

Chapter 4.5

Decision Support Systems in Indian Organised Retail Sector

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INTRODUCTION

Retailing as simply defined is the end process of supply chain management where there is a direct interaction with the end-user or the customer. Hence forth availability, assortment, display, proper handling of product plays a vital role in a competitive world.

Organised retail stores are characterized by large professionally managed format stores. They provide goods and services that appeal to customers, in an excellent ambience that is conducive for shopping, created based on consumer preference analysis, and offer good value as some of the benefits of large-scale purchases are passed on to consumers. In India, retail has its deep root since long back –and that is why India is being known as “Nation of Shopkeepers” with about 12 million retailers by 2003¹. Organised

retailing contributes 2 percent to the total Indian retail sector and expected to increase to 5 percent, by 2010. Retail sector forms 10-11 percent of GDP². It is attractive in terms of investment, employment opportunity, and usage of technology. Indian organised retail industry was worth Rs. 13,000 crore in the year 2000 and was expected to grow by 30 per cent in the next five years touching Rs. 45,000 crore in 2005. ³ Food and personal care amounted to Rs. 1000 crore in 2000. Retailing is in a rapid state of change due to speedy technological developments, changing competitive positions, varying consumer behaviour as well as their expectations and liberalized regulatory environment. In such a scenario, information is crucial to plan and control profitable retail businesses and it can be an important source of competitive advantage so long as it is affordable and readily available. DSS (Decision Support Systems) which provide timely and accurate information can be viewed as an integrated

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entity providing management with the tools and information to assist their decision making.

In west, retail businesses have been the early adopters of Information Technology (IT). As there is a need to capture accurate information and make it available not only within the store but send it to warehouse, distributors and manufacturers in real time to manage the short shelf life of some goods in grocery sector and costs of inventory, varied DSS tools have been adopted by organised retailers. VMIs- vendor managed inventory systems, Scanner at the counters- point of sales systems, RFID- radio frequency identification, OLAP (online analytical processing), supply chain management systems, forecasting systems, CRM- customer relationship management systems, ERP- enterprise resource performance system etc. are the tools used by organized retailers in developed nations.

Most retailers collect and have access to huge amount of data, collected from day to day operations e.g. customer loyalty data, retail store sales and merchandise data, demographic projection data etc. Currently retailers are data rich but information poor. There is a great potential to develop systems that enable analysts and decision makers to manage, explore, analyze, synthesize and present data in a meaningful manner for decisions. Retail managers are in a constant need for right kind of information for making effective decisions. Modern advancements in ITES (Information Technology Enabled Services) and communication has permitted deployment of DSS (Decision Support Systems). DSS can be defined as computer based systems that help decision makers to confront ill structured problems through direct interaction with data and analysis models.⁴

DSS are basically characterized by three capabilities; dialogues, data and modeling- the emphasis of each varies from organization to organization. DSS includes a wide variety of systems, tools and technology that support decision making. EIS (electronic information system), ESS (Electronic sup-

port system), GIS (geographic information system), OLAP (online analytical processing), software agents, knowledge discovery system and group DSS – all can be considered as DSS. Broadly two major categories⁵ of DSS namely enterprise wide DSS and desktop DSS exist. Enterprise wide DSS are linked to large data warehouses and serve several decision makers in a company whereas desktop single user DSS are small systems residing on individual manager's personal computer. Thus it is an interactive computerized system that gathers and presents data from a wide range of sources, typically for business purposes. The organization needs to pool in both internal and external data, software, customer data, models and trained people to appreciate and use the systems for decision making which will help build sustainable competitive advantage. This can be depicted in the following Figure-16.

As seen from the above, external data and software alone would not provide competitive advantage, but organization's own customer and business data, models which convert data into useful information and people, who will operate the systems, analyze outputs and make decisions based on the information provided- all these would be required for competitive edge. Companies need to make decisions faster, across more channels and product lines, leverage more data, under greater regulatory demands and competitive pressures, and with more complicated constraints and trade-offs. DSS entails development of approaches for applying information systems, technology to increase the effectiveness of decision makers. Each sector with unique characteristics poses very different challenges to an organization; hence in-depth understanding of one sector would provide deeper insight into the requirement of DSS to enable managers in that sector to take effective decisions. The proposed study aims at understanding DSS, its application in grocery sector and issues arising out of implementation of DSS in Indian retail grocery sector.

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