

Hypothesis: Partial Dispersion of Knowledge enhances overall growth
(Economy wise, Standard of Living wise & Humanity wise)

Analyses:

Let an economy consists of 'n' number of mentally capable individuals who constitute the entire work force of the country.

Let 'a' be highly knowledgeable individuals out of the total 'n' who takes major decisions to direct the work flow in the economy directly and indirectly.

Hence (n-a) are the remaining non-knowledgeable individuals who can be raised to the higher category with proper training.

Thus, an economy is basically driven by the interdependence of these two categories of individuals.

Each individual has a capability to generate an idea. *(I assumed ideas equaling total implementation. That is in this context I am excluding abstract ideas, which are not feasible)*

An idea is highly correlated to the width of knowledge. Thus 'a' individuals being more knowledgeable will generate more ideas than (n-a) individuals.

Let average idea generated by 'a' individuals be 'x' and by (n-a) individuals be 'y' ($x \gg y$).

Hence effectively the Efficiency (E) of an economy can be represented as follows...

$$\mathbf{E = a^x \cdot (n-a)^y}$$

Now to find the maximum efficiency of such an economy we do partial differentiation of the above equation with respect to x & y since the efficiency depends on the new implementations and that logically depends upon the ideas which are developed by two different categories of individuals as described above. Hence we need to take into consideration the impact of changes in one by keeping the other constant and hence we do partial differentiation.

Differentiating wrt 'x' and equating it to zero we get...

$$0 = \frac{a^x \cdot (n-a)^y}{\log a} + C_1$$

Where C_1 is an Error explaining the effects not associated with the equation.

Solving the above equation we get...

$$a^x \cdot (n-a)^y = -C_1 \cdot \log a \dots(I)$$

Similarly differentiating wrt 'y' and equating it to zero we get...

$$0 = \frac{a^x \cdot (n-a)^y}{\log (n-a)} + C_2$$

Where C_2 is an Error explaining the effects not associated with the equation. Solving the above equation we get...

$$a^x \cdot (n-a)^y = -C_2 \cdot \log (n-a) \dots(II)$$

Equating the equation (I) & (II) we get...

$$-C_1 \cdot \log a = -C_2 \cdot \log (n-a)$$

$$C_1 \cdot \log a - C_2 \cdot \log (n-a) = 0$$

Assuming the constants not affecting the above equation by huge margin we can neglect its impact. Hence we are left with...

$$\log a - \log (n-a) = 0$$

$$\log a = \log (n-a)$$

$$a = n-a$$

$$n = 2a$$

$$a = \frac{n}{2}$$

$$2$$

Hence a unique interpretation, which we can derive from the above equation, is that for a given 'n' number of individuals with 'a' highly knowledgeable individuals the maximum efficiency E of an economy can be achieved with exactly half the number of highly knowledgeable individuals out of the total 'n'.

This further substantiates the concept of "Systematic Anomalies" present in any system citing that a system is composed of inherent flaws within it.

This also corroborates the concept of "Game Theory" wherein information asymmetry is prevalent in any growing economy due to which exploitation takes place which fuels incentive to keep certain section of the economy unknowledgeable and benefit from it collectively.