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Economics – Slovakia¹

The contribution of Slovak economists to the general development of economic theory seems to be relatively minor, at least if judged on the basis of international encyclopaedias and economists' vocabularies. To a lesser extent, one may arrive at a similar conclusion about Eastern and Central European economists. For example, Blaug (1986) considers only five economists from the region among the one hundred great economists before Keynes. These are Ladislaus von Bortkiewicz (1868-1931), Rosa Luxemburg (1870-1919), Eugen Slutsky (1880-1948), Nikolai Dmitrievich Kondratiev (1892-1931), and Oskar Lange (1904-1965).

Furthermore, Blaug (1985) lists János Kornai as the only Eastern or Central European economist among his one hundred major economists after Keynes. If birthplace counts, then in Blaug's lists we find Irma Adelman (born in 1930) and Nicholas Georgescu-Roegen (1906-1994) born in Romania; Evsey E. Domar (1914-1997), Michał Kalecki (1899-1970), and Jacob Mincer (born in 1922) born in Poland; Alexander Gerschenkron (1904-1978), Simon Kuznets (1901-1985), Wassily Leontief (1906-1999), Abba Lerner (1903-1982), and Jacob Marschak (1898-1977) born in Russia; Nicholas Káldor (1908-1986), Tibor Scitovsky (born in 1910), and János Kornai (born in 1928) from Hungary; Ludwig von Mises (1881-1973) born in today's Ukraine; and Jaroslav Vaněk (born in 1928) born in Czechoslovakia.

Eatwell, Murray, and Newman (1991) provide information on a number of major economists who worked in the region. If we do not consider Michail Bakunin, Nikolai Chernyshevski, Vladimir Lenin, Georgi Plekhanov, Yosef Stalin, and Leo Trotsky, then these include: Oskar Nikolayevich Anderson (1887-1960), Ladislaus von Bortkiewicz, Nikolai Ivanovich Bukharin (1888-1938), Alexander Vasiljevich Chayanov (1888-1939?), Vladimir Karpovich Dmitriev (1868-1913), Grigorii Alexandrovich Feldman (1884-1958), Michał Kalecki, Leonid Vitalievich Kantorovich (1912-1986), Nikolai Dmitrievich Kondratiev, Alexander Alexandrovich Konüs (born in 1895), Oskar Lange, Mihail Manoilescu (1891-1950), Vasily Sergeevich Nemchinov (1894-1964), Vasily Sergeevich Novozhilov (1892-1970), Evgenii Alexeyevich Preobrazhensky (1886-1937), David Borisovich Ryazanov (1870-1938), Eugen Slutsky, Stanislav Gustavovich Strumilin (1877-1974), Pyotr Berngardovich Struve (1870-1944), Mikhail Ivanovich Tugan-Baranovsky (1865-1919), Evgeny Varga (1879-1964), Nikolai Alekseevich Voznesensky (1903-1950), Wladimir Savelievich Woytinsky (1885-1960), Władysław Marian Zawadzki (1885-1939), and Nikolaj Ivanovich Ziber (1844-1885). But none of them is associated with Slovakia.

One may then assume that Slovak economists, being from a European periphery and working for a certain period under authoritarian rule, can probably be found in the dictionaries of dissenting (non-mainstream) economists. But in a representative dictionary of dissenting economists edited by Arestis and Sawyer (1992), we find no Slovak economist. Again, if birthplace counts, then one finds Thomas Balogh (1905-1985), Paul Alexander Baran (1910-1964), Nikolai Ivanovich Bukharin, Nicholas Georgescu-Roegen, Nicholas Káldor, Rosa Luxemburg, Michał Kalecki, and Alec Nove (1915-1994) coming from the region.

Furthermore, Wagener (1998) considers nineteen eminent East European economists who were active after World War II. These were Fritz Behrens (1909-1980) and Gunther Kohlmeier (born in 1913) from the former East Germany; Włodzimierz Brus (born in 1921), Michał Kalecki, Oskar Lange, and Edward Lipiński (1888-1986) from Poland; Josef Goldmann (1912-1984), Václav Klaus (born in 1941), Ota Šik (born in 1919), and Miroslav Toms (1944-1988), Czech nationals from the former Czechoslovakia; Aleksander Bajt (born in 1921) and Branko Horvat (born in 1928) from the former Yugoslavia; Leonid Kantorovich, Vasily Nemchinov, Vasily

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Novozhilov, and Nikolai Petrakov (born in 1937) from the former Soviet Union; and János Kornai, György Péter (1903-1969), and István Varga (1887-1962) from Hungary. Again, none of them is a Slovak national or a foreign national who has lived in Slovakia.

Furthermore, Havel, Kláček, Kosta, and Šulc (1998), who extensively review economic theorizing in the former socialist Czechoslovakia, mention no Slovak economist, nor do they include among their references any articles or books published in the Slovak language or in Bratislava. If my reading of their paper is correct, then the only high-ranking Slovak economists they mention are Eugen Löbl, who was imprisoned in the early 1950s, and Jozef Kučerák, who organized a reading course based on the Samuelson-Nordhaus textbook for young Slovak economists.¹

In these various prestigious and competent listings, no mention is made of any economist from Slovakia. Thus, as a first approximation, one may say that there seems to be no significant Slovak economist and thus no significant contribution by Slovak nationals to the development of economic theory. This also means no specific Slovak school of economic theory, like those observable in some smaller nations, for example Sweden or the Netherlands.

However, as I show in this text, the state of economic theory in Slovakia can be seen in a more positive way. There have always been able economists in Slovakia; most of the time their analytical and pedagogical abilities made their work a contribution to the understanding of economic matters in Slovakia. And since we do not want to erode our own historical consciousness, the story of the development of this stock of knowledge and opinions deserves to be told.

