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The Revealed Preference Theory

Subject:	Business Economics
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Paper No. & Title:	Paper – 101 Microeconomics - I
Unit No. & Title:	Unit – 2 Consumer Demand: The Revealed Preference Theory
Lecture No. & Title:	Lecture – 5 The Revealed Preference Theory

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1. Introduction

The revealed reference theory is propounded by Paul Samuelson in 1938 which studies the behavior of people while making choice. It is behavioral ordinal utility theory which studies the behavior of consumer and his preferences. Hicks has also given the ordinal utility theory but his theory is introspective while revealed preference theory reveals the preferences of the consumers by studying their behavior while they are making their choices. So the choices of the consumers show their preferences. The revealed preference theory is based on strong ordering of consumer choice where consumer or purchaser is revealing its strong preference for some bundle of goods and refuses to choose other bundles while under the weak ordering consumer may show the preference but he can be indifferent among the choices.

Objectives:

1) To explain the revealed preference theory.

2) To explain the WARP and SAAP.

Theory: - According to this theory from the available combinations of goods whatever consumer is choosing it reveals the preference of the consumer for that particular combination of good. The basic hypothesis is choice revels preference of consumers. I.e. there are three bundles of the goods X, Y, Z. Consumer selects X over all other bundles because the chosen bundle he likes more or the chosen bundle is cheaper than the other available bundles. Now if a consumer purchases X either due to its less price or if the prices are higher but consumer prefers X because he likes more this combinations than other available combinations. This is called the strong axioms revealed preference where consumer rules out other available options of goods for one choice.

