CLOSING REPORT

Power relations, state reactions to economic crises, and investment cycles in party-states: The case of China Project number: K 115932

Mária Csanádi (principal investigator) Ferenc Gyuris

Our research project was based on the theoretical fundations elaborated by Mária Csanádi during her empirical research on communist party-state systems since the 1970s, which she started to apply to the general as well as specific features of the Chinese party-state, its functioning and transformation. In our project, we have scrutinized investment overheating, a major characteristic of the operation and transformation of party-states, along with its systemic reasons and consequences, on both the macro (national) and micro (local) scales. We revealed the specific emergence of investment overheating in the decentralized Chinese power structure, its interrelation with the international context of the party-state, with special regard to external economic shocks (mainly the 2008-2009 global financial crisis) and the resulting reactions of the Chinese central state. We proved that the waves of state interventions into the economy and those of overheating are interrelated, the state-owned and non-state owned spheres in the economy react differently to state interventions, and the reaction of enterprises is linked to the dynamics of economic transformation in China.

In our research we managed to analyze both official macrostatistics and, as an important novelty, a comprehensive firm-level database of Chinese industrial enterprises with data for 1998 to 2013. During our project, we cooperated with two Chinese researchers, Wanjun Wang (Nanjing University of Finance and Economics) and Shengyu Liu (Guangdong University), as well as a Hungarian colleague, Balázs Lengyel (Centre for Economic and Regional Studies), head of the Lendület research group "Agglomeration and Social Networks". All these cooperations have resulted in academic papers.

Theoretical background: the IPS (Interactive Party-State) Model

Self-similar elements, structure and dynamics and the structural background of differences of party-states and their operation and transformation were defined in a comparative analytical model combining political economy and networks in a systemic approach. The model is built on the network that evolves from the dependency and interest promotion relationships of party, state and economic decision-makers. Elements, connecting and operating principles are self-similar in time, space and different aggregation levels. Elements are: (1) the party hierarchy that monopolizes the political sub-field, (2) the state hierarchy that monopolizes the economic sub-field and thereby the extraction and distribution of resources, (3) the power instruments of the party held by actors in the party hierarchy, which stretch out and break through the institutional boundaries of non-party hierarchy and overlap the decision-making process through the activity, positional and organizational structure and individual party members. Shortcuts in the decision-making process are available for the few that allow the actor to

integrate into the decision-making process at higher levels of the given hierarchy or from state to party hierarchy. All actors have hierarchical dependency lines but only actors within the party hierarchy are holding lines that interlink all others in non-party hierarchy. Thus, dependencies, interest promotion and resource extraction and distribution are politically monopolized in the network. The more interlinking lines and more shortcuts an actor has, the larger his/her bargaining capacity. Different bargaining capacities forge the distribution of power in the network. Distribution of resources will evolve according to bargaining capacities. Criteria of distribution are politically rational. This will incite the politically rational economic behavior of the actors: the drive for growth and the accumulation of resources and shortcuts. This behavior will lead to investment overheating. Elements, connecting and operating principles, the political rationality of selective distribution and economic behavior as well as the resulting overheating are self-similar in time, in space and at different levels of aggregation of the network. Therefore, overinvestment and overheating are permanent features of the party-states. These characteristics are systemic and inherent to the party-state network, so they prevail independently from the transformation of the network (its absolute and relative retreat).

In addition to self-similarity, however, there are differences in the pattern of power distribution. These emerge in time, in space and at different levels of aggregation, and will define the characteristics of operation, the instruments of self-reproduction, and the sequence, speed and conditions of system transformation.

Our research revealed the common grounds of the differences between European and Chinese party-state systems and their transformations. Based on this analysis, we could conclude that pattern characteristics evolve as a result of internal and external dynamics, they invite pattern-conforming measures that escalate during transformation. Thus, the sequence (either economic or political first), speed and conditions of the transformation are basically not the outcome of deliberate strategic choices taken by the decision-makers, but they are primarily determined by the specifics of the power distribution pattern of the party-state.

In the IPS model, we simultaneously took into consideration external economic constraints (exerted by the field outside the party-state network, either domestically or abroad) and internal structural constraints (depending on internal power distribution) in their mutual dynamic impact on the self-reproduction of the party-state system. All these impacts may occur in different stages of the operation: during both the period of self-reproduction and transformation with different consequences. These same external and internal constraints along with their different time-spans explain the differences in the reactions of the party-state to adaptation pressures of the same patterns and that of different patterns.

Case study #1: macro-level consequences of overheating due to external shock

We considered China a transforming Communist party-state with specific features and empirically proved that overinvestment is one of its inherent characteristics. Overinvestment intensifies after external shocks (i.e. the global crisis of 2008-2009) due to state intervention in the state-owned sector, and the private sector's adaptation to it. We revealed that overinvestment occurs at both national and regional scales and is especially strong in economic

sectors and enterprises with the strongest links to party and state actors. Since the properties of the system are self-similar in time, space and at different aggregation levels, these general features can also be revealed in the Chinese party-state and in its different aggregation levels in any time period.

