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The Problem of Labour and the First Hungarian Economic Macromodel

I After being liberated from one and a half century of Ottoman rule at the end of the 17th century, Hungary began during the 18th century to be reintegrated into European economic and cultural life.¹ The last quarter of this century was especially important from the point of view of the take-off of up-to-date economic thinking facilitated by the introduction of academic teaching of cameralistic economics and statistics with the 1777 educational reform, by the first real census in the years 1784-1787 and by the renewal of constitutional life at the first feudal Diet in 1791 with an outspoken "reformistic" character. The same spirit prevailed in the central administration of the country in the royal offices at Buda, where several able economists were activated not only in practice but also literarily. Under their influence the young generation became interested soon not only in cameralistic, but also in Physiocratic and in classical English economic ideas and the subsequent boom in the grain and cattle trade with the era of Napoleonic wars gave a further impetus to free-trade ideas.²

So there is no wonder that the brightest young economist on the turn of the 18th and 19th centuries, GERGELY BERZEVICZY (1763-1822) was trained in this central royal economic administration after finishing his university studies at the best Central-European University in Göttingen with strong capitalistic affinities and after a Western European travel in France, England and Belgium. His brilliant career came to a brutal end by his involvement in the 1795 Hungarian Jacobinist plot and despite the fact that the English royal intervention saved his head and spared him from imprisonment, he spent his remaining life-span in banishment on his Northern Hungarian estates as a gentleman farmer and became the author of the best economic treatises of the epoch.³ His four analyses on a broad

¹ HORVATH, R. A.: The Interdependence of Economic and Demographic Development in Hungary (From the Middle of the 18th to the Middle of the 19th Century), in *Population and Economics*, Ed. by DEPREZ, P., Winnipeg, 1970., pp. 127-139.

² From the SAME AUTHOR: *L'Edit de Tolérance de Joseph II et ses Conséquences Economiques*, in *Colloque sur la Tolérance Civile de l'Université d'Etat à Mons, Bruxelles-Mons*, 1982., pp 141-151, — *Monetary Inflation in Hungary during the Napoleonic Wars*, *The Journal of European Economic History*, 1976, Nr. 3, pp. 651-662.

³ From the SAME AUTHOR: *Economic Analysis in the Works of Gergely Berzeviczy*, *Acta Universitatis Szegediensis, Juridica et Politica*, Tom. XVIII. Fasc. 1., Szeged, 1971, Monography with English summary on pp. 105-107, — and *The Problems of Statistical Method and Theory in the Works of Gergely Berze-*

statistical basis of the Hungarian macro-economic problems culminated in theoretical observations and conclusions in the Smithian spirit and were raising heavy controversies and had a deep impact on economic and general political thinking among his contemporaries.⁴ His fifth and biggest work a synthesis of his economic ideas finished around 1819 in the form of a theoretical economic text-book was retained by the censorship of the Saint-Alliance regime and was only printed and translated into Hungarian in 1902 by the Hungarian Academy of Sciences.⁵ Notably, he wrote in Latin for his ruling-class, the Hungarian nobility, but several of his published works were also printed in Germany — so he became a member of the Göttingen Scientific Academy. Some of his works were printed even in Hungarian or circulated in handwritten copies.⁶

II. BERZEVICZY was the first to give a conscious and scientifically well based exposition of the problem of labour in Hungarian economics and in close connection with the main basic-economic problems. This kind of explanation was a logical consequence of the economic situation developed after the liberation from Turkish domination, as the central part of the country was devastated and depopulated and the shortage of labour, that of capital and know-how and the lack of supporting social institutions were the greatest obstacles to a rapid capitalist take-off, — among them the mightiest social factor being the existing feudal system itself.⁷

Against the labour shortage the cameralist thinking of the Habsburg Empire was advocating a colonization-policy based on the German population of the territories under their rule, the Holy German-Roman Empire included. These relatively well-to-do agrarian and handicraft strata of German and Austrian population had to be heavily supported and financed to migrate into Hungary and this measure was shown too expensive to be applied to a greater extent.⁸

The mainstream of the migration towards the central and southern

viczy (1763-1822), Budapest, 1972, Monography with English summary on pp. 131-135, — and *L'Interdépendance des Facteurs Economiques et Démographiques dans la Pensée de Grégoire Berzeviczy*, Population, 1970, No 5, pp. 975-987, with English and Spanish summaries.