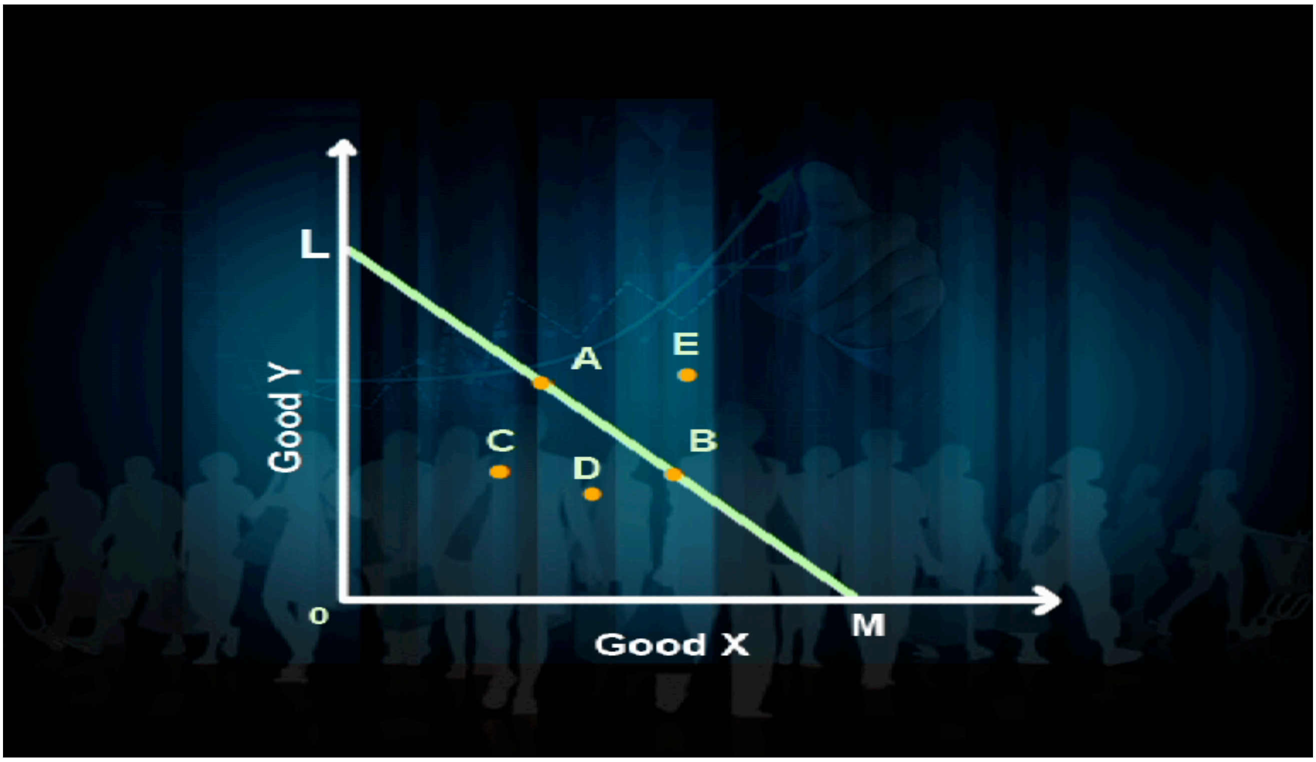


Diagram 1

Let's try to understand this with the help of simple diagram 1. In this diagram good X is shown on horizontal side and good Y is shown on vertical side. As given the income and the prices LM curve is the price income curve of the purchaser. On this given line consumer is able to choose any bundle given on the line and inside the LM curve. Consumer prefers bundle A on LM curve because combination C and D are relatively inferior than A and combination E is beyond the reach of the consumer. So bundle A is the revealed preference of the consumer.

So the behavior of choosing bundle A or the giving preference to the bundle A is the strong order of the consumer we can also say this behavior as strong axioms revealed preference where consumer is preferring A over B and B over C and D, so this shows a proper strong order. While in weak ordering consumer can be indifferent between A and B bundles.

2. Derivation of Demand Curve through Revealed Preference Theory

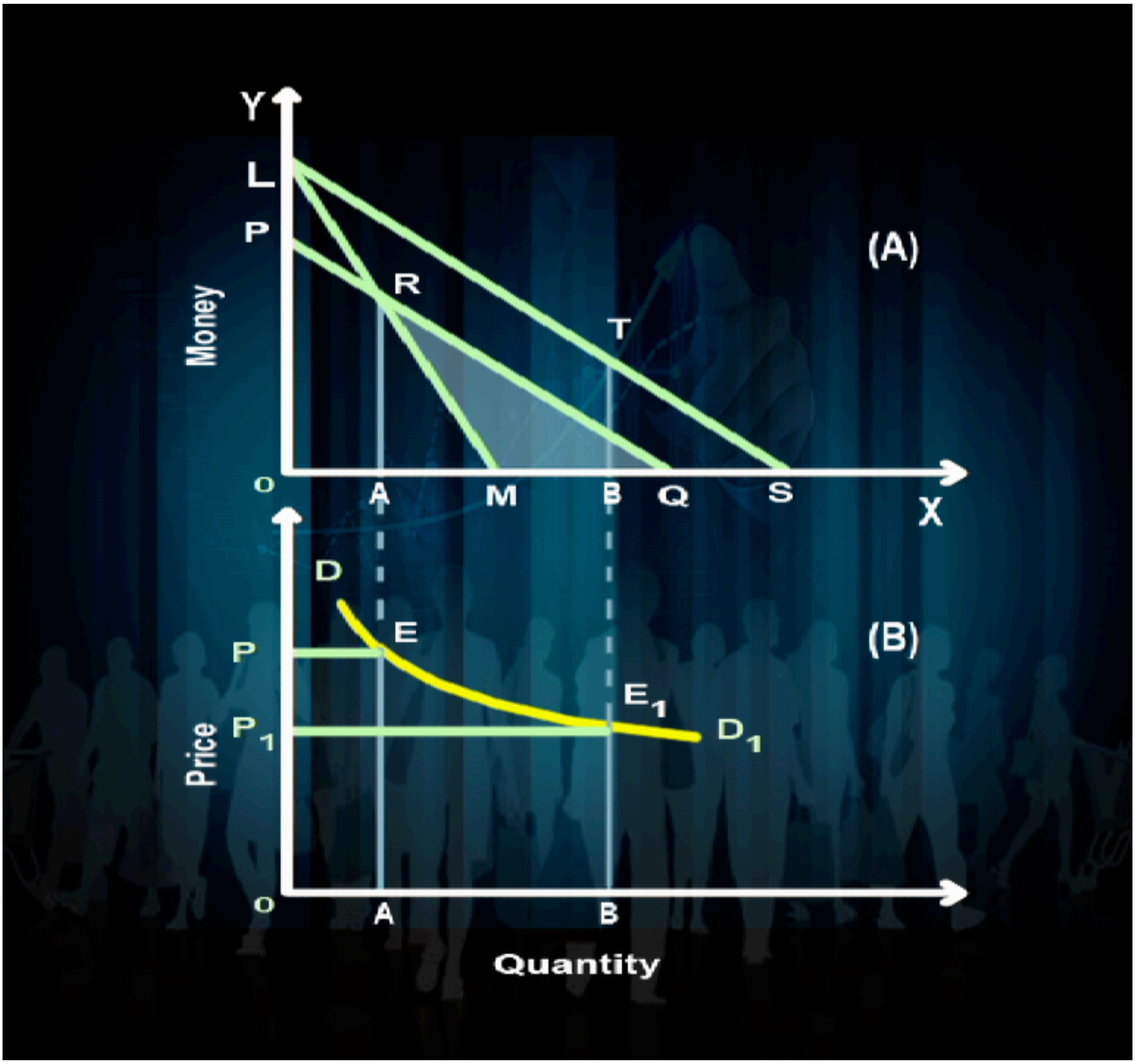
Professor Samuelson propounded the law of demand based on the revealed preference hypothesis on the basis of some assumptions. We will see those assumptions.

