resources Development
	— Support of the Objectives and Priorities of the Parent Organization
	— Management of Change (Technological)
	— Management Control of the MIS/DP Organization

The reader who wishes to examine this comparison in detail is advised to review the Rockart and Martin articles. My examination leads me to conclude that the results are quite similar. Rockart and Martin have chosen to use slightly different labels for each CSF identified, but the detailed descriptions of the two sets of CSFs are clearly comparable. Their separate efforts seem to have identified common areas of concern.

There are, however, areas of inconsistency. For example, Martin identified "Management Control of the MIS/DP Organization" as a CSF. This is a bit of an oddity since organizations in "stage three or four," as Martin judged them according to Nolan's stages hypotheses, would not be expected to be preoccupied with control concerns. Rockart's companies appeared to be "in late stage three or early stage four" and control was "rarely" viewed as critical. Martin's finding might be explained by his comment that "two thirds of them were using database technology on less than 20% of their applications" [4]. On this benchmark at

least, perhaps Martin's companies were closer to early stage three when controls would be of greater concern.

It is useful to point out that Rockart's CSFs in the table above are referred to by him as "Generic CSFs." Rockart noted that while specific CSFs do differ from one IS executive to another, the generic set is "readily apparent in the nine companies studied" [8]. In addition to comparing favorably with Rockart's generic set, the CSFs chosen by Martin compare favorably with the detailed list of CSFs of the nine companies in Rockart's study [8].

This exercise is hardly conclusive, but it does seem to indicate that the Critical Success Factors approach provides reasonably reliable results. It also indicates, however, that the CSFs approach is not a precise instrument, wholly free from the bias of an interviewer's interests and perception.

A bibliography of CSF articles, papers, and notes of which I am aware follows.

- [1] Bullen, C.V. and Rockart, J.F. "A Primer on Critical Success Factors," Working Paper No. 69, Center for Information Systems, Sloan School of Management, M.I.T., Cambridge, Massachusetts, June 1981.
- [2] Davis, G.B. "Comments on the Critical Success Factors Method for Obtaining Management Information Requirements in Article by John F. Rockart," *MIS Quarterly*, Volume 3, Number 3, September 1979, pp. 57-58.
- [3] Davis, G.B. "Letter to the Editor," *MIS Quarterly*, Volume 4, Number 2, June 1980, pp. 69-70.
- [4] Martin, E.W. "Critical Success Factors of Chief MIS/DP Executives," *MIS Quarterly*, Volume 6, Number 2, June 1982, pp. 1-9.
- [5] Martin, E.W. "Critical Success Factors of Chief MIS/DP Executives — An Addendum," *MIS Quarterly*, Volume 6, Number 4, December 1982, pp. 79-81.
- [6] Munro, M.C. and Wheeler, B.R. "Planning, Critical Success Factors, and Management's Information Requirements," *MIS Quarterly*, Volume 4, Number 4, December 1980, pp. 27-38.
- [7] Rockart, J.F. "Chief Executives Define Their Own Data Needs," *Harvard Business Review*, Volume 57, Number 2, March-April 1979, pp. 81-93.
- [8] Rockart, J.F. "The Changing Role of the Information Systems Executive: A Critical Success Factors Perspective," *Proceedings of the Third International Conference on Information Systems*, Ann Arbor, Michigan, December 1982, pp. 185-197 (reprinted from Sloan Management Review, Fall 1982).
- [9] Sanders, G.L., Courtney, J.F., and Burns, J.R. "A Decision Support System for Identifying Critical Success Factors," *Proceedings of the National AIDS Conference*, San Francisco, California, November 1982, pp. 209-211.

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