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**COMMERCE**
**PAPER No. 2: MANAGERIAL ECONOMICS**
**MODULE No. 11: DEMAND FOR CONSUMER DURABLES**

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## 1. Learning Outcomes

After studying this module, you shall be able to

- Know some of the limitations of the conventional theory of consumer demand.
- Learn the alternative models of consumer behavior, i.e. the characteristics theory of demand.
- Identify the characteristics of consumer durables
- Understand the concept of Hedonic pricing.



## 2. Introduction

The traditional theory of demand stated that individuals derive utility directly from the consumption of particular goods or service. However theory of attributes as given by Kelvin Lancaster states that goods or services are demanded not for their own sake rather for the characteristics they possess. And thus goods should be defined not in terms of their physical properties but in terms of their characteristics or attributes. At any given time, a particular good is simply a collection of various attributes.

In this module we shall be elaborating upon the theory of attributes as postulated by Lancaster. Also we shall be discussing the various characteristics of the consumer durables and concept of Hedonic pricing.

## 3. Theory of Attributes- Lancaster's Approach

As discussed above the traditional analysis of consumer demand deals with consumer choice under budget constraints in which preference ordering is used, to maximize utility when price changes. This kind of analysis provides no way for using information about the properties of goods. Lancaster (1971). The new theory developed by Lancaster. It was based on the concept that all commodities possess characteristics or attributes that are demanded by the consumers, not the goods themselves. For instance, the demand food is due to the nutrients and flavors in the food and due to the price.

Lancaster pointed out demand analysis cannot explain how demand would be affected due to change in one particular properties of a good or how a new good fits into preference patterns over existing goods. Moreover, changes in the characteristics of a good imply a new preference pattern. Consequently, “we must throw away any information derived from observing behavior in the previous situation and begin again from scratch”. (Lancaster, 1971)

The new theory developed by Lancaster was called “new theory of consumer demand”, in which the traditional theory was modified by stipulating that what consumers are demanding to acquire is not good themselves (e.g. cars or train journey) but the characteristics they contain (e.g. transport from place A to B). This theory tells us about the difference between less developed (Lancaster called them “primitive”) consumption economies, in which there are fewer goods than characteristics, and more developed (“sophisticated”) consumption economies, in which there are more goods than characteristics, so that consumers can secure any combination of characteristics they desire, subject only to budget constraints. This new theory also explains how to forecast demand for new commodities.

Lancaster's theory of attributes states that the usefulness of goods for the consumer depends on their properties or characteristics. Goods can be arranged into groups based on the characteristics they contain. Consumers buy goods within groups according to the attributes they possess per dollar. The groups are defined in such a way that consumers buy only one item in a group.

These needs for consumer goods satisfies relatively few simple needs such as food, shelter and entertainment. These demands are met through the production of various goods and services. Thus, basic human needs can be satisfied through many combinations of materials and technology. Many goods produced in an advanced economy meet similar needs; consumers apparently select only a few goods on the basis of their price and different qualities or attributes.

In the Theory of Attributes, the concept of product attributes enters into the demand functions. The theoretical model of demand function is based upon estimates of these attributes rather than the product themselves. Mckillop and Wibe (1987) stressed the potential value of the Lancaster approach as a fruitful method for studying the demand for wood products because the qualities and performance of wood determine demand. Thus quality measure of products as related to the technology for their utilization provides the foundation for the analysis of demand. Product quality and variety are incorporated in the model.

### 3.1 Uses of the theory

- Batten and Johansson (1987) furthered introduced the Lancaster model to preference groups of consumers and producers in a spatial context and combined it with logistics substitution models and export flow analysis. The authors deploy this method for explaining the substitution of product and technological change and applied it to various markets in which forest products compete with other commodities. A Product of characteristics was introduced in the model to obtain an invariant structure in which the dynamic competition takes place between products.
- Trajtenberg (1990) used the Lancaster Theory to lay down the theoretical and econometric framework for the measure of social gains from product innovation. The dynamics of the model from adjustments to changing conditions such as relative prices, production cost, production attributes and preferences.
- The Lancaster approach offers promise to the analysis of new composite wood-nonwood combinations that may substitute for traditional wood products or may be used in new markets to replace plastics and other materials.



### 3.2 Criticism

The problem is that the group definitions are different depending on the consumers. A family with one car would lump all cars in one group. A family with two cars would may be make a difference between small cars and bigger ones.

## 4. Demand for Consumer Durables

Consumer goods are often divided into two categories: durables and non-durables. Consumer durables are not the same as non-durables. Consumer durables have attributed that are different.

Durables have an extended product life and are not worn out or consumed quickly when you use them. Since they're made to last, durable goods are typically more expensive than non-durable goods that have to be purchased over and over again. For example, cars, refrigerators, washing machine, TVs etc.

### 4.1 Characteristics of Consumer Durables:

Consumer durables have 3-main features or attributes, namely

- **Durability**  
Demand and hence price does not depend on one time use or consumption, unlike a cup of tea. It is durable. Utility is obtained throughout the life. One assumption of utility analysis is that the marginal utility declines. But this happens because successive units are consumed one after the other without a gap in time. This does not happen in durables. The purchase decision is at one point of time but the utility obtains over a period of time.
- **Irreversibility**  
To purchase a durable the consumer has to buy the whole of it. He cannot just buy a part of a TV so as to watch commonwealth games. If a consumer watches a movie he pays only for a part of the utility. He does not buy the movie theater. So the price cannot be related to the utility and services that the consumer gets from one unit of consumption of a consumer durables. Also we cannot extract just one feature and consume it.
- **Indivisibility**  
Finally, a purchase decision is irreversible. The durable has been bought for a life time.

In ordinary demand theory consumption and utility are ex-ante quantities. The decision to buy is passed on “as if analysis”. If one unit more were to be consumed marginal utility would go down. If consumer’s surplus were to become less then the consumer may withdraw consumption in the case of any ordinary commodity. In the case of a

durable he cannot withdraw consumption because it is everlasting. The purchase decision is finality that cannot be reversed.



## 5. Hedonic Pricing

In case of cars, refrigerators, TVs, computers etc. prices does not depend on marginal utility alone. Rather it depends on a number of features that are durable. Therefore, it depends on total utility of a durable.

We therefore use:

Hedonic price:  $P_X = f(\text{attributes of } X)$

For example, Price of a car =  $f(\text{engine capacity, ground clearance, fuel, interiors, safety, mileage etc.})$

## 6. Summary

- In this module we discussed the limitations of the conventional theory of consumer demand, and an alternative theory was presented.
- The theory of attributes given by Kelvin Lancaster was elaborated which states that goods or services are demanded not for their own sake rather for the characteristics they possess
- We discussed the uses of the theory of attributes and the criticism laid down against it.
- Demand and the various characteristics of the consumer durables were described in detail.
- Concept of Hedonic pricing was introduced.

