Population Theories in Hungary in the Late XVIIIth Century

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Population theories seek to present in the form of theoretical models the relationship between all the factors that influence the development of populations. The starting point still remains the work of Malthus at the turn of the XVIIIth century, which drew on a rich variety of earlier writing on population. Schumpeter acknowledged the importance of this earlier work in his *History of Economic Analysis*,[1] and argued that the growing interest in population problems derived in part from theoretical issues posed by the links between demographic development and employment levels, profits and living standards, but also from the practical problems that faced those European societies which had experienced depopulation and were "poor in goods but rich in possibilities." In this respect he mentioned Germany and Spain,[2] but one of the most outstanding examples in the XVIIIth century was Hungary.

Hungary was partially liberated from Turkish rule in the XVIIth century (between 1687 and 1699) and it was only in 1718 that the Turks were finally expelled. Their devastations and the gradual nature of the process of liberation gave rise to major problems of depopulation, which is why these problems became a matter of public concern long before the debate on the state of the Hungarian economy proper took shape. It was then generally believed that a more abundant labour supply would automatically bring about an increase in production and enable the country to quickly shrug off its poverty.

A central feature of Hungarian public administration in the early XVIIIth century was the constitutional arrangement whereby the Habsburg monarchy, with each extension of its power over the country (in 1687, 1723 and 1764), shared power more closely with the feudal Diet composed of the Hungarian nobility and prelacy. Control over public finances was shared between the two throughout the period of the military struggle against the Turks. But

[1] SCHUMPETER, J.A., *History of Economic Analysis*, Edited by Boody-Schumpeter, E., Third Printing, New York, 1959, Chapter 3, The Consultant Administrators and Pamphleteers, pp. 143 ff.

[2] *Ibid.*, Chapter 5, Population, Returns, Wages, and Employment, pp. 250 ff.

[3] *Ibid.*, pp. 199 ff., — delineating the development of public finance in general, — and on p. 147 as the only exceptions: Hungary and Switzerland.

as the Habsburg rulers became more absolutist in their pretensions, these constraints became increasingly irksome — in particular for Maria Theresia and Joseph II. It is not surprising, therefore, that population questions were initially addressed largely in formal and legalistic terms in the legislative acts of the Diet. It was only in the later period of the Enlightenment that commentators and administrators began to address population issues more directly, but it was not until the early XIXth century that these discussions were to be fully separated from administrative and juridical concerns.[4] By then Hungarian thinkers had become deeply influenced by the ideas of Malthus.[5]

Of the Hungarian thinkers who addressed population questions in the XVIIIth century, only István Hatvani made a contribution of international importance when he drew up a partial but accurate table of infant mortality based on probability calculus. But this was an isolated case and had little impact inside Hungary, and no official interest was shown in the implication of his work — in which he claimed that a reduction in infant mortality would quickly increase the size of the population. However, some of his best students did have an important influence in some areas of public health where they advocated better care for children and the provision of training for midwives.[6] In general terms, Hungary remained in great part isolated from the debates on population theory until the final decade of the XVIIIth century when a major public debate on demographic issues began to flourish.[7]

The Debate before 1740

The first direct reference to the need to repopulate the areas devastated by Turkish occupation can be found in an instruction issued by Archbishop Leopold Kollonich, the Chancellor to Leopold I, in 1689, which used the classical mercantilist formula "*ibi populus, ubi obulus.*" This instruction — entitled *Einrichtungswerk des Königreichs Hungern* — looked to solve the problems of population and property together and to improve productivity not only in agriculture but also in industry and trade in line with the thought

[4] Horváth, R.A., L'Edit de Tolérance en Hongrie: histoire et appréciation critique, in *La Tolérance Civile*, ed. Crahay, R., Bruxelles-Mons, 1982, pp. 141 ff., esp. pp. 149 ff.

[5] Horváth, R.A., "Malthusian Ideas on Population in Hungarian Demography before World War II," *The Journal of European Economic History*, 1972, n. 2, pp. 272 ff., — and: "Malthus et la Hongrie du XIXe Siècle," in *Malthus Hier et Aujourd'hui*, ed. Fauve-Chamoux, A., Paris, 1984, pp. 99 ff.