We found that these peculiarities intensify during external shocks (e.g., the global crisis), when the amplitude of overheating temporarily increases due to stronger state intervention to adapt the party-state network to the impact. Owing to the self-similarity, the same phenomenon occurs at the local level as well. Such swings are stronger at the provincial level than at the national one for the decentralized power network in China, and they are the most accentuated in provinces preferred by state investments. Our results revealed that the dynamics of increasing and decreasing overheating as well as the expansion and retreat of the party-state network are connected. When overheating increases, the network temporarily expands at both the national and provincial levels, mostly in provinces preferred by state investment. Furthermore, the sphere outside the network adapts itself in transforming the Chinese economy to the preferences of the network, both spatially and in terms of enterprise ownership types, which further intensifies overheating and increases it to an even higher level.

As soon as overheating declines, the network retreats in absolute and/or relative terms at both the national and provincial levels. However, this decline is uneven. Because power distribution is decentralized, the decline is slower in the case of investments by local governments than central investments. Central investment reduction barely affects local investments, the indebtedness of local governments and internal motivations of the self-similar power structure. In addition, overheating's slowdown and the retreat of the network are even slower in provinces that are preferred by central governments.

Likewise, different enterprise ownership types take different trajectories. During transformation, enterprises belonging to the network and those outside of it behave differently during overheating and cooling down periods. In overheating periods, even influential domestic enterprises outside the network tend to allocate more investment in provinces preferred by the state, but this move is far less accentuated than for enterprises inside the network. As soon as either the overheating level begins to decline or investment distribution becomes less polarized along certain central preferences, enterprises outside the network return to their former investment spatial preferences (favoring more developed provinces mainly); whereas enterprises of the network hardly, if ever, do the same. Finally, in spite of short-term pulsations in the trend caused by central measures to compensate for the global crisis, the network in the long run retreats in absolute and relative terms; thus, economic transformation occurs at both the national and provincial levels.

Case study #2: micro-level consequences of overheating due to external shock

In addition to national level statistical analysis of overheating based on the IPS model, we empirically tested the reaction to state intervention and overheating at enterprise level. Therefore, we scrutinized in the transforming party-state system of China the subtle dynamics of enterprise adaptation to state interventions, which react to hardening external and internal

constraints. Our systemic approach allowed us to conduct a complex firm-level analysis of the system dynamics of economic transformation in China. It also allowed us to detect the impact of radical economic policy turns from 1998 to 2013. We examined two major interdependent issues: (1) the consequences of enterprise activity on economic transformation and (2) adaptation of enterprises to major state interventions.

We analyzed a firm-level database of the Chinese industry from 1998 to 2013 with more than 3.8 million entities. Enterprise sensitivity and adaptation were measured by entries and exits. Taking a systemic approach, we distinguished enterprises that belong to either the party-state network or to the market as two economic sub-spheres defined by our analytical framework. Using the dynamics of entries and exits of industrial enterprises in each of these two spheres, we measured their expansion and contraction as well as that of the speed of both. Different speed allows for the quantification of the dynamics of economic transformation. Our results revealed that increasing frequency of entries and exits, both within and between the two spheres, are interconnected with state interventions reacting to booming and cooling periods of system-specific overinvestment and hardening and softening external constraints.

We separated enterprises in the transforming economy into those that, in a given year, were overwhelmingly held to the power network by stronger institutional ties (measured by ownership structure) and those that instead pertained to the market. We specifically measured firm level activity through exits and entries into the network and the market that would either contribute to or hinder the transformation process. We analyzed 8 movement types for the period of 1998 to 2013: enterprise entries to the network/market (ON, OM), exits from the network/market (NO, MO), transfers from network to market and vice versa (NM, MN), and enterprises staying within the network/market for more than one year (NN, MM).

Similarly, we revealed a strong connection between enterprise entries and exits and the occasional changes in the acceleration and slowdown of transformation dynamics through alternating periods of retreat and expansion of the network. We confirmed the retreat of the network between 1998 and 2009 in terms of number of enterprises, employment, and sales revenues. However, we found that state interventions reacting to the 2008-2009 global crisis as well as Xi Jinping's anticorruption campaign in 2012-2013 halted the retreat of the network in terms of various statistical indicators. Interventions also changed the moderate annual decline of state-owned capital share among enterprises belonging to the network (a clear trend until 2008), for they led to a "hidden expansion" of the state ownership through a relatively fast increase of its capital share from the early 2010s. Thus, transformation is not continuous, as halts and slowdowns during this process occur in major periods of state intervention.

Neither is the advancement of transformation uniform. Regarding the number, employment, and sales revenue of enterprises, the retreat of the network and the expansion of the market sphere have substantially been more advanced than in case of the allocation of resources, which is selective and biased towards state-owned and large enterprises. These along with the resulting politically rational economic behavior of enterprises are essential characteristics of the party-state system.

