

SSET 26 – Theory of INVESTMENT

Investment: present wealth destined to generate future wealth.

This simple definition contains the elements to develop an investment theory:

- W_{t_0} : present wealth.
- W_{t_n} : future wealth.
- t_n : time.
- g : generate wealth (gain), as differential $g = W_{t_n} - W_{t_0}$.
- $U_{(g,a)}$: marginal utility of the generation and saving of wealth (decreasing).
- $U_{(d,i)}$: marginal utility of destruction and exchange of wealth (increasing).

We can express W_{t_n} as a function of W_{t_0} and g , the **Equation of wealth generation**:

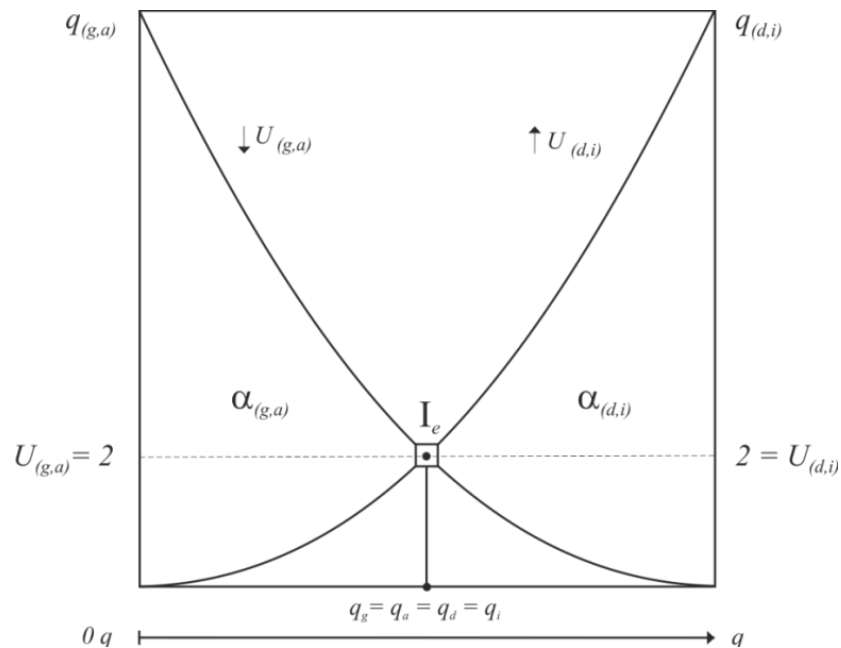
$$W_{t_n} = W_{t_0} (1 + g)$$

On the other hand we have the formula of the amount (M_{t_n}) based on (M_{t_0}) and interest (i):

$$M_{t_n} = M_{t_0} (1 + i)$$

Considering that interest (i) is the **value-price of time**, and g is the **variation of wealth (value) over time**, it is easy to understand that investment (**I**) will be made if $g > i$, then:

$$\mathbf{I} \leftrightarrow g \geq i^{1\ 2}$$



¹ The sign = implies the lower limit of the decreasing marginal utility, or maximum point of the concave curve of accumulated decreasing marginal utility.

² In practice it is the comparison of the interest with the internal rate of return of an investment.

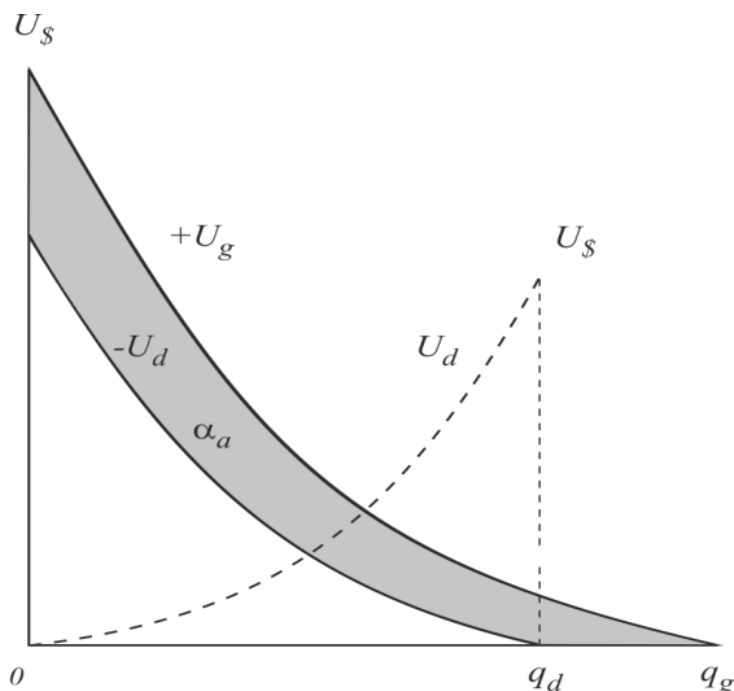
Let us see the graphical representation of the *Evolutionary Medium Point*³ of Investment de la Inversión (EMP-I):⁴