[6] Horváth, R.A., "The Development of Political Arithmetics in Hungary," in *Essays in the History of Political Arithmetics and Smithianism*, Acta Universitatis Szegediensis, Juridica et Politica, Vol. XXV, Fascic. 2, Szeged, 1978, pp. 17 ff.

[7] This periodization coincides roughly with that of Kautz G.: *The Development of Economic Ideas* in *Hungary and their Influence on Social Conditions*, Pest, 1868, p. 82. /Hung. text/.

of late XVIIth century Austrian mercantilists like Becker, Hornigk and Schröder. But the first serious Hungarian economic historian, Gyula Kautz, argued that although the four Diets between 1712 and 1741 were inspired by these principles they did little more than pay lip-service to them in principle in their legislation.[8]

As the Habsburg administration grew stronger, its principal concern was to assess Hungary's fiscal resources more effectively and between 1718-21 a general property survey and census was carried out on the orders of Charles III (Charles VI by his Imperial title). On the basis of this census the historian Acsády estimated that Hungary's population at that time was about 2.3 million, although later demographic research indicates that this was a serious under-estimate and suggests that the population was closer to 4.3 million when allowance is made for the defects of the census (failure to take account of tax evasion, of migrant groups and the technical short-comings of the census itself).[9]

The Hungarian nobility took little notice of this initiative by the Habsburg administration and the Diet of 1723 stressed the need for an accurate census, but there was very little information available except for a single description by Matthias Bél written between 1735-43 which was composed in the style of Conring and contained no statistical information.[10] Bél was a school teacher from Lozsony (modern Bratislava in Slovakia), the capital of what was known as "Royal Hungary" which had remained under Habsburg rule throughout the Turkish occupation. He was the first to introduce the old style of descriptive statistics pioneered by Conring which he had learned at the University of Halle where he had studied the fashionable course in administrative law. An even greater influence on his masterly description of the "present state of Hungary" came from writers of the Italian Renaissance like Galeotto Marzio and Bonfini — both of whom had been active at the court of Matthias Corvinus, the last Hungarian born ruler, in the late XVth century. Their work had first been imitated in the description entitled *Hungaria* compiled at Brussels in 1536 by the Chancellor of the widow of King Lewis II, the Archbishop Nicolas Oláh.

Bél discovered and published Oláh's treatise and began to read the Italian authors more closely, especially Flavio Bondio and Muratori as well as the French writer Jacques Bongart. In his own *Notitia Hungariae Novae Historico-Geographica* Bél provided a highly detailed, albeit not quantitative, de-

[8] *Ibid.*, pp. 85 ff.

[9] Acsády, I., *The Population of Hungary in the Era of the Pragmatica Sanctio*, Budapest, 1896. /Hung. text/.

[10] Horváth, R.A., The Development of Hungarian Descriptive Statistics," *Publications of the Hungarian Demographic Research Institute*, N. 13, Budapest, 1966, Chapter I, pp. 13 ff. /Hungarian text/, — with reference to Bél, M.: *Notitia Hungariae Novae Historico-Geographica*, Vol. I-V, Vienna, 1735-1742.

scription of the whole country county by county with a wealth of information on the population. His approach was essentially ethnographic and he gave minute descriptions of the origin, nationality, ethnic features, language, customs and way of life of the population in each locality, as well as discussing their social stratification and the distinctions between the nobility, the towns-people and the peasants. He also described the country's administrative organization and the situation of the principal towns, markets, villages, fortresses and castles.

An important aspect of Bél's work was the scale of the enterprise which involved not only Bél's own students but also the active support of the Habsburg authorities and local government. Only part of the entire work was ever published, but it was to have great influence and a new abridged version of the original Latin text was published in the last decade of the century in Hungarian.[11]

The Second Period: 1740-1790

The Diets of 1741 and 1751 again stressed the need to encourage population growth, but continued to look to mercantilist remedies. The 1751 Diet proposed encouraging the expansion of manufacturing as a solution, while its successor in 1764 advocated abolishing the guilds and introducing a free market for industry.[12]