Our systemic approach confirmed that the process of economic transformation is *not uniform*. The network shows a steady decline in the number of enterprises as well as in those enterprises' employment counts and sales revenues, while the market is expanding in terms of these indicators. However, a different tendency evolves in the distribution of resources due to systemic selectivity, which prioritizes (1) state-owned and state-controlled enterprises that belong to the network at the expense of market firms, (2) enterprises belonging to the central government at the expense of those belonging to local governments, and (3) large companies at the expense of small ones. Thus, tendencies regarding the different distributive and market factors also involve *different speeds* in the transformation.

Moreover, the process of transformation is not *unilinear*. The retreat of the network and the expansion of the private field have their temporary setbacks and even reversals, which are strongly connected to major state interventions. State interventions are aimed at restoring the cohesion of the network that occasionally declines due to decreasing resources along with the boom of systemic overinvestments. These latter, in turn, occur due to the systemic behavior of enterprises in the network and the adapting behavior of private firms outside of it to selective distribution of resources. Overheating and state interventions occur in different external conditions, which determine the nature of the intervention (e.g. whether new resources are pumped into the economy, or restrictive measures and decentralizing reforms are taken) and its consequences. Activity increases in the case of both soft external constraints accompanied by hard domestic constraints (2001) and soft structural (domestic) constraints accompanied by hard external constraints (2008), as well as when both external and structural constraints become hard (2004 and 2012). External resources pumped into the system in 2001 stopped overheating by 2004, restrictions and the selective resource distribution of 2004 caused overheating again by 2007, the stimulus package of 2008 caused overheating by 2010-2011, and all of these required new state interventions to halt them.

Pulsation in the system is strongly connected to the temporary halts and reversals of transformation. This process is reflected even on the firm level in the robust indicators of entries, exits and transfers. Such enterprise activity dramatically increases after restrictive-distributive state interventions.

Movements revealed not only the systemic bias in resource distribution towards large enterprises but also the strength and nature of interdependence between enterprise activity and systemic state intervention. Entries (ON), transfers to the network from the market (MN), and growth in numbers in the network (NN) reached their apex, while exits (NO) and transfers from the network to the market (NM) declined to the lowest values of the examined period in 2005, 2009 and 2013, all of which were years that followed radically restrictive but selective state interventions aimed at halting the overheating of 2004, 2008, 2012. This process underlined our arguments that selective—politically rational—intervention, in both restriction and allocation, activates enterprises, pointing towards a new overheating process. Thus, pulsation in transformation is connected to systemic state intervention in reaction to overheating.

We could perceive two hidden processes in the retreating network. One is the reason of the decrease in the number of enterprises, which apparently contributes to the gradual loss of their overall position compared to the market enterprises. An examination of dynamics by movement types suggests that mergers, rather than exits, are behind this process: the number of network enterprises (NN) is decreasing from one year to the next even while entries (ON), transfers (NM) and exits (NO) have very low numbers. The same is suggested by the fact that the distribution bias towards large enterprises is increasing. The other hidden dynamic within the network is the advancement of the state ownership share of state-controlled firms within the network. Considering these hidden dynamics of resource allocation, its selectivity based on political rationality and slower retreat in resource allocation, the evident advancement of the market compared to the network in China became questionable. Instead, we may argue that selective distribution based on political rationality and according enterprise economic behavior in the drive for resources is conserved by the power network, fed by resources extracted from the expanding market field.

Our results, organized by movement type, showed that sensitivity to state interventions stands for both network and market enterprises. For example, the highest and most allocation-sensitive market movement per enterprise was MN, which increased in number of enterprises and sales revenue and employment count per enterprise in the years of major interventions. In 2012, the fastest increase among all movement types was the number of enterprises leaving from either the network or the market during the economic policy context of the anti-corruption campaign. However, a characteristic difference among them was that the firms leaving the market were mostly small, indebted enterprises, while those leaving the network were large, indebted enterprises. We assume that in this case, a process similar to the one accompanying resource centralization during the 1994 tax reform that boosted the privatization of smaller indebted SOEs occurred. Radical restrictions from 2012 onwards were parallel to the stricter selection in allocation, mergers and the centralization of the level of allocation. We argue that the result of this move was the reallocation of burdens and larger, indebted SOEs to lower levels and the sucking up of SOEs and private enterprises registered at lower levels (prefectures and counties) to higher levels.

Case study #3: Varieties of state intervention in case of investment overheating: anticorruption campaign, centralization of power, and centralization of resources Based on what we have found on national and enterprise level regarding reactions to state intervention and learning from the irregular fluctuations of overheating, our next step was to identify the systemic reasons of state interventions in the context of the network dynamics interacting with external shocks.

The most evident example was the systemic background of anti-corruption campaigns. First of all, we revealed that corruption and anti-corruption campaigns are not strictly connected. Corruption is an inherent structural factor of communist systems due to politically monopolized closed channels of distribution of resources and respective structural behavior. However, anti-corruption campaigns emerge only occasionally. We demonstrated that the emergence of such campaigns are related to the specific "pulsation" in the system's dynamics rather than to

corruption. They occasionally serve to regain control over resource allocation during periods of persistent loss of cohesion in the power network. Cohesion is restored either through the redistribution of discretions over resources or through the restructuring of power distribution. We analyzed this process through Xi Jinping's radical anti-corruption campaign since 2012 and interpret the potential outcomes of power restructuring though the anticorruption campaign.

