Chapter XII

Evolution and Revolution of Retailing Through IT

Marcel Cohen
Imperial College Management School, UK

ABSTRACT

This chapter examines the impact that IT has had on retailing under two headings–evolutionary and revolutionary changes. The evolutionary changes described focus on the electronic identification of products, the improved communication links between retailers and their suppliers, and the introduction of electronic payment. The revolutionary changes considered are those stemming from e-commerce. The thrust of the discussion is that whilst IT has revolutionised product associated with the physical transfer (delivery or pickup) of goods to customers. This has opened up an opportunity for a new form of retailer that may be the result of an alliance between companies with IT skills (e.g., Microsoft), delivery capability (e.g., DHL) and distributed physical assets (e.g., Exxon).

INTRODUCTION

The classical distribution chain from manufacturer to end user is essentially a break bulk process. Manufacturers supply a small number of wholesalers with large/ bulk quantities (for example, truckloads) of the same product. Wholesalers supply a larger number of intermediaries/retailers with a variety of products but smaller quantities (for example, boxes containing dozens of items) of each. Retailing describes the final link in the distribution chain that deals with the supply to end users (or consumers). It is characterised by supplying a very large number of people with small, often single items, with a large variety of products.

The retail shop has remained largely unchanged for centuries as the final stage of a break bulk distribution operation. In the last 30 years however certain societal trends (see Henley Centre for Forecasting, 1984) have caused fundamental changes in the food retailing landscape. The fundamental driver to change is the consumers' willingness and ability to hold stocks of food products in their own home rather than depend on retailers to hold the entire inventory. This in turn is driven largely by the availability of storage devices, such as refrigerators, in peoples' homes, the ability to transport large quantities of goods through the availability of cars, and finally having the ability to finance the stock held through regular salaries and other credit facilities. This has led naturally to a change of buying habits from daily small purchases to less frequent larger purchases. The latter became so major an event that they justified a purposeful expedition, called a "mission shop" to a suitable retailer rather than a chance purchase on the way to or from work. That was the motivation for the birth of out-of-town large food superstores, also called hypermarkets.

The out-of-town hypermarkets were focused initially on functional products such as grocery and other domestic requirements. This left the less functional (and possibly more enjoyable) purchases in the high street. Thus a polarisation occurred with high-touch/pleasurable purchases, from clothes to cameras, in the high street and functional purchases, from canned foods to detergents, in out-of-town centres. Each of these facilities developed at its own pace. For instance the out-of-town centres grew in size and diversity in range, most notably offering petrol for sale. High street shops became more aesthetically pleasing by the use of interesting displays and lighting. Indeed the very nature of the high street has evolved from a long line of shops to malls or precincts. Some suggest (see Popcorn, 1998) that the birth of such precincts is driven by the societal trend of fear and mistrust of others. The precincts provide secure environments to allow retailers to vet customers before serving them.

The important fact remains that retailing has undergone major changes as a result of societal changes. However we argue here that this change in retailing, large as it is, is surpassed by the impact that IT has had on retailing.

The impact of information technology (IT) in causing change to retailing has taken two basic forms—evolution and revolution. Historically IT has helped the *evolution* of retailing but more recently it has begun to cause a *revolution* in retailing. We shall visit each of these two roles of IT in turn.

Whilst IT in its broadest definition has helped retailing evolve in many ways—including security systems, edge-of-shelf displays showing computer-controlled prices, and the like—we shall focus on the three most significant developments. We shall consider product identification, linkages with suppliers and lastly electronic payment. These three contributions from IT have had a fundamental impact in the evolution of the retailing process.

The main focus of this chapter however is not to describe how IT has merely helped the *evolution* of retailing but rather to examine how the development of IT might contribute to the *revolution* of retailing. We are specifically concerned with electronic trading, otherwise known as e-commerce. In a sense this is an attempt to grapple with the future and we will have to speculate to a large extent on the way

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