# Alternative Paths of Globalization and the Technocratic Way to the Future: Seeking a Strategy of Development in Socialist Hungary in the 1960s and 1970s*

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**ABSTRACTS**

This article examines how the leadership of the Hungarian socialist state assessed its global position at the turn of the 1950s and responded to perceived challenges. The main problem identified was the technological lag behind the West. No further investment of capital and labour at the existing technological level could bring about any significant progress without an increase in efficiency. Thus, the import of technology from the West was seen as the way forward. This meant that the class struggle elements of Marxist ideology essentially had to be abandoned. The socialist system now saw the success of building socialism as dependent on successfully adopting Western technology. As a consequence, the system gave the technocrats much greater autonomy than would otherwise expected over the use of substantial resources in areas such as computers, electronics and the automobile industry because the import of technology was tasked to them. After the goal of importing technologyy, in fact import substituting industrialization, relations with the Third World were only of secondary importance. Their primary role for Hungary was in the acquisition of hard currency because Hungary was also able to export technology and know-how to developing countries, for example in medicine and engineering.

In diesem Artikel wird untersucht, wie die Führung des ungarischen sozialistischen Staates dessen globale Position zu Beginn der 1950er Jahre bewertete und auf die wahrgenommenen Her-

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ausforderungen reagierte. Als Hauptproblem wurde der technologische Rückstand gegenüber dem Westen identifiziert. Weitere Investitionen in Kapital und Arbeit auf dem bestehenden technologischen Niveau konnten ohne eine Steigerung der Effizienz keinen nennenswerten Fortschritt mehr bewirken. Daher wurde der Import von Technologie aus dem Westen als der Weg nach vorn angesehen. Dies bedeutete, dass die klassenkämpferischen Elemente der marxistischen Ideologie im Wesentlichen aufgegeben werden mussten. Das sozialistische System betrachtete den Erfolg des Aufbaus des Sozialismus nun als abhängig von der erfolgreichen Übernahme westlicher Technologien. Deshalb räumte das System den Technokraten eine weitaus größere Entscheidungsgewalt über die Verwendung erheblicher Ressourcen in Bereichen, wie Computertechnik, Elektronik und Automobilproduktion ein als sonst zu erwarten gewesen wäre, indem ihnen die Verantwortung für den Import von Technologie übertragen wurde. Aufgrund des Zieles, die Industrialisierung im Wesentlichen durch den Import von Technologien voranzutreiben und damit eine Strategie der Importsubstitution zu verfolgen, waren die Beziehungen zur Dritten Welt nur noch von untergeordneter Bedeutung. Ihre primäre Rolle für Ungarn bestand in der Beschaffung harter Devisen, da auch Ungarn in der Lage war, Technologie und Know-how in Entwicklungsländer zu exportieren, zum Beispiel in den Bereichen Medizin und Maschinenbau.

## 1. Introduction

A resolution of the Central Committee of the Hungarian Socialist Workers' Party in November 1961 welcomed the previous Congress of the Communist Party of the Soviet Union. The Hungarian Party's resolution outlined euphoric visions for the future development of the Soviet Union.

> *The Programme of the Communist Party of the USSR set as its goal the creation of the material and technical basis for communism by 1980. Within a few years, the Soviet Union will overtake the United States not only in the total volume of agricultural but also in the total volume of industrial production. According to the 20-year programme for communism-building, the Soviet Union's industrial production in 1980 will be six times that of 1960, substantially more than the industrial production of the whole world today. At the same time, the Soviet Union will have the shortest working hours and the most vibrant scientific and cultural life in the world.*[1]

There are numerous Soviet or Hungarian party documents from the turn of the 1960s written in this style that speak enthusiastically about the future a few decades later. What may seem paradoxical at first sight is that this vision and the measures taken to put it into practice do not express some kind of communist teleology of Marxism but the ultimate abandonment of it and its replacement by a technocratic ideology that was not

1 Resolution of the Central Committee of the Hungarian Socialist Workers' Party (HSWP) of 17 November 1961. A Magyar Szocialista Munkáspárt határozatai és dokumentumai 1956–1962 [Decisions and Documents of the Hungarian Socialist Workers' Party 1956–1962], Budapest 1964, p. 506.

only transnational but which saw that its goals could be achieved through transnational linkage – that is, through the transfer of knowledge and technology. This particular party document adopted a transnational technocratic language that was not organized according to the dichotomy of East-West division or to the Marxist vision of class struggle because the revolutionary, class-struggle legitimacy of the socialist system no longer seemed to have any persuasive force and was replaced as the means of political legitimation by the technocratic discourse of modernization practically all over the Eastern Bloc around 1960. Parallel with this turn, after 1945, technocrats and technocratic views also came to play a key role in Western capitalist societies as continuous economic growth became the central element of political legitimacy there, too.[2]

The Hungarian turn towards technocracy was even clearer in the text of the party resolutions of the following year. The Eighth Congress of the Hungarian Socialist Workers' Party in 1962 adopted the language of the previous Congress of the Communist Party of the USSR, with the restraint characteristic of the Kádár party:

> *The goals set for industrial development can only be achieved by a great increase in labour productivity; therefore, we will accelerate technical development, the main directions and goals of which will continue to be determined centrally, taking into account the capabilities of our country and the results of technical and scientific progress. The central and industrial research and development institutes in industry should receive more financial support than hitherto. The main task of researchers and developers is to help raise production and manufacturing in the most important sectors to the standards of the leading countries.*[3]

The document identified the most important task of the system as improving labour productivity, which could be achieved by applying the results of technical and scientific progress. The aim was to achieve the standards of the leading Western countries. A decade earlier, the aim stated in similar documents had been to defeat domestic class enemies and foreign imperialists. In the early 1960s, however, the aim was no longer to defeat the imperialists but to catch up with them in terms of economic development. And the only way to do this, it was understood, was through the improvement of the technology used in production. The rise to prominence of technological progress did not mean the end of the confrontation between the blocs. It was power politics that determined the big technological projects, too. However, it did represent a major change in the legitimation of the system, as it shifted the emphasis from class struggle to technological development and also transformed the power structure of state socialist societies, giving technocrats greater room for manoeuvre.

2 D. S. Chassé, Towards a Global History of the Marshall Plan. European Post-War Reconstruction and the Rise of Devlopment Economic Experties, in: Industrial Policy in Europe after 1945. Wealth, Power and Economic Devlopment in the Cold War, eds. C. Grabas and A. Nützenadel, London 2014, pp. 187–212.

3 Resolution of the Congress of the HSWP, November 1962. A Magyar Szocialista Munkáspárt határozatai és dokumentumai 1956–1962 [Decisions and Documents of the Hungarian Socialist Workers' Party 1956–1962], Budapest 1964, p. 573.

