

NECESIT QUANTUM ECONOMICS

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Abstract: The article formulates the **new** Necesit Quantum Theory of Economics – in the analysis of the role of production technologies in it, and the role of consumption and politics, geography and time lags – in determining the industries and social structure, prices, money circulation, market conditions, economic development and growth, cycles, crises and the future. In the basis of the social economical system functioning and development there lies a **necessity**, its consumption-production proportions, economic quants and time logs. Those innovative substitutions can lead to imbalances, cycles and social crises.

Keywords: necessity, technological and social, consumption, production, prices, money, proportions, quants, logs, modernization, growth, development, cycles.

1. In the basis of the social system functioning and development there lies a **necessity** (Latin - *necitas*), the objective relations with the world without which the system falls into the state of stagnation, degradation and ruin. [1], [3. p. 63.]

2. The necessary goods for production and consumption are **complementary** and **complementary** i.e. they are sets of completing each other components being useless without any or their **substitutes** in definite **proportions** and **logs**.

3. The 2nd law states the system of balance production and **consumer proportions** and **logs** of economical and other consuming elements x_i and functional elements y_i in the society:

$$\sum_{i=1}^m a_{ji} x_i = \sum_{i=1}^m b_{ji} y_i, \quad j = 1, 2, \dots, n, \quad (1)$$

a_{ij} - being technologically (including social) necessary consumption of produce

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on the types of the elements, b_{ij} - being the produce or function produced: a_{ji} , b_{ji} - values are known, $x \equiv y$ values are unknown.

Solution of the equation (1) gives the necessary **industry** structure, proportions i.e. any multiple to them, but it does not give the specific quantities.

4. Since every social element being necessary for the society must get everything required for the production and functioning, the proportions of necessary production and consumption define proportions of goods exchange, **prices** on the equation (1):

$$\sum_{j=1}^n a_{ij} x_i (=) \sum_{j=1}^n b_{ij} y_i, \quad i = 1, 2, \dots, m, \quad (2)$$

There are no indeterminate unknowns in this exchange balance. They are **not** equations and summing up goods on row vector does not here mean a common mathematical addition, but equalization only (=) of **miscellaneous** sets of goods in order to state their necessary **proportions** of goods **exchange** to be **real PRICES**. Nominal prices (in the monetary numbers) depend on the amount of money: $p^n = M / p^r B$.

5. **The political economics. OVER-necessary** (“surplus”) product creates $x > y$ and limited *freedom* in its redistribution, the choice of one possible variant of society structure (1) and exchanges in the society (2), becomes an apple of discord and dissention in the division of income on tax, wage, profit, rent, etc. and economics turns in **political** one. Optimum here is defined by the methods analogous to mathematical programming of L.V.Kantorovich - G.B.Dantzig - T.Coopmans, - but *global* and *necedit*.

6. The *non-linear* of changes in proportions between expenditure and output is caused by the **indivisibility** of clothing, machines, roads etc., consumer and production factors to be **economic quants**. Their influence is reflected by the introduction into *necedit* equations (1) and equalization (2) of quants coefficients h_{ij} , meaning a measure of completeness of instant indivisibility use. [2.]

$$\sum_{i=1}^m a_{ji} \dot{h}_{ji} x_i = \sum_{i=1}^m b_{ji} y_i, \quad j = 1, 2, \dots, n, \quad (3)$$

$$\sum_{j=1}^n a_{ij} \dot{h}_{ij} x_i (=) \sum_{j=1}^n b_{ij} y_i, \quad i = 1, 2, \dots, m \quad (4)$$

7. Introduction of technological **log** relations into (1) and (2), terms of consumption t_{ij}^a and production t_{ij}^b of goods defines the relations of *accumulation* and *credit*, inflation and deflation, and **economic cycles**, the periods of **modernization**, with *acceleration* of the effect depending on capital-intensity of the industry $a = t_{ij}^a / t_{ij}^{ba}$ the cause of economic slumps and recoveries.

8. Introduction of natural, infrastructural and social distinctions of production and transportation into the model determines geographical differentiation of prices, rents, tariffs, prices of natural resources, optimum customs duties and as a result the **GEO-economics**. [2. p. 90 - 99.]

9. Modernization of technologic is **substitutions** of functional elements a_{ij}, y_i, b_{ij} , made by the people for the better ones, yet it creates the *bad* contradiction to former, bring about **misbalances** in (1) and **disproportions** in (2), thus **differential price** Δp is difference of systems necessary and actual proper prices, brings additional profit to **more effective** productions, losses and ruin to others until the proportionality is restored, but in some new way. **Market regulation** of economic **development** or **progress** is considered to be the case differing from the simple economical **growth**, and proportions being initial and unchanged (1) and (2). [3. p. 347.]

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