

MOVEMENT OF WEALTH

Law of Equilibrium is accepted as a proven Law by all scientists world over. This Law is applicable to matter, wealth and energy alike. When we speak of Law of Equilibrium a question is raised in our minds as to how this Law operates. Generally when two systems of different levels or concentrations(of matter or wealth or energy) are connected to one another, movement(of matter or wealth or energy) from higher level or concentration to lower level or concentration takes place till such time that level or concentrations in both systems become par or in other words equilibrium state is reached. If matter or energy or wealth move at random or from lower concentration/level to higher concentration/level equilibrium cannot be achieved. Let us study them taking examples from real life. When hot water is mixed with cold-water, heat moves from hot water to cold water till the temperatures of both waters become equal.

One must remember here that level of energy (heat) is important for movement of heat and not the quantity of heat energy to determine the course of movement. The cold water may contain more heat energy but its temperature (level of heat) is less than that of hot water.

The same is applicable to matter also. When two solutions of different concentration are mixed, the particles of matter move from higher concentration to lower concentration till the concentrations in both systems equalize. When a tube of a vehicle is punctured we notice that air from the tube moves out though atmosphere contains more air than the tube. This goes to show that quantity of air is not important but the density or pressure of air determined the course of movement of air.

Can this apply to wealth also? Yes. Let us study in detail.

Before proceeding with the discussions it becomes prerequisite to understand concentration of wealth. People use the word concentration very vaguely. When we refer concentration, we must remember that two forms of wealth are involved here. When we say that the concentration of sugar solution is 5% we mean that 5 grams of sugar is dissolved in 100 grams of water. Here the two forms of matter are solute (sugar) and solvent (water). What are the indicators of concentration of wealth? Price, Rate of return, Rent etc are the different indicators of wealth. In price, the two forms of wealth are 1) money 2) commodity. In rate of return the two forms of wealth are 1) return 2) investment.

Let us see concentration of forms of wealth in price. Let us study taking an example.

Rs.5/kilogram of potato
MARKET A

Rs.6/Kilogram of potato
MARKET B

The two forms of wealth here are A) Money (rupees) B) Goods (Kilograms)

Let us observe the concentration of wealth in this example.

1 Wealth in the form of money is more concentrated in Market B because Rs.6 is greater than Rs.5. We notice that in a costlier market money is concentrated.

2. Wealth in the form of potato is more concentrated in Market A because 1Kilogram/Rs5 is greater than 1Kilogram/Rs6. We observe that in a cheaper market commodity is concentrated. **It must be remembered here that concentration of one form of wealth will**

be reciprocal of the concentration of other form of wealth. We observe that commodity moves from cheaper to costlier market i.e. from higher concentration to lower concentration. Economists say that goods move from cheaper to costlier markets. I say that wealth moves from higher concentration to lower concentration.

Wealth in the form of money is more concentrated in Market B. Therefore wealth in the form of money should move from Market B to Market A. Economists say that buyers move from costlier to cheaper markets. Are not both sayings same? Has quantity of money any say in determining movement of wealth in the form of money? Suppose a market with higher concentration of money, i.e. Market B in the above example, has less quantity of money than that of Market A what would have been the course of movement of wealth? Is movement of wealth dependent upon quantity of wealth? No. Quantity of wealth is of insignificance in determining course of movement of wealth.

Let us study rate of return as a measure of concentration of wealth. The two forms of wealth here are A) Investment B) Return on investment. Let us study with an example.

Rs.12 return/Rs.100 investment
INVESTMENT A

Rs.10 return/Rs.100 investment
INVESTMENT B

Let us answer the following;

1. Where is wealth in the form of returns concentrated? In Investment A Returns is concentrated because Rs.12 is greater than Rs.10.
2. Where is wealth in the form of investment concentrated? In Investment B investment is concentrated because Rs.100 investment/Rs.10 return is greater than Rs.100 investment/Rs.12 return.
3. Where do people prefer to invest? Naturally in Investment A as this yields more returns. In simple words wealth in the form of investment moves from Investment B to Investment A i.e. from higher concentration to lower concentration.
4. We know that wealth in the form of return is static because it cannot move from investment to investment. If it were to move, it would move from Investment A to Investment B i.e. from higher concentration to lower concentration. I have termed such

movement of wealth where only one form of wealth moves as OSMOTIC movement of wealth and this is similar to a biological process where only one form of matter (solvent) moves and the other form of matter(solute)remains static.

Let us examine rate of exchange as a measure of concentration of wealth. Here the two forms of wealth are the two currencies that get exchanged for one another. Let us see whether wealth moves from higher concentration to lower concentration.

Re 45/\$1	Re46/\$1
New York	Chennai

We find that Rupee is concentrated in Chennai because Re46 is greater than Re 45.

Please notice that \$ is concentrated in New York because $1/45$ is greater than $1/46$.