The turn towards technology in the Soviet Union and in the Central European countries that were militarily and politically dependent on it is a well-known development in the Khrushchev era.[4] By this time, the Eastern Bloc leaders had realized that previous economic policies based on the labour-intensive expansion of existing technological capacity could not deliver further growth. Increasing efficiency was identified as the key to further progress, which was seen as achievable mostly through the use of more efficient production technologies – hence, the need for a scientific and technological revolution, for which a series of institutions were established in the second half of the 1950s and early 1960s.[5]

In the Soviet Union, the State Scientific-Technological Committee was created in 1957 to develop new production technologies or to import them from abroad and implement them at home. The Soviet Union had the high level of scientific knowledge needed to build nuclear technology or missile technology, but a range of industries, especially in manufacturing, lacked modern, efficient production technology. As domestic technological development, which was supposed to take place in several industries at once, progressed slowly, it was soon realized that the expected scientific and technological breakthroughs could not be achieved by relying on domestic development, so attention turned to the acquisition of foreign technology.[6] The push for the development of heavy and war industries able to defeat the West militarily had subsided, giving way to the recognition of the need to develop production technology in manufacturing industries to compete successfully with the West in terms of economic performance and, ultimately, living standards.[7]

The Soviet and the Central European state socialist technological turn and their entry into competition with the West did not leave Hungary untouched. Many Hungarian party documents were written in the spirit of the soviet slogan, "Catch Up and Surpass!" (догнать и перегнать [*Dognat i Peregnat*]). Of course, technological development had to be carried out in a planned way:

4 K. Gestwa, Technik als Kultur der Zukunft. Der Kult um die "Stalinischen Grossbauten des Kommunismus", in: Geschichte und Gesellschaft 30 (2004) 1. pp. 37–73; M. Schulze Wessel, Zukunftsentwürfe und Planungspraktiken in der Sowjetunion und der sozialistischen Tschechoslowakei: Zur Einleitung, in: Zukunftsvorstellungen und staatliche Planung im Sozialismus. Die Tschechoslowakei im Ostmitteleuropäischen Kontext 1945–1989, eds. M. Schulze Wessel and C. Brenner, Munich 2010, pp. 1–18. On the technolgoy history of Soviet Union as still fundamental, see L. R. Graham, The Ghost of the Executed Engineer: Technology and the Fall of the Soviet Union, Cambridge, MA 1993.

5 P. R. Josephson, Would Trotsky Wear a Bluetooth? Technological Utopianism Under Socialism 1917–1989, Baltimore 2010.

6 Sari Autrio-Sarasmo: Cooperation across the Iron Curtain. Soviet Transfer of Technology from West Germany in the 1960s, in: M. Kohlrausch, K. Steffen, and S. Wiederkehr (eds.), Expert Cultures in Central Eastern Europe: The Intarnationalization of Knowledge and the Transformation of Nation States since World War I, Osnabrück 2010, pp. 223–239; S. Autio-Sarasmo, Knowledge through the Iron Curtain: Soviet Scientific-Technical Cooperation with Finland and West Germany, in: S. Autio-Sarasmo and K. Miklóssy (eds.), Reassessing Cold War Europe, London 2011, pp. 66–82.

7 The famous Moscow "kitchen debate" between Nixon and Khrushchev was an expression of the competition for living standards. E. Mehilli, Technology and the Cold War, in: A. M. Kalinovsky and C. Daigle (eds.), Routledge Handbook of the Cold War, London 2014, pp. 292–304.

> *The introduction and application of modern technology should not be a spontaneous activity without overall systematic management and control.*[8]
> *Industrial development must lead to a faster increase in labour productivity, a significant reduction in production costs, material and energy requirements, an improvement in the quality of products, and an increase in their exportability.*[9]
> *The goals set for industrial development can only be achieved by a great increase in labour productivity; therefore, we will accelerate technical development, the main directions and goals of which will continue to be determined centrally, taking into account the capabilities of our country and the results of technical and scientific progress. The central and corporate research and development institutes in industry should receive more financial support than hitherto. The main task of researchers and developers is to help raise production and manufacturing in the most important sectors to the standards of the leading countries.*[10]

The aspiration to catch up did not remain merely a linguistic reality in party documents as was the case with many official objectives but real measures were taken to achieve it. The National Technical Development Committee (NTDC) was set up in 1961 as a central element of the Hungarian strategies striving to catch up with Western societies in terms of economic performance. This article presents a brief overview of the activities of this institution, which was expected to increase the productivity of the Hungarian economy in the 1960s and 1970s, situated within the context of the recent literature on the globalization of the East Central European state-socialist systems.

The turn of these regimes towards technology, which now expected communist salvation from technological progress rather than class struggle, coincided with the opening of the Soviet Union and its subordinate allies to the newly independent countries of the "Third World". Exploring the history of the opening up of the Eastern Block to the Third World over the course of the past decade, historians have added significant nuance to the simplified picture of the Cold War as an opposition of two blocs. They have pointed out that relations and political strategies in the Cold War period were not determined solely by the conflict between the "West" and the "East," and the processes of globalization were not simply structured around the former as the centre. The motivations for the opening of the East to the South and its subsequent dynamics up to the fall of the Soviet Union have been reassessed in the last decade by research as an attempt to create an alternative space for globalization centred on Moscow or the Eastern Bloc.[11] In the wake of this

8 Submission to the Political Committee of HSWP of 5 March 1959. A Magyar Szocialista Munkáspárt határozatai és dokumentumai 1956–1962 [Decisions and Documents of the Hungarian Socialist Workers' Party 1956 –1962], Budapest 1964, p. 506.

9 Resolution of the Congress of the HSWP, November 1959. A Magyar Szocialista Munkáspárt határozatai és dokumentumai 1956–1962 [Decisions and Documents of the Hungarian Socialist Workers' Party 1956–1962]., Budapest 1964.

10 Ibid., p. 573.

11 J. Mark and Y. Feygin, The Soviet Union, Eastern Europe, and Alternative Visions of a Global Economy 1950s–1980s, in: J. Mark, A. Malinovsky, S. Marung (eds.), Alternative Globalizations: Eastern Europe and the Postcolo-

opening, it is argued, "Soviet and Eastern European planning became for a few decades one of the main globalizing forces, proving attractive for decolonizing states in the global South looking to build their own economic sovereignty."[12] While this line of research has indeed highlighted a number of links between the Eastern Bloc and the Third World, the question of how the process of opening up to the Global South relates to the increased demand for modern technology in the socialist countries remains open. This paper seeks to shed light on that question.

