

The contribution of hicks and slusky to understand consumer behaviour



**ASSIGN
BUSTER**

Consumer behaviour is studying what consumers buy and for what reason do they buy a certain good or service. It is also the mental progression that follows. Consumer behaviour is essential in economics because demand and price of a product depend on the consumer and what they intend to purchase and for what price. In economics, theories on consumer behaviour concentrate on the consumer determined to maximise enjoyment (utility) from their purchased good/service. For example if the price of good A increases, then consumers will buy less of A because it is more expensive for them and therefore less utility. On the other hand if the price of good A decreases then consumers will buy more, meaning more utility. Consumer behaviour is the interaction between price change and consumer demand and what influenced the consumers to purchase the product, taking other factors into consideration such as budget constraints.

John Hicks and Eugene Slutsky have greatly contributed to western economics as a whole and more specifically the understanding of consumer behaviour/consumer choice in microeconomics. John Hicks created the Hicksian Demand Function and Slutsky created the Slutsky equation, which linked both Hicksian demand with Marshallian demand.

The two main components of consumer theory are individual preferences and utility, and the budget constraint. Both of these factors are needed to derive a demand curve, more specifically the Marshallian demand curve (uncompensated demand curve or constant money income curve). What Hicks wanted to achieve is a demand curve with limited constraint and maximum utility/satisfaction. On the traditional Marshallian demand curve, when price drops demand increases therefore real income rises. The rise in <https://assignbuster.com/the-contribution-of-hicks-and-slutsky-to-understand-consumer-behaviour/>

quantity demanded is due to the total price effect which includes the income effect and substitution effect. The substitution effect is the change in quantity purchased due to a change in price of a good e. g. if the price of good X is cheaper the individual will buy more of good X. The income effect is the rise or fall of real income and purchasing power of the individual because of a price change of the good. What Hicks and Slutsky sought was to create a demand curve without the income effect and to be left with the substitution effect. This was the compensated demand curve or constant real income demand curve. In order to achieve this, the demand curve would have to be developed from indifference theory.

An indifference curve is a curve/s showing the consumption of two different goods and how much utility it provides and which combinations are possible between the two goods keeping income constant. Both Hicks and Slutsky use the indifference curve/s to produce their own theories on consumer behaviour. On the indifference curve the consumer is indifferent, i. e. they do not have a preference of one good over the other. It is presumed that the axioms of rational choice are in effect. These axioms are Completeness, Transitivity and Continuity. These are central to all the theories because if these change then the validity of the theories using indifference curves will be affected. There are different utility functions. For normal goods, it is a downward sloping curve with a declining gradient. However for perfect substitute goods, they are downward sloping with a constant gradient. For perfectly complimentary goods, the curve is an ' L ' shape. On the graph there are an infinite amount of indifference curves on the graph. The marginal rate of substitution will determine the gradient of the curve. The

marginal rate of substitution is the rate at which an individual is willing to substitute good A for B or vice versa.

On the same graph we can also place a budget line showing the consumers budget constraint. This is usually a downward sloping line with a constant gradient. The equation to work out the budget line is $M = P_xX + P_yY$ where M is money income, P_x and P_y is price of Good X and Good Y respectively, X and Y is the quantity of X and Y respectively.

The slope or gradient can be affected by factors such as price change of good A and/or good B. For example a fall in the price of X would mean that the individual is able to purchase more of X, therefore quantity of X purchased will increase. With the price of Y remaining the same, this would mean that the budget line would change, altering the gradient of the line, thus creating a new budget line compared to the original line (1 to 2 on diagram below).

Where the budget line and indifference curve intersect, this is where the utility is at its highest for the individual at the current income level. This is called the consumer equilibrium.

With a new budget line, we would need a new indifference curve (IC2) and therefore a new consumer equilibrium. From here the price consumption curve can be derived by joining all the consumer equilibrium points together. This method is also used to derive the income consumption curve, but this can only be produced if the new budget line is parallel to the initial budget line i. e. they will not intersect.

With this graph, the Marshallian demand curve can be obtained by using the quantity of good X where each consumer equilibrium point lies. This would be complimented by the different price of good X to pinpoint the positions and therefore by connecting the points, a Marshallian demand curve is created.

What Hicks wanted to achieve was a demand curve without the income effect because utility cannot be measured as such, which Alfred Marshall assumes. The Marshallian demand curve shows the demand with income and substitution effects. By excluding the income effect, it will show how the individual will react to a price change with just the substitution effect. Thus this will show how demand varies with a change in price. This assumes that as the price of the product changes, the individual is compensated enough to keep them on the original indifference curve and therefore there is no change in real income, nullifying the income effect. In order to obtain this, Hicks moved the new budget constraint line so it would be a tangent to the initial indifference curve. This is the Hicks compensating variation. The Hicks equivalent variation is initial (original) budget line is moved to the new indifference curve, which is the opposite compared to the compensating variation where the new budget line and initial indifference curve was moved.

Both these variations would create a varied demand curve compared to the Marshallian curve. For normal goods, the Hicksian demand curve is steeper i. e. larger gradient than the Marshallian demand curve.

Hicks' demand function was further developed on by Eugene Slutsky. Even though Hicks' method was theoretically correct, it had a flaw which could not

relate it to the real world. In order for Hicks' compensated demand curve to work in the real world, you would need the exact indifference curve to find out the demand curve and therefore affect consumer income. To counter this predicament, Slutsky had a different method to derive the compensated demand curve.

Hicks' method keeps utility level constant (before change in price). This would also mean that the budget line would be the same as well. This method to separate the indifference curves into the substitution and income effects is better for welfare economic comparisons. In contrast to this, Slutsky's method kept the consumption bundle identical as before. He focuses on a new indifference curve which compensates for the shift of the budget line to be at the initial level of consumption and consumption bundle. Slutsky's method places the consumer on a higher indifference curve.

