What are the differences in consumer theory between consumers who regularly update their mobile handsets and those consumers who choose to wait and upgrade their handsets every few years?
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Abstract:

Consumer theory is almost entirely influenced by the different valuation on the same goods by individuals. Since we are dealing with individuals, preferences become highly subjective and difficult to measure. Naturally it is in the interest of firms to understand their consumers' preferences in order to target sales, hence drive profits. Each individual derives a unique amount of utility when consuming new technology, often difficult to quantify. The consumers who upgrade handsets more frequently are also those who derive more utility from them, they derive greater satisfaction from these goods. Utility feeds directly into consumer preferences, as the consumer will decide to consume more of the goods that provide greater satisfaction. Once again, the consumers who consume handsets more frequently choose an optimal bundle that contains more phones proportionally than the average consumer. Lastly, the demand function is influenced by the consumer's preferences through the elasticity of demand. Elasticity depends on the preference; the stronger the preference the more inelastic the demand function becomes. Overall, there are substantial differences between the two consumer categories. However, the main determinant of these differences arises from the subjective nature of valuation.

Preferences in consumption are very hard to determine as they are subjective and difficult to quantify. Each consumer behaves in a different way, although we tend to assume in economic theory that they all act rationally. Especially in the technologically driven society of today, consumers are constantly confronted with the choice of upgrading to a later version of technology or waiting to upgrade in a few years' time. At the opposite ends of the spectrum are consumers who constantly upgrade to cutting-edge innovation, and consumers who are less concerned and upgrade every 3 to 5 years (or more). These two categories of consumers will face different choices and preferences. Consumers will always experience opportunity cost[1], the cost of foregoing the next best alternative, as well as resource allocation. A consumer's resources are scarce, such as income and the need to allocate their scarce resources to suit their individual needs. This essay will analyse the consumer theory behind the two consumer categories by comparing the differences in the demand function. Furthermore, the difference in preferences between the two consumers is crucial, along with the varying forms the utility functions assume for each individual.

Utility is an economic measurement for consumer satisfaction. As with preferences it is difficult to plot utility, as it is hard to quantify due to its high subjectivity. Utility is illustrated in diagrams by means of indifference curves, in which the consumer is indifferent between various bundles of goods. Consumers who keep up to date with technology derive more utility from having the latest handsets than they do from consuming books. In contrast, the consumers who do not place great emphasis on cutting edge technology derive most utility by expenditure on other goods such as books. These differences in utility will influence the shape of the indifference curves as each consumer group values the latest phones differently. Those

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[1] Explanation given in Appendix A

individuals who are phone enthusiasts will want phones more than books. Hence they derive higher utility from phones, causing the indifference curves to become steeper towards the phones axis. The opposite is evident with the average consumer, who has a more balanced shape indifference curve. Again we can illustrate this principle in diagrammatic terms. The further the indifference curves are from the origin, the higher the overall utility. The consumer's objective, therefore, is to reach the highest indifference curve given constraints of income.

Diagram illustrating the difference in indifference curves between consumer groups.

A) Average Consumer

B) Phone Enthusiast
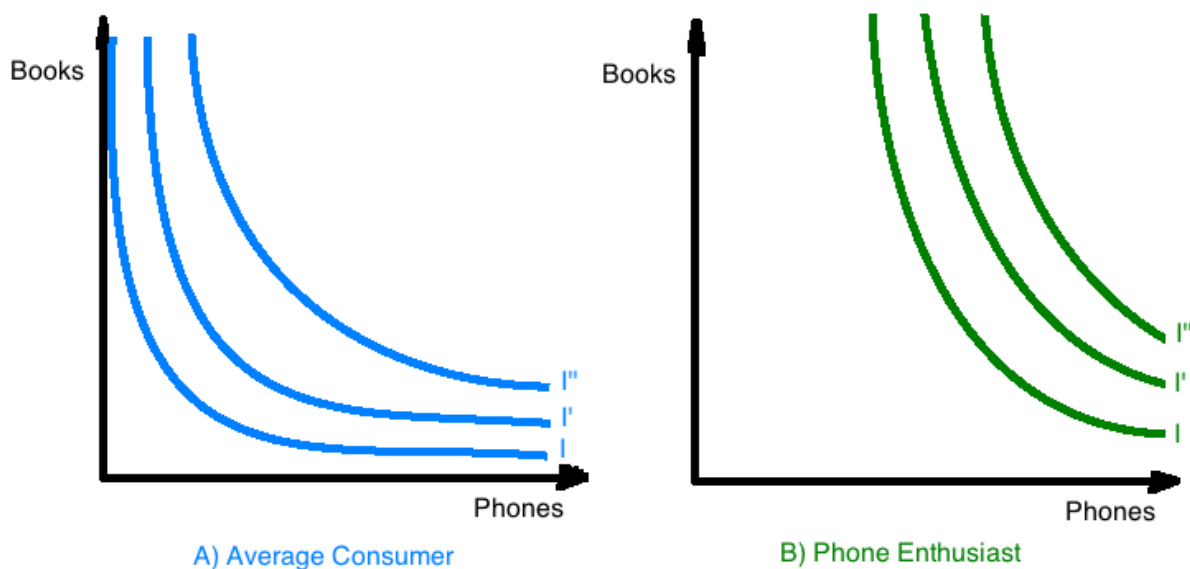
In greater detail we observe that the two categories of consumers react differently towards the same new phones, as they perceive different value in the product. Novelty plays a crucial role in this instance, as the phone can now perform tasks that were previously unattainable. The novelty can therefore drive utility upwards, making the product more desirable regardless which consumer group we analyse. This is particularly true with current phones, all of which provide almost identical features of connectivity, communications and entertainment.

