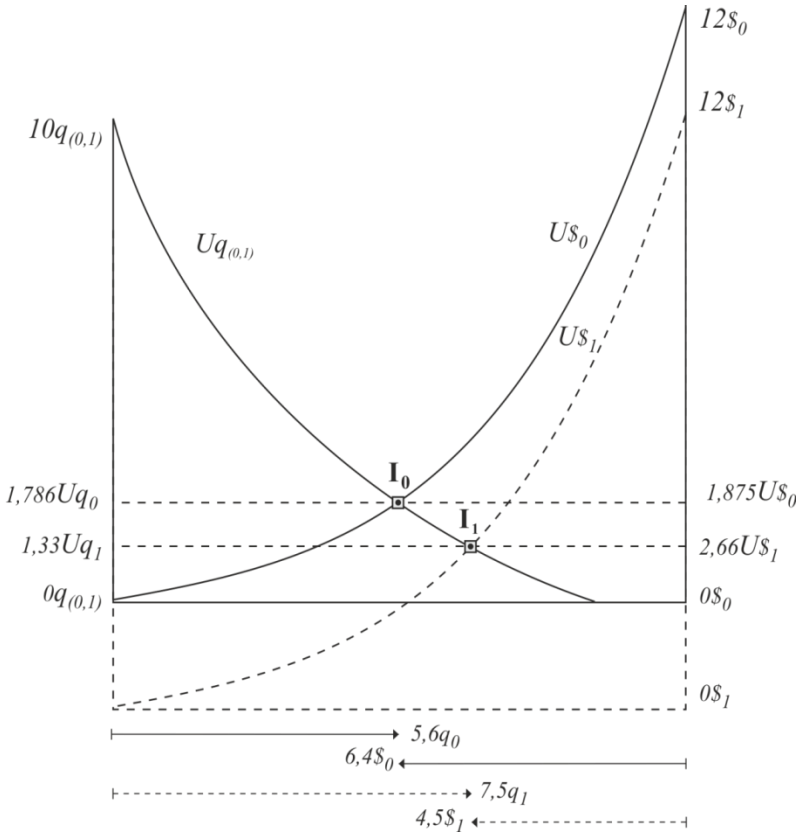
SSET 10 - **"CROSS" correlation of exchange**

Value ↔ quantity

Accord to the ***Subjective and Solidarity Economic Theory*** (SSET), the intersection of marginal utilities of two economic good determine the act of exchange. This cross was determined by the both relative values of goods, moment in what emerge the quantities exchanged, origin of the two price coefficient.

We interesting in this work is detecting the positive correlation between relative value of one economic good [$v_{x(y)}$] and the quantities exchanged of the other one (y_i). To the effect we build the following graph, following the "closed box" model of the SSET: [1]

"Cross" Correlation of Exchange



Accord to model of "closed box", what confront both curve of decreasing marginal utilities of economic goods (U_q and $U_\$$), we start from the initial position ***0***, what determine $\mathbf{I}^0$ where across the curve with continuous stroke, and we deduce: [2]

$U_{\$0}$ = 1,875; U_{q0} = 1,786; q_{i0} = 5,6q_0; $\$_{i0}$ = 6,4$\$_0$; $v_{\$(q)0}$ = 1,05; $v_{q(\$)0}$ = 0,952; $P_{\$(q)0}$ = 0,875q_0; $P_{q(\$)}$ = 1,1429$\$_0$

[1] See at *Theory of wealth and unemployment* and ***Subjective and Solidarity Economic Theory*** (SSET).
[2] That is accord to the formulas of calculus of the *Table 5* of ***Subjective and Solidarity Economic Theory*** (SSET).

Then we consider an increase of the relative value of economic good ***$*** [$v_{\$(q)}$], that is represented in curve with discontinuous stroke ($U_{\$1}$). This curve ($U_{\$1}$) must be draw below its previous $U_{\$0}$, a circumstance that allows us to appreciate that at any level of $ on abscissa, now its marginal utility is higher than the initial one ($U_{\$1} > U_{\$0}$).

The consequences are appreciated in the graphically, and the new values corroborate it:

$U_{\$1} = 2{,}667$; $U_{q1} = 1{,}333$; $q_{i1} = 7{,}5q_1$; $\$_{i1} = 4{,}5\$_1$; $v_{\$(q)1} = 2{,}00$; $v_{q(\$)1} = 0{,}50$; $P_{\$(q)1} = 1{,}667q_1$; $P_{q(\$)1} = 0{,}60\$_1$

From the comparison of these variables we appreciate:

$v_{\$(q)1} = 2{,}00 > v_{\$(q)0} = 1{,}05$; $v_{q(\$)1} = 0{,}50 < v_{q(\$)0} = 0{,}952$; $q_{i1} = 7{,}50q_1 > q_{i0} = 5{,}6q_0$; $\$_{i1} = 4{,}50\$_1 < \$_{i0} = 6{,}4\$_0$; $P_{\$(q)1} = 1{,}667q_1 > P_{\$(q)0} = 0{,}875q_0$; $P_{q(\$)1} = 0{,}60\$_1 < P_{\$(q)0} = 1{,}143\$_0$; $U_{\$1} = 2{,}667 > U_{\$0} = 1{,}875$

Of all the comparisons we are interested in highlighting the one that corroborates the ***positive correlation*** of exchange:

"Cross" Correlation of Exchange

$$\uparrow v_{\$(q)} \leftrightarrow \uparrow q_i$$

Carlos A. Bondone