In more detail, state intervention reacting to overinvestment will be different in case both external and structural constraints become hard. In such cases, intervention to alleviate relative shortage will conclude in direct measures of retrenchment. Austerity measures mean resource reallocation efforts towards the higher aggregation levels, or burden reallocation towards the lower aggregation levels within the network. Such were, for example, the economic policy restrictions and centralization after the Tiannanmen square events, or the resource centralizing tax reforms in 1994, parallel to decentralizing inefficient enterprises and financial burdens while centralizing discretion over efficient SOEs. The goal was to halt overinvestment through retrenchment and the redistribution of resources towards the center from local levels and SOEs. Measures differ in different patterns of power distribution. In party-states with centralized patterns where, due to the lack of resisting capacities, forced resource extraction and redistribution are pattern-conforming, austerity measures are also taken, e.g. in form of different campaigns.

In the decentralized pattern stabilized through decentralizing reforms, austerity measures are combined with indirect resource extracting measures: resource revealing (decentralizing) reforms within the network and resource creating reforms outside of it. These two will strongly interact. New domestic resources are revealed within the network through decentralization of decisions, and created outside of it due to the expansion of the private field. Thus, reforms provide new resources to the self-reproduction of the system and further stabilize the network or increase local power without harming politically monopolized process of resource distribution. Therefore, reforms within or outside the network will not hinder, but promote overinvestment deriving from politically rational economic behavior. The reform process, however, will also form a "vicious circle" for the tendency of further decentralizing processes in periods of simultaneously hardening external and structural resurce constraints by enhancing the further decentralization of the market field outside the network will enhance the dynamics of system transformation combined with renewed acceleration of overheating.

However, austerity measures including direct state intervention and market conforming instruments will be applied selectively. in other words, they will be form-fitted to actual bargaining capacities in the network both centrally and locally. Market conforming economic policy measures attaining the network work faintly and also direct measures that enhance central rentrenchment have little impact on local levels. We could observe a pattern-confirming time delay in the selective impact of austerity measures beginning from 2010. While central level investment pace has been slowing, a further increase took place on the local level, for the further growth of local level loans, investments by local financial vehicles, central budgetary support, and the growth of land purchase. Thus, in the decentralized pattern of the Chinese

party-state, owing to strong local capacities for interest promotion and resisting intervention, even focused austerity measures are short-lived, selectively acquitting those integrated with multiple ties (larger bargaining capacity) in the decision-making process.

Corruption intensifies while the drive for growth and the hoarding of resources approach to the peak of boom, when reproduction constraints meet structural shortage, while both external and structural constraints are hardening. This is the period when anti-corruption campaigns use to be launched in order to reinforce retrenchment. We interpreted anti-corruption campaigns as direct instruments of the central government to regulate systemic behavior and recuperate the control over resources and cadres. Occasionally, anti-corruption campaigns have been combined with more explicit re-centralization efforts to contain unleashed local politically rational economic behavior and overinvestment. All of them were reactions to local overinvestment, hardening structural and external constraints, and losened cohesion in the decentralized power distribution. However, in the given pattern, anticorruption campaigns work selectively according to bargaining capacities and the political competition focus of the elite, so thus are transitory. Therefore, in case external and structural constraints prove to be persistent, intervention will modify the pattern itself.

We have confirmed that corruption in party-state systems is a structural characteristic which is persistently present, and its complexity grows while adapting to the growing complexity of the system and the specifics of the decentralized Chinese pattern of power distribution. We have also proved that there is no direct connection between corruption and anticorruption campaigns as the former is continuous in party-state systems, though with changing intensity and characteristics, whereas anti-corruption campaigns are occasional. Instead, the frequency of launching and the timing of anticorruption campaigns are strongly tied to the characteristic dynamics of the party-state system. This dynamics leads to overinvestment that is reinforced locally owing to the decentralized Chinese pattern, which leads to larger amplitude of local overinvestment, to hardening structural constraints, loosening cohesion of the network, and state intervention to restore it.

However, not all state interventions are restrictive as the nature of interventions depend on both external and structural constraints. In case either one is soft, new resources are pumped in the network. In case both are hard, austerity measures are introduced. Still, not all austerity measures include an anti-corruption campaign. The occasional timing of anti-corruption campaigns arrive when the hardening of both external constraints and structural constraints are persistent, while overinvestment intensifies both at national and local levels despite overall austerity measures. Both retrenchment and anticorruption campaigns serve the redistribution of resource allocation discretions and the reallocation of resources and burdens in the decentralized pattern of power. Reallocation of discretions, resources and burdens indirectly redistribute bargaining capacities and thereby power within the network.

Anti-corruption campaigns are generally usually short-term ones, as they are form-fitted to decentralized power structure and thereby to bargaining capacities. Yet, Xi Jinping's anti-corruption campaign is a long-lasting one as not only discretions but also the pattern of power

distribution is directly redistributed, which is altering resisting capacities within the network. This radical anticorruption campaign helped Xi Jinping to centralize—concentrate the so-far decentralized pattern of—power and extend the interlinking lines to the private sphere and, through modern electronic facilities, to deepen state control over individuals while altering the party constitution, perpetuating his own power.