1. Analysis of the pre-1989 situation

Czechoslovakia, as founded in 1918, consisted of two quite different parts: the more developed Czech Lands with an industrial tradition stemming from the 19th century and the less developed, agriculturally oriented Slovakia. During the first twenty years of the Czechoslovak state (1918-1938), the level of development in Slovakia improved, but Slovakia's share in the total industrial production and in the total income of Czechoslovakia increased only slightly. During the socialist period, some basic indicators of output and consumption per capita in Slovakia achieved a level close to the Czech Lands.² This economic growth was also reflected in the increased quality of human capital and research.

A Concise Encyclopedia of Slovakia and the Slovaks mentions two important economists active before 1918. One was Michal Baluďanský (1769-1847), the author of eight volumes on national economy, who studied at universities in Vienna and Budapest and in 1804 became a professor in St. Petersburg, where he was a rector of the university in 1819-21. The encyclopedia, titled in Russian *Enciklopedičeskij Slovar* and published in 1891 in Saint Petersburg, spells his name Michail Andrejevich Balugjanskij and calls him a Carpatho-Russian born in Hungary. The second economist is Kornel Stodola (1866-1946), who was an important businessman, political figure, and prolific writer on economic subjects (see Strhan and Daniel, 1994).

A Representative Biographical Lexicon of Slovakia also mentions two economists active before 1918. These are Gregor František Berzevici (1763-1822) and, again, Kornel Stodola. Berzevici (spelled Berzeviczy Gergely in Hungarian) published one of the first economic studies in the region under the title *De commercio et industria Hungariae* in 1797. His main political economy work was not published until 1902, under the title *Oeconomia Publico Politica*. See Maňovčík (1999: 35-36). Lisý, Petričová, and Čaplánova (1999: 308) also mention Berzeviczy as an important economist in their chapter on the development of economic thinking in Slovakia, and they consider Milan Hodža (1878-1944) the most important representative of Slovak economic thinking in the pre-1918 period. Petričová (1996) reviews those representatives of the Slovak national movement who dealt with economic issues and problems. These include Samuel Tešedík (1742-1820), Jozef Ignác Bajza (1755-1836), Juraj Fándly (1751-1811), Ľudovít Štúr (1815-1856),

B. Vrchovský (1812-1865), Peter Kellner-Hostinský (1823-1853), Samuel Jurkovič (1796-1873), and Daniel Lichard (1818-1882). In addition to other, already mentioned personalities, Lisý (1996) considers Anton Bielek (1857-1911), Peter Kompiš (1859-1929), and Fedor Houdek (1877-1953).

After 1918, when the Czechoslovak Republic was founded, this picture slowly changed. During the first Czechoslovak Republic, Czech national economists achieved greater prominence than the Slovak ones, as the examples of Karel Engliš, Alois Rašín, Albin Bráf, and Josef Macek best document. Czech economists (like Cyril Čechrák, A. Basch) held important teaching positions at Comenius University after its founding in 1919, see Korček (1996: 42).

This period saw the emergence of the first group of Slovak economists who can be considered to represent the beginnings of Slovak economic thinking. They include Imrich Karvaš (1903-1981), Rudolf Briška (1908-1971), Július Pázmán (1907-1982), and Peter Zaťko (1903-1978). Some of these economists played a controversial role during the period of 1939-1945. Before the country's breakup in the Second World War, some other economists had emigrated from Slovakia, and at least one of them, Ervin Hexner, had achieved a prominent position in the USA.

Pure and applied economic theory went through impressive developments after the Second World War. But to a large extent, the communist revolution isolated the community of Czech-Slovak economists from these trends. Economists reacted in different ways to this "exogenous shock". Some economists left the country (Macek), some did not return (Hexner), some did not continue to publish (Engliš, Karvaš), but most of the younger generation of economists accepted the requirements of the new era. There was also an emigration of economists after 1948 and after 1968, of whom Gregor Lazarčík and Mikuláš Luptáčik were probably the most eminent.

There were a large number of talented economists in Slovakia during the socialist period (1948-1989). They were mostly professors at the High School of Economics (Vysoká Škola Ekonomická), after 1989 renamed the University of Economics (Ekonomická Univerzita) in Bratislava, and at other schools and research institutions, and/or they worked as advisors to government. Some of them were reformists, some followed strictly the Communist Party line, and some of them were pure scholars. Clearly, the group that consisted of reformers, counter-reformers, and policy-makers was much larger than the group of pure scholars. Most of them were well read and very interested in their work. They contributed to the increasing understanding of economic matters in Slovakia, but they also put economic theory on an unproductive path. Under socialism there were clearly institutions that provided disincentives to originality or simply to productive research activity. Socialist institutions provided few incentives or rewards for increasing the stock of knowledge about Slovak or more general economic matters.

Most of the professional discussion in Slovakia in the period 1948-1989 was conducted in the jargon of Marxist social theory. This was the tribal language or a veil under which from time to time interesting intellectual contributions were made. I am aware that, from the position of general economic theory, most of the contributions made under socialism in all socialist countries were minor, and this is also the case in Slovakia. As Wagener (1998: 24) writes, "looked at from the point of view of the universal history of economic theory, economics under communism has not produced any spectacular new insights, theorems, laws or controversies which have to be memorized by all students of economics like, for example, the Cambridge controversy, Say's law, the Coase theorem or the Heckscher-Ohlin theory." This statement seems to hold also for contributions concerning socialist theory or radical political economy.

