Integrating decision support and human resource information systems

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Human resource information systems (HRIS) have vastly improved structured human resource management decision making while failing to improve semi- or unstructured decision making. This paper describes a human resource decision support system (HRDSS) which integrates DSS capabilities with those of HRIS to overcome the limitations inherent in the design of HRIS.

Introduction

Although Human Resource Information Systems (HRIS) have been addressed in terms of their implementation and availability (Frantzreb, 1986; Magnus & Thomesen, 1986), purpose (Johnson, Moorhead, & Griffin, 1983; Nardoni, 1985), and current status (DeSanctis, 1986; Magnus & Grossman, 1985; Moore & Clavadetscher, 1985) future directions for such systems have for the most part been ignored. HRIS are relatively new subsystems of organizational Management Information Systems (MIS). Their development has been similar to that of information systems of other functional areas although slower to develop. The most apparent difference between HRIS and the information subsystems maintained by other functional areas is the relatively recent interest in the development of such systems (Tomeski, Yoon, & Stephenson, 1976).

At present, HRIS provide the traditional transactional data operations and reports for personnel/human resource management administration (e.g., payroll, benefits administration, compensation administration, etc.), but are not designed to support managerial decision making (DeSanctis, 1986). Moore and Clavadetscher (1985) conclude that organizations will need to be firmly convinced that HRIS...
will save money and improve decision making before they pursue the acquisition of state-of-the-art systems.

That observation suggests that the allocation of additional resources to, and higher priority for, future HRIS development will require very persuasive justification. The human resource area will need to develop HRIS which extend their effect from the traditional transaction/report generating function to that of explicitly providing support for organizational decision making. This paper develops the integration of HRIS with Decision Support Systems capabilities to formulate a Human Resource Decision Support System (HRDSS) as a means to accomplish that goal.

**Current Status of Human Resource Information Systems**

As mentioned above, HRIS developed much later than information systems in other functional areas. Compared to other areas, researchers have shown relatively little interest in decision support systems for the human resource area. Articles proposing specific systems have been few in number (Davis & Steen, 1983; Enderle, 1987; Harris, 1986; LaPointe & Verdin, 1988). It appears that a very limited number of current HRIS have incorporated decision support features despite their enormous potential.

DeSanctis (1986) suggested that increasing demands by government agencies for human resource information, coupled with decreasing computing costs led to the initial interest in HRIS. Some factors now stimulating interest in HRIS include:

1. increased organizational size and complexity;
2. geographical dispersion of firms;
3. government regulation and reporting requirements; and
4. an increase in white collar work which demands a greater variety of skills for any given job. (DeSanctis, 1986, p. 16).

A concise definition of HRIS is provided by Mathys and LaVan (1982), who described them as “management information systems designed specifically to provide managers and others with information necessary to improve human resource decisions.” (p. 83). Unfortunately, empirical research suggests that HRIS are not perceived by managers outside of the human resource area as contributing significantly to improved decision making (DeSanctis, 1986; Mathys & LaVan, 1982; Moore & Clavadetscher, 1985). This common misperception that HRIS offers only limited support to decision making, particularly to managers outside of the human resource organizational unit, can partially be attributed to the approach taken by system designers in developing an HRIS. An observation by Magnus and Grossman (1985, p. 43) that “automation in the personnel department to date has focused on the bread and butter issues of human resources management: employee records, payroll, and compensation and benefits administration" is representative of other studies. DeSanctis (1986), Moore & Clavadetscher (1985), and Mathys & LaVan (1982) all reported similar findings, indicating that a majority of the HRIS applications are administrative (i.e., recordkeeping) in nature.

Particularly disturbing are the findings by Verdin (1987) which suggest that HRIS may also be of limited or questionable value to decision makers in the human resources organizational unit. Verdin (1987) found that computer applications had failed to reduce the amount of time spent on decision making for a majority of human resource managers studied, and that over 50% of the respondents reported low quality for decisions made using the HRIS. Moore and Clavadetscher (1985) found that over 40% of the respondents in the human resources unit reported only moderate to low utility for computerized HRIS systems. Recent reviews of com-