B A Economics Third Semester

ECD 1341 Micro Economics-II

Module III ,Unit-9

WELFARE ECONOMICS

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Welfare Economics

- Welfare Economics is concerned with the evaluation of alternative economic situations from the point of view of well- being of the society.

- The task of welfare economics is to suggest ways to improve a country's welfare to the maximum attainable position. Criteria of social science includes:

- Bentham's Criterion

- Cardinalist' Criterion

- Pareto optimality Criterion

- Kaldor-Hicks Compensation

- Scitovsky Criterion

Bentham's Criterion

- Welfare is improved when the greatest good is secured for the greatest number.

- Total utility is the sum of utilities of the individuals of the society.

- An interpersonal comparison of the deservingness of the members of the society.

- Criterion cannot be applied to compare situations where the greatest good and number do not exist simultaneously greatest

Cardinalist' Criterion

- The law of diminishing marginal utility is a criterion of social welfare.

- Social welfare would be maximized if income is equally distributed among all members of the society.

- **Limitations**

- All individuals have identical utility functions for money

- An equal income distribution may induce some people to work less leading to a reduction in total GNP

Pareto Optimality Criterion

- A market situation, where in it is not possible to make at least one person better off, without making no one worse off.

- Because of optimum allocation of resources in General equilibrium.

- Marginal conditions of Pareto Optimality is also known as **first order condition** .

Assumptions

- Each individual has his own ordinary utility function

- Production function remain constant.

- Goods Perfectly divisible

- Least –cost combination of factors,

- Maximize satisfaction

- Purchases all goods

- Perfectly mobile.

Marginal Conditions

- Efficiency in exchange

- Efficiency of Production
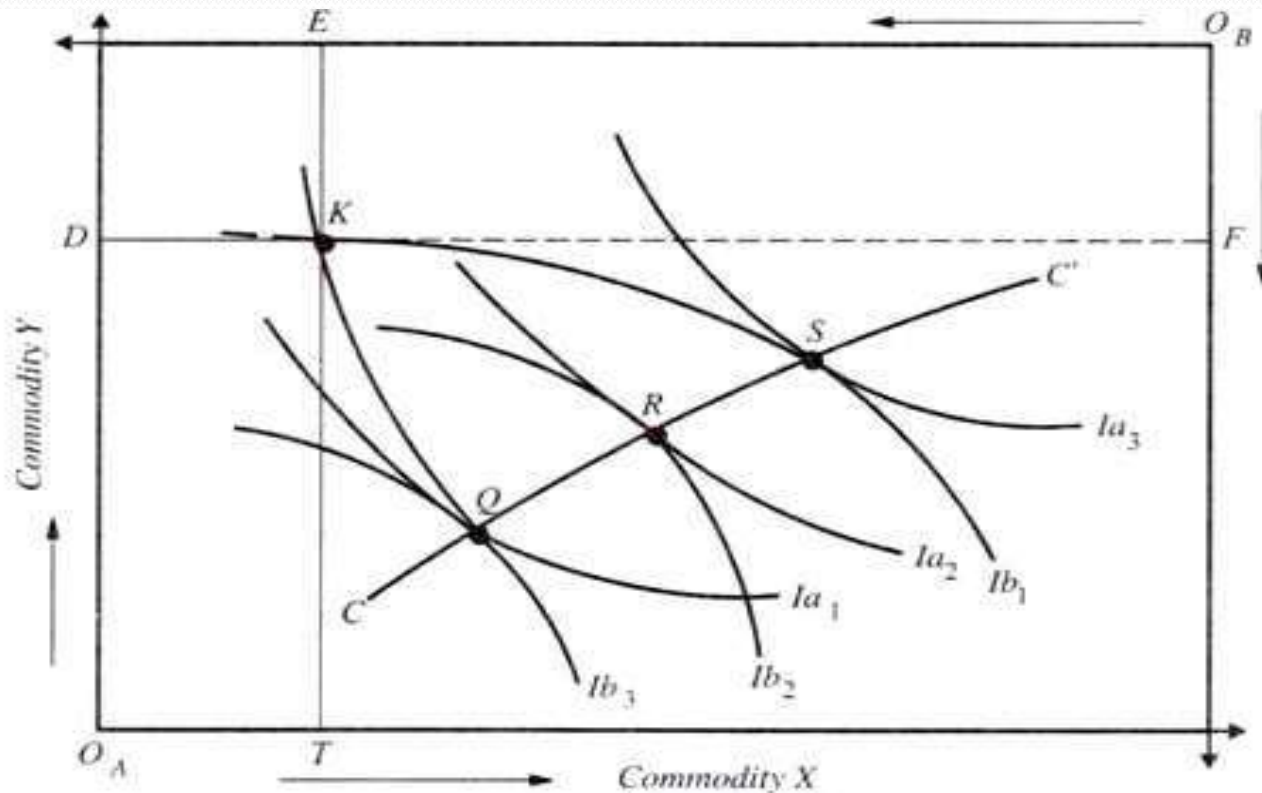
- Efficiency in the Product mix

