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MT-DP - 2011/31

Adaptation pressures during global decline on system transformation and its spatial consequences in China

MARIA CSANÁDI

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> Adaptation pressures during global decline on system transformation and its spatial consequences in China

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Adaptation pressures during global decline on system transformation and its spatial consequences in China

Maria Csanádi

Abstract

With the implementation of the approach of the Interactive Party-State model (Csanádi, 2006, 2011) the paper demonstrates the possible short and long term consequences of the adaptation pressures exerted by the global crisis on Chinese system transformation. It points to the short term character of the crisis. It reveals the temporary slow-down of transformation as a reaction to adaptation pressures and its reversibility with the waning of the crisis. It describes the sensitivity of government reactions to crisis. It points to government's bias towards the construction industry, state owned and large enterprises with domestic trade orientation. It suggests the dynamizing effect of biased state intervention on manufacturing sector, overwhelmingly composed by small and medium sized privately owned enterprises. It comments the long-term consequences of this mismatch. It also argues that temporary slow-down of economic transformation owing to state interventions preserved party legitimacy. The paper sheds light on the spatial disparities of the impact, the reactions and of their respective consequences.

Keywords: party-state model, short-term shocks, system transformation, global crisis, migration, economic policy reactions, prefectures, spatial disparities

JEL Classification: F5, D78, R58, J08, 015, E24

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A rendszer átalalakulására ható adaptációs nyomások a globális válság idején és ezek térbeli következményei Kínában

Csanádi Mária

Összefoglaló

A cikk az Interaktiv Pártállami Modell segítségével (Csanádi, 2006, 2011) a globális válság által kiváltott adaptációs nyomás lehetséges rövid és hosszú távú következményeit mutatja be a kínai rendszerátalakulásra. Rámutat a válság rövid távú jellegére és az adaptációs nyomásra kialakult reakciók következtében az átalakulás átmeneti lassulására és ez utóbbi reverzibilitására a válság elmúltával. A cikk feltárja a kormányzati reakciók érzékenységét a válságra. Bemutatja annak épitőipari, állami, nagyvállalati, és belső fogyasztási prioritásait. E szektorális prioritások ellenére az állami beavatkozások dinamizálták a feldolgozóipar egyes ágazatait, annak zömében magántulajdonban levő kis- és középvállalatait is. Felvázolja a gazdaságpolitikai prioritások és a válság által érintett területek közti átfedés hiányának lehetséges hosszútávú következményeit. Az elemzés alapján megállapítja, hogy a gazdasági átalakulás átmeneti lassulása az állami beavatkozások következtében a párt legitimitásának megőrzését eredményezte. A tanulmány Kínán belül rávilágít a globális válság hatásának, arra történt reakcióknak és következményeinek térbeli eltéréseire.

Tárgyszavak: pártállami modell, rövid távú sokkok, rendszerátalakulás, globális válság, migráció, gazdaságpolitikai reakciók, prefektúrák, térbeli eltérések

JEL kódok: F5, D78, R58, J08, 015, E24

Köszönetnyilvánítás:

E cikk megírását az OTKA támogatta. Sokkal tartozom Gyuris Ferencnek, akinek térkép-, tábla- és ábrarajzolási képessége kulcsfontosságú és elengedhetetlen volt e cikk megszületéséhez. Ez a cikk a 2011. június 30. – július 1. közötti Economics of Crisis, Education and Labour című budapesti közös kínai-magyar konferenciára készült.

INTRODUCTION

Global crisis exerted worldwide adaptation pressures on countries' international and domestic behavior and development. The more integrated financially and economically in the global market, the higher the adaptation pressures and the more sensitive the reactions. USA and Europe was hit the hardest. Financial crisis evolved into economic crisis. Not only banks but also states had to be bailed out. Governments crumbled, conflicts sharpened among social welfare systems, aging societies and competitiveness. Hard questions were raised against market liberalism, democracy and government roles in the economy. "Order" was required by the mass to overcome chaos and to put an end on expanding unemployment. State interventions increased, conservatives and right wing extremists got more gound in democratic countries. Recovery is slow, raised questions remained unsolved, social conflicts persist, empoverishment is expanding, migration due to brain drain is causing increasing problems for source countries. Asia was also strongly attained by the global crisis with unexpected speed and force, both financially and economically. This happened despite earlier views that Asia has decoupled from US economic developments. According to the Managing Director, Monetary Authority of Singapore, Asian exports tumbled by over 30%, stock prices fell by more than 60%. Asian economies, excluding China and Japan, contracted by an average of about 6.2% from peak to trough in the current downturn. Although exports have dropped uniformly in all Asean countries, their recuperation depended on the size of the economy, the level of integration into the global market, and their capacity for counter cyclical policies. Larger economies were less attained than those small ones (Swee Keat, 2009).