⁴ BERZEVICZY, G.: *De Commercio et de Industria Hungariae, Leutschoviae, 1797*, — *De Conditione et Indole Rusticorum in Hungaria*, n.p., n.d. (most probably from 1804-6), — *Ansichten über den asiatisch-europäischen Welthandel nach dem jetzigen Zeitbedürfnis betrachtet*, Pest, 1808, — *Die Erweiterung des Nordischen Handels dem hohen Wiener Congress untertänigst dargestellt*, Wien, 1814.

⁵ From the SAME AUTHOR: *De Oeconomia Publico-Politica*, Manuscript, first printed by GAAL, J.: *The Life and Works of Gergely Berzeviczy*, Vol. I-II, Ed. by FÖLDES, B. on behalf of the Economic Committee of the Hungarian Academy of Sciences, Budapest, 1902. (Hungarian text, with the translations of BERZEVICZY's works cited under (4) and (5).)

⁶ From the SAME AUTHOR: *Ungarns Industrie und Commerz*, Weimar, 1802, — *Die Lage der Bauern in Ungarn*, in *Göttingischer Magazin*, 1806., — *Considerations on the Asiatic-European Trade adjusted to the Needs of the Present Time*, Pest, 1808, (Hung. text), — *The Enlargement of the Northern Trade elaborated to the high Congress of Vienna*, Vienna, 1814, (Hung. text), — 3 handwritten copies of the work "*De Conditione et Indole Rusticorum*, etc." are preserved in the Hungarian National Széchenyi Library.

⁷ HORVATH, op. cit. under (1).

⁸ A sound Hungarian evaluation of this policy was given by FEJES, J.: *De Populatione in Genere et in Hungaria in Specie*, Pestini. 1812, — and HORVATH, R. A.: *Les Débuts de la Démographie en Hongrie*, János Fejes, Population, 1965. No. 1, pp. 109-122. (With English and Spanish summaries)

parts of the country came from the northern and eastern mountainous parts and also from the south, from the people still under Turkish rule. Ethnically the Hungarian element in this resettlement was playing a secondary role, mainly Slovaks from the north and Serbs from the south composed the bulk of this migration and also to a lesser extent some Rumanians from the east. The Western colonists were settled on a property basis, becoming autonomous farmers or craftsmen, but the the majority came under feudal landlords if not under municipality rule. The conditions of these resettled serfs became however much more favourable than in general and even the possibility to buy a complete free-peasant status was not excluded among the incentives of the resettlement.⁹

The strict enforcement of feudal duties in Hungarian agriculture because of the obsolete production and distribution system of this out-of-date economy was impoverishing not only the peasantry all over the country, but also their landlords gradually, that was the result of BERZEVICZY's famous economic statistical calculations in his second treatise around 1804-6, after he described and analyzed his country's economic resources and problems in 1797. Notably, he demonstrated on the basis of a yearly microeconomic production and consumption balance the total inefficiency of an average feudal peasant farm-exploitation and on the macro-economic level he analyzed the complete taxation returns of the country to arrive at the same conclusion.¹⁰