- Here 2×2×2 Model is used

Model of Pareto Optimality

- Assume that two commodities are being produced A and B.
- Two firms M and N. M produces A, and N produces B.
- Two factors of production, K and L. Firms M and N use both factor inputs to produce A and B.
- Two consumers X and Y, who consume both commodities A and B.
- Perfect competition,
- Static analysis,
- Diminishing returns, and utility

# Efficiency In Exchange Among Consumers

- Increase the utility of one individual without reducing the utility of the other
- MRS between two goods be equal

Efficiency Of Allocation Of Factors Among Firms

- Reallocation of factors to increase the production of one commodity without reducing the production of the others.

- The marginal rate of technical substitution between labour and capital be equal for all commodities produced by different firms.

Efficiency in production
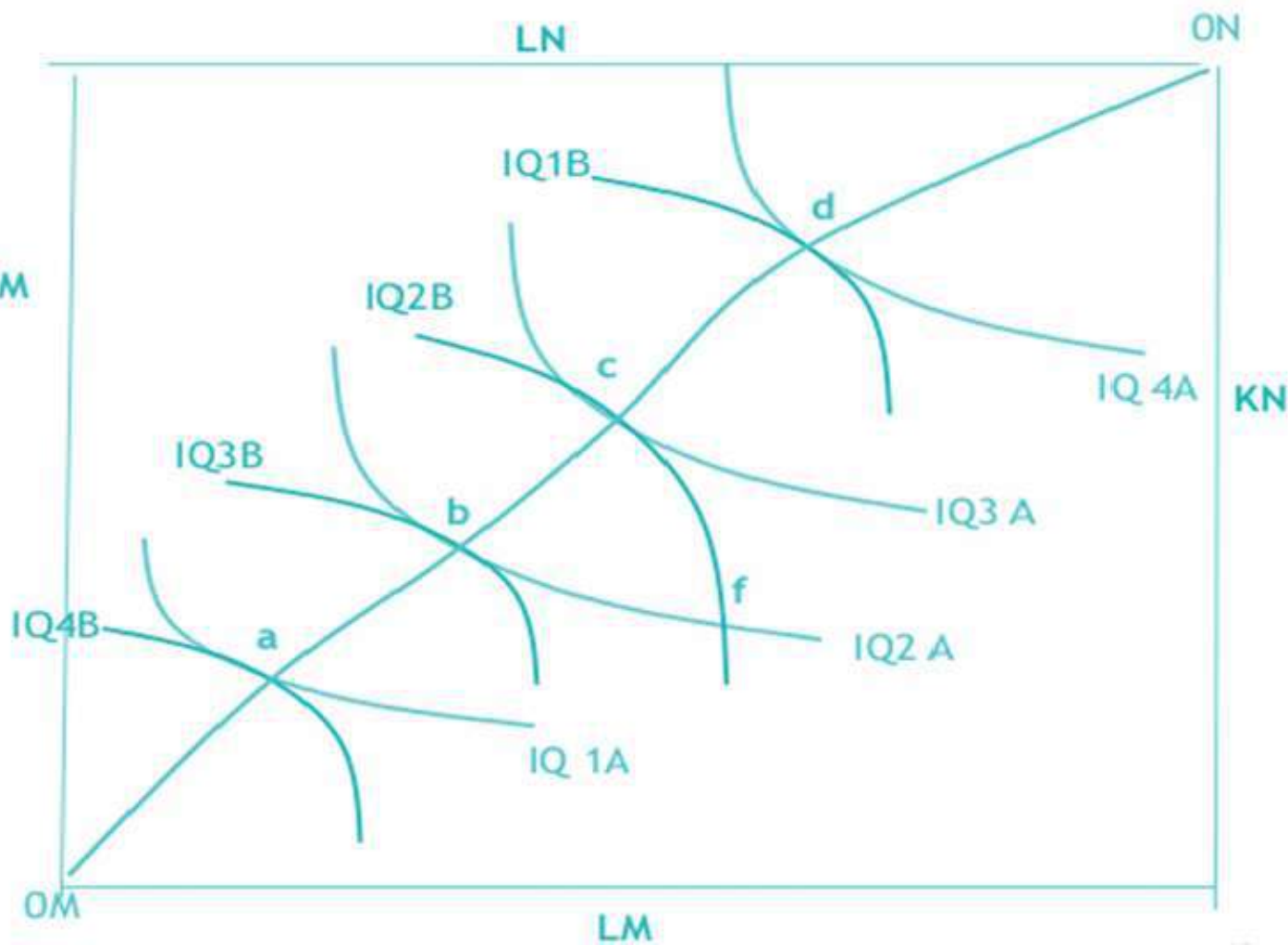
Edgeworth box
Isoquants of two firms M,N.
Both use K and L.
Each tries to achieve its highest IQ.
If M moves to higher IQ, then N is forced to move to lower IQ.
More K,L for one firm M means less for N.
So lowers its output.