We also found that the pattern shift did not change the self-similar dynamics of the system itself, and we revealed that even such a redistribution of power fostered the selective alleviation of the steady investment hunger of strategically important enterprises, which contributed to the increase of outward FDI to compensate domestic market constraints. Overcapacity and inspired the shift of domestic lending strategies from troubled SOEs towards less risky private sphere firms, and increasing the state control in the private sphere, increasing the ratio of state owned capital in the industrial sector. We also revealed that the contradicting market oriented arguments, which are often used to explain investment patterns in China, although neglecting both the pure existence and the impact of the transforming party-state system and the specific structural background of overheated investment fluctuations. Finally, we analyzed the constraints hindering forecasting the institutionalized outcome of Xi's strategy to force the so-far decentralized power structure towards a centralized pattern of power distribution under persistently and increasingly hardening external constraints, which motivate the launch of new state interventions.

Case study #4: The external (international) impact of the dynamics of the party-state system: The Belt and Road Initiative

We also investigated the impact of network dynamics (overheating) on the external environment. The most evident and remarkable example was the analysis of rapidly accelerating overseas direct investment by Chinese investors since the global crisis of 2008-2009, and especially the Belt and Road Initiative, starting in 2013 as "One Belt, One Road", parallel to the institutionalization of domestic anti-corruption campaigns. Chinese overseas direct investment has been booming since the second half of the 2000s. By 2016, the People's Republic of China had become the third most important source of FDI outflow globally, with outflow surpassing inflow for the first time in the last four decades. The global crisis of 2008–2009 was a major factor behind this trend for reducing the global demand for Chinese manufacturing goods as well as profitable investment opportunities within China, and producing surplus capacities in a range of economic sectors. In reaction to these, Chinese economic actors have been getting increasingly interested in investing their capital abroad.

In China, state enterprises cover not more than one quarter of the total fixed asset investment stock, whereas they play a dominant role in overseas direct investment (ODI), with at least 66% in every sector, and with more than 80% in most of them. This circle is identical to those enterprises which are the main beneficiaries of selective resource allocation by the central government, and which therefore have the largest overcapacities and play a dominant role in internal economic overheating. In other words, the Belt and Road Initiative is a highly important

measure—or geographical "fix"—for the central government in Beijing to manage internal overcapacities.

The dominant role of state-owned enterprises also enables the political leadership to exert considerable control over ODI and employ foreign investment as an important tool for promoting foreign policy interests. Statistics on economic branches, although uncertainties around their methodology should be considered, reveal for the 2010s a gradual shift of Chinese ODI from mining and related transportation towards sectors suffering from significant surplus capacities at home (mainly manufacturing and construction). The remarkably declining share of Africa from Chinese overseas investment is a clear trend in the same period, with North America and Europe becoming increasingly attractive places to invest, for the know-how and technology they possess are more important now for upgrading Chinese enterprises than cheap natural resources.

For these tendencies, poor countries with a low quality of governance in Western terms, often including an authoritarian political framework as well, are not likely to remain the main beneficiaries of Chinese ODI. Those will increasingly become developed countries with much more stable economic and institutional background, which provide less space for interest promotion by Chinese enterprises. Yet, the shifting focus of Chinese ODI also means that in the mid-term it is unlikely to massively mobilize less developed economies and narrow the gap between the Global North and the Global South, which was already wide before China became a major global investor. In consequence, there has already been an increasing number of cases where leading North American and Western European actors, both economic and political, show increasing resistance to transactions possibly enabling the flow of Western knowledge, technology and production skills to Chinese enterprises with interests (either actual or supposed) in strategic and defence industries.

Case study #5: The spatial agglomeration of network and market enterprises in China

Using the same firm-level industrial database as in case studies #2 and #3, we modified and extended our collaboration partnership for the sake of further research and new papers. We are collaborating with another Chinese colleague at Guangdong University, Liu Shengyu, whose major field is enterprise economics in China, and who has access to the database. Our other new collaboration is with our colleague Balázs Lengyel at the Institute of Economics, head of the Agglomeration and Social Networking Lendület Research Unit. He is an expert in using big data statistical methods in scrutinizing spatial agglomeration in the economy. Our common research with both of them relies on a new and rapidly emerging analytical approach, which was introduced by Luis Bettencourt and his team in the US in agglomeration economics. The main focus of the study is the concentration of industrial enterprises along the urban hierarchy of China, with a comparison of market enterprises (private firms) and network enterprises (firms of the party-state network), and the temporal change of their patterns since the late 1990s.