The shortage of labour according to BERZEVICZY's argument was in the first place not due to the failure of colonization or to the unsatisfactory momentum of the internal migration, but to the generally inefficient use of the existing labour-force in the feudal agriculture. Even if there was some surplus locally existing in the latter, it was not able to maintain the drive for industrialization as the system of guilds in the towns gave no way to such expansion. According to the calculations of BERZEVICZY the share of the urban population in Hungary at the turn of the century was no more than 5 %, in comparison to the fact that England was nearing to 50 % at the same time. The capitalist take-off — according to his views — in this first period would require clearly a faster growth of population from the point of view of industrialization and so he was firmly against the ideas of MALTHUS and adhered rather to the tenets of SAY.¹¹ But he went even further than that, anticipating the ideas of MARX or those of LEWIS in our century in this field.¹²

III. From this extremely short summary of the views of BERZEVICZY already the comprehension of the interrelations of the main economic variables could be deduced. However to demonstrate the deep insight and the strict logics of his comprehension of the complexity and the functioning of the capitalist economic system and its potential economic growth in the

⁹ HORVÁTH, R. A.: *La Population de la Hongrie au 18e Siècle, Contribution au Congrès Mondial de l'Association Internationale des Sciences Historiques*, Bucarest, 1981. (Mimeographed)

¹⁰ HORVÁTH, op. cit. under (3) on second place, Chapters III and II, pp. 43-61, and 24-42 resp., and the 12 statistical tables of taxation in the Annexe, pp. 139-162.

¹¹ From the SAME AUTHOR: *Malthusian Ideas on Population in Hungarian Demography before World War II*, *The Journal of European Economic History*, 1972, Nr. 2, pp. 272-297.

¹² LEWIS, A.: *The Theory of Economic Growth*, London, 1955, — with references to MARX.

up-to-date sense, it is possible to reconstruct his ideas as a first Hungarian economic model, as I have shown some ten years ago in a monography on BERZEVICZY's statistical ideas.¹³

The procedure I have chosen was inspired by COURNOT and by the Schumpeterian spirit of the history of methodological analysis.¹⁴ COURNOT was, of the opinion that the verbal economic analyses of RICARDO lend themselves easily for a mathematical-economic reformulation because of their strict logics and their clear-cut relationships.¹⁵ The same is true as regards the verbal economic framework deployed by BERZEVICZY. For its reformulation I chose the ADELMAN-HAAVELMO growth model from the 1960ies because of its close adaptability to the economic ideas of BERZEVICZY to venture into this field.¹⁶ There is no need of course to review the complete apparatus of the ADELMAN-HAAVELMO model for a remodelling of the growth theory of BERZEVICZY and especially that of the part played in it by the labour factor. It is enough to restrict ourselves to its theoretical hard-core and to its underlying hypotheses.

The point of departure is furnished by the basic idea of BERZEVICZY's theoretical economic analysis of development, i.e. that the main economic criterion of any kind of economic growth must be equivalent to the increase of the aggregate national product of the system during a given time. In other words BERZEVICZY's approximation is identical with the national product approach connected with the national income approach as these are the two main economic variables of the economic system in their interrelation. It was also evident for him that the aggregate national product may be measured the most conveniently by the share of per head average product of population on a yearly basis, — even if abstraction is made from the way of distribution, that is to say from the real per head product according to the different degrees of realization by individuals or by different classes of the population. The main economic, social and political argument of BERZEVICZY partly runs against this distortion effect of the feudal system, but analytically the problem enters on a later stage, — that he clearly understood. The starting point is the increase of the average per head product in this first stage, which under the above assumption during a "t" period may be measured by an additional real growth not only individually or locally but generally, i.e. per capita.

The other main line of BERZEVICZY's argument in favour of the capitalist mode of production and its competitive distribution by free trade is a consequence of this line of thought by stressing that this mode of production and way of distribution is the most efficient accelerator of the growth of the per head product, despite the possibility of a distortion effect ensuing from an unfavourable development of the "terms of trade" in an open economic system. This problem historically was one of the most serious ones between the Austrian and hereditary provinces of the

¹³ HORVATH, op. cit. under (10), Chapter VIII, pp. 121-127.