Assumptions:

1. The taste of consumer remains constant.
2. The choice of the consumer shows the preference of the consumer for that particular commodity.
3. Consumer chooses only one combination of good at any point of time on price income line.
4. Consumer prefers combination of more goods than less in any given situation.
5. Samuelson assumes consistence in the behavior of the consumer that if consumer prefers A instead of B in one situation than it can't opt B instead A in other situation. This is called two-term consistence.
6. Samuelson has given theory of revealed preference on the basis of assumption of transitivity which refers three-term consistence. For example if A is preferred to B and B is preferred to C than A Is also preferred to C. this assumption is base of this theory because consumer has to make consistent choice from the given choices.
7. Income elasticity of demand remains positive.

Explanation:

Demand curve of the individual can be derived with the help of revealed preference theory. Let's try to understand this with the help of diagram 2.



(Panel A) where money has been taken on Y axis and Quantity of good G on X axis. LM is the initial price income curve where consumer shows its preference on point R and purchases OA amount of good. now if suppose the price of G has been fallen so the new price income line is LS where consumer prefers point T and buys OB amount of goods, here we can see the preference of the consumer has been changed from point R to T, this Figure 2 change can be said price effect because of decrease in the price of G. so the fall in the price of G leads to increase in the demand from OA TO OB.