The relationship between the East and the West was asymmetrical. The Soviet Union and the Eastern Bloc were always compelled to develop or nurture economic relationships with the outside world, which included the search for market opportunities and the import of technologies and capital. Without economic links to the West, the East was incapable of development, and indeed its existence depended on relations outside its sphere of direct influence.[13] In contrast, for the West, connections with the Soviet bloc were not vital for its development.[14]

This unevenness in the economic power relations made difficult the purchasing of new technologies as well as the creation of a network by the Soviet Union that might have been a genuine alternative to Western-centred globalization. Having accepted the need for technological development as a means of competing with the West, they also accepted the view that the key to economic and social development was the technocratic efficiency gains that market competition had so successfully brought about in the capitalist countries. Indeed, with regard to approaches to industrial development and economic efficiency, there was no other model than that of the "capitalist world".[15]

Of course, the European state-socialist countries used the mechanism of planning rather than the market to allocate economic resources. In terms of economic success and efficiency, however, these systems, precisely after their turn to technology, no longer represented different standards from those that applied under capitalism. The aim was to

nial World, Bloomington 2020, pp. 35–58; J. Mark and T. Rupprecht, The Socialist World in Global History. From Absentee to Victim to Co–producer, in: M. Middell (ed.), The Practice of Global History: European Perspectives. Bloomsbury, London 2019, pp. 81–113; J. Mark and P. Apor, Socialism Goes Global: Decolonization and the Making of a New Culture of Internationalism in Socialist Hungary, 1956–1989, in: Journal of Modern History 87 (2015) 4, pp. 852–891; A. Calori et al., Alternative Globalization? Spaces of Economic Interaction between the "Socialist Camp" and the "Global South," in: A. Calori et al. (eds.), Between East and South: Spaces of Interaction in the Globalizing economy of the Cold War, Berlin/Boston 2019.

12 J. Mark and P. Betts. Introduction, in: Socialism Goes Global: The Soviet Union and Eastern Europe in the Age of Decolonisation, Oxford, 2022, pp. 13–14.

13 On the complexity of the political, military, and economic structure of the Eastern Bloc and its semi-peripheral economic position compared to the West, see S. Marung, U. Müller and S. Troebst, Monolith oder Experiment? Der Block als Raumformat, in: M. Middell (ed.), Verräumlichungsprozesse unter Globalisierungsbedingungen, Leipzig 2021, pp. 237–276.

14 O. Sanchez-Sibony: The Cold War in the Margins of Capital: The Soviet Union's Introduction to the Decolonized World, 1955–1961, in: Mark, Kalinovsky, and Marung (eds.), Alternative Globalizations, pp. 59–79.

15 O. Sanchez–Sibony, Red Globalization: The Political Economy of the Soviet Cold War from Stalin to Khrushchev, New York 2014; O. Sanchez–Sibony, Capitalism's Fellow Traveler: The Soviet Union, Bretton Woods and the Cold War 1944–1958, in: Comparative Studies in Society and History 56 (2015) 2, pp. 290–319; C. Boyer, Asymmetrische Verflechtung: Ein Beitrag zur Erklärung des Systemzusammenbruchs in Ostmitteleuropa, in: Jahrbuch für Wirtschaftsgeschichte/Economic History Yearbook 1 (2014), pp. 197–232.

achieve the productivity optimum idealized by technocrats, that is the highest possible output achieved with the least possible input.[16]
Through the history of the central body of Hungarian technology imports, this paper examines how Hungarian state socialism sought to achieve technological progress in the context of the opposition between the two blocs in the 1960s and 1970s. Before going into the details of the history of the NTDC in Hungary, it is first necessary to outline the general characteristics of technocracy in the period, based on the relevant literature, in order to better interpret the making of technocratic attitudes into official ideology around 1960 in Hungary.

## 2. The Technocracy

Although its roots go back much further, technocracy as a way of looking at things, or as Dirk van Laak has called it, a "background ideology", was given a dramatic boost in its unfolding by the Great Depression and eventually came into its own in the 1960s.[17]
In its broadest sense, technocracy is the view that scientific rationality can solve current economic and social problems. The key term for technocracy is *efficiency*, both in engineering and in economic terms, or the optimal balance of inputs and outputs. Behind this lies the belief in the universal validity of rational, scientific processes as the means of solving problems.[18]
In the twentieth century, specialized experts were the representatives (or apostles) of the technocratic approach. They established themselves as the rational scientific managers of modern economic and social processes.[19] In industrial societies, the role of the sciences and thus also, their prestige grew continuously. The sciences were the only social institution that did not lose any of their functions in the nineteenth and twentieth centuries, and their sphere of influence was constantly expanding. Their emergence as the indispensable foundation for state and economic affairs in the broad sense occurred at the turn of the twentieth century. Governments, various bodies of the state apparatus, business enterprises, gradually, civil society organizations, and finally, individuals came increasingly to rely on the sciences and sought out experts equipped with the necessary scientific knowledge and tools.[20] Scientific and technocratic experts became indispensable in the

16 O. Sanchez-Sibony, Economic Growth in the Governance of the Cold War Divide: Mikoyan's Encounter with Japan, Summer 1961, in: Journal of Cold War Studies 20 (2018) 2, pp. 129–154.
17 W. Schivelbusch, Entfernte Verwandtschaft: Faschismus, Nationalsozialismus, New Deal 1933–1939, Munich/Vienna 2005; V. Dubois and D. Dulong, Introduction générale, in: La question technocratique. De l'invention d'une figure aux transformations de l'action publique, Strasbourg 1999. 5–9.
18 D. van Laak, Technokratie im Europa des 20. Jahrhunderts – Eine einflussreiche "Hintergrundideologie", in: L. Raphael (ed.), Theorien und Experimente der Moderne. Europas Gesellschaften im 20. Jahrhundert, Cologne 2012, pp. 101–128; B. Ziemann et al., Introduction: The Scientization of the Social in Comparative Perspective, in: B. Ziemann et al. (eds.), Engineering Society: The Role of Human and Social Sciences in Modern Societies 1880–1980, Basingstoke 2012, pp. 1–40.
19 M. Kohlrausch, Building Europe on Expertise: Innovators, Organizers, Networkers, London 2014.
20 M. Szöllösi-Janze, Wissensgesellschaft in Deutschland: Überlegungen zur Neubestimmung deutscher Zeit-

successive development of policies that shaped the life of society in a wide range of fields, just as in the economic, scientific (and technocratic) expertise became an increasingly important factor of production, alongside capital and manual labour.[21]

The technocratic expert emerged as a new defining figure of authority whose claim to legitimacy rested on his ability to offer scientific responses to the challenges posed by modern industrial societies. The experts did not craft (utopistic or theological) plans for an envisioned better future. Rather, they sought to manage processes underway in the present in a scientific manner, thus steering these processes in the "right" direction.[22] The expert was concerned not so much with the question of "what to do" as with "how to do" it scientifically. Technocratic proposals were always empirically based, and plans were never based on anything openly resembling a political ideology. Rather, they were founded on rational, proven knowledge and procedures whose efficiency was well established. Throughout the twentieth century, technocratic experts lived in symbiosis with the state. Regardless of the political system of the moment and place, state power relied on the technocracy, and the representatives of the technocracy relied on state power.[23]