I divide these discussions and contributions into two principal streams. The first current of discussions deals with the relationship between the (central) plan and the market, which in the Slovak context to a large extent is discussion on the specifics of Slovakia in the Czechoslovak economy. The second current is represented in the literature, which maintained contact with modern economic theory, especially in the subfields of econometrics and operation research.

The first current is the discussion about the relationship between the plan and the market. As in any socialist country, this discussion reflected policy and political views inside the Communist Party as well as in the economic community. In Czechoslovakia, these discussions were

concentrated in Prague, in the 1960s as well as later in the 1980s. Discussing the reform debate of the 1960s, Adam (1993) divides the participating economists into four groups according to their views on the relationship between the plan and the market. He reviews the views of Czech economists from Jaroslav Vejvoda through Ota Šik and Karel Kouba to Oldřich Kýn, i.e., from the most orthodox conservative to radical liberal, in the jargon of the 1960s. Concerning the Slovak discussion, he writes: "Marketisation of the economy had more enthusiastic adherents in the Czech lands than in Slovakia. In the latter, there was some concern that the market might hamper further equating of the economic level in Slovakia with that in the Czech lands. In their outline of the further development of the reform, Slovak economists maintained that 'economic evening out in Slovakia will be more complicated in a management model based on market relations', and therefore suggested a series of measures to ensure further equalization." (Náčrt ďalšieho, 1969: 52). One can accept the view that the Slovak economists were rather passive in the direct discussion about the relationship between the plan and the market. Rather, in the Slovak economic discussion, the issue of misallocation of resources under central planning appeared in the context of the centralized decision-making process, which – the argument ran – hurt Slovak economic interests. In this spirit, a series of papers appeared that dealt in a self-constrained way with the issue of the Slovak economy's specific position in Czechoslovakia. Authors of such papers included Turčan (1955), Kočtúch (1964), Pavlenda (1965), Džuban, Kočtúch, and Pračko (1966), Pračko (1968), Briatka (1969), Lipták (1969), and Bálek (1982).

The second current in Slovak economic thinking maintained contact with the advancements of economic theory in the Western countries. Here, considerable advancement was achieved in econometrics, operation research, and the mathematical foundations of modern economic theory. One example is an official university textbook on dynamic modeling edited by Adam Laščiak (1985); the co-authors include Miroslav Maňas, Jaroslav Samek, Josef Lauber, Juraj Trnovský, and Miroslav Hysko. This book contains a sophisticated treatment of mathematics for graduate macroeconomics and optimization, as well as a review of various macroeconomic and sectoral models used in the Czechoslovak Republic during the socialist period. There is also a textbook in a similar spirit on optimal programming, also edited by Laščiak (1983); the co-authors include Jozef Sojka, Ladislav Unčovský, Ján Šimkovic, Roman Hušek, Miroslav Maňas, Michal Chobot, Eduard Hozlár, and Vladimír Ulašín; and the book includes monographs by Jozef Sojka (1970) and Ladislav Unčovský (1985). However, the impact of these books on the general public and on policy-making was minor.

This second current also includes the work of Štefan Heretik, Ludovít Korček, Ján Iša, Drahomír Šíbl, Monika Šestáková, and others who were involved in one way or another in what was called the "critique of bourgeois economic theory". To some extent, this "critique" played a positive role in transporting the work of Western economists to Slovakia; Heretik (1988) is a good example of this work. However, the university curriculum did little to present major contemporary Western economic thought. It was taught superficially and thus did not help to raise the level of the young generation of economists who studied Western economic thinking under the pretext of its critique.

Economic research lacked empirical orientation. This tendency remains in Slovak economic theory making, even after the breakup of the socialist regime. One of the reasons may be that the communist regime did not particularly encourage searching for facts; but also, the Slovak economy was a part of the larger Czechoslovak economy, and some data were simply not available on the level of individual republics. This low level of empirically oriented research also meant that economic policy decisions were made in a vacuum.

Noteworthy translations were made of Smith, Ricardo, Weber, and Schumpeter. However, to my knowledge, no basic or intermediate undergraduate Western textbooks were translated into the Slovak language during the socialist period. There was also no translation of economists active after the Second World War.

Economists in Slovakia were typically not dissidents during the socialist period. Even in the Czech Lands, most dissidents emerged from non-economist circles. Unlike in Prague, economists in Slovakia did not form discussion clubs around leading personalities. In an interview, Mikloš gave a good description of this situation: “In the Czech Republic there was a strong group of economists around (future Czech Prime Minister Václav) Klaus, (Tomáš) Ježek, and others, who held meetings and taught themselves; ... Slovakia, on the other hand, lacked that kind of community, and the general level of economic sciences was considerably lower.” (2001: 4) Some Slovak economists – those who lived in Prague during the 1980s – participated in these Prague discussion circles.³

2. Redefinition of the discipline since 1990

As in the socialist period, also after the fall of the socialist regime more economists were politically oriented than preferred to be independent, pure scholars. We see rarely whole careers devoted wholly to science, and also we rarely see independent views in policy discussions. There is a general absence of pure theoretical interest. Large numbers of economists devote a substantial share of their career to political obligations, for example Rudolf Filkus, František Hajnovič, Pavel Hoffman, Hvezdoň Kočtúch, Jozef Kučerák, Jozef Markuš, Ivan Mikloš, and Brigita Schmögnerová.

The change of elites

Slovak economic theory making is characterized principally by discontinuity.⁴ To the extent that an academic discipline develops in the cooperation between older and younger generations, in the Slovak context this development has been principally interrupted. A generation of economists who matured before socialism may have provided the first pillars of high-standard economic education and economic theory making, but this group of economists did not continue their academic careers after the socialist revolution. The generation of economists who matured during the socialist period did not create a Slovak economic school and some (most) of their intellectual endeavor lost its value at the beginning of the 1990s after the collapse of socialist order. Thus, we witness a peculiar situation: in the 1950s and to some extent also in the early 1970s and early 1990s, a young generation of economists rose to high government and academic position because their older competitors had been compromised by the previous regime.