Next we shall analyze how China, as a large country deeply integrated into the global economy endured the crisis. Looking at the statistics, the annual data hardly show the impact of the crisis. Still, more detailed monthly level data show a large but short period of decline in external and internal indicators of economic development (export, import, FDI, GDP, unempolyment). This short backlash however, had promt and sensitive reactions both at central and local level. It provoked short-term political challenges and state interventions. Intervention has long-term structural consequences on spatial disparities of economic development, migration routes and transformation. In sum, the paper deals with the sensitivity of the Chinese system to global dynamics, reactions to the crisis and their short-and long-term impact of global decline on system transformation and its spatial disparities.

SENSITIVITY TO GLOBAL DYNAMICS

It sounds evident that the more integrated the countries were into the global economy the stronger the adaptation pressure was and so was their reaction to the impact of global downturn. China's integration and sensitivity to global dynamics increased in giant steps since 1979 onwards when the opening up was proclaimed and gradually realized by Deng Xiaoping. By 2007, the share of foreign trade in the GDP was 66.8, within that, export accounted for 37 percent of the GDP (Cai F. et al., 2010, p.36, 38).

Map 1.



Spatial sensitivity of global downturn in export

Source: Michigan University China Data Center

Map 1 shows the spatial sensitivity of coastal provinces due to the concentration of exports to those locations and the higher than average share of the export in GDP in those same. This sensitivity further increases through the fact that the annual foreign direct investment inflow was overwhelmingly concentrated on export and to the coastal regions (Csanádi, 2008, p. 45 Map 4). Export and import have a multiplying effect not only in economic, but also in social and political dimensions. For example, one-third of China's

labor force is composed of migrant population. The size of this floating population was 140 million in 2008. One third of all migrants were employed in export-oriented manufacturing industries, while 80% of labor in manufacturing industry were migrants (Chan, 2010). Inland provinces provided about 80% of migrants who seeked job outside their own province. Coastal provinces absorbed about 70% of migrants from other provinces contributing to the spatial disequilirium in export, FDI, population and GDP density towards the coast. (Compiled from NBS labor chapter of the one percent census, 2005)¹.

This fact on the one hand shows the export sensitivity of the manufacturing industry, and spatial sensitivity of export owing to its concentration to coastal provinces. On the other hand, it underlines the political sensitivity in space both of the central and western provinces as sources of outmigration and that of the coastal provinces as destinations of immigration.

Sensitivity to global dynamics emerges also when capital flows outwards. By the end of 2007 around 7,000 Chinese domestic enterprises had made 118 billion USD in direct investments in 173 countries and regions around the world (Exxun, 2009).² Crisis offered new opportunities for Chinese enterprises abroad. In the first quarter, China invested to establish 445 companies overseas. The figure has increased 6.8% year on year.³ China's foreign investments exceeded \$9.4 billion in 2009, up 54 percent year on year in 2009, according to the Ministry of Commerce.⁴ Thus, taking the above and also the export's further multiplying effect on the GDP growth through consumption and investment channels, (Cai et al, 2010, p. 38) sensitivity to external and internal adaptation pressures and its direct consequences on political legitimacy are evident.

¹ See the working and living conditions of migrant workers coming from rural areas to urban workplaces in Li, 2008.

² ExxUN 2009.04.19.http://www.exxun.com/China/e_ec.html

³. China's non-financial direct foreign investment reached 3.7 billion USD. In addition, a number of major projects are under negotiation. "*Chinese enterprises active in global restructuring*" 17:04, June 04, 2009 <u>http://english.peopledaily.com.cn/90001/90778/6671987.html</u>

⁴ " Chinese firms are going global in various industries such as automotive, steel, metals, energy and computers to explore new markets and acquire raw material and energy resources. China's mining and metal industry mergers reached \$16.1 billion in 2009, accounting for 27 percent of the total volume of business in the world, according to the latest report by Ernst and Young. Overseas mining and metal acquisitions will continue growing in 2010 and underdeveloped areas such as Africa, Asia and South Africa will be the new focus for investment. Rare metals will attract more investment, it said." *Crisis good opportunity for Chinese companies to go global*" By Lan Lan (China Daily) Updated: 2010-04-12 09:08 http://www.chinadaily.com.cn/china/2010bfa/2010-04/12/content_9714726.htm

THEORETICAL APPROACH TO SENSITIVITY AND ADAPTATION PRESSURES

In the case of China however, sensitivity to external dynamics is not only directly reflected in the above economic, social and political dimensions but also may be indirectly detected in the changes in the direction and speed of the transformation process.