It was around the time of the Great Depression that a technocratic vision of society emerged, according to which progress, understood as modernization, was derived from specialized knowledge. Progress in production, based on the sciences and technical rationality, was associated, at least in Western societies, with a Fordism managed with the tools of Keynesian economics. This led to an idea of development that was indeterminate and open-ended but, according to the technocratic vision, always rational in its various phases. Development was understood as a technological opportunity and, at the same time, an economic necessity in addressing social problems through increased efficiency. This understanding of development harmonized with and could be adopted by completely different and even ideologically opposed orientations.[24]

The technocratic approach was present not simply as an array of abstruse ideas debated in texts distant from life "on the ground". With the emergence and continued growth of industrial and agricultural production technologies and the development of infrastructure that spanned continents (roads and railways, airports, cable lines, pipelines, telecommunications networks, etc.), technocracy was a shaping force in day-to-day life in Europe. Even with the shifting political divisions of the twentieth century, these creations of the

geschichte über Verwissenschaftlichungsprozesse, in: Geschichte und Gesellschaft 30 (2004) 2, pp. 277–313. "Wissenschaftliches Wissen [hat] seine soziale Funktion kontinuierlich erweitert […], bis es alle öffentlichen wie privaten Lebensbereiche einschließlich der Intimsphäre durchdringt […]. Traditionelle Konfliktlinien wie etwa der Klassengegensatz zwischen Kapital und Arbeit verlieren damit an prägender Kraft, sie werden überlagert von neuen Handlungsfeldern mit anderen Rationalitäten und mit neuen Akteuren, deren Funktion und sozialer Einfluß auf Wissen beruht", p. 279.

21 L. Raphael, Verwissenschaftlichung des Sozialen als methodische und konzeptionelle Herausforderung für eine Sozialgeschichte des 20. Jahrhunderts, in: Geschichte und Gesellschaft 22 (1996), pp. 165–193.

22 T. Etzemüller, Social Engineering als Verhaltenslehre des kühlen Kopfes, in: T. Etzemüller (ed.), Die Ordnung der Moderne. Social Engineering im 20. Jahtrhundert. Bielefeld 2009, pp. 11–39.

23 Ibid.; Kohlrausch, Building Europe, pp. 55–78, 139–142.

24 A. Doering-Manteuffel, Konturen von "Ordnung" in den Zeitschichten des 20. Jahrhunderts, in: Etzemüller (ed.), Die Ordnung der Moderne, pp. 41–64; Kohlrausch, Building Europe, pp. 107–113.

technocracy did a great deal to create a comparatively integrated whole out of the peoples of Europe.[25] The expertise of the technocracy was as present in the countries of the Eastern Bloc as it was in the West, if perhaps in a different context and with distinctive "local" features, but nonetheless with the same basic conviction in the pre-eminence of the sciences as a tool with which to address social, economic, and other problems and thus enable further progress.[26]

One institutionalization of technocratic expertise under state-socialist conditions was the NTDC in Hungary. This is used here to explore the characteristics and visions of the socialist technocracy and the strategy by which the Hungarian socialist leadership tried to improve the country's global position.

## 3. The National Technical Development Committee in Hungary

The apparatus of the Central Committee of the Hungarian Socialist Workers' Party elaborated a decision for the Central Committee so as to establish the National Technical Development Committee independent of the National Planning Office and for tasks that went beyond the level of individual ministries. The proposal began with a summary of the technocratic ideal of the 1960s:

> *In our country, the foundations of socialism are definitive, being laid at a time when the automation of production processes, the production of new, hitherto unknown plastics, the development of electronics, the use of nuclear energy for peaceful purposes: these mark the beginning of a new technological revolution.*[27]

25 T. J. Misa and J. Schot, Inventing Europe. Technology and the Hidden Integration of Europe, in: History and Technology 21 (2005) 1, pp. 1–19. According to the article, which sets the agenda for research in the history of technology, apart from the attention paid to political processes, there has been little research on how Europe's borders were shaped by a common technology whose development was driven in large part by the military preparations of the opposing powers. The research in this direction is summarized in the Making Europe series; see R. Oldenziel and M. Haerd, Consumers, Tinkerers, Rebels: The People Who Shaped Europe, Basingstoke 2013; Kohlrausch, Building Europe; P. Högselius, A. Kaijser, and E. van der Vleuten, Europe's Infrastructure Transition: Economy, War, Nature, Basingstoke 2014; A. Fickers and P. Griset, Communicating Europe: Technologies, Information, Events, Basingstoke 2019; W. Kaiser and J. Schot, Writing the Rules for Europe: Experts, Cartels, and International Organizations, London 2014; M. P. Diogo and D. van Laak, Europeans Globalizing: Mapping, Exploiting, Exchanging, Basingstoke 2016.

26 M. Kohlrausch, K. Steffen and S. Wiederkehr, Expert Cultures in Central Eastern Europe. The Internationalization of Knowledge and the Transformation of Nation States since World War I. Introduction, in: Kohlrausch, Steffen, and Wiederkehr (eds.), Expert Cultures in Central Eastern Europe, pp. 9–30; D. Jaješniak-Quast, "Hidden Integration". RGW-Wirtschaftsexperten in europäischen Netzwerken, in: Jahrbuch für Wirtschaftsgeschichte 55 (2014) 1, pp. 179–195; Z. Bódy, Enthralled by Size. Business History or History of the Technocracy in the Study of a Hungaryan Socialist Factory, in: Hungarian Historical Review 4 (2015) 4, pp. 964–989; J. Janác, "Haben wir nur das Wasser, das vom Himmel fällt?" Kontinuitäten technokratischen Denkens in der sozialistischen Tschechoslowakei am Beispiel des Donau-Oder-Elbe Kanalprojektes, in: Bohemia 57 (2017) 1, pp. 115–147; D. Olsáková, Im globalen Netzwerk? Die Planung der wissenschaftlich-technischen Entwicklung der Tschechoslowakei von der Sowjetisierung bis zu den ersten Integrationsversuchen in den sozialistischen Block, in: Bohemia 57 (2017) 1, pp. 25–54; Schulze Wessel, Zukunftentwürfe.

27 MNL OL XIX – A – 41. 1. Submission of the Industrial and Transport Department of the HSWP Politburo to the Central Committee 12 July 1961.

The creation of the NTDC was the work of two engineers, Árpád Kiss, President of the National Planning Office, and János Sebestyén. Sebestyén headed the technical office of the National Planning Office, which was set up by Árpád Kiss in order to prepare the NTDC.[28] In preparing a draft for the NTDC, Sebestyén consulted company leaders, the technical university, and heads of research institutes and referred to similar bodies in the Soviet Union and Czechoslovakia as models.[29]

After the preparatory work of the Planning Office apparatus and consultation with the Central Committee apparatus, the establishment of the NTDC was decided by a party decision in accordance with the political decision-making processes of the time, and two government decisions were adopted to form the concrete organization.[30] This created a body that was intended to address scientific and technical development issues of strategic importance to the Hungarian economy and was explicitly designed to be distanced from the various lobbying interests of the agricultural or industrial sectors. Decision-makers felt that there was a need for a body that could formulate and implement general "technology policy" agendas independently of individual corporate or industry lobbies. To this end, the NTDC became an autonomous body, with its own title within the budget chapter of the Council of Ministers, and managed its own resources. The National Technical Library and Documentation Centre, the Hungarian Standards Office, the National Bureau for Patents, and the National Metrology Office became its subordinate institutions.

