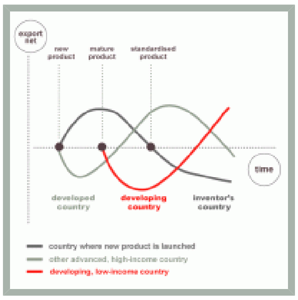
international product life cycle



characteristics

author:	Vernon, Raymond
country:	United States
period:	1966
type:	model
role:	consultant and manager
activity:	analyse
topic:	culture & internationalisation and marketing & sales
abstr. level:	environment
perspective:	rational
status:	for review
module:	classics I
comments:	1

related models

- diffusion of innovations
- globalisation of markets
- product market matrix

description:

In 1966, Raymond Vernon published a model that described internationalisation patterns of organisations. He looked at how U.S. companies developed into multinational corporations (MNCs) at a time when these firms dominated global trade, and per capita income in the U.S. was, by far, the highest of all the developed countries.

Raymond Vernon was part of the team that overlooked the Marshall plan, the US investment plan to rejuvenate Western European economies after the Second World War. He played a central role in the post-world war development of the IMF and GATT organisations. He became a professor at Harvard Business School from 1959 to 1981 and continued his career at the John F. Kennedy School of Government.

The intent of his International Product Life Cycle model (IPLC) was to advance trade theory beyond David Ricardo□s static framework of comparative advantages. In 1817, Ricardo came up with a simple economic experiment to explain the benefits to any country that was engaged in international trade even if it could produce all products at the lowest cost and would seem to have no need to trade with foreign partners. He showed that it was advantageous for a country with an absolute advantage in all product categories to trade and allow its work force to specialise in those categories with the highest added value. Vernon focused on the dynamics of comparative advantage and drew inspiration from the product life cycle to explain how trade patterns change over time.

His IPLC described an internationalisation process wherein a local manufacturer in an advanced country (Vernon regarded the United States of America as the principle source of inventions) begins selling a new, technologically advanced product to high-come consumers in its home market. Production capabilities build locally to stay in close contact with its clientele and to minimize risk and uncertainty. As demand from consumers in other markets rises, production increasingly shifts abroad enabling the firm to maximise economies of scale and to bypass trade barriers. As the product matures and becomes more of a commodity, the number of competitors increases. In the end, the innovator from the advanced nation becomes challenged in its own home market making the advanced nation a net importer of the product. This product is produced either by competitors in lesser developed countries or, if the innovator has developed into a multinational manufacturer, by its foreign based production facilities.

The IPLC international trade cycle consists of three stages:

1. NEW PRODUCT
The IPLC begins when a company in a developed country wants to exploit a technological breakthrough by launching a new, innovative product on its home market. Such a market is more likely to start in a developed nation because more high-income consumers are able to buy and are willing to experiment with new, expensive products (low price elasticity). Furthermore, easier access to capital markets exists to fund new product development. Production is also more likely to start locally in order to minimize risk and uncertainty: □a location in which communication between the markets and the executives directly concerned with the new product is swift and easy, and in which a wide variety of potential types of input that might be needed by the production units are easily come by□.

Export to other industrial countries may occur at the end of this stage that allows the innovator to increase revenue and to increase the downward descent of the product□s experience curve. Other advanced nations have consumers with similar desires and incomes making exporting the easiest first step in an internationalisation effort. Competition comes from a few local or domestic players that produce their own unique product variations.

2. MATURING PRODUCT
Exports to markets in advanced countries further increase through time making it economically possible and sometimes politically necessary to start local production. The product□s design and production process becomes increasingly stable. Foreign direct investments (FDI) in production plants drive down unit cost because labour cost and transportation cost decrease. Offshore production facilities are meant to serve local markets that substitute exports from the organisation□s home market. Production still requires high-skilled, high paid employees. Competition from local firms jump start in these non-domestic advanced markets. Export orders will begin to come from countries with lower incomes.