Efficiency in the composition of output

- The MRPT (Marginal rate of product transformation) between any two commodities be equal to the MRS (Marginal rate of substitution) between the same two goods.

- MRPT is the slope of the Production Possibility Curve(PPC)

- MRPT is the rate at which a good can be transformed into another

Efficiency in Product Mix
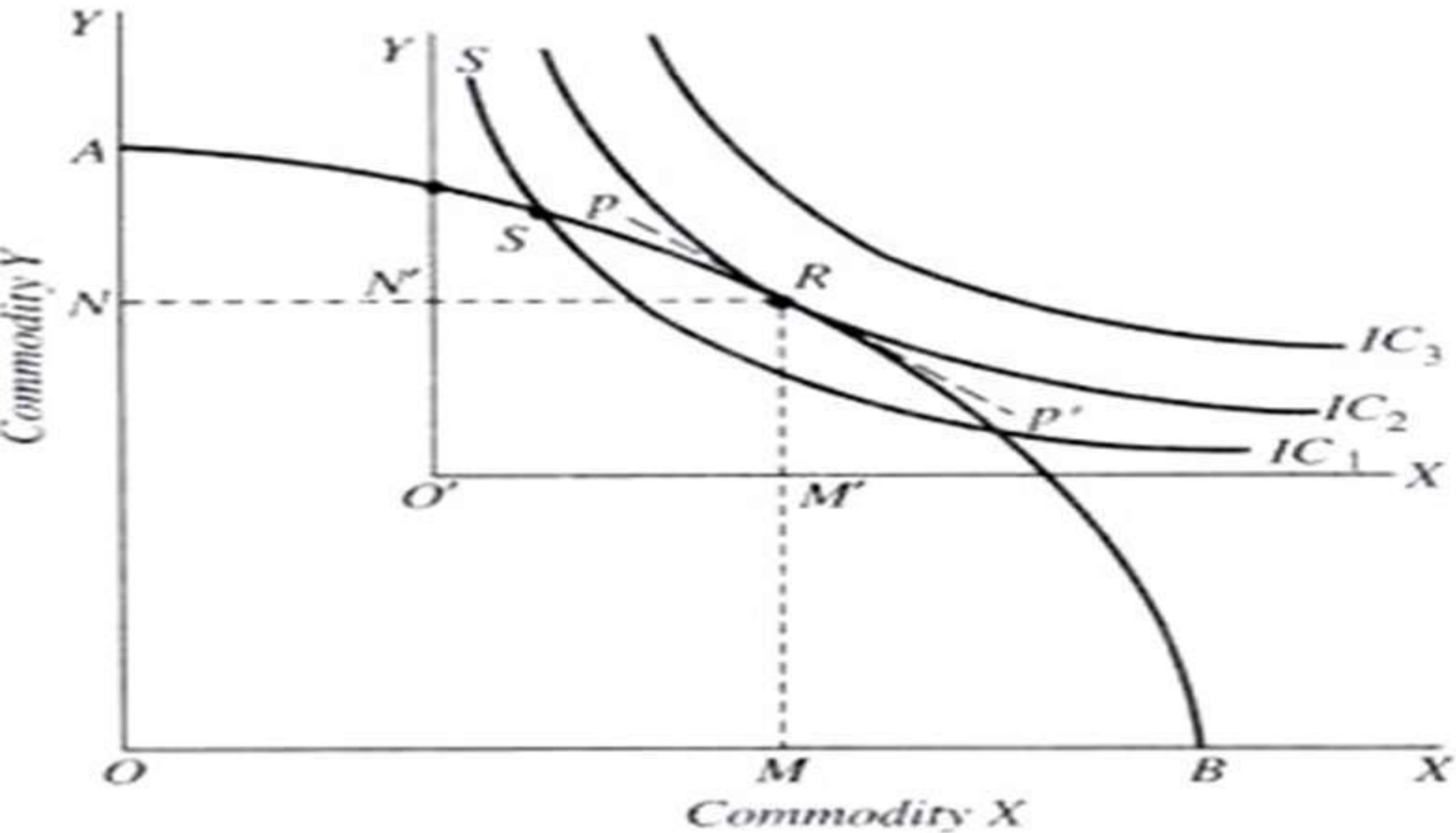
Marginal Conditions For Pareto Optimality