There has been some change in the economists in the government elite, but much less in the academic environment. One cannot create a new generation of academic economists in a short period of time. Some full and associate professors appointed under the socialist period still prefer “a peaceful life”. That is probably quite natural; the problem is rather that this is institutionally possible. At the end of this paper, we present lists of publications in internationally refereed journals. Judging by this standard, Slovak economists who work abroad are under more pressure to publish.

The issue of the change of elite touches on a specific Slovak matter, i.e., the longstanding interest of Slovak economics and ideological circles in the question of ownership. In mainstream economic theory, ownership is not a crucial issue. To a certain extent, it does not matter who owns the capital; what matters is the market structure, incentives, institutions, policies, etc. After 1918, when Czechoslovakia was founded, the weaker position of Vienna and Budapest influenced ownership structures in what had become Czechoslovakia. Slovakia’s backwardness was clearly felt also in the ownership structure.⁵ Creating a Slovak bourgeois class was an issue especially after 1992. Attempts to privatize under Mečiar’s government may have intended to keep the proportion of foreign ownership low and create a Slovak national bourgeoisie close to the representatives of the political elite. As a result of these efforts under the Mečiar government, there was a substantial increase in the interconnection of political and economic power, in non-

transparent privatization contracts designed to strip enterprises of assets, and in cronyism. Consequently, in the period after Mečiar, this naïve aim was abandoned, and privatization proceeded along more conventional lines.

New institutional structures⁶

Universities and colleges

Undergraduate programs in economics typically cover ten semesters at colleges and universities. The educational program usually starts with a bachelor's program lasting six semesters, followed by a four-semester master's program. The graduates of the master's program earn an academic degree, either "engineer" or "magister". These degrees allow the graduates to continue in a doctoral program. The level of graduate education in economics in Slovakia is still relatively low. Most talented students leave Slovakia and prefer to study in foreign countries, especially in Prague (CERGE-EI), Budapest (CEU), and then in various institutions worldwide. Basically, there is no thorough graduate training in economics in Slovakia. One attempt – and only on the master's level – was the Professional Program in Applied Economics (PPAE) at the Academia Istropolitana and, after the government closed that, at the Academia Istropolitana Nova. But, for financial reasons, this program will probably suspend its activities.

The University of Economics⁷ in Bratislava is the major institution of undergraduate education in economics and business administration. The university staff includes more than one thousand employees (approximately half of them members of faculty) and around nine thousand students in the three-year bachelor's programs and two-year master's programs. The University of Economics in Bratislava consists of six colleges: the College of National Economy; the College of Economic Informatics; the College of Commerce; the College of Business Management; the College of Business Management located in Kosice, and the newly established College of International Relations.

Fidrmuc (1998) argues that, at the University of Economics, the level of education is quite low in the area of economic theory. Following the reforms in 1989, the relatively extensive education in Marxist political economic theory and related topics was cut off. Teaching in microeconomics is approximating Western standards much faster than in macroeconomics. To a large extent, young faculty members have to take additional jobs to have the standard of living they expect and, as a consequence, are less interested in research.

The University of Economics plays an important role as a business school and partially also as a center for training economists. Although standards are definitely improving compared to the socialist period, one is still surprised by the inflated number of professors and associated professors, some of whom were never particularly exposed to competitive pressures.⁸ The drive for excellence seems missing and does not seem to be institutionally supported.

A more elite economics education is provided at Comenius University in Bratislava. The Faculty of Mathematics and Physics initiated an undergraduate program of economics and financial mathematics, while the education of business administration started in 1991 at the newly created Faculty of Management. In 1993, the Institute of Applied Mathematics of the College of Mathematics and Physics, Comenius University started a master's program in Economics and Financial Mathematics. The first graduates finished their studies in 1999. In an effort to improve the quality of its lecturers, Comenius University started cooperation with the Pittsburgh University in 1997. As an element of this cooperation, the University of Pittsburgh invited lecturers of the Institute of Applied Mathematics to participate in the first four semesters of the PhD program in Pittsburgh, majoring in economics and finance. Some of them decided to graduate in a master's program in economics at Pittsburgh University, and later some obtained a doctoral degree at Pittsburgh University.

Several other universities provide economics education. These include the Matej Bel University in Banská Bystrica, the Agricultural University in Nitra, the University of Trenčín, the

University of Žilina, the Faculty of Business Management of the Bratislava University of Economics in Košice, and the Technical University in Košice. Many of these faculties were not created or expanded until the 1990s. According to Fidrmuc (1998), these colleges admitted about a third of all new students of economic sciences in Slovakia for the academic year 1998/1999.

Research institutes

The Institute of Slovak and World Economics is a successor to the Institute of Legal and Economic Sciences of the Slovak Academy of Sciences, which was founded in 1949. In 1956, this institute was reorganized in several steps as the Institute of Economics of the Slovak Academy of Sciences. In 1991, subsidies from the state budget were drastically reduced, which led the Institute to shift its orientation more toward applied research. In the first years of the economic reforms, a relatively high number of researchers decided to leave, either for the banking sector or to start a political career. This Institute consists of the following departments: Macroeconomics Theory and Regulation; Microeconomics Theory and the Business Sector; World Economics; and the Department of Economic-Mathematical Analysis. Pure and applied research is financed mainly through projects from the Scientific Grant Agency of Slovakia through government projects, PHARE projects, and Unido projects. The Institute publishes the monthly journal *Ekonomický Časopis* and also provides graduate education in economics in the framework of the Slovak Academy of Sciences.

