Vernon’s product cycle theory is reexamined and extended in the first half of this chapter. It did not originally address the recent environmental changes, the global economy, supply chain management, and the rise of developing countries. The geographic location of manufacturing facilities is discussed from the viewpoint of the innovations. The physical location at the beginning of the VCR industry is explained in the latter half of this chapter. Although there was a great global demand for the VCR from the beginning, Japanese companies exclusively manufactured almost all VCRs in Japan and exported them all over the world. Manufacturability is the critical factor at the beginning as Vernon’s product cycle theory demonstrated.
Vernon’s Product Cycle Theory

The Product Life Cycle was developed by Vernon (1966, 1977, 1998) from the standpoint of location. This theory, now called the product cycle, is oriented toward explaining the production process and the role of the physical location of facilities. He described the geographical location of manufacturing facilities according to the state of the technology (the product and process innovations), international trade, and economies of scale, unlike PLC (Product Life Cycle), which focuses on the market and consumer behavior. Vernon (1966) classified the time periods of this life cycle into three stages, New, Maturing, and Standardized. In this section, we review the product cycle from the individual process and product innovation stages in the terms of the global supply chain under the condition that national borders are becoming less of a problem and that the uniqueness of the countries and regions is becoming more important than before.

However, Vernon’s product cycle theory did not cover the following recent environmental changes. Therefore, we need to discuss the relationship between the product and process innovations and the geographic location of the manufacturing facilities in view of the following modern developments. They are: the global economy, supply chain management, and the rise of developing countries.

1. **Global economy**: Technical innovations in telecommunications and international transportation have blurred national borders. The global division of labor is taken as a matter of course. The demand for new products spreads worldwide much quicker than before. On the other hand, facilities in the low cost operation areas can start manufacturing high-tech products much earlier in the life cycle than before because they have gained experience through practice. Any company should make the most of the global market and global sourcing simultaneously.

2. **Supply chain management**: Supply chains have become the basic unit of competition. No single company can do everything efficiently. Various suppliers have unique expertise or advantages in one or more ways. It is a waste of resources for a single company to attempt to cover all aspects of development, production, and logistics. Sometimes, supply chain members are very flexible for sound strategic reasons. This view can shorten the time to market and at the same time achieve more
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