

*Consumer's Equilibrium*  
*with cardinal utility technique*

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# Introduction

The theory of consumer behavior is based on an axiom that a consumer is a utility maximizing entity.

The classical and new classical economists held the view that utility is cardinally or quantitatively measureable. It can be measured in cardinal numbers like weight, height, length etc.

Acc. to Modern economist utility is ordinally measureable in terms of 'less than' or 'more than'

# Meaning

The concept of utility was introduced to social thoughts by Benham in 1789 and to economic thought by Jevons in 1871.

In Twentieth century Marshall and Pigou further elaborated cardinal utility analysis.

In general sense utility is the want satisfying power of a commodity. In economic sense, utility is a psychological phenomenon.

# **Consumer's equilibrium: Marshallian approach**

Consumer's equilibrium refers to a situation where in a consumer gets maximum satisfaction out of his limited income and has no tendency to make any change in his existing expenditure. The term 'equilibrium' implies a position of rest or changelessness.

# Assumptions

- Rational consumer
- Cardinal utility
- Independent commodity
- Limited money income
- Price, taste and fashion remain constant
- Marginal utility of money is constant
- Perfect knowledge
- Diminishing marginal utility

# Determination of consumer's equilibrium

1. A single commodity with one use
2. A single commodity with several uses
3. Several commodities

Table I : Consumer's equilibrium in case of one commodity with one Use

Unit of X	Marginal Utility Gained from X	Price of X/ Utility Sacrificed	Surplus or Difference
1	50	20	30
2	40	20	20
3	30	20	10
4	20	20	0
5	10	20	-10