Another institute conducting economic research is the Institute for Forecasting of the Slovak Academy of Sciences. Its major predilections since 1990 are similar to those in the Institute of Slovak and World Economics.

The Institute of Informatics and Statistics (Infostat) specializes in econometric and statistical analyses and forecasts of macroeconomic tendencies. Infostat was established by an agreement between Czechoslovakia and the development program of the United Nations. Infostat is a subordinate agency of the Slovak Statistical Office and employs approximately 140 researchers and administrative staff. The short-term forecast for the Slovak economy is the widely known product of this institute. These forecasts are based on an econometric model of the Slovak economy developed by Ján Haluška and Michal Olexa.

A number of nongovernmental institutions – think tanks that observe and analyze economic, political, and social development – were established in Slovakia in the 1990s. These groups have intense contacts with foreign research institutes and universities. A group of economists and social scientists with liberal values established the Center for Economic and Social Analysis, better known as M.E.S.A.10. Many of its members served in key positions in the executive and legislative bodies in the first years of economic reforms, and some are in such positions in the current government. M.E.S.A.10 issues monthly reports on the development of the Slovak economy. The research studies of M.E.S.A.10 are widely used by various international and domestic observers.

The Center for Economic Development, founded in 1993, is a nonprofit and nongovernmental organization. It provides alternative independent monthly analyses of the Slovak economy.

Academia Istropolitana in Bratislava was originally intended to be a university-type institution. Since this concept encountered some legal barriers, a group of scholars tried to create an elite graduate training school. Finally, Academia Istropolitana was founded through intergovernmental agreements with support from various governments and foundations and was partially financed by the state budget. In 1994, Academia Istropolitana started the Professional Program in Applied Economics. The problems of the legal status of Academia Istropolitana increased, which led some scholars (among others, Alena Brunovská, Kevin Sontheimer, and Andreas Wörgötter) to found Academia Istropolitana Nova as an independent graduate institution in October 1996. The Professional Program in Applied Economics (PPAE) was organized in cooperation with the University of Technology in Vienna (Bernhard Böhm) and the University of Pittsburgh (Kevin Sontheimer). The generous grant from the Austrian Ministry of Foreign Affairs

helped finance this program. PPAE had students from more than ten countries, and some of them continue currently in doctoral programs in Tilburg, Louisiana, Calgary, and Pittsburgh. Its lecturers included economists from the Technical University of Vienna, Central European University in Budapest, Charles University in Prague, Comenius University in Bratislava, the University of Bonn, the University of Pittsburgh, and the Slovak Academy of Sciences.

Rehabilitation, repatriation, new departures

Some Slovak economists who were active during the 1918-1945 period have been rehabilitated, for example at the University of Economics. Professors who were persecuted after 1948 and after 1968 were also rehabilitated.

3. Core theoretical and methodological orientations

In economic theory, the return to pre-war traditions is a difficult issue. Modern economics is much different from the economics of the 1920s or 1930s, so not much of pre-war traditions could be revived. On the other hand, modern Slovak economic thinking, like some Slovak economists in the 1920-1930s, concentrates on the problem of the small open economy with its own peculiar characteristics, and in this sense there is some continuity with pre-war traditions.

There are some new East-West asymmetries; for example, research in pure theory of economics is not typically done in Slovakia. But there are exceptions, especially among the mathematically oriented economists, as Horniaček (1996) documents. Toward the end of the 1990s, there was a move toward a more empirical research, especially in issues of economic policy-making. An excellent example is Marčincin and Beblavý (2000); co-authors include Martin Barto, Miroslav Beblavý, Lucia Haulíková, Marek Jakoby, Tomáš Kmet, Martina Lubyová, Anton Marčincin, Karol Morvay, Andrej Salner, Ján Tóth, and Daniela Zemanovičová. There is also an increasing trend to look beyond the official statistical data, and researchers are scrutinizing government statistical data. There is definitely a beneficial trend to use the terminology of modern economic theory. As in most other transition economies, the style of discussion has greatly converged with the Western style.

4. Thematic orientation and funding

Some crucial questions for the future development of economic theory in Slovakia require deeper analysis. This analysis should include the issue of the costs of research and the connection between the quality of the output and its costs. It also should include a decision about the priorities of research and about developing appropriate procedures to evaluate departments at universities and research institutes. Probably some commission of international experts should be asked to evaluate the level of the Slovak economic research, as was done for example in Sweden (see Engwall, 1992).

Private capital contributes almost nothing to financing economic education in Slovakia. Tax legislation is not encouraging the private funding of education. Foreign donors play a much more important part in transferring funds to economic education. Foreign donors also support some of the elite research institutions. Some research is carried out in the framework of projects supported and funded by the European Commission.

After the division of Czechoslovakia, the share of state support for universities declined. Fidrnc (1998:4) writes, "Many interview partners complained about the financial situation of the universities. For example, the Faculty of Management of the Comenius University writes: 'Budgets can cover neither the basic needs of the universities nor the realization of developing programs. Inefficient supporting of the universities from the budget negatively influences educational process as well as research and development'".

Salaries at universities are lower than salaries for comparable positions in the private sector, banking, and a significant part of the state and municipal administration. This is especially true for assistant professor positions. University graduates are therefore typically not interested in staying or in studying in doctoral programs. Many faculty members have two or three jobs. This significantly restricts the possibilities for academic research and for closer supervision of students.

5. Public space and academic debates

There were two principal discussions in the Slovak economics community during the 1990s. First, there was a discussion about the character of the transition process: gradualism versus shock therapy and the issue of Slovak specifics in the former Czechoslovak Republic. Second, since Slovakia gained its independence, discussion has continued on the character of further development and the proper macroeconomic policy.