There were two reasons why the Hungarian ruling class was prepared to rely on mere declarations of principle for so long. The first was closely linked with the activities of the commissions set up by the Habsburg rulers to redistribute uncultivated lands which operated entirely to the advantage of non-Hungarian nobles except for a handful of staunch Habsburg supporters within the Kingdom. The second was linked to the efforts made by the Habsburg rulers to increase fiscal revenues in order to modernize Hungary's shattered administrative structures and devastated economy. Since the nobility were exempt, the tax burden which supported both the nobility and the administration fell entirely on the peasants whose resources were already exhausted. In 1751 the reforms introduced in the hereditary provinces by the Habsburg monarchy brought the fiscal exemptions of the nobility to an end, but did not extend to Hungary — the Hungarian Diet rejected both the overall increase in the tax burden and the manner in which it was to be redistributed. The only solution open to the monarchy was to suspend the Hungarian constitution, which was done in 1764, and to attempt to reform the whole system of serfdom and taxation.

These issues necessarily long over-shadowed the problem of under-

[11] Vályi, A., *The Description of Hungary*, etc., etc., Vol. 1, Buda, 1796, Vol. 2-3, ibid. 1799. /Hungarian text/.

[12] Kautz, *op. cit.*, pp. 102 ff.

population, and in so far as this was discussed it was in the context of the resettlement of uncultivated and abandoned land. It was generally held that this could not be done without removing the burdens of serfdom and the legal constraints on the mobility of rural labour which threatened the interests of the feudal landowners. These central issues were accurately reflected in the literature on the population question that began to develop during this second phase.

A pamphlet entitled the *Opinio circa reformationem Regni Hungariae* was circulated anonymously by the government during the Diet of 1764. This drew attention to the need to repopulate large areas of the country and in general increase its labour resources. It argued that this could only be achieved through improving the conditions of the serfs, improving their general standard of living and limiting the privileges of the Hungarian clergy and nobility. The pamphlet also emphasized the need for a census capable of providing an accurate picture of the size, composition and condition of the population.

Another treatise by the well-known writer Ádám Kollar entitled *De Originibus et Usu Potestatis Legislativa* put forward similar ideas and was circulated at the same time, but both were firmly rejected by the Diet. The tense political climate that resulted is evident from the fact that one of the most perceptive administrators of the time, Baron Miklós Skerletz, was forced in 1764 publicly to deny that he was the author of an anonymous counter-tract, despite the fact that he had made enormous efforts to reconcile the conflicting interests of the Hungarian ruling classes and the equally essential need for economic reforms.[13]

With the onset of the absolutist regime after 1767, new limitations on the terms of serfdom were introduced which reduced the obligations placed on the peasants and did something to improve their living standards by allowing some limited freedom of movement. This was initially granted only to children, but under Joseph II it was made permanent. Strongly influenced by the ideas of the Physiocrats, Joseph II was eager to introduce a standardized tax system based on agricultural output (the *impôt unique*) and administered on the basis of the cadastral measurement and registration of all land. The first general census of the population was carried out as a result with the help of the army between 1784-5 and included the lands of the nobility. The archival material in the Vienna State Archives show that many Italian officers in the engineering corps of the Habsburg army were involved in this operation.

In parallel with the administrative centralization of the Habsburg Empire, a new differential economic system was introduced with the introduction of protectionist measures not only against foreign countries but also between the core and the periphery of inner "colonies" — Hungary, Lombardy and

[13] Berényi, P., *The Works of Baron Miklós Skerletz, written and translated from Latin*, Hungarian Economic Classics, Nr. XV. Budapest, 1914, p. 16, — with reference to the anonymous pamphlet entitled "*Vexatis dat in intellectum.*"

Belgium. But Joseph's over-reaching ambitions exposed all the contradictions and tensions in this system of "isolation" and it was tacitly abandoned by his successor Leopold II who started by convening the Hungarian Diet as soon as he came to power in 1790 and thereby restored the former Hungarian constitution.

Most of the economic literature of this period is loyalist in tone and fairly repetitive, as is evident from the work of József Izdenczy on tax reform (1777) and János Szapáry on Hungary's wealth (1784).[14] The only work of any interest in this period that touched on the population question was written by the Lutheran pastor Sámuel Tessedik, the first person to establish training schools for peasants. In two books published in 1784 and 1787 he argued strenuously for the development of an independent class of small peasant farmers in ways that amalgamated Physiocrat theories, the examples of Süssmilch and Frederick II, and the cameralist ideas of Sonnenfels.[15] These wide-ranging influences are indicative of the way in which European ideas and theories were beginning to permeate Hungary at this time as a result of the cultural polities adopted by the absolutist monarchy, particularly with regard to education.