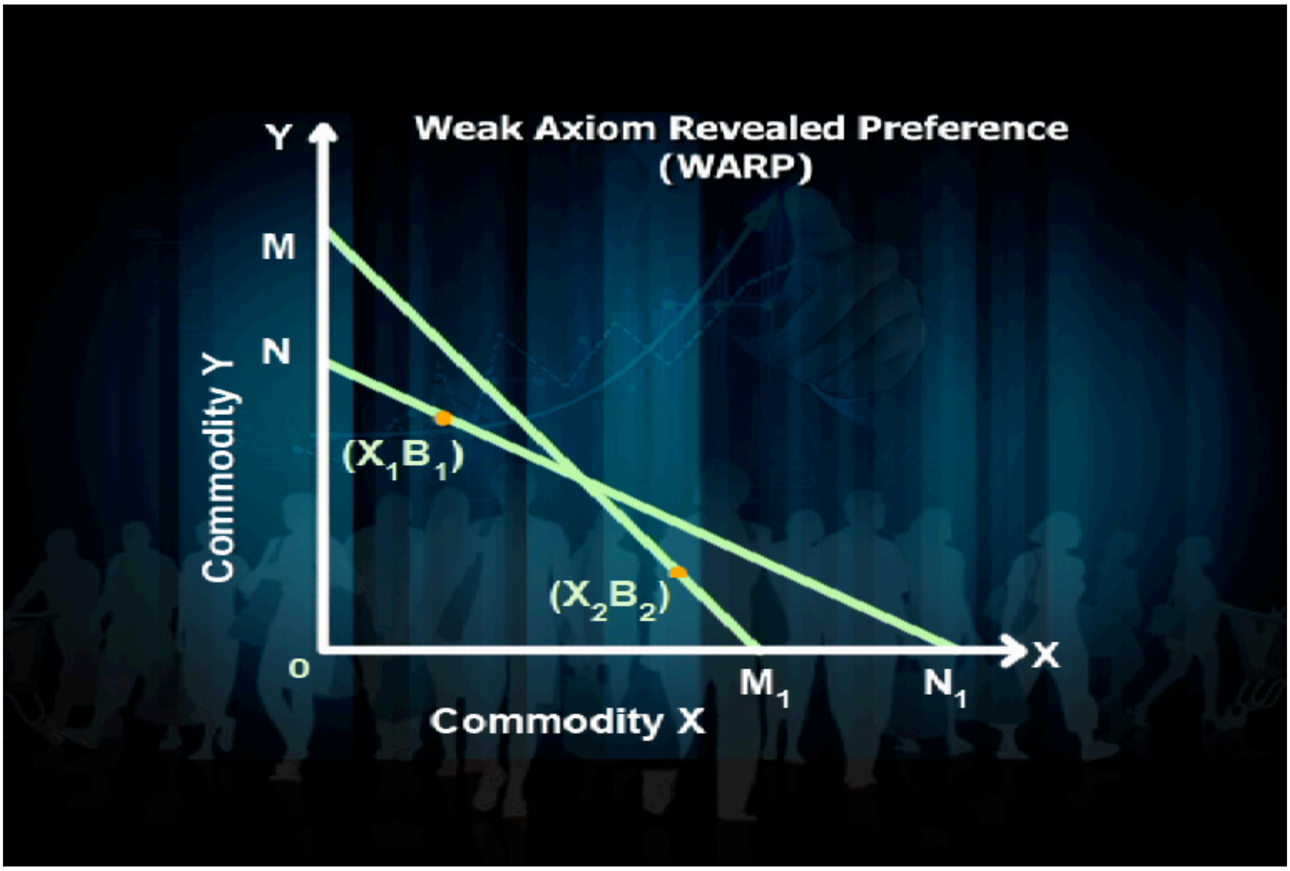
The real income of consumer has been increased because of fall in the price of G so if we take away this increase in real income, let say LP amount of money from the consumer the new price income line would be PQ where consumer again opt the point R where he was earlier. The between P and R is not preferred by consumer because he does not want to decrease the consumption of good G, so point R would be the consistent choice for consumer. If the PL amount of money which were taken from the consumer returned again consumer will prefer the point T where he will be able to buy more goods of G. we can make the demand curve with the help of panel A as in panel A when the price of G is OL/OM (OP IN PANEL B) the demand of G is OA. And when the price of G falls to OL/OS the demand of G increases from OA to OB. We can join these combinations as point E and E1 in panel B we will find a smooth demand curve. So this way we can derive the demand curve with the help of revealed preference theory.

Weak Axiom Revealed Preference and Strong Axiom revealed Preference

The preference of the consumer shows the best option he has chosen among the provided options, but there are some assumptions of rationalities while consumer makes choices and these assumptions called Weak axiom revealed preference and strong axiom revealed preference.

Weak Axiom Revealed Preference

The weak axiom revealed preference assumes the two-term consistence while making choices by consumers. It means if at P1 price X is directly revealed preferred to the Y then Y can't be reveled preferred to X at that price or even at any other price. Suppose if Y is revealed preferred to X ay P2 Price it is the violation of the weak axiom revealed preference.



We can understand WARP by this figure 1. In this figure we have taken commodity X on X axis and commodity Y on the Y axis. There are two price lines MM1 and NN1 on which two different combinations are given suppose if a consumer is choosing X1B1 bundle on P1P2 prices than we can say that X1P1 + B1P2 revealed preferred to X2P1 + B2P2.

Now it is not possible to choose X2B2 bundle by consumer even in the next choice otherwise it will be considered the violation of WARP because consumer is not consistent in his choice.

Strong Axiom revealed Preference

The assumptions of SARP is based on the another assumption which is said assumption of transitivity. For example if A is revealed preferred to B and B revealed preferred to C than A is also revealed preferred to C. this assumption is crucial for revealed preference theory for making consistent consumer choice.

For example if a combination X1Y1 revealed preferred to combination X2Y2 and X2Y2 is revealed preferred to X3Y3 then X1Y1 will also be revealed preferred to X3Y3. This is called three term consistence.

3. Summery

Revealed preference theory shows the choices of the consumers when they are given certain options. This theory is studying the behavior of consumer which is more realistic way of studying consumer's behavior. It also replaces the assumption of continuity of indifference curve theory of hicks and accepting the strong and weak order assumption which is superiority of this theory over hicksian theory, but there are some limitations also as Revealed preference theory is assuming that the consumer is rational while making choices and that is a base of this theory that choices reveals preferences but it is not always correct many tie consumer does not act rationally.