¹⁴ COURNOT, A. A.: *Recherches sur les Principes Mathématiques de la Théorie des Richesses*, Paris, 1838, — and SCHUMPETER, J. A.: *History of Economic Analysis*, Ed. from Manuscript by BOODY-SCHUMPETER, E., Third Printing, New York, 1959.

¹⁵ COURNOT, op. cit., Préface, pp. IV-VI.

¹⁶ ADELMAN, I.: *Theories of Economic Growth and Development*, Stanford, Second Printing, 1964, — with reference to HAAVELMO, T.: *A Study in the Theory of Economic Evolution*, Amsterdam, 1964.

Habsburg Empire on the one part and between Hungary on the other part, and it was analyzed by BERZEVICZY in his 1797—treatise already with the help of an abstract economic schema.¹⁷

By supposing at the first stage of analysis a closed economic system as he did, however he was aware of the fact that the "inputs" and "outputs" of the system are not exclusively "pure" factors in the economic sense. They are interrelated with the factors of the social system and even with that of the cultural environment and consequently, they must be incorporated into a comprehensive theory of a "public political" economics, i.e. into the macromodel. On this basis the production function figuring in the ADELMAN-HAAVELMO—model are becoming identical according to the latter's connotation in the following formulation:¹⁸

$$Y_t = f(K_t, N_t, L_t, S_t, U_t),$$

where

Y_t = the output rate of the national product in a given "t" time

K_t = the system's input of capital and maintenance during the same time period

N_t = the input or utilisation rate of natural resources during the same time

L_t = the employment rate of the labour force during the same time

S_t = the input rate of the disposable "know-how" of the social system during the same time, — i.e. including not only the input rate of technological innovations, but the changes in the skill of labour force and increases in its general culture and intelligence during the same time

U_t = any other changes in the social and cultural environment not included in the above factors, represented by their aggregated complementary input effect during the same time.

The use of this form of production function at this stage does not consider the right side of the equation as a function of time, which is however not identical with the supposition that the changes in the different factors enumerated between the parentheses are not interconnected at the same time, that is to say they are supposed to be not independent.

The factor "K" represents the input of the physical capital, i.e. that of the physical volume of capital and not the rate of utilization of investments as nowadays is more usual for analytic purposes. The statistical measurement of the former is surely more difficult than that of an investment rate, but in an economic system at the beginning of the capitalist take-off, when the general rate of growth may be supposed to be extremely high, this solution should be considered theoretically more appropriate as the up-to-date one. This is in close conformity with BERZEVICZY's views, who did not elaborate a theory of investment and spoke generally of the effect of the aggregate physical volume of capital.

The same remark is valid as concerns the factor " N_t " of the rate of input of the natural resources, which is considered as a parameter to be constant in actual statistical and economic theory or if referred to separately it is to be included into the " K_t " input rate of capital. BERZEVICZY under the strong influence of Physiocracy attributed a special importance to the different productivity rate of the different types of land freshly

¹⁷ BERZEVICZY, op. cit. under (5).

¹⁸ ADELMAN, op. cit. under (16), Chapter II: A General Framework for Analysis, pp. 8 and furth.

incorporated into capitalist production and so his emphasis was a more outspoken one than that of SMITH or even RICARDO.

Another problem arising in connection either with "N_t", or especially with "L_t", is due to the fact that the rate of both of these variables is never homogeneous because of their highly heterogeneous structure. Their composition and quality is heavily influenced by changes of social and cultural character as represented in the right side of the equation by the factors "S_t" and "U_t." MARX referred to these phenomena as the "laws of motion of the whole society"¹⁹ and the ADELMAN-HAAVELMO — model expressed this complex interdependence by the assumption that any production factor included into the right side of the basic production function — from "K_t" to "U_t" — may be considered as heterogeneous in its structure containing a great amount of components none of them homogeneous. For example the input volume of physical capital and maintenance is a vector in itself as an aggregate volume of several concretely differing components in the form:

$$K_t = (K_{1t}, K_{2t}, K_{3t}, \dots, K_{jt}),$$

where K_{1t} or K_{jt} are designating a "K₁" and a "K_j" specific type of capital equipment which are utilized during a period "t". Naturally, all other factors outside of "K_t" must be constructed under the same vector pattern to meet this important requirement of the model. BERZEVICZY was in this respect very explicit, when he rejected the one-sided productivity theory of the Physiocrats — which was called recently by DENIS a "conceptual error"²⁰ — and he stressed "expressis verbis" that the capital input employed in industry, trade, transport or communication has to be considered as productive as that employed in agriculture, in its greatest variety.²¹

Going back for one moment to the social and cultural production factors and to their equally vector-like composition, this is not only a consequence of the changes underlying in "U_t" itself, which was dealt with especially by MARX, but it is also manifestly the case concerning the changes intervening in "S_t" itself. The ADELMAN-HAAVELMO model to provide an explanation for this kind of complexity insists on the fact that the factor "S_t" contains an "entrepreneurial type of activity", too. This is the provision for such quantitative changes in the factors of production — land, capital, labour, etc. — which are not only functions of endogeneous, but also of extraneous factors. This provision implies however, that the combination of factors of production in this latter case could deviate from the optimal one and the costs of production may be augmented because of this special provision effect, — a specification not present in BERZEVICZY's thought.

A further development of the ADELMAN-HAAVELMO model applied to the theoretical framework of BERZEVICZY would require a step by step derivation on the assumption that only one production factor is changing in the "t" time, while the other ones are remaining invariable. This detail on the basis of the assumption of the "ceteris paribus" clause, was not

¹⁹ Ibid., — with reference to MARX, according to whom it is necessary "to lay bare the laws of motion of the society", — p. 17, and also Chapter V, pp. 60 and furth.

²⁰ DENIS, H.: Histoire de la Pensée Economique, Collection "Thémis", 2d augm. Ed., Paris, 1967, p. 168.

²¹ BERZEVICZY, op. cit. under (4) on the first place, — with reference to the Tableau Economique, Chapter X: Some Theoretical Reflections. (Latin text)

dealt with by BERZEVICZY. A next step is to make the whole production function a dependent variable of time, that is every production factor should be made a function of the time itself, — and not only globally, but for every component separately and inclusively in the form as given below for a "j" component of the first factor "K" and the last factor "U" on the right side of the equation:

$$\Delta K_j/\Delta t = k. (Y, K, N, L, S, U, t)$$

.....

.....

$$\Delta U_j/\Delta t = u. (Y, K, N, L, S, U, t)$$

In contrast to the first step the presence of this more important second one is outstanding in the thought of BERZEVICZY. The above system of equations has the important role to explain the effect of the several input factors — starting from the capital to the so-called "laws of motion" of the society — in the economic system as a whole, — including the problem, for how long a time is the system existing in the Marshallian sense as a "going concern".²² Or, putting it into modern scientific terms, what is the specific "age" of the economic system. In up-to-date economic theory the usual treatment of this problem is based on the simplifying assumption that a zero starting point "O" in time is chosen. So the combination of the starting conditions and the above detailed functions as variables of time may be taken for the structural parameters of the given economic system, or more strictly speaking for its structural coefficients, — as in the case of an input-output analysis based on the LEONTIEF-model.²³ The corresponding alternation in the production function would be represented as follows:

$$Y = Y(K_0, N_0, L_0, S_0, U_0; t; a_1, a_2, a_3 \dots a_j \dots),$$

where the factors from "K₀" ... to "U₀" are identical with the values of the "zero" starting point in time, and "a₁", "a₂" ... "a_j" and further, are structural parameters of the system for subsequent "t" times. It seems to be evident that such a starting point in time could be chosen only in periods when the historical change is relatively great and the dividing line between the past and the present is sharp enough for a clear separation of the two situations from the point of view of economic development.