For Slutsky's compensated variation, instead of moving the new budget line so it is a tangent to the indifference curve, he shifted the new budget line so it would intersect the initial consumer equilibrium. This would mean for a normal good the budget line, in Slutsky's method, would be higher than Hicks' approach. For Slutsky's equivalent variation, he shifted the initial budget line where it would intersect with the new consumer equilibrium, instead of shifting the initial budget line to become a tangent to the new indifference curve which was Hicks' method to reduce the income effect.

With Slutsky's method of eliminating the income effect on the indifference curves, a compensated demand curve can be created.

This new demand curve is steeper than the Marshallian demand curve (uncompensated) but does not have a higher gradient than Hicks' compensated curve (see graph below).

This graph shows the uncompensated (Marshallian) demand curve, labelled D_m . It also shows the two types of compensated demand curve which are Hicks' demand curve (D_h) and Slutsky's demand curve (D_s).

Because Slutsky's derivation of the demand curve uses the consumer equilibrium points on the indifference curves, the compensated demand curve for Slutsky has a lower gradient (but still negative). This is because Slutsky uses higher points in the indifference curve to derive his version of the demand curve.

The demand curve shows us the progression Hicks and Slutsky made with demand functions. The uncompensated demand curve represents the demand for a particular good or service but with the income effect and substitution effect included. On the graph, point X_1 to X_2 represents the income effect and substitution effect. Alternatively, Hicks' (D_h) and Slutsky's (D_s) compensated demand curves show the demand plus the substitution effect only. The reason for the difference between the two compensated demand curves is that in the Hicksian compensated demand curve, the income effect is assumed to be larger compared to Slutsky's income effect. Therefore in this case (the product being a normal good), Slutsky's method of deriving the demand curve underestimates the size of the income effect, so in turn he overestimates the substitution effect because if you move along the demand curve for Slutsky, the quantity of goods will increase or decrease

more than Hicks' demand curve. As a result the Slutsky compensated demand curve has a lower gradient than Hicks.

Because of the different gradient of the compensated demand curves, this will yield different results for consumer surplus calculations. Consumer surplus will help measure how much utility or satisfaction a consumer obtains from a particular product or service

Consumer surplus is the difference between what the consumer is willing to pay for the good or service (indicated by a point on the demand curve) and what they actually pay for the good or service (market price). It is also an economic measure of consumer satisfaction within the market. It is the extra benefit the person receives when making transactions at the market price. Economists cannot measure utility so therefore they use producer/consumer surplus as a money measure of utility change. On a demand curve, consumer surplus is the area below the actual demand curve and above the price line (triangular area).

The Marshallian demand curve only gives an estimate of consumer surplus because it includes consumer surplus gain or loss due to the income effect whereas the Hicks compensated demand curve does not suffer from this problem, since real income remains fixed thus the focus is on the effect of price on quantity demanded. This means that Hicks' compensated demand curve is theoretically accurate, and it also gives us a more accurate measurement of consumer surplus.

The only problem with Hicks' compensated demand curve is that you would need that exact indifference curve to work out the demand curve which is <https://assignbuster.com/the-contribution-of-hicks-and-slutsky-to-understand-consumer-behaviour/>

implausible even though it is theoretically correct. This is where Slutsky's method would come because you do not need this in order to work out the demand curve, and therefore consumer surplus. The disadvantage of this method that it will overestimate consumer surplus compared to Hicks but underestimate compared to Marshallian curve. Both Hicks and Slutsky methods are more accurate measures of consumer surplus because they have reduced the effects of the income effect.

In conclusion, John Hicks and Eugen Slutsky contributed greatly to the understanding of consumer behaviour. By using indifference curves, they developed the compensated demand curve, which nullified the income effect in order to find out consumer behaviour without taking purchasing power into account. This would find out the true demand patterns for a good or service.

The demand function invented by Alfred Marshall was very important for economics, who developed the Marshallian demand curve. However Hicks noticed flaws in the model and therefore created his own theory. Hicks developed the distinction between the income effect and substitution effect (both become the price effect). This therefore allowed the invention of the demand curve with only the substitution effect, so the change in relative price could be observed.

Hicks' method is theoretically correct but difficult to apply to the real world due to the inclusion of the exact indifference curve between two goods. This is unlikely to create because it is difficult. This is where Slutsky's method would help because in this method you do not need the exact indifference

curve to create the demand curve. The disadvantage is that Slutsky's method overestimates the substitution effect, but the difference between Hicks and Slutsky is minimal and therefore Slutsky is used.

These methods are important to discover consumer surplus. The Hicksian Demand Curve is the right one to use for consumer surplus calculations, but we generally use the Marshallian curve because again the differences are minimal for simple calculations, and for more accurate measure than Marshallian, we would use Slutsky. Consumer surplus is used by economists to measure utility gained or lost in a price change. This method developed by Hicks was revolutionary because before his theory, it was near impossible to measure utility appropriately. Theoretically correct, but again hard to find the correct data. For that reason, Slutsky expanded on Hicks theory by giving a more realistic approach, but losing its accuracy. This is still more accurate than working out the consumer surplus on a Marshallian demand curve.

Overall, Hicks and Slutsky revolutionized the way we understand consumer behavior from demand patterns, with the measurement of consumer surplus by using utility from the good or service. The Marshallian demand curve overestimated consumer surplus because of the income and substitution effects. By isolating the substitution effect, we are able to see what consumers would do in a change of price of a good or service without purchasing power affecting results. This would show the pure demand patterns of a product and also what consumers would give up in order to acquire that particular good without wealth factors. Hicks accurately

measured this while Slutsky took a more realistic approach to consumer behavior.