Consumer preferences can be defined as "the subjective (individual) tastes, as measured by utility, of various bundles of goods." These preferences can then be ranked according to their induced utility: the higher the utility, the stronger the preference (Consumer Preferences). Preferences are hard to plot, as they are completely individual and difficult to quantify. Nonetheless, there are substantial differences evident between the two groups of consumers in the way they rank their preferences. The consumers who keep upgrading their mobile handsets would prefer to consume the latest technology that is currently available and would sacrifice some expenditure on all other goods. The consumers who see technology as being less significant will prefer to allocate most of their money on consuming other goods, rather than spending it on new handsets. It becomes clear that the two preferred bundles chosen by the two consumer groups will vary considerably. When discussing optimal choice we need to constrain the analysis, which is done by imposing a budget constraint. The optimal choice occurs where the indifference curve is tangential to the budget constraint (Varian, 2010, P.74). The optimal bundle for the technology consumers will lie much closer to the phones axis as they want to consume more handsets, whereas the other consumers would choose a point closer to the books axis at another tangent point. Despite both consumer groups finding their optimal choices with the given resources, their optimal bundles of goods vary.

Diagram illustrating the differences in optimal choice between consumer groups.
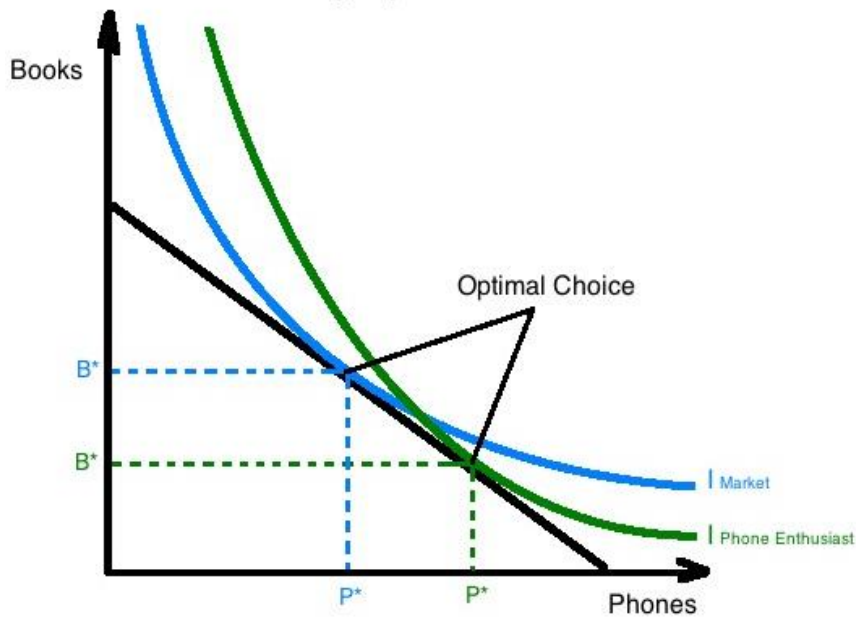

In general, technologies in the form of mobile handsets behave as normal goods. In essence this implies that, as the consumer's income increases, so will the demand for the latest technology (Varian, 2010, P.96). The demand curve for the market of mobile handsets is always downward sloping; as price decreases, the quantity demanded increases. The individual demand curves of the two consumer categories will vary, as they see different value in the products. The consumer category, which is constantly upgrading to the latest versions of mobile handsets, will have a steeper sloping demand function. The steeper slope implies that the elasticity of demand[2] is small, indicating that they are more dependent on the product. Conversely, the consumers who upgrade their mobile handsets once every few years have a more elastic demand function. The demand function will be flatter implying that they are not as dependent on these new products. The difference then is simply in the slope of the demand curve; however, the implications of this statement are more significant. The varying degrees of dependence illustrate why some consumer groups will place the purchase of a new

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[2] Explanation given in Appendix B

phone above other goods, and why others will rank the same purchase beneath other goods. Here we can clearly see how some consumers value the same good in different ways, highlighting the subjectivity of consumption. Those consumers who consume the latest technology are those who would be waiting anxiously to get their hands on the latest technology, whereas the other consumers are almost indifferent when the new handset is released as they do not require a new device at this moment in time.