In Czechoslovakia after the breakup of the socialist system, the view of the Czech liberals (Klaus, Ježek, Zelienc, and others) came to predominate. This school won the discussion and the political competition against its main opponents: the 1968 reformers, those who put more emphasis on structural and sectoral policies, and those economists who emphasized Slovak specifics.

Criticism of the liberal views was fierce. Interestingly, however, the discussion never went into the details of liberalization policy, but focused instead on the consequences of liberal policies as well as on the general economic orientation of Slovakia within the Czechoslovak Republic and later on the orientation of the independent Slovak Republic. There was no competition with liberal views in the early 1990s, since no group of economists in Slovakia had any prepared scheme of transformation. On the other hand, since the transformation hit certain Slovak regions and industries heavily, the anti-liberal forces – quite rightly – began to pinpoint the consequences of the transformation. But their critique was not coherent, since it is not clear today nor was it clear in any period of the 1990s what option Slovakia had except to introduce the liberal reforms of the early 1990s.

In the post-socialist period, I identify in Slovakia two major lines of economic thinking, which run parallel to political divisions in the country. The first group emphasizes some specific Slovak way of doing economics, in contrast to the federal liberal reforms introduced in Czechoslovakia. While neither group is homogenous, the first group consists of economists like Hvezdoň Kočtúch, Mikuláš Sedlák, Jozef Košnár, Rudolf Filkus, Adam Laščiak, Jaroslav Husár, Jozef Markuš, and Viktor Pavlenda. This group of economists has been more or less opposed to the liberal reforms of 1989-1992. They have advocated more gradual and more socially balanced reforms that would take into consideration the specifics of Slovak economic reality.⁹ The thing they have in common is their preoccupation with the lamentable state of Slovak society and economy – as they see it – in the transition process.

Slovakia has not typically been regarded as the cradle or home of liberal political and economic ideas.¹⁰ Under such conditions, the concept of the liberal market economy could hardly be expected to flourish. Nevertheless, after the fall of socialism, a group of Slovak economists with an approximation of neo-liberal views emerged.¹¹ This group endorsed the shock therapy coming from Prague. It consists largely of economists who work for think tanks and analysts of financial corporations, as well as some academics. The most famous representatives are probably the leading Slovak economic policy-makers Ivan Mikloš, Jozef Kučerák, and a more centrist policy-maker, Brigita Schmögnerová. One should probably also include in this group younger economists like Anton Marčincin, Miroslav Beblavý, Ján Tóth, and Ján Oravec.

Principal academic journals

There are few economic journals in Slovakia. *Ekonomický Časopis* is published monthly by the Institute of Slovak and World Economics of the Slovak Academy of Sciences. The journal has an anonymous reviewing procedure. The University of Economics publishes an economic review, *Ekonomické Rozhlady*. In cooperation with partner organizations of other Central European countries, the Slovak Society for Operations Research edits a quarterly *Central European Journal for Operations Research*. The Slovak Central Bank publishes a review, *Biatec*.

Selection of publications in world languages

A natural way of comparing the publications of Slovak nationals with their international peers is to consider publications in Econlit. Slovak nationals who live and work abroad or who at least obtained their PhD abroad head the list. At the end of this text, we provide a (hopefully) complete list of these economists and the titles of their publications. Ján Fidrmuc from Trinity College Dublin, Jarko Fidrmuc from the Austrian Central Bank, Vienna, Július Horváth from Central European University Budapest, Martina Lubyová from the Slovak Academy of Sciences, Mikuláš Luptáčik from the University of Economics Vienna, and Luboš Pástor from the University of Chicago are Slovak nationals who published extensively in high-ranking internationally peer-reviewed journals. Of these authors, Luboš Pástor seems to be gaining the most international recognition.

The problem of the “brain-drain”

This is quite a serious problem, especially for the young generation of economists. The situation is similar among the promising young faculty, which aspires to an international career. A large number of Slovak undergraduate students of economics study at Charles University in Prague and also at some other Czech universities.¹² However, I do not have precise data on the extent of this exodus to Prague.

Conclusion

In this short essay, I describe the development of Slovak economic thought. This is an introductory work and requires further analysis. The main point of this short essay is to show the international community that there is a developing and rather interesting life in the economics community in Slovakia.

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- ¹ Jiří Havel told the author of this essay that originally this issue was to be addressed in the appendix; but for technical reasons this idea never materialized.
 - ² For an empirical discussion of convergence between the Czech Lands and Slovakia, see Křovák and Zamrazilová (1992), Estrin and Urga (1997), and Fidrmuc, Horváth, Fidrmuc (1999).
 - ³ These included the author of this essay and some other Slovak economists who did not continue an academic career in the 1990s. See for example Horváth (1985), Horváth and Ježek (1987).
 - ⁴ Havel (1992) makes a similar note about the development of Czech economic theory.
 - ⁵ Prucha (1995, 43-44) contains an interesting treatment of this issue.
 - ⁶ In this section, I draw heavily on Fidrmuc (1998).
 - ⁷ On November 4, 1940, the High Business School in Bratislava (Vysoká obchodná škola v Bratislave) was founded as a private institution. Among the founding fathers of the school were Jur Hronec, Július Pázmán, Jozef Fundárek, Imrich Karvaš, Rudolf Briška, Vladimír Králiček, and Ján Hromádka (see Ekonóm, The Information Bulletin of the University of Economics, January 2001: 27).
 - ⁸ In this context, Cassel's 1941 dictum is still valid: “In my opinion, the important task was to train not many economists, but economists of high class who could advance the science of economics and improve its position in our country. Under these circumstances, it was no easy task for a professor to judge which students he should admit into the field. He has an enormous responsibility both towards society and towards the individual student” (Jonung, 1992: 37).