Maria Theresia had introduced the *studium politico-camerale* at the academies founded for Hungarian and Croatian noblemen in 1752, and this was adopted at the Jesuit University of Nagyszombat (present-day Tirnava in Slovakia) and at Vienna University in 1760. The chair which had been created in 1765 for Sonnenfels in 1765 was later imitated at other Hungarian Academies of Jurisprudence, first at Nagyvárad (now Oradea in Roumania) in 1769 and then at Zagreb (in Croatia) and at Györ in Western Hungary. The *Ratio Educationis* of 1777 initiated a sweeping educational reform that reorganized the curriculum of the high schools and introduced the teaching of descriptive statistics — although not until the late 1780s in Vienna and only in the 1790s in Hungary.[16]

Despite these innovations, the new high school curriculum did not have a major impact on the debate on population problems. Most of the protagonists of this debate continued to come from foreign universities, with the single exception of Baron Skerletz who will be the principal subject of the third section of this article.

[14] KAUTZ, *op. cit.*, 124 et seq., — with reference to IZDENCZY, J.: *The Shortcomings of the Hungarian Tax System and the Necessity of a New Financial Structure*, Manuscript from 1777, printed first in Vienna, 1802, - count SZAPÁRY, J.: *Der unthätige Reichtum Ungarns wie zu gebrauchen*, Nürnberg, 1784, — and TESSEDIK, S.: *Der Landmann in Ungarn, was er ist und was er sein könnte*, Wien, 1784, Hung. ed. in 1786, — and *Ökonomisch- statistische Bemerkungen über den gegenwärtigen Zustand des Landeswesens in Ungarn*, Wien, 1787.

[15] HORVÁTH, R.A., "Tessedik als Sozialwissenschaftler," *Acta Universitatis Szegediensis, Juridico et Politica, Vol. XVI, Fascic. 6, Szeged*, 1969.

[16] KAUTZ, *op. cit.*, pp. 123 ff.

The Third Period: the final decade of the XVIIIth Century

Baron Skerletz came from a Croatian family of Italian origin named Scaliger.[17] The family had separated into a Croatian and a Hungarian branch so was bound by ties of kinship as well as history to Hungary. In the 1740s Skerletz attended high school in Hungary before going on to the Croatian College in Vienna where he studied philsophy, German law and literature. After spending a year at Bologna he finished his law studies at Eger in Northern Hungary. After taking practice in Pest he qualified as a barrister and in 1754 returned to Zagreb to practice at the bar since his family had become very poor. However, he quickly rose to the magistracy and for the rest of his life served as a senior government administrator.

Skerletz was a man of great learning; as well as Croatian he spoke not only Hungarian and German but Italian and French — and almost certainly English, not to mention Latin, as well. He had a fine sense of compromise, was honest, diplomatic and modest — he also shewed great physical courage on the occasion of an armed uprising. His principal expertise lay in the field of taxation and constitutional issues, and as a result he was sent by the Croatian Diet as a delegate to the Hungarian Diet in 1764 to help draw up the first reform programme. This proved a failure but in the new period of absolutism that followed he was appointed to the Croatian Chancellery and under Joseph II he became Intendant of Zagreb. Disillusioned with absolutist policies he returned to the legal profession, although he resumed the office of Intendant after the Emperor's death in 1790.

Then history began to repeat itself. He was again sent as a delegate to the Hungarian Diet convened by Leopold II in 1790 which resumed discussion of the reform proposals first put forward in 1764. Because of his outstanding experience and knowledge Skerletz was immediately appointed to the committee dealing with commerce and general economic affairs, and his written report (which was completed in less than two years between August 1791 and January 1793) offered a comprehensive and objective description of the state of the country together with a list of reforms that were needed and the measures necessary to bring them about. The report was divided into two parts, a *Descriptio physico-politicae situationis Regni Hungariae* and a *Projectum Legum,* the latter containing a full draft of the legislation necessary for implementing the reform programme together with detailed explanations of the reasons for the reforms and the ways in which they would encourage economic development.[18]

[17] BERÉNYI, *op. cit.*, pp. 3 ff.