According to the text of the government decision, the NTDC was tasked with "elaborating the most scientifically sound and economically feasible state-of-the-art technical solutions for the development of industry, construction, transport, and agriculture". Its primary task was to "develop guidelines based on technical-economic science to underpin development on long-term perspective".[31] The magic term "long-term perspective" was thus linked to technical modernity and the scientific basis of the "technical-economic" objectives to be achieved. However, domestic research and development was not expected to play a decisive role in achieving this goal.

The documents establishing the NTDC already stated that the most important task of the institution would be to develop technology import strategies, that is, to determine from where and for which sectors of the Hungarian economy technology should be imported. The institution was thus set up for the purpose of transnational technology import, and its task was to be carried out by establishing transnational links. The decision-makers did not start from the primary role of domestic technology development. Nor was the NTDC just an analytical, planning institution. It received a substantial budget allocation to finance domestic research and development and a foreign currency allocation to purchase foreign technology licences. It established contacts with foreign

28 Oral History Archivum Z 356, Interview with Sebestyén János, pp. 162–168.

29 MNL OL XIX – A – 41. 1.

30 Government Decree No 1017/1961/IX.14 ordered its establishment, and Decree No 1003/1962./I.27 laid down its organization.

31 Ibid.

companies from which it wanted to buy technology and helped domestic companies to implement the technology it bought.

The NTDC soon grew into a quasi-ministry of research and development with huge sums of money but unintegrated into the government ministries and very much based on the autonomous operation of technocratic groups, which were hierarchically organized from within. The NTDC actually functioned as a ministry of research and development, and its president became a member of the government. Under the conditions of the party-state, it enjoyed a surprising degree of autonomy. As the leading body for technical development, the NTDC was not an office, not a bureaucratic organization. Its bodies, committees and working groups at various levels were made up of members from universities, research institutes, company development departments, delegates from ministries and planning departments, senior staff of sectoral industrial research institutes, and even economic journalists. For some, membership was linked to a position; for others, it was a personal achievement. The Supreme Plenum included a number of academic members from the Hungarian Academy of Sciences. According to the statutes of the organization, their work was to be guided by technical and economic science and not by ideological or political considerations or, in principle, sectoral lobbying interests.[32] This created a corporative institution, which strengthened the support of the system among technical intellectuals not politically affiliated to the party while providing them with resources for their professional advancement.

By institutionalizing the technocratic exigence for development based on techno-economic scientificity, a very significant unspoken turn was made in the ideology of the Kádár regime. The socialist government goals in the future were no longer defined by the principles of Marxism-Leninism; still less were the methods leading to the goals deducible from them. Rather, it had become the task of "technical-economic" science to set the right goals and to determine the way to achieve them. With this party and government annunciation, the technocrats as depositories of scientific knowledge were also given unquestioned legitimacy and room for manoeuvre.

As a later report, dating back to the 1970s evaluating the established practices of the NTDC put it, "the political significance of this style of work is that it involves the most skilled sections of the technical intelligentsia in the technical-economic management of the state and gives them the opportunity to engage in creative activities beyond their immediate work (in thematic committees, debates, etc.)".[33] Or, as later expressed by the Vice-Chairman of the NTDC, the experts on the NTDC committees were "working in a paid social activity"[34] – a very well paid job for the time.

Vice-Chairman János Sebestyén held his position in the organization from its foundation until 1989 alongside the often-changing chairmen, who were politicians. An engineer by training, Sebestyén was a government commissioner for the Stalin City steelworks pro-

32 MNL OL XIX – A – 41. 1. Article 5 of the Statutes of the National Technical Development Committee.
33 Ibid., Work of the National Technical Development Committee in 1977. Summary Report. 16 December 1977.
34 Oral History Archivum Z 356, Interview with Sebestyén, p. 169.

ject in the first half of the 1950s and later headed Hungary's trade mission in Frankfurt. Even there, in the second half of the 1950s, his task was not simply to conclude foreign trade deals but to import technology. He had already played a key role in preparing the decision to set up the NTDC, and as vice-chairman, he was obsessed with importing technology (according to his publications and an interview he gave late in life). He saw it as his personal mission to help the system, with which he identified unconditionally, to attain an economic capacity through a technological development that was on a par with the West.

Sebestyén's attention and the entire activity of the NTDC were directed at enabling the Hungarian economy to import the technology that would allow more cost-effective, labour-saving production and, above all, the production of goods that could be successful in "capitalist" export markets. According to Sebestyén's analysis – but also, one might say, according to the Hungarian technocratic consensus of the time – the solution to the structural problems of the Hungarian economy, which were quite visible for decision-makers from the regular foreign trade deficit, was to increase the export potential of the Hungarian industry to Western markets made possible by technological developments.[35] In the eyes of the NTDC, the measure of the success of socialism was economic success in the capitalist markets.[36]

The NTDC was involved in the design and implementation of large-scale projects in all sectors of the economy. It played a role in the import of American methods for large-scale agriculture, the creation of a chemical industry based on the processing of Soviet oil, automotive projects, and the conversion of the country's energy industry from coal to Soviet natural gas. Such investments were preceded by extensive data collection, study trips to Western countries, and meticulously elaborated scientific analyses, which had to determine which technological development trends looked promising for the Hungarian economy and which technologies were worth importing from where.

Most of the big technological investment projects were not just on the scale of Hungary. Western technology imports were usually intended for the development of production systems that were linked to the economies of other European socialist partner countries; otherwise, the investment would not have paid off. Contrary to other fields of cooperation, cooperation between member countries on joint infrastructure investments – electricity grid, natural gas, and oil supplies – was relatively successful.[37] These were precisely

35 J. Sebestyén, The History of the National Technical Development Committee from a Technology Policy Perspective (1960–1990). National Technical Development Committee, For internal use, Budapest (1994) (Budapesti Műszaki Egyetem. Országos Műszaki Információs Központ és Könyvtár [Budapest University of Technology. National Technical Information Centre and Library], BME OMIKK 423.461).

36 Petrov comes to a similar conclusion when looking at Bulgarian-Indian industrial relations in the electronics sector; Bulgarian companies had learned how to move in the market as capitalist enterprises. V. Petrov, The Rose and the Lotus. Bulgarian Electronic Entanglements in India 1967–1989, in: Journal of Contemporary History 54 (2019) 3, pp. 666–687. See also M. Trentin, Tough Negotiations: The Two Germanys in Syria and Iraq from 1963 to 1974, in: Cold War History 8 (2008) 3, pp. 353–380; Ł. Stanek, Buildings for Dollars and Oil. East German and Romanina Construction Companies in Cald War Iraq, in: Contemporary European History 30 (2021), pp. 544–561.