- ⁹ See Čapek (1993) for a critical point in this context.
- ¹⁰ “According to the liberal view, land can be sold freely in international trade. But that is true only if both parties to this trade are equal. If, however, one is weaker and the other is stronger, then this liberal rule would lead us directly into disaster. We in Hungary – namely our peasants – were exposed for almost half a century to economic competition in which the state worked against us with the landlords and with speculative traders. That is the reason why liberalism is not close to our hearts and hurts us especially in business matters.” Milan Hodža in *Slovenský Týždenník*, September 12, 1903; quotation from Lisý et al. (1999: 315), translated by the author.
- ¹¹ Mikloš (2001: 18-20) says in an interview: “The essence of Czechoslovakia’s reform program was drawn up by a group of Czech economists. This was a terrific piece of luck for Slovakia, because at that time Slovakia had no economists who were up to the task. It’s my belief that had Slovakia been left a decade ago to launch economic reforms with Slovak economists alone, it would have staggered, the same way Bulgaria or Romania did. We would have done nothing, or taken only insufficient measures.” Also, when asked in the same interview how many top Slovak economists endorsed shock therapy, Mikloš answered the following: “... Most of the people who endorsed it were grouped around Jozef Kučerák, who was then Slovak Deputy Premier for Economics.”
- ¹² I thank Jarko Fidrmuc for raising this point.

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- Unčovský, Ladislav: “Concentration and Efficiency in Slovak Commercial Banking”, in: *Central European Journal for Operations Research and Economics*, 1998, Vol. 6, 3-4, 317-24;
- Source: ECONLIT in August 2001. This list does not include working papers and chapters in books, nor non-English-language journals.

Table 1 Biographical data on selected Slovak economists before 1948

Briška, Rudolf (1908-1971) Between 1938-1950 Professor at the Faculty of Law of Comenius University.	<i>Problémy reagrarácie</i> (Problems of Re-Agrarization), 1939; <i>Vojnové hospodárstvo</i> (War Economy), 1942; <i>Národohospodárska teória a prax 1-2</i> , (Economic Theory and Reality), 1943-48.
Hexner, Ervin (1898-1968) From 1931 General Secretary of the Central Association of the Slovak Industry in Slovakia. 1939-46 Professor at Chapel Hill, in 1944-1958 at the IMF, in 1958 Professor at Pennsylvania State University.	<i>Foundations of Cartel Law</i> , 1932; <i>The International Steel Cartel</i> , 1943.
Karvaš, Imrich, (1903-1981) Professor at the Faculty of Law at Comenius University from 1934, Minister in 1938, Governor of the Slovak National Bank (1939-1944).	<i>Hospodárska štatistika Slovenska</i> , (Economic Statistics of Slovakia), 1928; <i>Menový Problém</i> , (Monetary Problem) 1929; <i>Štátne príjmy a konjunktúra</i> (State Revenues and the Cycle), 1931; <i>Vplyv kartelov na konjunktúru</i> (The Impact of Cartels on the Cycle), 1932; <i>Problematika času v hospodárskej teórii</i> (Problems of Time in Economic Theory), 1937; <i>Základy hospodárskej vedy</i> , (Foundations of the Economic Theory), 1947.
Pázmán, Július (1907-1982) Worked in the central bank (1934-1939), head of the foreign currency department of the Slovak National Bank (1939-46), Professor (1946-1972) and Rector of the Economic University in Bratislava (1948-1949).	<i>Devízové hospodárství</i> , (Economics of Foreign Exchange), 1940, <i>O kontrole</i> (On Control), 1948,

Tvarožek, Tomáš (1892-1945) First Minister of Finance in the Slovak National Council.	
Stodola, Kornel (1866-1946) Co-owner of the tanning factory in Liptovský Mikuláš, from 1920 Chairman of the Business and Industry Chamber in Bratislava, Senator between 1925-1939.	<i>Tarifná politika na Slovensku</i> (Tariff Policy in Slovakia), 1923; <i>Hospodárske záujmy Slovenska v sneme</i> (On Economic Interests of Slovakia in the Parliament), 1924; <i>V záujme Slovenska</i> (In the Interest of Slovakia), 1926.
Zaňko, Peter (1903-1978) Professor at the College of Commerce in Bratislava, 1940-49. High position in the Slovak state during and after the war until 1948.	<i>Industrializačná politika Maďarska a jej výsledky</i> (Industrialization Policy of Hungary and Its Consequences), 1930; <i>Domácka výroba na Slovensku a Podkarpatskej Rusi</i> (On Domestic Production in Slovakia and Sub-Carpathian Russia), 1931.