[18] *Ibid.*, pp. 61 ff., — and pp. 117 ff., — with reference to SKERLECZ, N., *Descriptio physico-politicae situationis Regni Hungariae relatae ad Commercium,* published Posonii, 1802, — and: *Projectum legum motivatum in objecto Oeconomiae publicae et Commercii preferendarum,* published Posonii, 1826. /Hungarian transl./ — See also HORVÁTH, *op. cit.* under /8/, Chapter II, pp. 26 ff.

In this double-part study Skerletz created for the first time in Hungary what Schumpeter described as a "quasi-system", in which both advanced mercantilist principles and the ideas of Child and Smith were brought together, albeit with a strong emphasis on the need for state intervention.[19]

Skerletz approached the problem of under-population in terms of economic conditions, not simply the question of resettling abandoned land, and insisted on the links between population and the state of agriculture, industry and trade. Skerletz insisted that because Hungary was primarily an agricultural country the ideas of the Physiocrats were particularly well suited to analyzing its economic condition, but he did not commit the "conceptual error" of subordinating all economic issues to the primacy of agriculture. He was more concerned with the question of how to achieve broad-based economic growth and he argued that the development of the secondary and tertiary sectors were of no lesser importance. For the same reason he believed that the expansion of foreign trade was a pre-requisite of balanced growth and anticipating in some ways Riccardo's theories of comparative costs he set out an alternative to the detested "isolationist system" on which Habsburg commercial policy was premised.

Following earlier English writers like Petty[20] and Child, Skerletz devoted special attention to the issue of population and forcefully took up the arguments put forward by Temple[21] and others who had denied that trade and manufacturing diverted manpower from the production of primary necessities. His ideas on the role of money in foreign trade and as a force for international equilibrium derived not only from Sonnefels but also from Italian theorists like Beccaria and Galiani.[22] The pragmatic influence of his favourite philosopher, John Locke, is evident from the fact that he consulted the opinions of leading merchants in four of Hungary's most active commercial towns — Buda, Pest, Pozsony and Győr — while his wider views on human nature were deeply influenced by the ideas of Spinoza.

In his discussion of the demographic question,[23] Skerletz drew widely on the statistical data available which included the census conducted by Joseph II and also a number of more specialised inquiries. He put the size of Hungary's population at 8 million (excluding Transylvania) and calculated the

[19] CHILD, J., *New Discourse on Trade*, 1693, — and SMITH, A., *An Inquiry into the Nature and the Causes of the Wealth of the Nations*, Glasgow, 1776.

[20] PETTY, W., *Essay concerning the Multiplication of Mankind*, 2d Ed., 1686, — and SCHUMPETER, *op. cit.*, p. 256 note /8/, — with reference to Petty's views on the populousness of the Netherlands.

[21] TEMPLE, W., *A Vindication of the Commerce and Arts*, 1758, — a work written against BELL, W., *What Causes principally contribute to render a Country Populous? And what Effect has the Populousness of a Nation on its Trade?* 1756.

[22] SONNENFELS, J., *Grundsätze der Polizey-, Handlungs- und Finanzwissenschaft*, Wien, 1765, 2d ed. ibid., 1770, — with several references to Beccaria and Galiani.

comparative population densities of Hungary and Austria. In 1777 he reckoned that the average figure was 2,641 per square mile, but since the figures from Carinthia and the Tyrol were much lower he suggested that the population density in the mountain regions of Hungary would have been much lower than this. The cause, he believed, was the development of more extensive forms of agriculture and in particular livestock rearing that required more land while demanding less labour. This was particularly damaging for the population of the mountain regions since there was less seasonal and other work available for them.

