

The Impact on Decision Making of Centralisation in a Multinational Manufacturing Company: The Materials Purchasing Function

Fergal Carton

University College Cork, Ireland

INTRODUCTION

Multinational companies faced with an uncertain world are notorious for centralising control of their far flung empires to the extent that local decision making becomes a matter of managers merely executing orders rather than showing creativity or initiative in solving issues. Control can be best exerted by *standardising* processes and centralising responsibility for decision making. Enterprise resource planning (ERP) systems are a perfect vehicle for such centralising forces, imposing a common way of doing business across the organisation, and simultaneously providing a head office with centralised control of those practices. On the other hand, these *highly integrated systems* exacerbate rather than resolve the managers' information deficit problems. Though providing a high level of granularity of transactional data, they fail to assist managers in controlling business *performance* to predefined targets. Taking the material purchasing department of a manufacturing multinational as an example, this article studies the impact of ERP-enabled centralisation on day to day decision making of managers both at a local plant and at corporate head office (HQ). Although huge improvements in *data integrity* at an operational level (inventory, procurement, *standardisation* of codes, prices, and so forth) have made local *cost control* much more robust, local managers have sacrificed the ability to investigate these costs. As prices are set centrally by commodity teams, local managers have been disempowered with respect to leveraging purchase price variance (PPV) and quality in their relationships with suppliers. Furthermore, they are asked to implement radical *cost saving programmes* without disturbing the availability of raw materials for production. From a local point of view, managers do not have a say in the setting of targets, and do not have the tools (or know how) to work with the detailed transactional data in

the ERP system to be able to understand *cost drivers*. HQ, on the other hand, gain in visibility of local *costs*, and typically make no change to *integrate* their own planning applications, retaining legacy tools and interfaces. This article examines the apparent imbalance between the price paid by local materials buyers, namely a huge bureaucratic overhead, and the benefit derived by corporate purchasing.

BACKGROUND

ERP could be classified as one of Thompson's (1967, p. 17) "mediating" technologies, requiring the *extensive* operation of activities in *standardised* ways. The benefits of standardisation have been compared with utilities/ banks/ employment agencies, where the benefits do not accrue until all subscribers are incorporated into the network.

The problem of organisation design is to create mechanisms that permit coordinated action across large numbers of interdependent roles (Galbraith, 1974). Furthermore, the greater the task uncertainty, the greater the amount of information that must be processed among decision makers during task execution in order to achieve a given level of performance (Galbraith, 1974). So the organisation adopts integrating mechanisms which increase its information processing capabilities.

Davenport (1998) showed the paradoxical impact of ERP on companies' organisation and culture. On the one hand, by providing universal, *real-time* access to operating and financial data, ERPs allow companies to streamline their management structures, creating flatter, more flexible, and more democratic organisations. On the other hand they also involve the centralisation of control over information and the *standardisation* of processes, which are qualities more consistent with

hierarchical, command and control organisations with uniform cultures.

Thus, multinationals face a choice between using their ERP as a *standardisation* tool or preserving some degree of local independence in software and business processes (Davenport, 1998). Most local subsidiaries do not have a say in the decision to implement ERP, so it is usual that the global solution lacks some capability to deal with the local requirements, though some local sites with better political connections or more influence on key processes typically get better treatment than others.

In the case of the purchasing (materials) department, many ERP implementations derive much of their justification from the rationalisation of the supply base. Adam (2004) describes how businesses can succumb to the “ERP steamroller” of integration in the area of procurement. *Cost savings* are realised through a rationalisation of local suppliers and purchasing patterns and the elimination of redundant suppliers. Advantageous volume purchase agreements may be negotiated at a global level, therefore leveraging the buying power of the corporation as a whole. At the same time, key local relationships and more flexible person-to-person arrangements are sacrificed without a possible measure of how critical they are in operational terms.

These benefits can of course be obtained without the attendant implementation of centralised data and processes (as exemplified by single instance ERP applications) but typically the savings are realised through the roll out of a system to manage the newly structured master data and procedures throughout the dispersed multinational.

To understand the role of ERP in procurement, it is useful to look briefly at the history of these applications, and, in particular, to consider the evolution of *material requirements planning* (MRP) through to present day ERP.

MRP: THE FIRST STEP ON THE ROAD TO BUSINESS INTEGRATION

MRP originated in the early 1960s as a computerised approach for the planning of materials acquisition and production for more complex manufacturing processes where interdependencies between components existed. Orlicky (1975) realised that a computer enabled the

detailed application of the technique, making it effective in managing manufacturing inventories.

Based around the Bill of Materials (BOM), early applications exploded a production plan for a top level parent item into a plan of production and purchasing for component items. These systems were implemented on large mainframe computers run in centralised material planning departments for large companies.

Closed loop MRP, which provided for the feedback from the execution to the planning cycle, together with some financial modules, developed into an *integrated* approach to the management of manufacturing resources known as Manufacturing Resource Planning or MRP II. From the 1980s onwards, MRP II applications became available at lower cost on minicomputers and then microcomputers.

Extending the integration into other functional areas such as finance, distribution, and human resources, ERP systems can be linked to an increasing business trend towards globalization. To be successful, a global company must be able to control and coordinate their various remote operating units. Accurate, *real-time information* provided by an ERP system has the ability to *integrate* the more remote subsidiaries into corporate practice because an ERP system allows the sharing of information in *standard* format across departments, currencies, languages, and national borders. Thus, ERP systems can be used to provide a “common language” between units (Bingi, Sharma, & Godla, 1999; Horwitt, 1998).

Multinational manufacturing companies can clearly benefit from this centralising effect of ERP implementations. However, it is unclear whether these benefits accrue to all levels in the organisation. Furthermore, research would suggest that the benefits that do accrue tend to accumulate around the finance department, which has the greatest need of *real time information* on expenditure and revenues for planning and control purposes.

CENTRALISATION AND MATERIALS PLANNING

In this article we focus on two aspects of the centralisation of decision making associated with ERP implementations: first how it affects the materials purchasing department of a large multinational manufacturing

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