Our results show that market enterprises had a significantly stronger spatial agglomeration (urban scaling) over the whole period than network enterprises. In other words, large urban centers had a higher share of market enterprises than of network enterprises. This finding was

independent from whether the agglomeration of firms was measured in terms of number of enterprises, the number of workers they employed, or the sales revenues they realized and the investment they carried out (Figure 1, 2). We also revealed that the impacts of the 2008-2009 financial crisis intensified urban scaling in both domains, but mid-terms outcomes were different. Whereas the urban scaling of network enterprises returned by 2012 and 2013 to its former lower levels in the first half of the 2000s, the scaling coefficient of market enterprises got stuck at the high level which only emerged during the crisis. This confirms that state interventions after the global crisis were selective. With their focus on network enterprises (as already presented in case study #2), they enabled the revival of several network enterprises that were hit by the crisis, whereas they did not have the same impact on market enterprises.

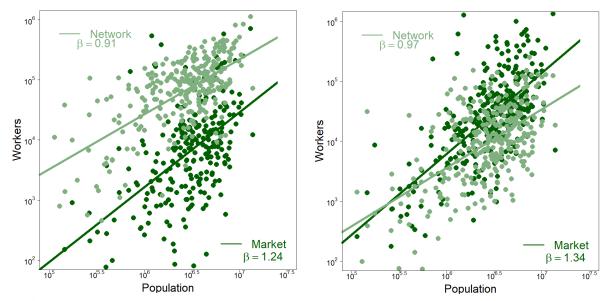


Figure 1 The spatial agglomeration of industrial workers employed by network and market enterprises according to city size (urban scaling) in terms of population in 1999 (left) and 2009 (right). Data and calculation: Balázs Lengyel, Liu Shengyu, Mária Csanádi and Ferenc Gyuris

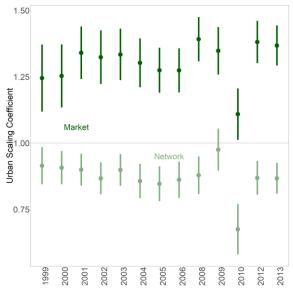


Figure 2 The changing urban scaling coefficient (β) of network and market enterprises (1999–2013). Data and calculation: Balázs Lengyel, Liu Shengyu, Mária Csanádi and Ferenc Gyuris

Conference papers and academic lectures

We have presented our new results in several papers at academic conferences and guest lectures in scientific institutions.

Conference papers:

14 March, 2017, Budapest: 2nd "Day of Lectures on Geography". Hungarian Academy of Sciences. Paper, Ferenc Gyuris: Geography of the economic crisis: the case of China

8 September, 2017, Budapest: International Workshop on Regional Geography. Hungarian Academy of Sciences, Research Centre for Astronomy and Earth Sciences, Geographical Institute. Paper, Ferenc Gyuris: Reasons for and limits to the Chinese economic miracle" from an economic geography perspective

18 November, 2017, Budapest: "Stormy Waters" Conference. Pázmány Péter Catholic University, Modern East Asia Research Group. Paper, Mária Csanádi & Ferenc Gyuris: Overrunning investments in China and the outflow of capital to abroad: connections and consequences (in Hungarian)

January 19, 2018, Budapest: New Silk Road Conference. Corvinus University, Institute of Economic Geography, Geoeconomics and Sustainable Development. Podium discussant, Ferenc Gyuris: The geographical and regional economic factors of the New Silk Road Belt (in Hungarian)

17 September, 2018, Kyiv, Ukraine: Spaces, Values and Power – Eurasian Cities and Regions in Transformation Conference. Paper, Ferenc Gyuris: The rise of Eurasia and Central and Eastern Europe: A political discourse in light of dreams and realities

3 November, 2018, Beijing: Workshop on Coupling National Strategies on the Belt and Road Initiative. Chinese Academy of Sciences, Institute of Geographic Sciences and Natural Resources Research. Invited paper, Ferenc Gyuris: Potentials and challenges of BRI: Some considerations from an East Central European perspective

4 November, 2018, Beijing: The Second International Science Forum of Scientific Organizations on the Belt and Road Initiative. Invited paper, Ferenc Gyuris: Potentials and challenges of BRI: Some considerations from an East Central European perspective

10 November, 2018, Debrecen: 9th Hungarian Geographical Conference. Paper, Ferenc Gyuris: "Twilight of the West" – again? Interpretations of contemporary changes in the global geography of the economy (in Hungarian)

1 December, 2018, Budapest: "Chinese reform and opening: the bottom line" conference. Pázmány Péter Catholic University, Modern East Asia Research Group. Paper, Ferenc Gyuris: The changing spatial pattern of economic development in China during the four decades of economic reforms (in Hungarian)

5 March, 2019, Budapest: 4th "Day of Lectures on Geography". Hungarian Academy of Sciences. Paper, Ferenc Gyuris: The changing foci of China's global economic interests: Consequences from the perspective of East Central Europe (in Hungarian)

4 April, 2019, Washington DC: Annual Meeting of the American Association of Geographers Panelist, Ferenc Gyuris: Revisiting post-socialism for social change

5 April, 2019, Washington DC: Annual Meeting of the American Association of Geographers. Paper, Ferenc Gyuris: Short- and long-term stability and instability in the pattern of regional development inequalities in (former) communist countries