.Skerletz estimated the active population at 1.3 million, the non-productive at 170,000. Taking 5.5 as the average family size this corresponds roughly to the ratio of the urban to the rural population. But he also pointed out that many urban artisans were also engaged in agriculture, especially on the Great Hungarian Plain where the insecurity of Turkish rule had encouraged the population to cluster around the towns. Skerletz was the first to identify this problem and also the fact that in the same area marshland and uncontrolled rivers also kept the population low (the same problems occured in certain parts of Western Hungary as well). Since his analysis revealed that the numbers engaged in industry were very low (no more than 30 per 10,000) and those of the landless wage labourers extremely high, Skerletz argued that the answer lay in industrial expansion, the abolition of guilds and monopolies, free trade and even mechanization. In a less progressive vein he also argued that the army should be recruited exclusively from the working classes.

The fundamental argument in Skerletz's analysis was of course the need to abolish serfdom once and for all through a redemption scheme organized over a 25 to 20 year amortization programme. In parallel he argued the need for land reforms that would reduce the estates of the great land-owners in order to halt the pauperization of the rural population. Sadly this was never implemented because the reforms of 1791-3 remained a dead letter owing to the Napoleonic wars and the settlement reached between the Habsburg monarchy and the Hungarian ruling classes. This resulted in the "second serfdom" that lasted until serfdom was finally abolished during the revolution of 1848.

This summary of Skerletz's ideas will serves to show that the problem of re-populating Hungary lay at the heart of the reform programme advanced by this key administrative figure. In his *Projectum Legium* he proposed that all foreign and Hungarian settlers should be given tax exemption for a period of six years, together with freedom from other obligations including military service. In the case of settlements on privately-owned land, the period of tax and other exemption was reduced to three years, but nonetheless re-settlements on private land achieved a real significance either at the initiative of individual landlords, or on a contractual basis and in some cases even through outright purchases of land, in ways that played an important part in undermining the *Ancien Régime* agrarian system.

In his own proposals Skerletz also made provision for resettling gypsies in rural areas and Jews in manufacturing regions — two quite new remedies to the problem of under-population. Foreign manufacturers were to be offered tax exemptions for up to ten years, although in the case of Hungarians this was limited to exemption from tax on profits and did not confer any monopoly. Skerletz also advocated an inspectorate of manufactures and the establishment of technical and practical training for parish priests and school teachers. He also put forward a national development plan for expanding manufactures, and in 1793 devised a plan for an investment fund to promote domestic and foreign trade.[24]

Skerletz was not influenced, therefore, by fears of the damaging consequences of capitalist development for population growth expressed by writers like Süssmilch, nor by their insistence on the need to find an alternative solution.[25] England provided very explicitly his guiding model and example.

The starting point of his analysis was, after all, the fact that some 790,000 rural wage labourers — nearly four and a half million people when their families are also taken into account, and so more than half the entire population of Hungary — were constantly exposed to the threat of famine. He was also well aware that the size of most of the over 500,000 peasant farms was hopelessly inadequate and that the living standards of the entire "misera plebs contribuens" who bore the main brunt of Hungary's tax system were desperately poor. In these conditions, Skerletz argued, even the preservation of a traditional demographic trend characterized by high fertility and mortality rates and slow rates of growth would require radical economic and social changes — faster growth would therefore necessarily demand correspondingly greater changes. The central feature of Skerletz's theory was quite simply that changes in patterns of population growth were inseparable from changing economic and social conditions.

Conclusions

Skerletz died in 1797 and his draft legislation was never enacted as law. None the less his ideas and writings had a major impact on the debate on population issues amongst succeeding generations in Hungary. Following in the best tradition of Enlightenment political arithmetics, Hatvani had already estimated in 1757 that the mortality rate was possibly declining and demons-

[23] For details see the translation of Berényi, *op. cit.*, under note 13.

[24] Rediscovered by Berényi, *op. cit.*, p. 50, — entitled: *Projectum de erigendo fundo Regni Publico*, 1793.