Equilibrium =  $MU_x = \text{Price}$

CONSUMERS EQUILIBRIUM IN CASE  
OF ONE COMMODITY WITH ONE  
USE

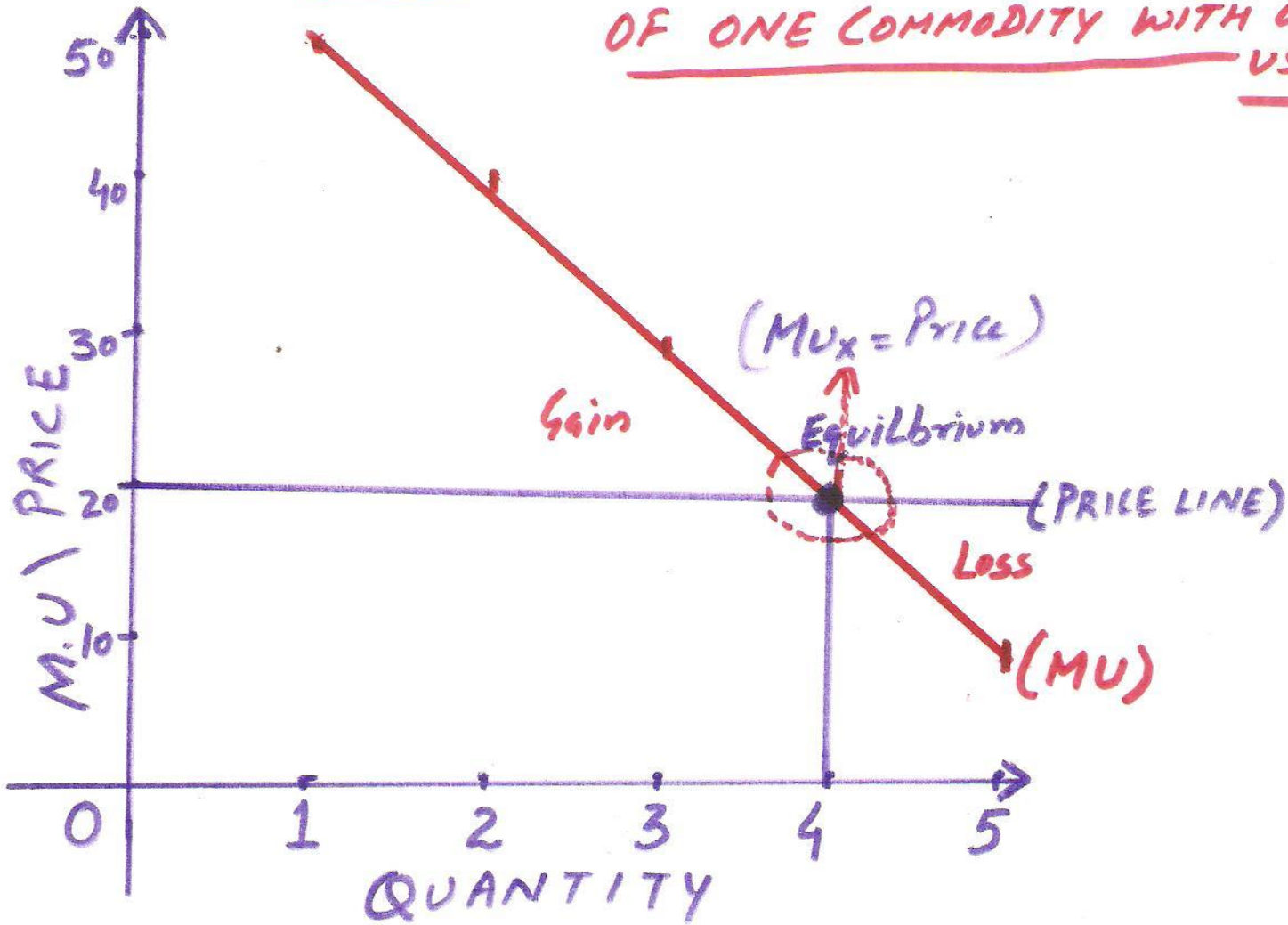


Fig - I



Table II : A Single Commodity with Several Uses

Quantity of Diesel (in litre)	M.U. of Diesel in Car	M.U. of Diesel in Generator
1	10 <sub>I</sub>	8 <sub>III</sub>
2	8 <sub>II</sub>	6 <sub>V</sub>
3	6 <sub>IV</sub>	4
4	4	2
5	2	1

CONSUMERS EQUILIBRIUM IN CASE OF  
ONE COMMODITY WITH SEVERAL  
USES

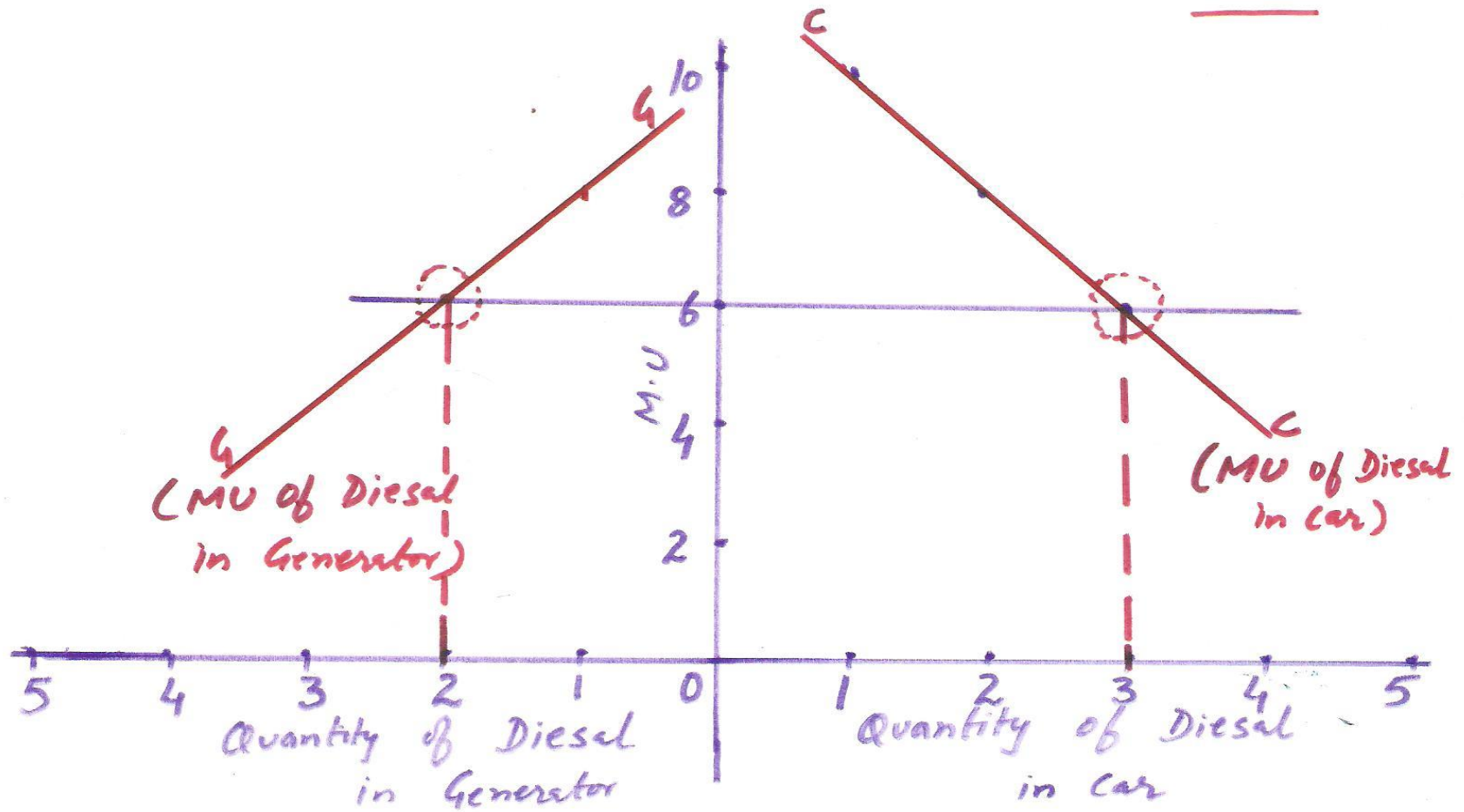


Fig - II

Table III : Several Commodities

Rupees Spent	MU of X	MU of Y
1	12 <sub>I</sub>	10 <sub>III</sub>
2	10 <sub>II</sub>	8 <sub>V</sub>
3	8 <sub>IV</sub>	6
4	6	4
5	4	2