Let us first define our approach regarding the system transformation itself. This approach is based on the respective criteria of system transformation within the Interactive Party-state (IPS) model (Csanádi, 2006, 2011). The model defines the basis of the communist social systems as the politically monopolized power network of institutional relationships that evolves among party- state- and economic decision-makers during the decision-making process. Thus, transformation process from this point of view means that the party-state network is *retreating* as a social system from politically monopolized economic, political and social sub-spheres, while the sub-spheres of a new social system are *emerging* outside the network. Arrows on Figure 1 show the direction of the process of system transformation.

Figure 1.



According to the model, the order, speed, conditions of transformation of individual sub-fields (political, economic etc) may vary, depending of the characteristics of the distribution of power within the power network (Csanádi, 2011). Consequently, either first economic or first political subfield may transform, or all subfields may transform simultaneously. It is the distribution of power within the network that determines the order of transformation of sub-fields and also calls for its speed: transformation may be gradual or abrupt in nature. Order determines the economic and political conditions under which the system transformation is taking place. In the case of China (see Figure 2) the characteristics of transformation are the following: first economic trasformation is taking place, the retreat of the network from the economic sub-sphere is gradual, and so is the

expansion of the emergent field. Economic transformation is occurring under authoritarian political regime and macroeconomic growth.

Figure 2.



System transformation in the case of China

However, even the same type of transformation process may temporary shift directions, vary in the relative speed of expansion or contraction of the network and emergent fields and also vary in space respectively. Shifts in directions and speed depend on the adaptations to external and internal impacts. We call the variations of direction and speed of change of the network and emergent fields in relationship to each other as *transformation dynamics*. This latter is a complex term: it consists of (a) the varieties of changes in the network field: growth, stagnation or decline (b) the varieties of changes in the market field: growth, stagnation or decline. (c) The varieties of the speed of changes in one or the other direction in relationship to each other: the speed of one field may be faster, equal or slower than that of its counterpart. Thus, transformation dynamics contains the combination of the varieties of direction and the combination of the varieties of speed. Varieties will present different types of transformation dynamics.

The next figure (Table 1) shows the variations of directions the transformation process may take. Each variation is a type of transformation dynamics.

	Growth	Stagnation	Decline
Growth			
Stagnation			
Decline			

Types of dynamics owing to the relative directions of change

Considering the different types of transformation dynamics in Table 1, transformation of a sub-sphere (no matter if economic or political) occurs in two cases: when both arrows point upwards but emergent field expands faster than the net (we call this relative retreat of the network). The other type is when the two arrows point into opposite direction relative to each other with the emergent field expanding and the network field contracting (we call this as absolute retreat of the network⁵). In the case of those types, market sphere increase persists while the network field relatively grows (but it does slower than the emergent field), stagnates or declines, that is. In all these cases *economic transformation is taking place*.

During process of economic transformation the type of transformation dynamics may temporary change for shorter or longer period of time, and also the speed may change with or without shifting types. If stagnation or contraction of both network and emergent fields in the economic sub-field persist for longer term, adaptation pressures increase towards the transformation of further sub-fields.

⁵ Absolute retreat of the network means its emptying (stripping off), its weakening, its withdrawal and cut off (see in detail in Csanádi, 2011 DP 2011/5).

HYPOTHESIS ON THE SYSTEMIC IMPACT OF GLOBAL DYNAMICS

Having defined system transformation and transformation dynamics, we may now procede to our hypothesis regarding the relationship of external dynamics and its impact on system transformation in the Chinese case. Our *hypothesis* is that global growth accelerated economic transformation, and prolongued party legitimacy, thereby delaying the transformation of the political subfield (Figure 3).

Figure 3

Directions and speed of the dynamics during economic growth



Accordingly, global decline slows down or even may reverse economic transformation, challenging party legitimacy, thereby accelerating the evolution of conditions to the transformation of the political sub-field.

Slow-down may evolve in several ways: with the decline of the speed of the emerging field, with the faster growth of the network field, with the stagnation or contraction of the market field while expansion of the network field, or with the stagnation or contraction of both fields. These latter may cause the decline of political legitimacy and create the preconditions for political transformation (Figure 4).

Figure 4.

Types of transformation dynamics if the original hypothesis for political transformation persists



The hypothesis is supported by the dynamics of the model that suggests high systemic sensitivity both economically and politically due to the inter-twine of economic and political sub-spheres. The model suggests also that preconditions for political transformation emerge when adaptation effors arise in case of hardening external and internal economic constraints. This argument is empirically supported by case-studies carried out regarding to Romania and Hungary (Csanádi, 2006). Empirical support is reinforced by Chinese structural specifics: distributable resources within the network strongly depend on the market dynamics that has drasticly declined in the last quarter of 2008.