15 November, 2019, Manchester: China's Global Urban Presence Workshop, University of Manchester. Invited paper, Ferenc Gyuris: East Central European perspectives on large-scale Chinese infrastructure projects

Academic lectures at universities and research institutes:

26 October, 2016, Nanjing: Nanjing University of Finance and Economics, School of Economics. Presentation: Maria Csanádi & Ferenc Gyuris: Systemic background of overheating during transformation

23 October, 2018, Beijing: National Development and Reform Commission, Institute of Spatial Planning and Regional Economics (NDRC ISPRE). Presentation 1: Maria Csanádi & Ferenc Gyuris: Overinvestment, intervention and transformation in China. Presentation 2: Ferenc Gyuris: Temporal instability in the regional pattern of economic development: A comparative study of China and former communist East Europe

24 October, 2018, Tianjin: Nankai University, Department of Political Economic Studies. Presentation: Maria Csanádi & Ferenc Gyuris: Overinvestment, intervention and transformation in China

25 October, 2018, Beijing: Beijing Normal University, School of Economics and Business Administration, China Institute for Income Distribution. Presentation: Maria Csanádi, Ferenc Gyuris & Wanjun Wang: Opening up the black box: Transformation specifics through enterprise entry and exit in China

26 October, 2018, Beijing: Chinese Academy of Social Sciences, Institute of Industrial Economics. Presentation 1: Maria Csanádi & Ferenc Gyuris: Overinvestment, intervention and transformation in China. Presentation 2: Ferenc Gyuris: Temporal instability in the regional pattern of economic development: A comparative study of China and former communist East Europe

29 October, 2018, Hong Kong: The University of Hong Kong, Department of Politics and Public Administration. Presentation 1: Maria Csanádi: Dynamics of anti-corruption campaigns

and power redistribution in China. Presentation 2: Maria Csanádi, Ferenc Gyuris & Wanjun Wang: Opening up the black box: Transformation specifics through enterprise entry and exit in China

31 October, 2018, Fuzhou: Fujian Normal University. Presentation 1: Maria Csanádi: Dynamics of the Hungarian transformation. Presentation 2: Ferenc Gyuris: Regional development disparities in Hungary before and after the transition

19 March, 2019, Budapest: Hungarian Academy of Sciences, Section X (Earth Sciences). Invited paper, Ferenc Gyuris: The impact of economic transition on spatial disparities of development – Chinese and Russian lessons (in Hungarian)

25 July, 2019, Budapest: ELTE Eötvös József Collegium, 8th Talent Camp. Presentation, Ferenc Gyuris: Reasons for and limits to China's emergence as a global economic power – from an economic geographer's eyes (in Hungarian)

22 October, 2019, Taipei: National Taiwan University, European Union Center. Presentation, Maria Csanádi: The political and economic transformation in Hungary and China

23 October, 2019, Taipei: National Cheng-Chi University, Department of Political Science. Presentation, Maria Csanádi: Main research directions and discussion with Prof. Chung-Min Tsai and two other professors

23 October, 2019, Taipei: Soochow University, Department of Sociology. Presentation, Ferenc Gyuris: The Harveyian mechanisms of uneven geographical development

25 October, 2019, Taipei: Soochow University, Department of Political Science & Central and Eastern European Center. Presentation 1, Maria Csanádi: The political and economic transformation in Hungary and China. Presentation 2, Ferenc Gyuris: The Chinese Belt and Road Initiative from a Central European perspective

28 October, 2019, Hangzhou: Zhejiang University, School of Public Affairs. Presentation, Maria Csanádi & Ferenc Gyuris: Opening up the black box: Transformation specifics through enterprise entry and exit in China

30 October, 2019, Chinese Academy of Social Sciences, Institute of Quantitative and Technical Economics. Presentation: Maria Csanádi: Comparing Hungarian and Chinese transformations from systemic perspective

1 November, 2019, Beijing: Renmin University, School of Economics. Presentation 1: Maria Csanádi: Structure, operation and transformation of party-state systems. Presentation 2: Ferenc Gyuris: Stability and instability in the spatial pattern of regional development: A comparison of economic transformations in China and Russia

Consultations

25 October, 2015, Beijing: Zhou Fengsheng (China Enterprise Reform and Development Society)

26 October, 2015, Beijing: Ding Ningning (former Director General, Research Department of Social Development, Development Research Center, the State Council)

27 October, 2015, Beijing: Chang Xin, Zhang Xiaoxi (CASS Institute of Economics)

28 October, 2015, Beijing: Zhou Fengsheng (China Enterprise Reform and Development Society), Gao Xu (China Everbright Securities)

29 October, 2015, Beijing: Wang Hongju (CASS National Academy of Economic Strategy)

30 October, 2015, Beijing: Qiyuan Xu, Cao Yongfu (CASS Institute of World Economics and Politics)

21 October, 2018, Tianjin: Guangwen Meng and his research group (Tianjin Normal University, College of Urban and Environmental Science)

2 November, 2018, Shanghai: Chen Zhao (Deputy Director, China Center for Economic Studies [CCES], Fudan University, School of Economics)