Table 2 Biographical data on selected Slovak economists active after 1948

Heretik, Štefan (1915-1983) Professor at the University of Economics in Bratislava.	<i>Teoretické základy súčasnej buržoáznej ekonómie</i> (Theoretical Foundations of Contemporary Capitalist Economics), 1973; <i>Náčrt dejín politickej ekonómie: do sedemdesiatych rokov 19. storočia</i> (The Outline of the History of Political Economy until the 1870s), 1988.
Hoffman, Pavel (born 1931) Researcher at the Institute of Economics of the Slovak Academy of Sciences, Economic Minister in the 1990s.	<i>Zamestnanosť a hospodársky rast</i> , (Employment and Economic Growth), 1971; <i>Priestorové vzťahy v národnom hospodárstve</i> (Spatial Economic Relation in the Economy), 1984.
Husár, Jaroslav (born 1936) Professor and Pro-Rector of the University of Economics in Bratislava.	<i>Aplikovaná ekonometria</i> (Applied Econometrics) 1998; <i>Rozumieme makroekonómii?</i> (Do We Understand Macroeconomics?) 1993; <i>Makroekonómia</i> (Macroeconomics) 1998.
Filkus, Rudolf (born 1927) Professor of the Economic University at Bratislava, and also researcher at Slovak Academy of Sciences. Minister in the 1990s.	<i>Civilizácia na rázcestí</i> (Civilization at the Crossroad), 1964; <i>Ekonomické aspekty technického pokroku</i> (Economic Aspects of Technical Progress), 1967; <i>Cena – nevyhnutná súčasť hospodárskeho mechanizmu</i> (Price the Necessary Part of the Economic Mechanism), 1989.
Kočtúch, Hvezdoň Dušan, (1929-1994) Economic University in Bratislava, Professor at High School of Economics from 1968; from 1970 to 1974 worker, from 1979 to 1989 researcher at less influential sector-oriented institute in Bratislava. From 1990 again Professor at Economic University in Bratislava. Founder of the Independent Association of Slovak Economists (NEZES). One of the most influential non-liberal Slovak economists after the second world war.	<i>Ekonomická efektívnosť investícií: o optimálnom objeme investičnej výstavby</i> (Efficiency of Investment: on Optimal Size of Investment), 1959; <i>Meranie ekonomického vyrovnávania Slovenska</i> (Measuring the Convergence in Slovakia), with Viktor Pavlenda, 1964; <i>Za novú ekonomickú kvalitu česko-slovenskej federácie</i> (For New Economic Quality of the Czech and Slovak Federation), 1991.
Laščiak, Adam, (1929- 1998) Professor at Economic University in Bratislava.	<i>Dynamicke Modely</i> (Dynamic Modeling), 1985; <i>Optimálne Programovanie</i> (Optimal Programming), 1983; <i>Uvod do Ekonomiky SR</i> (Introduction to the Economics of the Slovak Republic), 1995.
Lazarčík, Gregor (born 1923) Professor Emeritus Brooklyn College, City University of New York.	
Löbl, Eugen (1907-1987) During 1945-1948 Deputy Minister of Foreign Trade in Prague; in 1952 sentenced to life imprisonment, in 1963-69 director of a bank in Slovakia; after 1969 in the U.S.A.	<i>The Responsible Society</i> , 1978; <i>Wirtschaft am Wendepunkt</i> , 1975.
Luptáčik, Mikuláš (born 1944) Graduate of the High School of Economics in Bratislava, 1966, Professor at the Economics University in Vienna, Austria.	<i>Geometrische Programmierung und Ökonomische Analyse</i> . Hain-Verlag, Meisenheim, 1977; <i>Nichtlineare Programmierung und Ökonomische Anwendungen</i> . Athenäum, 1981.
Markuš, Jozef, (born 1944) Graduated from the University of Economics in Bratislava, worked at Academy of Sciences, Minister in the 1990s and later the head of Matica Slovenska.	<i>Polnohospodársko-potravinárske prognózovanie</i> (Forecasting in Agriculture and Food Production), 1987; <i>Slovensko na prelome tretieho tisícročia</i> (Slovakia at the Turn of the Third Millenium), 1991.
Mikloš, Ivan (born 1960), Minister and Deputy Prime Minister in the 1990s; influential liberal policy-maker.	<i>Rewriting the Rules, an Interview on Slovakia's Economic Reform</i> , 2001

Okáli, Ivan (born 1929) Researcher; 1983-1990 Director of the Institute of Economics of the Slovak Academy of Sciences in Bratislava.	<i>Faktory a výsledky ekonomického rozvoja krajín RVHP</i> (Influences and Results in the Economic Development of COMECON Countries), 1980; <i>Stratégia oživenia alebo prežitia?</i> (Strategy of Boom or Survival?), 1993.
Pavlanda, Viktor (1928-1990)	<i>Meranie ekonomického vyrovnávania Slovenska</i> (Measuring the Convergence in Slovakia), with Hvezdoň Kočtúch, 1964.
Sedlák, Mikuláš (born 1928) Professor and Rector of the Economic University in Bratislava.	<i>Rozvoj organizačných štruktúr podnikov</i> (Development of the Organizational Structure of Enterprises), 1988; <i>Organizovanie a organizačná štruktúra</i> (Organization and the Organizational Structure), 1998.
Sojka, Jozef (born 1925) Professor and Pro-Rector of the Economic University in Bratislava.	<i>Ekonomická dynamika a rovnováha</i> (Economic Dynamics and Equilibrium), 1970; <i>Matematické modelovanie ekonomických procesov</i> (Mathematical Modeling of Economic Processes), with Jaromír Walter, 1986.
Schmögnerová, Brigita (born 1947) Centrist policy-maker, Minister of Finance.	<i>Cúvanie Napred</i> (Moving Backwards Ahead), 1997.
Šíbl, Drahoš, (born 1934) Professor at the Economic University in Bratislava.	<i>Ekonomická interdependencia vo svetovej ekonomike</i> (Interdependence in the World Economy), 1995; <i>Európska únia a Slovensko</i> (European Union and Slovakia), 1996.
Unčovský, Ladislav (born 1929) Professor at the Economic University in Bratislava.	<i>Operacná analýza v riadení podnikov</i> (Operational Research), 1985; <i>Modely sietovej analýzy</i> (Models of Network Analysis), 1991; <i>Stochastické procesy a modely</i> (Stochastic Processes and Models), with Katarína Čemická, 1992; <i>Teória a metódy logistiky</i> (Theory and Methods of Logistics), 1995.