37 F. Flade, The Role of the Council for Mutual Ecomic Assistance in the Construction of Transnational Electricity

the area where technocrats had a lot of room to manoeuvre and where they could link their activities to the big political interests at the bloc level.[38]

Their most enduring project was the 1970 creation, in cooperation with Siemens, of the Research Institute for Computer Technology and Automation (RICTA). In addition to providing computer services to companies on a commercial basis, this institute provided the computer backbone for the Ministry of the Interior's records and the Statistical Office. According to Sebestyén's 1994 study, computer imports were the subject of a long battle with decision-makers who did not understand its importance and were reluctant to spend much of the budget on such purchases. The turning point in this story was the Soviet Union's demand for the creation of a common computing base for the Council for Mutual Economic Assistance (CMEA).[39] The motivation for this certainly included military needs; it did not only concern the industrial applicability of computer technology and the rationalization of production processes that could be achieved through it.

The creation of the computer technology base of the CMEA was, of course, only possible with significant Western technology imports, and the NTDC was the Hungarian implementing agency. The Computer Import Committee within the NTDC was headed by Sebestyén.[40] It established links with Western computer companies and decided on various hardware and software purchases. This was a militarily important area where Siemens was competing with IBM and other Western companies for Eastern markets; the NTDC and Sebestyén himself favoured the German company.

In 1973, Siemens established a computer joint venture in Hungary and signed a comprehensive framework agreement with the NTDC. On this basis, the two parties set up a number of joint working groups specialized in specific topics and tasked with preparing concrete deals. At the top level, the cooperation was managed by a regular consultative body consisting of members delegated by Siemens AG and the NTDC, as well as the heads of the large Hungarian companies concerned.[41] On this basis, Sicontact Kft was established in 1974, 49 per cent owned by Siemens and 51 per cent by the Hungarian partners.

Grid Mir, in: Comparativ. Zeitschrift für Globalgeschichte und Vergleichende Gesellschaftsforschung 27 (2017) 5–6, pp. 48–64; F. Flade, Energy Infrastructures in the Eastern Bloc: Poland and the Construction of Transnational Electricity, Oil and Gas Systems, Wiesbaden 2017; L. M. Lüthi, Drifting Apart: Soviet Energy and the Cohesion of the Communist Bloc in the 1970s and 1980s, in: J. Perovic (ed.), Cold War Energy: A Transnational History of Soviet Oil and Gas, Basingstoke 2017, pp. 371–399.

38 U. Müller, Introduction. Failed and Forgotten? New Perspecitves on the History of the Council for Mutual Economic Assistance, in: Comparativ. Zeitschrift für Globalgeschichte und Vergleichende Gesellschaftsforschung 27 (2017) 5–6, pp. 7–25; D. Jajesniak-Quast, The Multiple International Dimensions of Comecom. New Interpretations of Old Phenomena, in: ibid., pp. 140–149; A. Steiner, The Council of Mutual Economic Assistance – An Example of Failed Economic Integration?, in: Geschichte und Gesellschaft 39 (2013), pp. 240–258.

39 Sebestyén, History of the National Technical Development Committee.

40 Tibor Vámos recalling the memory of János Sebestyén, to whom he was already subordinate during the construction of Stalin's City, at the National Technical Development Committee Memorial Conference in 2012, https://www.youtube.com/watch?v=wRQ–4pynx84&feature=youtu.be (downloaded 20 January 2021).

41 Zs. Frisnyák and J. Klement, A Siemens története Magyarországon, 1887–2017 [History of Siemens in Hungary, 1887–2017], Budapest 2017, pp. 138–139.

The main activity of Sicontact Kft in the 1970s was the installation, servicing, and after-sales service of equipment supplied by Siemens (mainly computers). Clients included the Hungarian Ministry of Finance, banks, and some large corporations. This scope of activity suited the interests of Siemens, which primarily wanted to gain market entry into Hungary and the socialist countries, but it caused dissatisfaction among its Hungarian partners, who wanted to achieve joint production and gain foreign currency export revenues through jointly manufactured products. Indeed, isolation from Western European markets was a growing problem in the thinking of the Hungarian economic elite. Against all Hungarian intentions, it was a constant problem in terms of both technology imports and marketing opportunities for Hungarian agriculture and certain industries.[42] Even though it did not result in joint production, the cooperation with Siemens was nevertheless successful in the creation of RICTA (as mentioned).[43] Siemens' business was aided in this by the Soviets' having also concluded a general agreement with the German company for the development of their computer technology – the control exercised by the US government over US companies made them unavailable to Moscow as a partner. It was in the computer field that the manoeuvres of rival foreign companies and the various domestic and Soviet backers who favoured them were also joined by state security agencies. One time, the Interior Ministry arrested an official of the NTDC.[44] Although the intelligence – and possibly corrupt – aspects of the establishment of RICTA and the import of computer technology cannot be clarified due to the unavailability of the relevant sources, it is certain that the import of technology was of great importance in this case since it led to the creation of the systems that were employed as a computer background by various agencies of the Hungarian state in the 1970s and 1980s, from the country's Central Statistical Office to its Interior Ministry. This is where, for example, Videoton's development in computing and microelectronics started, which, in addition to consumer electronics demand, met economic and specifically military needs – and not only Hungarian ones but also those of the partner armies in the Warsaw Pact.[45]
In such technology-import projects, cooperation was based on a common technocratic approach because the revolutionary impact of computer technology on production and

42 P. Germuska, Attraction and Repulsion: Hungary and European Integration, in: A. Romano and Federico Romero (eds.), European Socialist Regimes' Fateful Engagement with the West: National Strategies in the Long 1970s, London 2020, pp. 50–77.

43 M. Strehó and A. Szász, A Sztaki története [History of RICTA], Budapest 1999, https://itf.njszt.hu/objektum/az–mta–sztaki–tortenete (downloaded 20 January 2021).

44 The man was convicted in 1973 for espionage and currency offences. According to his testimony, the National Technical Development Committee encouraged and financed certain Hungarian companies to make purchases from the West, especially in the computer industry, but only if they made contracts with the companies of their choice, usually West German companies, which paid commissions to the NTDC officials in return for the deals. Against the leadership of the NTDC, however, the BM III: General Group was unable to achieve any substantial results in its investigations (although it would have liked to). See Zs. Borvendég, Az "impexek" kora [The age of "impexes"], Budapest 2017, pp. 172–176.