If the cost of remittance is less than the differential exchange rate \$ would move from New York to Chennai. Conversely Rupee would move in the opposite direction. However this is subject to the exchange regulations obtainable in the two countries.

Let us study cost/return as a measure of concentration of wealth. The two forms of wealth of wealth here are cost and return. Let us study in detail.

You are an Executive of a Company manufacturing two products. The cost/return ratios of the two products are as under:

Rs.32 costs/100 returns	Rs.40 costs/Rs.100 return
PRODUCT A	PRODUCT B

You are preparing the cost budget of the company. Where will you allocate more funds?

Where is wealth in the form of cost is concentrated? In Product B cost is more concentrated and hence while allocating costs in the budget you would naturally allocate more costs for production of Product A. In other words cost moved from Product B to Product A. Return is static and does not move from product to product. If it were to move the natural course would have been the opposite of cost.

Now let us consider wages/laborer as a measure of concentration of wealth. Let us study movement of wealth.

Rs.5000000 wages/100 laborers Firm A	Rs.6000000 wages/100 laborers Firm B
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OR Rs.50000wages/Laborer Rs.60000wages/Laborer

Where are wages concentrated? In firm B because Rs.60000/-is more than Rs.50000/-.

Where is labor concentrated? In Firm A wealth in the form of labor is concentrated because $1/50000$ is greater than $1/60000$. If wages were to move it would move from Firm B to Firm A. We know that wages do not move from firm to firm. Only wealth in the form of Laborer moves and it moves from Firm A to Firm B (that is, from higher concentration to lower concentration). We move to an opportunity offering higher salary than the existing one.

In the above case, you must have observed that only one form of wealth moved and the other form remained static. In biology we find a process called OSMOSIS. In the process of Osmosis only one form of matter moves (only solvent particles move and solute particles do not move). When two solutions are separated by a semi-permeable membrane, a membrane that allows only solvent particles to pass through, solvent moves from higher concentration to lower concentration. This process is called "Osmosis".

Since there is no specific word in use in Economics to denote a process where only one form of wealth moves , I have used the same word "Osmosis". For details about Osmosis, please read books on Biology. When only one form of wealth moves and the other form of wealth remains static such movement of wealth is called Osmotic Movement of Wealth and the process is called OSMOSIS. In the example where Rate of Return was considered as a measure of concentration, you must have noticed that returns

did not move from investment to investment. That is also an example of Osmotic Movement of Wealth.

Imagine that you are a Credit Appraiser of a Financial Institution. You have worked out the Internal Rate of Return of a Project. Suppose the IRR of the project is 14% and the Opportunity cost of capital is 12%, do you vouch for the viability of the project?

We say that the project is viable because the Internal Rate of Returns (IRR) of the project is greater than the opportunity cost of the capital. Let us see whether wealth moves from higher concentration to lower concentration in this case.

Rs.100 investment/Rs.14 return Project IRR	Rs.100 investment/Rs.12 return Opportunity Cost of Capital
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We notice that in opportunity cost of capital investment or cost is more concentrated because $100/12$ is greater than $100/14$. When wealth moves from higher concentration to lower concentration, which is its natural course, we derive higher returns or reduced cost or both.

When wealth moves from higher concentration to lower concentration, we achieve any or all of the following:

- 1.Increased returns
- 2.Reduction in costs
- 3.Increased saving
- 4.Increased utility

This, in the words of Marshal, is CONSUMER SURPLUS. When wealth moves from lower to higher concentration loss results. Law of Thermodynamics says that any reaction that proceeds from higher energy level to lower energy level is spontaneous. Similarly

any economic reaction that involves movement of wealth from higher concentration to lower concentration is spontaneous.

From the above examples it is clear that wealth in its natural course moves from higher concentration to lower concentration. We must also know that quantity of wealth is not important but it is the concentration or level of wealth that determines the course of movement of wealth. We may consider several other measures of concentration of wealth like rent/house, capital/resources etc. This process helps in maintaining equilibrium.

Economists use the equilibrium concept in various occasions like price stabilization in a perfect market. This equilibrium can be achieved only if wealth moves from higher concentration to lower concentration. If wealth were to move at random equilibrium concept would have failed.

Lastly I would summarise that wealth, like matter and energy, move from higher concentration to lower concentration. The measures of concentration of wealth invariably contain two forms of wealth. Price, rate of return, rate of exchange, etc are different measures of concentration or level of wealth. It is for the Economists to consider Marginal Utility as measure of wealth. This movement of wealth helps a system attain equilibrium. When only one form of wealth moves the other remaining static, such movement of wealth is similar to a biological process called Osmosis. Hence I have termed such movement of wealth as Osmotic movement of wealth. The quantity of wealth is not important but the level of wealth is the determining factor for movement of wealth.

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