- Three conditions must be satisfied

(1) $MRS_{XY}^{A} = MRS_{XY}^{B}$

(2) $MRTS_{LK}^{X} = MRTS_{LK}^{Y}$

(3) $MRPT_{XY} = MRS_{XY}^{A} = MRS_{XY}^{B}$

Criticisms

- It cannot evaluate a change that make some individual better off and others worse off

- It is a necessary but not sufficient conditions for the welfare maximization

- Many points are not comparable unless interpersonal comparison and value judgments are made

Scitovsky's Double Criterion of Social Welfare

- Scitovsky pointed out an important limitation of Kaldor-Hicks criterion

- This could lead to contradictory results

- It is possible that if R is an improvement for A, then another point, V could be an improvement for B.

- For getting consistent results if V is preferred to R on the basis of a welfare criterion, then position R must not be preferred to position V on the same criterion

Scitovsky Double Criterion

- When the two utility possibility curves are non-intersecting and change involves movement from a position on a lower utility possibility curve to a position on a higher utility possibility curve, the change raises social welfare on the basis of Scitovsky criterion.

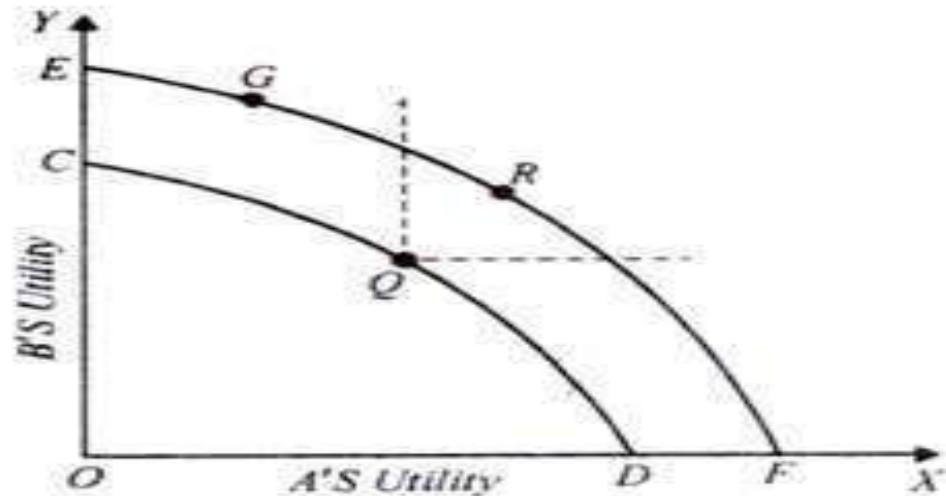- The change brings about increase in aggregate output or real income.


Fig. 41.4. *Scitovsky's Double Criterion*

The Kaldor-Hicks Compensation criterion

- An important criteria for measuring social welfare.

- To overcome the limitation of Pareto criterion,kaldor and Hicks introduced a welfare criterion which is based on the compensation principle.

- If those who gain from the change could compensate those who are hurt from the change and can still be better off, from the gainer's point of view. If there is some one who is a loser from a change can bribe the gainers to prevent the change to happen and still remain better off, that change constitutes an improvement according to Kaldor-Hicks criterion.

Kaldor-Hicks Compensation Principle

- The Utility Possibility Curve : Contact curve of consumption, drawn in outer space. If both consumers are at Z,A's utility is oA and B's utility is Bo. Not an optimal point .

- If A moves to point R, his utility increases to Ar, but B's utility falls to Br. If A can compensate B worth BoBr, so that B is back to Z with his original U: Bo, i.e. point S,then A's utility still increases to AS. At S,A is still better off ,while B's utility has not decreases, he is not worse off. So movement from Z to S improvement in social welfare .