Investment: occurs to the left of I_e , while there $U_g \geq U_d$.⁵

To the right of I_e , we are in the presence of $U_g < U_d$, where the economy destroys more wealth than generate. Again we see that the EMP-I is in: $U_g = U_d = 2$.

The concept of investment can also be seen in terms of the graph in SSET 15, *Net generation of wealth - saving*:

Net wealth generated (α_a)



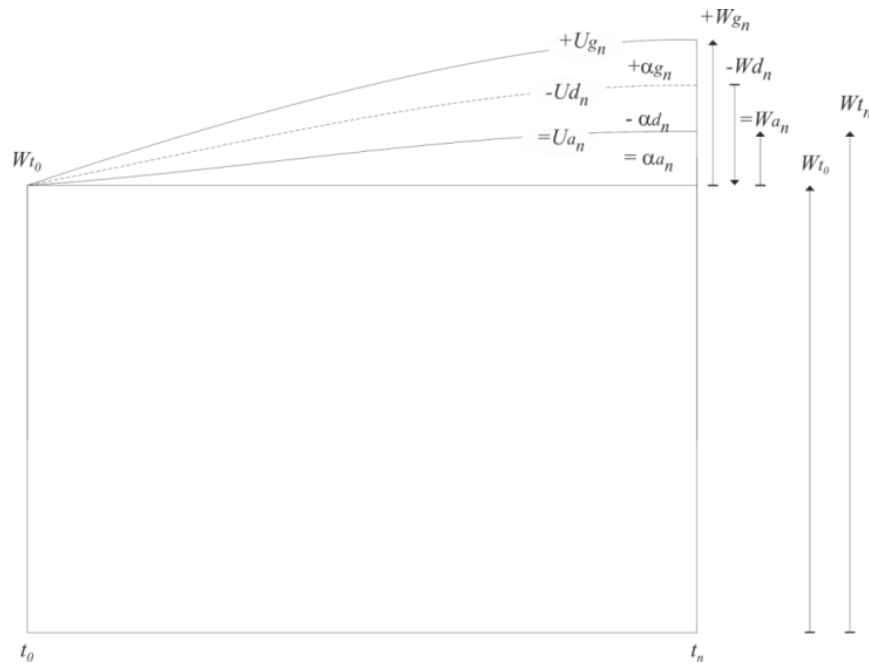
Where we would have that the investment would imply the limit: $U_g = U_d$ and $\alpha_a = 0$, and its equivalent of the graph in SSET 15, *The Subjective-currency-accountable economic calculation*:

³ Once again its analytical potential is appreciated in economic theory.

⁴ It is replica of the SSET 21 chart – *The Evolutionary Medium Point* (EMP).

⁵ Where U_g is marginal utility of wealth generation and U_d its destruction.

Net wealth generated (W_a)



Where the investment limit would imply: $+W_g - W_d = W_{an} = 0$ and $W_{tn} = W_{t_0}$.
 Our theory of interest is present in the comparison between g and i .^{6 7}

SYNTESIS: the similarity of the wealth equation and the equation of the amount capitalized at interest [$W_{t_0} (1 + g)$ and $M_{t_0} (1 + i)$] is an excellent demonstration that economic time materializes in wealth, therefore the study of its variation in time is the study of economic time — whose value-price is interest.

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⁶ Where interest is the price of time what materializes in wealth (g). Therefore the formula for the variation of wealth over time [$g = (W_{tn} / W_{t_0}) - 1$] is the same as that of interest (price of time measured in wealth): [$i = (M_{tn} / M_{t_0}) - 1$] — financial mathematics is an analysis tool as useful as the double entry accounting technique.

⁷ The difference between our **Subjective and Solidarity Economic Theory** is evident, where it emerges: wealth = saving = credit ($W_s = W_a = W_c$), versus the knowns $S = I$.