BERZEVICZY consciously identified the change from feudalism to capitalism as such a marked change, when the autonom development of the economic system and its smooth running — or its relative equilibrium — responds not only to quantitative changes in the so-called purely economic production factors as "K", "N", "L", but is disturbed by the factors of "S" and "U" of the past. So they are not positively influencing — neither quantitatively nor qualitatively — the economic development. He identified as such e.g. the burdensome effects of the feudal taxation system and that of the feudal tax gathering system as institutional factors not only economic,

²² MARSHALL, A.: Industry and Trade, London, 1919.

²³ LEONTIEF, W.: Input-Output Economics, Collected Essays, New York, 1966, Essay 7: Input-Output Analysis (1965), pp. 135 and furth.

but social and legal. Against them he awaited a positive effect from the introduction of the capitalist property system for the peasantry and a corresponding revenue tax system in monetary terms. He considered these as wider endogeneous problems of the economic system itself, while he identified the establishment of the "continental blocade" in Europe by NAPOLEON as an exogeneous factor, which may correspond to another "O" starting point in time on the basis of which a new system of European continental trade may developing parallelly with a new kind of production equation system and a new relative equilibrium as a result.

IV. With this latter problem we want to end the reformulation of BERZEVICZY's economic ideas in the framework of an economic macro-model and we want rather to turn our attention to the problem of labour in his thought, how it presents itself in a confrontation with the views of two great classical economists in England, that is to say compared to the views of SMITH and RICARDO.²⁴

It is a well-known fact that in early classical economic thinking the problem of labour was mostly included in the so-called "population problem" and was dealt with rather exceptionally separately, — a line of thought which the analysis of BERZEVICZY is following, even if in some details differing from them. This is more clearly felt in comparison with the views of RICARDO, which was developed later and most probably not known by BERZEVICZY.

It is a well-known fact that SMITH' exposition as regards the interdependence of economic and demographic factors was based on the three productive factors, those of labour, capital and land, "L", "C" and "N". However to characterize his analytic ideas in modern terms, one could say that he considered the marginal productivity of labour and land as a dependent variable of capital and that of the social and cultural institutions. — i.e. of "K", "S" and "U". Another assumption of his was that the price paid for the use of land is in reality a monopolistic one, or expressed otherwise, the volume of land at economic disposal is a fixed quantity.

He supposed as well the starting conditions and the economic behavior of the "economic men" as given ones and so the resulting economic growth or decline became determined by the social and institutional factors, the curve of which may be traced as cumulatively ascendant or cumulatively descendant graphically. Notably, the increasing demand during a take-off in his thought automatically implied an increasing demand for labour, too, resulting in population growth at an accelerating rate during the periods of prosperity, — and accordingly at an accelerating declining rate during a period of crisis. Hence the reversed L-shaped population curve opposite to modern population growth theories with a logistic curve as first traced by VERHULST and later on by PEARL and REED and also represented by the analysis of ADELMAN.²⁵

The latter's curve is more near to the ideas of RICARDO, who starting from the same three productive factors identified the productive capacity

²⁴ The summary of SMITH' and RICARDO's views on population is taken equally for convenience from ADELMAN, op. cit. under (16), Chapter III and Chapter IV, on pp. 24 and furth, and pp. 43 and furth, resp.

²⁵ HORVATH, R. A.: An Early Mathematical Estimation of Population: The Laws of Verhulst, 1844. — Contributed Papers, 42d Session of the International Statistical Institute, Manila, 1979, (Mimeographed) — with references to PEARL and REED.

of the economic system and accordingly the rate of its growth as a slow-down process because of the decreasing marginal productivity of land. He supposed that the extension of agricultural production requiring the use of more and more extensively usable land is slowing down equally the marginal productivity of capital and labour on the long run, too, — despite the fact that the social and institutional factors — "S" and "U" — are augmenting the marginal productivity of "K" and "L" for the long run. — Hence the parabolic — may-be logistic — trend of the whole process in the Ricardian thought.