Graph illustrating the demand curves for different consumer groups.
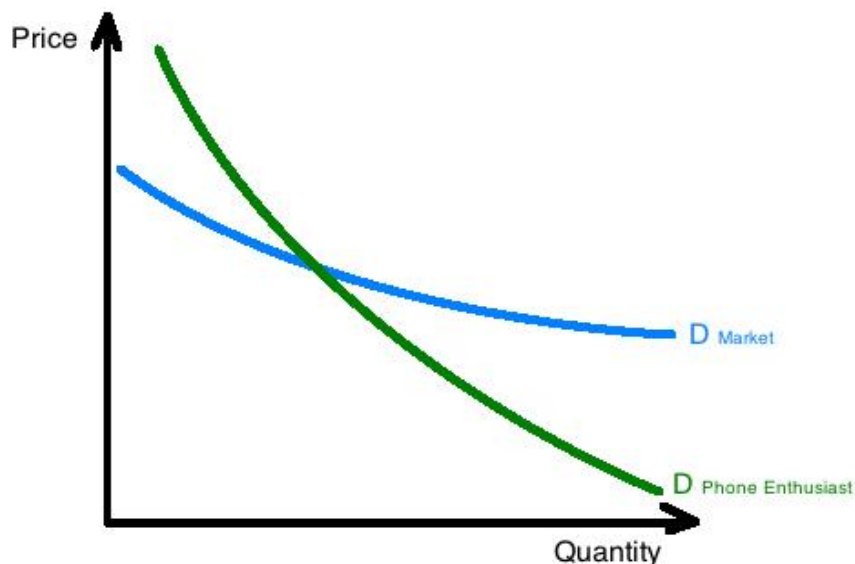
In conclusion, it becomes evident that between the two extremes in consumers there are stark contrasts in their preferences as well as their demand functions. The catalyst for these differences in preference is the subjectivity involved in valuation of certain products. Consumer preferences, which in turn influence the demand function, illustrate the concept of valuation. Some consumers decide to consume a bundle of goods that is more balanced, whereas phone enthusiasts decide to consume a bundle with a greater proportion of phones. In addition, the demand curve demonstrates the stark contrast in valuation as with those who

are phone enthusiasts the demand function is very steep, hence relatively inelastic. In contrast, the average consumer has a relatively elastic demand function. Elasticity is a clear indicator of dependency and evidently the enthusiasts depend more on later technology and thus are more likely to upgrade. Naturally as with any model there are limitations and conditions to the analysis, which cannot be overlooked. These assumptions are there to simplify the model and allow it to become more manageable. In the analysis above, prices were assumed fixed along with income, facilitating comparisons between the two cases. Furthermore, the analysis only compared two cases limiting the models effectiveness in describing true consumer behaviour.

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Appendix A:

Opportunity Cost -   "The cost of an alternative that must be forgone in order to pursue a certain action. Put another way, the benefits you could have received by taking an alternative action." (Opportunity Cost)

Opportunity cost is a measure of the sacrifice made when a consumer makes a decision. Every choice made involves a sacrifice whether it is another good, in monetary terms (Money that could have been saved and the interest earned) and time.

In a diagram this means:

[Diagram removed due to copyright restrictions - please see:

http://wrightslandofeconomics.wikispaces.com/Scarcity+and+Opportunity+Cost+AP+MICE]

What does this mean in our question?

Automatically there is a choice involved as the consumer has to choose between buying a new phone or to spend his income on books. Clearly this involves a sacrifice, as the consumer's income is finite. So the opportunity cost would be how many books would the consumer have forgone in order to purchase a phone?

Appendix B:

Price elasticity of Demand -   "The *price elasticity of demand* measures the sensitivity of the

quantity demanded to changes in the price.

Demand is *inelastic* if it does not respond much to price

changes, and *elastic* if demand changes a lot when the price

changes."(Elasticity)

Price elasticity of Demand can be calculated by the following equation:

$$P \in D = \frac{\Delta Q}{\Delta P}\frac{P}{Q}$$

Thus the higher value for $P \in D$ the flatter the demand curve must be. A small change in price

will cause a large change in the quantity demanded.

Definitions of Elasticity:

1. If Ped = 0 demand is perfectly inelastic - demand does not change at all when the price

   changes – the demand curve will be vertical.

2. If Ped is between 0 and 1 (i.e. the % change in demand from A to B is smaller than the

   percentage change in price), then demand is inelastic.

3. If Ped = 1 (i.e. the % change in demand is exactly the same as the % change in price), then

   demand is unit elastic. A 15% rise in price would lead to a 15% contraction in demand

   leaving total spending the same at each price level.

4. If Ped > 1, then demand responds more than proportionately to a change in price i.e. demand is elastic. For example if a 10% increase in the price of a good leads to a 30% drop in demand. The price elasticity of demand for this price change is –3

(Price Elasticity of Demand)