45 P. Germuska, A magyar középgépipar. Hadiipar és haditechnikai termelés Magyarországon 1945 és 1980 között [The Hungarian Medium-sized Machinery Industry. Military Industry and Military Production in Hungary between 1945 and 1980], Budapest 2014, pp. 425–428.

data management and processing was equally understood by Western and Hungarian experts. They also wanted to use the new technology in corporate governance. In this context, Sandrine Kott has spoken of a "trans-block" technocratic approach.

In 1966, the Institute of Management Science was established in Budapest to enable Hungary to participate in the international management training courses run by the International Labour Organization (ILO). The ILO network of management training courses was established with the aim of making science-based management more successful for companies and thus improving the situation of the workforce, based on the assumption that the rationalization of production processes and the motivation of the workforce to behave appropriately required science-based management.

Interest in the programme came from the post-colonial countries in the Third World and also from several socialist countries in Central Europe. Meanwhile, between 1969 and 1971 alone, management experts – a large number of them British – delegated by the ILO to the courses of the Institute of Management Science trained 1,454 Hungarian managers, mainly middle managers of socialist companies. Kott's analysis suggests that a "trans-bloc" technocratic class that spoke a common language began to form.[46] The programme in Hungary was closed down in 1972, but there was still interest in business management computer systems, which were promoted by the ILO. The techniques of science-based management deriving from a capitalist environment were also seen as of key importance for socialist corporate governance and proper corporate control over workers.[47]

## 4. The Place of the NTDC's Technocratic Projects in the Historical Dynamic of the State-socialist System

In a sense, the NTDC became the institution of the meeting between the technocracy and the Kádár leadership, which was seeking new politics and new ways of legitimizing discourse in order to conciliate Hungarian society after 1956. Thus, the Kádár regime institutionalized the role of technocracy and granted it an unusual degree of autonomy, at least compared to the essential feature of Kádárism of allowing the various institutional systems of society at most a conditional and limited autonomy vis-à-vis political power. To a certain extent, the NTDC was thus able to become the gateway to technology transfer in Hungary, no doubt with the approval of the political leadership, but essentially following the initiatives of the technocrats. Its task was to ensure professionally driven technological development, mainly through the import of Western technology.

46 S. Kott, The Social Engineering Project. Exportation of Capitalist Managment Culture to Eastern Europe (1950–1980), in: M. Christian, S. Kott, and O. Matejka (eds.), Planning in Cold War Europe: Competition, Cooperation, Circulations (1950s–1980s), Berlin/Boston 2018, pp. 123–141; Sanchez–Sibony (ibid.) showed that in the Soviet-Japanese relationship, the two sides spoke the same technocratic language on economic issues.

47 Ibid.

Beyond the specific movements of individual domestic and transnational actors at the time, the global nature of the technocratic approach, based on a belief in the economic and social transformative capacity of scientific rationality, seems to have been essential. The Hungarian technocrats had a transnational mindset in common with not only their CMEA counterparts but also their Western partners. This technocratic transnationalism was exploited as a resource in the 1960s by the Kádár regime – and also by the Moscow-dominated Warsaw Pact – seeking to stabilize itself in the longer term, and not without success. It included computer technology and microelectronics, where the range of products expanded from the production of the bloated colour TV to military equipment and large-scale agricultural technology, which multiplied Hungarian food exports to the CMEA, and the MAN engine licence imported for the bus industry, which made Hungarian vehicle production the largest in the bloc in terms of buses.[48] In these technology import deals lay a common view among the technocrats of the two blocs that technological efficiency was the key to economic and social development.

The turn of the 1960s marked the end of an era of large-scale interventions by state-socialist power that reshaped property relations and social structures. Thereafter, development was no longer directed by an ideologically determined political programme but by the technocrats' vision of modernity, which shaped – often through technology import – not only industrial and agricultural technologies and infrastructure but also, increasingly, the everyday socialist way of life. And in order to achieve their goals, the Eastern technocrats hoped to adopt the applicable technologies from those very Westerners, with whom they spoke a common language. Already in the 1960s, the Eastern bloc, which had fairly clear military and political borders, was not separate from the West in terms of this technocratic transnationalism.

There is no doubt, however, that Hungary, in particular, and the Eastern Bloc, in general, were the recipients of a technology transfer, not exporters. In 1975, 98 per cent of the world's licences were sold in developed Western countries, and four-fifths of the customers came from these countries. In only two per cent of licence sales were the vendor active in CMEA countries. Third World countries did not sell any licences. These figures alone indicate that the West was indeed the centre of globalization in terms of technological innovation.

Extending the analysis beyond the narrowly understood licenses, we find that between 1970 and 1983, Hungary purchased licenses and know-how for 203.7 million dollars, while it sold technology for 49.7 million dollars; in other words, technology imports exceeded exports by over four times. The volume of technical design services sold by Hungary was much higher, mainly in the Global South. However, these architectural, water management, and such designs were essentially carried out in the context of commercial

48 In agriculture, too, the international networking of technocrats and the international transfer of technology thath reshaped the everyday life on the Hungarian countryside started in the first third of the 1960s, after the large scale political intervention of the state that reorganized the ownership structure, see S. Varga, The Hungarian Agricultural Miracle? Sovietization and Americanization in a Communist Country (trans. F.T. Zsigó), Lanham, MD 2020; Bódy, Enthralled by Size.

businesses.[49] In 1976, Hungary had only two joint industrial production operations with developing countries as compared with 279 with Western firms. In addition, there were 19 collaborations with Western companies on joint ventures in third, mainly developing countries.[50] Such industrial cooperation usually invoved technology transfer. In terms of cooperation partnerships, West Germany stood out with 39 percent of Hungary's total, followed by Austria with 15 per cent, the USA 9, Italy 8, France, Sweden, Switzerland 7, and the UK 6 per cent.[51]

The above proportions alone indicate that relations with the West – although limited by the bloc's borders – were much more important than those with the Third World, in principle priviliged by the ideology. The latter were essentially absent from the vision of the NTDC. Generally, these relations were of interest primarily because they helped Hungary to obtain hard currency; thus, they tended to be compensatory in nature. Hungarian economic policy and the technocratic elite in the National Committee for Technical Development hoped to catch up with Western economies by transferring technology from the West, but the capital required was unavailable precisely because the Hungarian economy was not producing efficiently enough. In this sense, the diagnosis made when the NTDC was established was correct according to the ex-post-economic historical analysis, too. That is why the country sought to acquire hard currency through deals with the Third World.[52]

In this strategy of technology import, despite all the ideological slogans uttered elsewhere, building socialism meant nothing other than achieving the productivity of capitalist economies. And because the NTDC's view of the problem was reduced simply to the adaptation of the appropriate technology, this endeavour failed. The same process occurred in the Soviet economy. The technological gap with the West increased in the 1960s, a time when the explicit aim was to achieve significant technological advances through Western economic connections – and indebtedness increased in the 1980s when the Soviet Union hoped to gain access to substantial capital through massive energy exports.