However, uncertainty arises on the theoretical support due to the so-far different order of transformations of economic and political sub-field in Eastern Europe and Soviet Union compared to China. There is no historical example for the transformation of the political sub-field second, pre-empted and accompanied by economic crisis and political delegitimation *after* economic transformation. Moreover, in the case of China owing to several specifis, large mobilizable reserves were accumulated that allow for the temporary compensation of external impact.

THE QUANTIFICATION OF THE TRANSFORMATION PROCESS – TESTING THE HYPOTHESIS

We may roughly quantify this relationship if we separate those economic units that depend overwhelmingly from the network (e.g. state owned enterprises, township and village enterprises) from those that depend overwhelmingly from the emergent field (in case of China these are the domestic and foreign private enterprises). Having done this separation, we have chosen one indicator that is relatively consistent in time, that of the Gross Idustrial Output Value (GIOV). We can interpret this rough indicator as an indirect measure of the network and the market field. Using the dynamics of these two groups in GOV we can trace the transformation process both during global growth and decline.

Figure 5 and Table 2 demonstrates the absolute and relative retreat of the network on national level during global growth. What we can see on this figure is the absolute retreat of the network until 2003, than a shift to relative retreat with expansion of the network field and the faster expansion of the market field until 2007. Shift occurred, presumably as the positive impact of entering the WTO that has propagated from the private sphere to the network field as well. The differences in the speed of the two fields have decreased in the last two years owing to the acceleration of the expansion of the network field. This process, in turn increased political legitimacy that contributed to the *delay* of political transformation.

Figure 5.





Source: Michigan University China Data Center

Table 2.

Industry	2000	2001	2002	2003	2004	2005	2006	2007
Net field speed	95,9	88,3	99,6	97,5	114,5	102,5	113,8	113,9
Emerging field speed	140,0	127,3	123,9	140,4	139,5	138,1	127,8	130,0
Direction								
Ei > or = or	>	>	>	>	>	>	>	>
< Ni								
Speed difference	44,1	39.0	24,3	42,9	25,0	35,6	14,0	16,2

Dynamics of change of the network and emergent field during global and macroeconomic growth

Note: Preceding year = 100% Ei = Emerging field in industry; Ni = Network field in industry Source: Compiled from the database of Michigan University China Data Center

However, in the last quarter of 2008 Chinese economy was harshly hit by the global crisis. It appeared that the preconditions for political transformation marked in the hypothesis regarding political legitimacy were unfolding. As a result of the crisis, the so-far frentically growing exports suddenly declined, so did imports, and FDI. Also GDP growth suffered a serious backlash (Figure 6, Figure 7) (Martin, 2008). Several thousands of small and medium sized enterprises disappeared from the economic scene (Liu, 2009), millions of workers were left without job and due payments (Cai and Chan, 2009), and over 16 percent of the 140 million migrants found themselves suddenly unemployed with low chances to find work at their rural home-town (Chan, 2010, p. 251).

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Figure 6.
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External impact: decline of export and import growth

Source: Michigan University China Data Center

Figure 7.

External and internal adaptation pressures: the decline of the FDI and that of the GDP growth



As we have already mentioned, export was concentrated at coastal provinces and migrant employment was export sensitive, thus, migrant unemployment had also spatial characteristics. Political sensitivity regarding the spatial concentration of exports and migrants working in exporting industries might have been multiplied and accentuated by the potential distribution of migrants within coastal provinces. Map 2 demonstrates the level and the dynamics of prefecture level GDP per capita. Interestingly enough, one may see that prefectures with high level and fast growing GDP/capita are surrounded by prefectures which have low level and slow growth GDP/capita. We may justly suppose that those prefectures with high level and fast growing GDP/capita are the more urbanized, industrialized. This simultaneously suggests that migrants are concentrated in those prefectures. Thus, in case of sudden lay-offs in those prefectures migrants will be practically locked in, since surrounding prefectures with low level of GDP/capita and slow growth will not able to offer alternatives and absorb them. These circumstances might well lead to increased political tensions when 23 million migrant workers lose job and forecasts were gloomy (Bukley, 2009, Chan 2010: 251, Chan, 2010: 12, Kong et al. 2009, Meng et al., 2010, Wong, 2008).

Map 2.