$$MU_X = MU_Y = MU \text{ of Money}$$

CONSUMERS EQUILIBRIUM IN CASE OF SEVERAL COMMODITIES

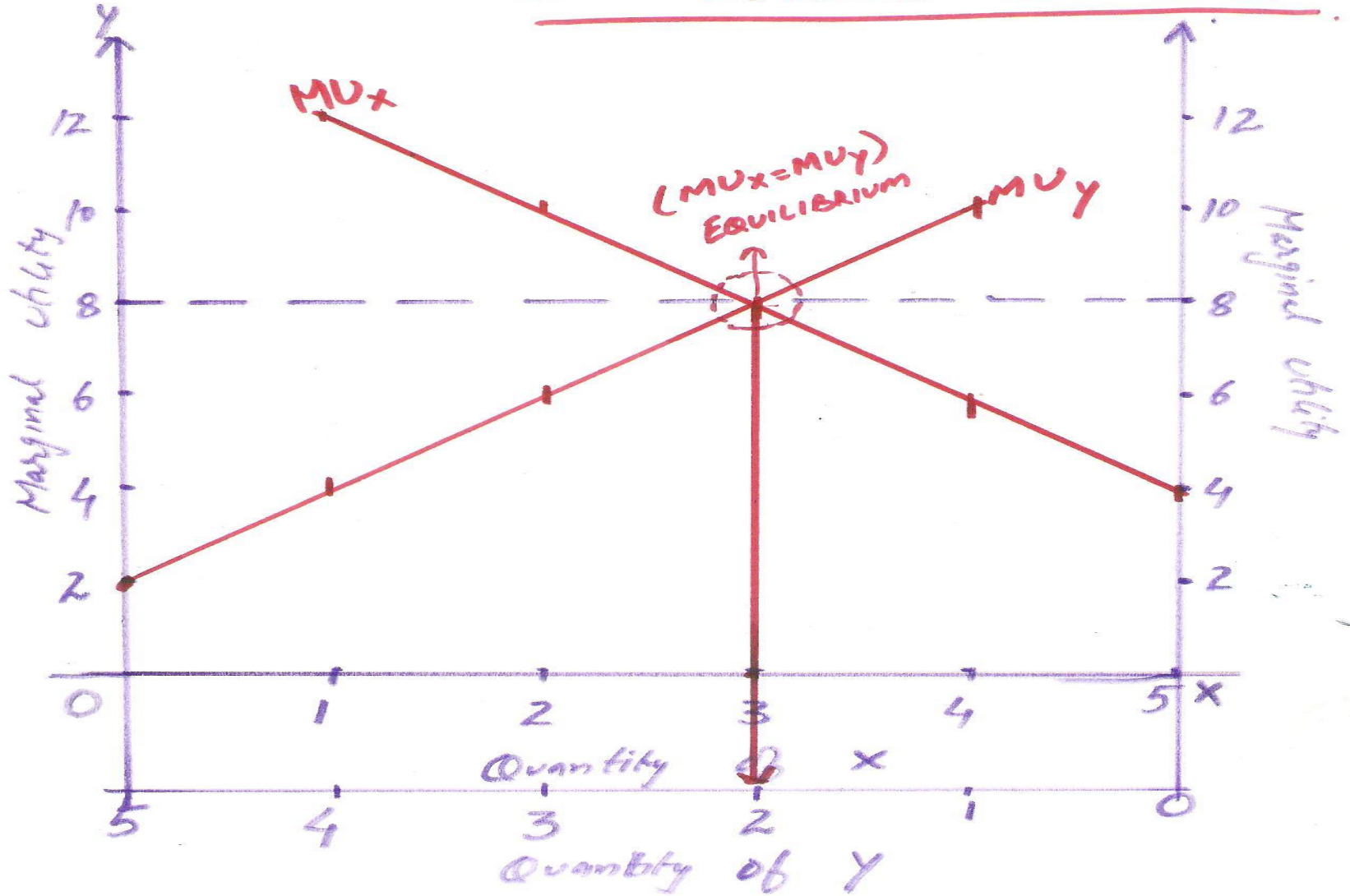


Fig - III

# Criticism of cardinal utility analysis

- Cardinal measurement of utility is not possible.
- Marginal utility can not be estimated in all conditions.
- Marginal utility of money does not remain constant.
- Too many unrealistic assumptions.
- Consumer is regarded as computer.

# conclusion

There are several unrealistic assumptions of cardinal utility analysis but still it was the first theory to explain consumer equilibrium. Marshallian theory left the distinction between the income and substitution effects of the price change unanalysed. It has too many weaknesses and these limitations has been removed by the Hicks-Allen indifference curve approach.