Despite the similarities of the views of the two great classical economists, ADELMAN worked out three specifications leading to a different and more pessimistic interpretation of capitalist growth in the Ricardian analysis when confronted to that of SMITH.²⁶ First, RICARDO accepted the population growth rate to be "dependent" on economic growth but not "proportional" with it. — Second, RICARDO recognized as an obstacle of further population growth the discrepancy between the "market-rate" and the "natural-rate" of the price of the labour force, while SMITH never attributed such an effect to the latter, — to the so-called "rate-of necessity" in his wording. Notably, — and this is the source of the third deviating interpretation of the problem with RICARDO — the rate of necessity was determined in the Smithian system by the biological and physiological wants of the working classes, while in the Ricardian system — according to the supposition of the falling rate of productivity — the necessity rate of salary is not a — long run — constant. Its level is oscillating historically, — and more so, because of the ascending trend of the costs of production of the labour-force, but also because of the growing level of wants during a growth period. From these Ricardian tenets two important population policy principles may be deduced — according to the analysis of ADELMAN²⁷: (1) the slow-down of population growth-rate may be — at least for a while — augmented with the help of the amelioration of agricultural technique and/or by the way of the import of foodstuffs, and (2) it may be further slowed-down by the pressing-down of the necessity rate of the price of the labour.

The position of BERZEVICZY in this whole problem is thus from every respect more near to SMITH than to RICARDO. There is no decreasing marginal utility present in his thought and accordingly, no slow-down of population growth. His optimism surpassed even that of SMITH, when he assumed that the historically growing rate of the necessities of the working classes is the main factor which is accelerating — through the additional labour-demand — not only population growth, but subsequently also the economic growth by a kind of "multiplier-effect".²⁸ He held even that the marginal productivity of land could be increased not only when the best lands are still at disposal, i.e. at the take-off period, but also in later stages, and secularly, through the cumulative effect of free trade and implemented production technology.

²⁶ ADELMAN, op. cit. under (16) — pp. 29 and furth. and pp. 47 and furth., resp.

²⁷ Ibid. pp. 51 and furth.

²⁸ HORVÁTH, op. cit. under (3) on the second place, Chapter VII, pp. 104 and furth. — with reference to KEYNES, J. M.: *The General Theory of Employment, Interest and Money*, London, 1936. — It may be noted that BERZEVICZY calculated for a developed economic system with a multiplier value of 3 (!).

Despite being completely aware of the retardation effect of the social and cultural factors in the old feudal system, he never implied the possibility of developing such "circulus vitiosus" situations as a hundred years later SCHUMPETER has done regarding the interdependence of economic and population growth.²⁹

In sharp contrast to this optimistic appraisal of the capitalist system, BERZEVICZY developed a deep comprehension of the inner contradictions in the whole capitalist economic and social system itself. But as an economist and social scientist of the take-off period of capitalism — anticipating its future victory in Hungary over feudalism — he dealt with this inner contradictions rather rudimentarily and tentatively. However, the impression one could gather from his economic writings is that he forethought this inherent problem of capitalism on a more wide and more serious scale than the petty bourgeois "third way" alternative of SÜSSMILCH half a century before him.³⁰

His scruples and his hints towards possible implementation by not only humanitarian but by rather socialist-like correctives as solutions are pointing — even if vaguely — beyond the limits of the capitalist system itself, — that is the summary of our conclusion from this rather sketchy econometric analysis of BERZEVICZY's economic thought, far ahead not only of Hungarian theoretical economics but being also in the front line of European economic thinking in general of his epoch.

²⁹ ADELMAN, op. cit. under (16), Chapter VI, — with reference to SCHUMPETER's works and theory, pp. 94 and furth.

³⁰ HORVÁTH, R. A.: "L'Ordre Divin" de Süßmilch, Bicentenaire du Premier Traité Spécifique de Démographie (1741-1761), Population, 1962, No. 2, pp. 267-288.