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The integrated management of logistic chains in the white goods industry. A field research in Italy☆

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Abstract

After having devoted many efforts and investments in improving their internal capacity to produce the right product at the right price at the right time, companies are now starting to discover that much of the value they deliver to their customers depends not only on their own performance, but also on the performance of all the other companies that belong to the same *logistic chain*. Thus, the integrated management of logistic chains has gained a large attention in the latest years, as one of the most effective tools to achieve an overall improvement in the economic as well as in the logistic value that is embodied in each product. This paper presents some results of a field research focused on logistic chain management, carried on by means of direct interviews on a sample of Italian companies, shops and final customers belonging to the white goods industry. Questions highlight the main cost and logistic effects that arise among different tiers of the chain when they interact. Here we illustrate the used methodology. Moreover, we discuss some of the empirical results achieved, with the aim of assessing the improvement potential that a tighter integration could achieve. In particular, it is shown that wide space for improving companies profitability is available both by reducing costs and by increasing sales.

Keywords: Supply chains; White goods industry; Survey

1. Background

1.1. The logistic chain concept

In many branches of industry, the last decade has witnessed an unexperienced increase in the environmental complexity that manufacturing companies have to face. This is partially due to the increased customer requirements which usually

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characterises mature markets. Moreover, the concurrence of the widening of markets and therefore that one of an ever stronger competition has further fostered this trend.

In order to cope with global and mature markets, manufacturers have striven not only to increase their product range, but also to enrich their products with a set of features that might create a difference with respect to competitors. This, in turn, has led to the need to master a wider range of manufacturing technologies than before. Given the considerable hurdle that has risen by the need to be the leader in such amount of different technological areas, many companies have preferred to reduce their level of vertical integration and to focus on their core technologies, rather than trying to be excellent in all of them [1]. A typical example of this way of doing is supplied by the PC industry, where each component (motherboard processor, hard drive, screen, operating system, printer, etc.) is usually manufactured by a small number of focused and global companies.

In such a context, if customers are to obtain a whole system (e.g. PC, screen, printer and modem) at a reasonable price, with a good quality and within a reduced lead time after the order, this can be obtained owing to the combination of efforts of all the actors connected to this system [2, 3]. Just to cite some of the well-known brands: Intel will supply the processor and Seagate or IBM the hard drive; Compaq will take care of PC assembly; Sony will provide the monitor; Hewlett-Packard will provide the printer; 3COM the lan board or the modem, Microsoft will supply the operating system and the dealer will do SW installation, product packaging and final delivery.

We will call the whole set of companies mentioned above a *logistic chain*, in that not only these companies perform the logistic phases of the PC value chain, but they also contribute to the "*logistic value*" that is embodied in the PC. In other words, these companies not only contribute to determine the inherent value of the PC as a product, but they also determine the service parameters that are connected to the delivery process, such as: response time, tardiness, etc.

1.2. Competition among logistic chains

Given the remarkable changes in the manufacturing industry that have been outlined in the previous section, companies have started to think how to link themselves inside a logistic chain in a way to generate more value for the customers and ultimately also for themselves. The integrated operations management of a whole logistic chain, is relevant due to two different competitive effects, owing to either different types of customers or the positioning of each industry in its life cycle.

Let us think about one customer buying a car. For first-time buyers, the act of buying their first car may well be considered as a "must", due to the mobility requirements it fulfils. Conversely, when you have already bought your car, buying another one could be just a matter of fashion or status. In this latter case, which refers to a mature customer, the act of purchasing might well be deferred to next year, while the same amount of money might be allocated to something else (e.g. a fashionable dress or suit, a new piece of furniture or even a vacation) or simply saved.

In the former case of the first-time buyer, the question to be answered is: *which car to buy?*, so the competition is *within* the automotive industry. Thus, each car manufacturer, together with dealers and components manufacturers (e.g. one automotive chain) compete against other ones, inside the automotive industry. On the contrary, the latter type of customer gives rise to a new kind of competition, which is *among* different industries. In this case, different automotive chains are competing against other chains that deliver furniture, dresses, or eventually anything else.

An additional difference between first-time customers and mature customers, is in that the first ones will presumably make their choice based on a combination of features and price (e.g. car within certain dimensions, ensuring given performances, under a pre-determined price threshold). So, given the purchase is needed, they will go ahead searching on the market, until finding the appropriate product. On the contrary, mature customers can give up the purchase, so they are likely to be less focused on functions and price than on other features like design, service or brand name. Further-