Chapter XVI

Application of Industrial Life Cycle Concept

The life cycle of products is a major concern in business all over the world. This Appendix proposes the Industrial Life Cycle Concept integrating the innovation, location, and marketing aspects. It is a very holistic concept in two regards. First, it deals with a whole category of products including multi-generation products. Second, it considers the whole supply chain from the consumers to suppliers. We demonstrated the industrial life cycle concept through a home-use VCR case study. The time frame is divided into five stages: introduction stage (before 1980); early growth stage (1980-1984); late growth stage (1985-1989); maturity stage (1990-2001); and decline stage (after 2002).
Introduction

This chapter discusses an *industrial life cycle*, a life cycle of a category of products, which is related closely to business practice. The goals and appropriate strategies of companies differ at each stage of the life cycle. It often is said that the life cycles of products become shorter and shorter because new products emerge more frequently and obsolete existing products earlier than before (Bayus, 1994). Although this is true for some series of products and for individual products (Higuchi & Troutt, 2004; Loch, Stein, & Terwiesch, 1996; Millson, Raj, & Wilemon, 1992), it is questionable as a whole, in particular for categories of products. A category of products is composed of some series of products, which are incorporated some individual products. In the home-use VCR, a category of products includes all home-use VCR products and the series of products are the Monaural (standard) products, HiFi (High-Fidelity) products, S-VHS (Super Home Video System) products, and so on. An individual product is a certain product, such as HR-3300, HR-F6, and so on.

Three different life cycle theories are integrated into a single *industrial life cycle* concept and focus on the life cycle of a particular category of product, the home-use VCR. This study hopefully will contribute to further research on the life cycle of products by proposing an ideal and latest case study for the life cycle by taking wide view including R&D, manufacturing, and marketing aspects. The home-use VCR industry is particularly appropriate for research on the life cycle of products for the following reasons:

1. The industry progresses with perfect timing. By the middle of 2000s, almost all companies stopped manufacturing home-use VCR products. And the majority of consumers started purchasing DVD or HDD recorders instead of home-use VCR. This industry is coming to an end.

2. The life of home-use VCR industry was about 30-40 years. This is long enough to divide into stages (in this book, five stages), yet not too long to be able to compare the earliest and final stages.

3. The home-use VCR is very lightweight. The constraint of its weight is so negligible that its logistics system can change easily according to the situation or need. Most VCR parts are so light and small that the manufacturers easily could change the location of factories and establish the effective and efficient global division of labor, for reducing the total costs including tariffs.
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