[25] Horváth, R.A., "L'Ordre Divin" de Süssmilch, Bicentenaire du Premier Traité Spécifique de Démographie (1741-1761). *Population*, 1962, Nr. 2, pp. 267 ff., - and *Id. Die Probleme von Süssmilch-Forschung - Gestern und Heute*, (In the press).

trated that even a relatively slight decline in infant mortality could result in an overall fall in mortality rates of the magnitude of 25%.[26]

Márton Schwartner, one of the leading Göttingen-trained statisticians at the University of Pest, estimated that the Hungarian population would double in as little as 50 years if constraints on population growth were removed.[27] He was the first writer to introduce scientific theories on demographic development to Hungary. He depicted Graunt as the Columbus of this new science, and he demonstrated in much clearer fashion than Skerletz how the new theories of Malthus differed from the traditionalist ideas of Süssmilch.[28] The Italian historian of statistical methods, Gabaglio, rightly recognized Schwartner as a fore-runner of Quetelet.[29]

His contemporary János Fejes was the first authentic Hungarian demographer, and was responsible for devising the first system of "population lists" for measuring the active population which were used for compiling the 1804-5 census. In 1812 — thirty years before Christoph Bernoulli — Fejes wrote the first genuine manual on population theory (in Latin) in which Hungary's population was likely to double over the course of a century given the existing checks[30] — a prediction that was to prove very accurate.

Skerletz's detailed study of a single country and his utilization of official statistical data also encouraged Márton Schwartner to develop a *"statistica specialis"* based on the Josephine census — a major departure from the more superficial comparative statistical studies covering a number of European countries in the style of Achenwall and Schlözer.

But the most important of Skerletz's followers was Gergely Berzeviczy, a young and gifted civil servant in the Hungarian central administration whom Skerletz met at the last Diet to be held in the XVIIIth century. Not only did Skerletz provide him with advice and encouragement but he also bequeathed him his notes so that he could continue his work.[31] Berzeviczy subsequently

[26] From *Id., F021 'The Scientific Study of Mortality in Hungary before the Modern Statistical Era', Population Studies,* 1963, Nr. 2, pp. 187 and furth., - with reference to HATVANI, S., *Introductio ad Principia Philosophiae Solidioris,* Debrecini, 1757.

[27] From the *Id., op. cit.* under (8), Chapter III, pp. 37 and furth., - with reference to SCHWARTNER, M., *Statistik des Königreichs Ungern,* Pesth, 1798, - 2d ed. in 2 Vol., Ofen, 1809-1811.

[28] *Id., op. cit.* under (5) (1984).

[29] *Id.,* 'De Christophe Bernoulli à Achille Guillard - Les Tentatives de Création d'une Discipline Démographique Autonomé au Milieu du XIXe Siècle; *Population,* 1980, No. 4-5, pp. 893 and furth.

[30] *Id.,* 'Les Débuts de la Démographie en Hongrie: János Fejes', *Population,* 1965, Nr. 1, pp. 109 ff., - with reference to FEJES, J., *De populatione in genere et Hungaria in specie,* Pestini, 1812.

[31] *Id.,* 'L'Interdépendence des Facteurs Economiques et Démographiques dans la Pensée de Grégoire Berzeviczy', *Population,* 1970, Nr. 5, pp. 975 ff., - with reference to BERZEVICZY, G., *De Commercio et de Industria Hungariae,* Leutschoviae, 1797, -

established himself as the leading economist and economic statistician in Hungary in the early XIXth century, developing a fully coherent system of classical economics and an early theory of "population economics" in the course of the debates on Malthus's ideas. In a recent paper I have attempted to reformulate his tenets in an econometric model based on his population theory.[32]

Through Berzeviczy Skerletz inspired a whole generation of Hungarian reformers down to 1848, but their influence can be traced through the late XIXth century as well through the work of leading Hungarian economists like Fényes, Kautz, Konek and Földes who pioneered a completely new phase in the analysis of population problems in Hungary and whose ideas paved the way for the new questions and models that would come to the fore in the XXth century.

see also two monographs HORVÁTH, R.A.: 'Economic Analysis in the works of Gergely Berzeviczy', *Acta Univ. Szegediens., Jur. et Pol.*, Vol. XVIII, Fasc. 1, Szeged, 1971, (Hungarian text with English summary on p. 111), - and: '*Questions of Statistical Theory and Methodology in the Works of Gergely Berzeviczy*, Budapest, 1972, (Hungarian text with English summary on pp. 131 et seq.) - and the two articles, *op. cit.*, under note (5).

[32] *Id.*, 'The Problem of Labour and the First Hungarian Economic Macromodel', *Acta Univ. Szegediens., Jur. et Pol.*, Vol. XXXI, Fasc. 14, Szeged, 1984, pp. 161 and furth.