3. STANDARDISED PRODUCT
During this phase, the principal markets become saturated. The innovator's original comparative advantage based on functional benefits has eroded. The firm begins to focus on the reduction of process cost rather than the addition of new product features. As a result, the product and its production process become increasingly standardised. This enables further economies of scale and increases the mobility of manufacturing operations. Labour can start to be replaced by capital. □If economies of scale are being fully exploited, the principal difference between any two locations is likely to be labour costs□. To counter price competition and trade barriers or simply to meet local demand, production facilities will relocate to countries with lower incomes. As previously in advanced nations, local competitors will get access to first hand information and can start to copy and sell the product.

The demand of the original product in the domestic country dwindles from the arrival of new technologies, and other established markets will have become increasingly price-sensitive. Whatever market is left becomes shared between competitors who are predominately foreign. A MNC will internally maximize □offshore□ production to low-wage countries since it can move capital and technology around, but not labour. As a result, the domestic market will have to import relatively capital intensive products from low income countries. The machines that operate these plants often remain in the country where the technology was first invented.

assets:

international product life cycle

ProvenModels ● editor PM ● 66 KB

three-stage international product life cycle
ProvenModels ● editor PM ● 68 KB

pros:

- The model helps organisations that are beginning their international expansion or are carrying products that initially require experimentation to understand how the competitive playground changes over time and how their internal workings need to be refitted. The model can be used for product planning purposes in international marketing.
- New product development in a country does not occur by chance. A country must have a ready market, an able industrial capability and enough capital or labour to make a new product flourish. No two countries exist with identical local market conditions. Countries with high per capita incomes foster newly invented products. Countries with lower per capita incomes will focus on adapting existing products to create lower priced versions.
- The IPLC model was widely adopted as the explanation of the ways industries migrated across borders over time, e.g. the textile industry. Furthermore, Vernon was able to explain the logic of an advanced, high income country such as the USA that exports slightly more labour-intensive goods than those that are subject to competition from abroad.
- According to Vernon, most managers are □myopic□. Production is only moved outside the home market when a □triggering event□ occurs that threatens export such as a new local competitor or new trade tariffs. Managers act when the threat has become greater than the risk in or uncertainty from reallocating operations abroad.
- The model□s validity was proved by empirical evidence from the teletransmission equipment industry in the post-war years. The model is best applied to consumer-oriented physical products based on a new technology at a time when functionality supersedes cost considerations and satisfies a universal need.

cons:

- Vernon□s main assumption was that the diffusion process of a new technology occurs slowly enough to generate temporary differences between countries in their access and use of new technologies. By the late 1970□s, he recognised that this assumption was no longer valid. Income differences between advanced nations had dropped significantly, competitors were able to imitate product at much higher speeds than previously envisioned and MNCs had built up an existing global network of production facilities that enabled them to launch products in multiple markets simultaneously. Investments in an existing portfolio of production facilities made it harder to relocate plants.
- The model assumed integrated firms that begin producing in one nation, followed by exporting and then building facilities abroad. The business landscape had become much more interrelated since the 1950□s and early 1960□s, less US-centric and created more complex organisational structures and supplier relations. The trade-off between export or foreign direct investments was too simplistic: more entry modes exist.
- The model assumed that technology can be captured in capital equipment and standard operating procedures. This assumption underpinned the discussion on labour-intensity, standardization and unit cost.
- The model stated that the stages are separate and sequential in order. Vernon□s Harvard Multinational Enterprise Project that took place from 1963 through 1986, was a massive study of global marketing activities at US, European, Japanese and emerging-nation corporations. The study found that companies design strategies around their product technologies. High-technology producers behave differently from firms with less advanced goods. Companies that invested more R&D to improve their products and to refresh their technologies were able to □push□ these products back to the new product phase.
- The relative simplicity of the model makes it difficult to use as a predictive model that can help anticipate changes. In general, it is difficult to determine the phase of a product in product life cycles. Furthermore, an individual phase reflects the outcome of numerous factors that facilitate or hamper a product□s rate of sales making it difficult to see what is happening □underwater□.
- The relation between the organisation and the country level was not well structured. Vernon emphasized the country level. Furthermore, he used the product side of the product life cycle, not the consumer side, thereby stressing the supply side. Selling □older□ products to a lesser developed market does not work if transportation costs for imports is low and information is accessible globally through the Internet and satellite TV.
- Foreign markets are not just composed of average income consumers, but contain multiple segments. The research did not consider the emergence of global consumer segments.

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