22 October, 2019, Taipei: Hungdah Su (Jean Monnet Chair Professor, National Taiwan University/Director General, European Union Centre in Taiwan), Kuo-chun Yeh (Professor, Graduate Institute of National Development, NTU), Hui Mei Tsai (Director, Center for Financial and Economic Strategies, Chung-Hua Institute for Economic Research), Feng-Cheng Fu (Consultant, Center for Financial and Economic Strategies, Chung-Hua Institute for Economic Research), Meng-chun Liu (Head of the First Research Division, Chung-Hua Institute for Economic Research), Marc Cheng (Executive Director, European Union Centre in Taiwan)

22 October, 2019, Taipei: Ko Chyong-Fang (Institute of European and American Studies, Academia Sinica)

23 October, 2019, Taipei: Po-Yi Hung (Department of Geography, National Taiwan University)

25 October, 2019, Taipei: Yu-Shan Wu, Tse-Kang Leng (Directors, Institute of Political Science, Academia Sinica)

25 October, 2019, Taipei: Chia Ming Chang (Director), James Cheng (Executive Director) (Central and Eastern European Center, Soochow University)

26 October, 2019, Shenzhen: Shengyu Liu (Guangdong University)

27 October, 2019, Fuzhou: Hairong Lai (Dean, Fujian Normal University)

30 October, 2019, Shanghai: Jinliao He, Chao Ye, Yiwen Zhu (East China Normal University, Institute of Urban Development)

Publications

Published papers

Csanádi, M. (2019): A megszaladó beruházások strukturális okai és rendszerbeli kockázatai Kínában. In: Salát, G.; Szakáli, M.; Szilágyi, Z. (eds.) Veszélyes vizeken: Konfliktusok és biztonsági fenyegetések a Távol-Keleten. Budapest, Typotex, pp. 321-336.

Gyuris, F. (2019): A kínai működő tőke kiáramlása a globális válság után. In: Salát, G.; Szakáli, M.; Szilágyi, Z. (eds.) Veszélyes vizeken: Konfliktusok és biztonsági fenyegetések a Távol-Keleten. Budapest, Typotex, pp. 337-356.

Csanádi, M., Gyuris, F. (2018): Átalakuló pártállam és egyenlőtlen túlfűtöttség Kínában a globális válság idején. TÉR ÉS TÁRSADALOM 32 : 1 pp. 50-75.

Csanádi, M. (2017): Chinese power structure and its transformation in comparative perspective FINANCIAL AND ECONOMIC REVIEW 16:(Spec. Iss.) pp. 7-20.

Gyuris, F. (2017): A kínai gazdasági csoda okai és korlátai. FÖLDRAJZI KÖZLEMÉNYEK 141 : 3 pp. 275-287.

Csanádi, M., Gyuris, F. (2017): A hatalmi szerkezet dinamikája, a túlfűtöttség és annak térbeli megjelenése Kínában. Budapest, MTA Közgazdaság- és Regionális Tudományi Kutatóközpont Közgazdaság-tudományi Intézet

Csanádi, M. (2016): China in between varieties of capitalism and communism Budapest: Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences (Műhelytanulmányok = Discussion Papers; MT-DP 2016/4.) (ISBN:978-615-5594-30-4)

Csanádi, M. (2015): Varieties of communist system transformation and their common systemic grounds: a comparative study of China and East European countries. JOURNAL OF CHINESE ECONOMIC AND BUSINESS STUDIES 14:(4) pp. 385-412.

Csanádi, M. (2015): Systemic background of local indebtedness and investment overheating during the global crisis in China. JOURNAL OF CHINESE ECONOMIC AND BUSINESS STUDIES 13:(2) pp. 147-174.

Csanádi, M., Zihan, N., Shi, L. (2015): Crisis, stimulus package and migration in China. CHINA & WORLD ECONOMY 23:(5) pp. 43-62.

Csanádi, M., Shi, L., Zihan, N. (2015): Válság, élénkítő csomag és migráció Kínában. In: Salát, G. (ed.) Kínai álom - kínai valóság. Budapest, Typotex, pp. 18-41.

Gyuris, F. (2015): Területi egyenlőtlenségek és a beruházások földrajzi eloszlása az átmenet Kínájában. In: Salát, G. (ed.) Kínai álom - kínai valóság. Budapest, Typotex, pp. 42-64.

Forthcoming papers

Csanádi, M. & Gyuris, F.: Uneven Economic Overheating in a Transforming Party-State During the Global Crisis: The Case of China (manuscript to the journal Communist and Post-Communist Studies)

Csanádi, M., Gyuris, F. & Wang, W.: Opening up the black box: interacting subspheres through enterprise entry and exit in China (manuscript to be submitted to The China Quarterly)

A third manuscript, on our case study #5 (the spatial agglomeration of network and market enterprises in China), is being prepared in cooperation with Balázs Lengyel and Shengyu Liu to the journal PLOS ONE.

A fourth manuscript on case study #3 is to be submitted soon to the Journal of East Asian Studies: Csanádi, M.: Dynamics of Anti-Corruption Campaigns and Power Distribution in China