The narrowly conceived socialist technocratic view of technological development without embedding technology in an economic, social, or even cultural or political context thus failed.[53] The Soviet Politburo was already dominated by technical graduates in the

49 Z. Bódy, Opening Up to the "Third World" or Taking a Detour to the "West"? The Hungarian Presence in Algeria from the 1960s to the 1980s, in: A. Ohlendorf and M. Trecker (eds.), Between Trade and Aid: Theories, Practices, and Results of Attempts at Exporting State-Socialist Development Models to the Third World (=Comparativ 33 [2023] 3), pp. 377–399.

50 P. Marer, East-West Technology Transfer. Study of Hungary 1968–1984, Paris 1986, pp. 123–124.

51 Ibid., p. 128.

52 The whole of the Eastern Bloc had a trade surplus with the Third World. M. Trecker, Red Money for the Global South: East-South Economic Realtions in the Cold War, London 2020, p. 157.

53 L. R. Graham, What Have We Learned about Science and Technology from the Russian Experience?, Stanford (CA) 1998; P. Hanson, The Soviet Union's Acquisition of Western Technology after Stalin: Some Thoughts on People and Connections, in: Autio-Sarasmo and Miklóssy (eds.), Reassessing Cold War Europe, pp. 16–32. The recognition of the importance of the economic, social and cultural embeddedness of technological systems in the study of technological development was originally inspired by T. Hughes, W. Bijker, and T. Pinch, The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology, Cambridge 1993.

1950s, and by 1980, some ninety per cent of the Politburo were technically qualified, including Brezhnev himself, a metallurgical engineer with an evening degree.[54] As a result of the subordination of an engineering education to technological goals and the equation of these with social development, by the 1980s, half of the world's trained engineers were working in the Soviet Union.[55] The planned economy model, both in its stricter and looser versions, was clearly inadequate for the progress that the socialist technocrats themselves would have considered necessary in the 1960s and 1970s.[56]

## 5. Conclusion

The Hungarian history of technology transfers, whose key instrument was the NTDC, does not support what one may call the concept of "red globalization". Relations with the Third World were not part of an alternative global network organized in opposition to the Western world; rather, from the Hungarian point of view, they were merely compensation for a partial but painful exclusion from the Western world economy. For Hungary, at the turn of the 1950s and 1960s, the decisive factor was the switch to a technocratic model of development, not the opening up to the Third World. The elites of the independent Third World countries saw it at the time as their duty to lead their countries on the path to modernization, and to do so they relied also on the expertise of technocrats. With regard to the concept of unilinear modernization and the technocratic knowledge required for technocratic modernization, the proposals of W. W. Rostow and Western development economists such as W. Arthur Lewis for a Third World development model were not different from those of the Eastern Bloc experts.[57] Industrialization, import substitution, increasing productivity, high rates of accumulation, and increased workforce education levels were the interrelated central ideas of this project. The technocrats of the West and the East did not think differently on these matters, sometimes not even in the details.[58] The shared vision of modernity could be the basis for business, for example, for selling Hungarian expertise. Again, the services and technical knowledge to be sold were not accompanied by any socialist content from an economic or social order point of view.

An independent alternative globalization organized around the Eastern bloc was at best a pretence.[59] The agency of the Eastern bloc as independent global actor was questionable,

54 Graham, The Ghost of the Executed Engineer, p. 73.

55 K. Gestwa, Die Stalinistischen Großbauten des Kommunismus. Sowjetische Technik- und Umweltgeschichte, 1948–1967, Munich 2010.

56 P. Hanson, The Rise and Fall of the Soviet Economy: An Economic History of the USSR from 1945, London 2003. A similar conclusion is reached by Borstelmann, who argues that without the oil boom of the 1970s, the decline of the Soviet Union would still have been spectacular in this decade. T. Borstelmann: The 1970s. A New Global History from Civil Rights to Economic Ineqality, Princeton 2012.

57 Trecker, Red Money for the Global South, pp. 38–39.

58 O. A. Westad: The Global Cold War. Third World Interventions and the Making of Our Times, Cambridge 2007, pp. 397–398.

59 O. Sanchez-Sibony, Capitalism's Fellow Traveler: The Soviet Union, Bretton Woods and the Cold War 1944–1958, in: Comparative Studies in Society and History 56 (2015) 2, pp. 290–319.

not only because it was economically dependent throughout its existence on its relations with the capitalist world, but also because, after the abandonment of class-struggle ideology, its economic and social success of its own development was measured according to the same technocratic criteria that were decisive in market economy conditions – as Sanchez-Sibony has shown in his analysis of Soviet-Japanese economic relations.[60] Of course, in military, power-political terms, the Eastern Bloc remained an independent actor for some time. But the different ownership structure in the economy ultimately proved to be uncompetitive with the existing market order.

The entire activity of the NTDC in Hungary was Western-centric, and the strategy it developed and implemented, some parts of which had a lasting impact, focused on achieving Western technological level. In its view, Hungary's position in the processes of globalization was fundamentally determined not by the opportunities opened up by decolonization in the Third World but by its isolation from Western technology and the protectionist policies of the European Economic Community, which together led to its exclusion from Western European markets. The efforts of the NTDC were aimed precisely at overcoming this isolation within the context of the Eastern Bloc. Compared to this basic objective, the Third World deals were incidental, compensatory and aimed at obtaining hard currency. Overall, the central efforts of technology import ultimately led to only partial successes at most. By the 1980s, the Hungarian technocratic elites had recognized that the successful further development of the country, and the exit from the trap of the system's inability to develop, required leaving the Eastern bloc.

The political transformation in 1989 and the integration into Western Europe thereafter was, in fact, a step that the Hungarian elites had long considered necessary, even if they had not necessarily imagined its concrete realization like this. In any case, what happened in 1989 was not a step backwards in the globalization of Hungary – nor probably of the other countries of the region – as was formulated by an approach that emphasized the presence of the Central-European socialist countries in the Third World as a sign of global aspirations.[61] It was a separate matter that the delay in the real global opening put the Central European countries in a relatively week position in the new European and global economic structure.

Decades of economic division – with GATT, the World Bank, the European Community on one side and the CMEA on the other – undoubtedly increased the distance between the Central European countries and the West. After decades of isolation, the integration of the former into the world economy, whose institutions, understandably, grew out of Western economic institutions, could only take place under disadvantageous conditions.[62]

60 F. Romero, Socialism between Détente and Globalisation, in: Romano and Romero (eds.), European Socialist Regimes' Fateful Engagement, pp. 11–30; Sanchez–Sibony, Economic Growth in the Governance of the Cold War Divide.

61 J. Mark, The End of Alternative Spaces of Globalisation? Transformations from the 1980s to the 2010s, in: Calori et al. (eds.), Between East and South, pp. 217–229.

62 B. Tomka, Austerities and Aspirations: A Comparative History of Growth, Consumption and Quality of Life in East Central Europe Since 1945, Budapest 2020.