E.g.: At point R, if A's welfare increases by Rs.1000,and B's utility falls by Rs.200,then A can pay Rs.200 to B as compensation, and still be better off with extra Rs.800 than at point Z. So from Z-S is improvement in Social Welfare.
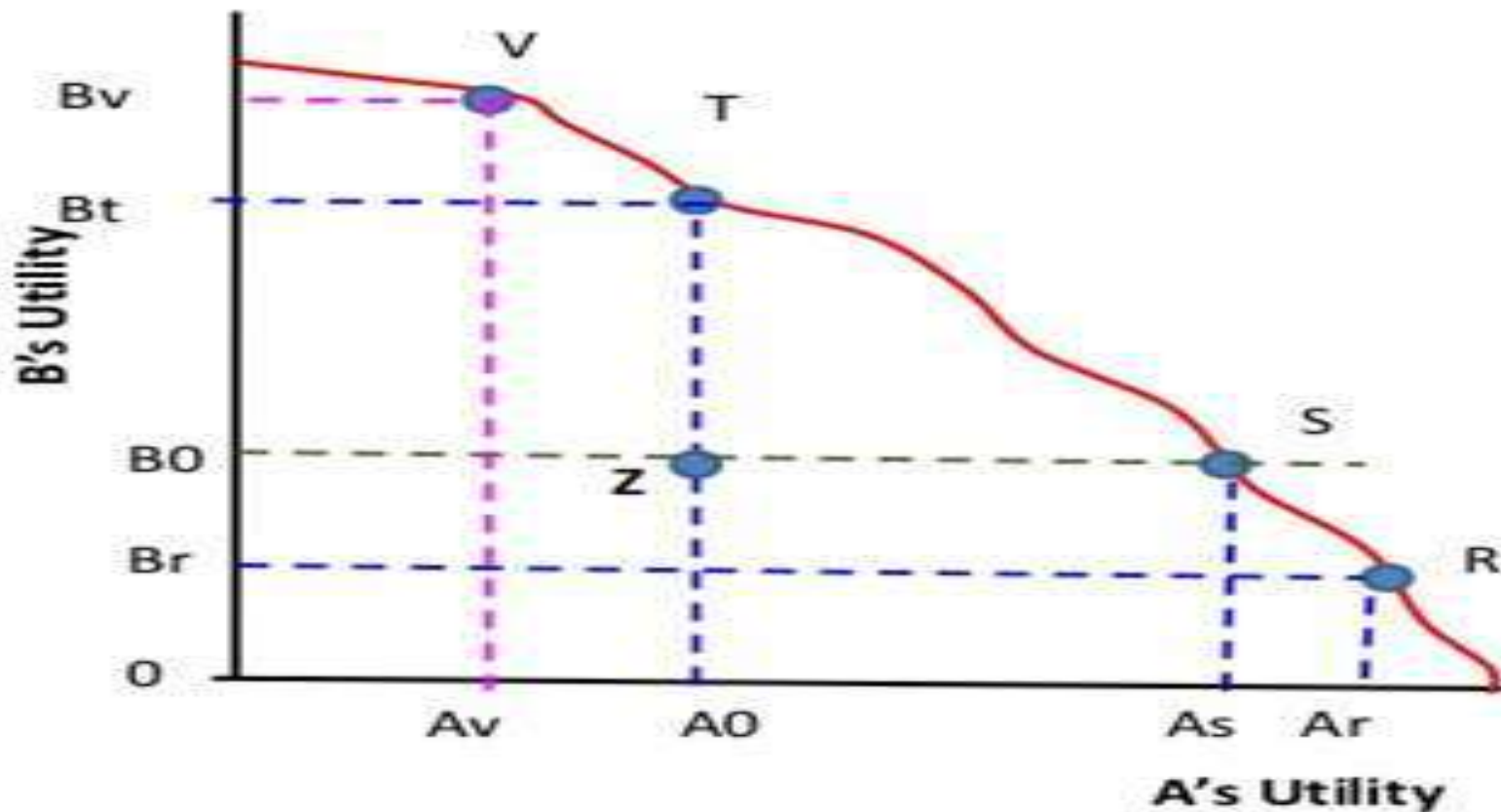
Limitations

- The criterion ignores the existing income distribution

- It assumes the marginal utility of money is equal for all the individuals in the society.

- It work only under the assumptions of equal utility of money to all individuals.