Spatial political sensitivity in the local concentration of migrants

Source: With permission of Gyuris, F. (2008)

Consequences of the external dynamics were also felt in the radical slow-down in the growth rate of the network field and emerging field though the type of dynamics did not shift (Figure 9). Thus, it seemed that the original hypothesis that suggested the evolution of conditions preempting political transformation in case of external decline was on its way.

Figure 9.





Source: Michigan University China Data Center

Social-political events of the first months underlined the evolution of the hypothsized preconditions. Mass protests developed in larger scope and became more violent and more frequent⁶. From end of 2008, to first quarter of 2009 127,000 such events were registered officially, compared to those 87,000 of 2005. Mass protests included storming local government departments, attacks on police and judiciary authorities and attacks on government buildings and vehicles and insolvent economic units (Walsh 2009). Members of the intelligentsia became also more vocal, demanding political change in a petition released in mid-December (Carta 08, Demick, 2008). In Hunan province demobilized and

⁶ On the reasons, background success and failure of collective unrest see Cai Yongshun, 2008, 2010.

retired soldiers formed a 100,000 strong "anti-corruption brigade" of laid off workers, poor peasants and lower class intellectuals (Khoo, 2008).

The further unfolding of initial developments however remained uncertain. One could not predict if localized and locked in political adaptation pressures would spatially propagate, and if yes, with what speed. Also it was impossible to predict the sensitivity of the slowed-down transformation dynamics to external and internal developments and its extension in time. Neither the extent of political sensitivity and adaptive reactions on the short term were predictable. One did not have experience either on the reversibility of the evolving process if conditions changed for the better and adaptation pressures eased. And pressures did definitely ease very soon since external and internal conditions reversed. By the end of the first quarter of 2009 foreign trade gained new impetus (Figure 10) and also GDP and Gross Output value in industry grew sharply (Figure 11).

Figure 10.



Short-term reversal: external constraints ease

Source: Michigan University China Data Center

Figure 11.

— — GDP (quarterly) GOV Industry (monthly) 60 50 year-over-year growth rate (in percent) 40 30 20 ٦ 10 0 -10 -20 2006 2007 2008 2009 2005 2010

Short-term reversal: internal constraints ease

Source: Michigan University China Data Center

Reversal of the GDP growth was not only due to revived export and renewed export incentives, and easing the burdens of manufacturing enterprises. Figure 12 shows the consequence of promt government reactions to crisis revealed by high volumes of bank loans during the critical period and growth of investments in fixed assets, including foreign and domestic endeavours that increased domestic consumption.

Figure 12.



Compensation: loans and investments in fixed assets expand

According to Cai Fang's arguments, bank loans have increased as a consequence of timely central government adaptation to the new situation through relaxed monetary policy and lending incentives. This required the radical shift of former year's growth and inflation supressing policies (Cai, 2011). Figure 13 gives account of the expansionary fiscal policy of the government despite slowing down revenues in the same year.



Compensation: government spending expands

Source: Michigan University China Data Center

Within those, the fast, sensitive and transitory incentives for lending expansion are shown in the share of expenditure items of both central and local budgets. The only item whose share was significant already in 2007 and that further increased radically in 2008 was that of industry, commerce and banking (compiled from appendix B, at Cai, 2011, p. 14). Also central spending on medical and healthcare and environmental protection substantially increased in 2008, but its share in the central budget was practically insignificant.

We may suppose that partial consequence of these promt actions might have been reflected in the dynamics of transformation. Table 3 reveals that the slow-down in 2009 was pre-empted by an acceleration of the expansion of the network field from 2007 to 2008 that radically decreased growth rate differentials of the two (market and network) fields. Only after this event we may detect the mutual slow-down of expansion rate in both fields from 2008 to 2009. Unfortunately with yearly data we cannot localize more exactly the time of the higher state activity in 2008-2009.

Industry	2004	2005	2006	2007	2008	2009
Net %	114,5	102,5	113,8	113,9	123,0	103,2
Emerging field %	139,5	138,1	127,8	130,0	125,5	108,7
Direction						
Ei > or = or < Ni	V	>	>	>	~	~
Ei Ni	25,0	35,6	14,0	16,2	2,5	5,5

Dynamics of change of the network and emergent field in industry during the crisis period

Note: Preceding year = 100% Ei = Emerging field in industry; Ni = Network field in industry Source: Compiled from the database of Michigan University China Data

Both lending, investments in fixed assets and government commitments have been incited by the central government's four trillion yuan stimulus package introduced upon political initiative as soon as the crisis hit. The package amounted to 13 percent of the GDP in 2008. Two-thirds of the investments however, were focusing on infrastructure building, including post-earthquake recovery and reconstruction, subsidized housing and public infrastructure (Figure 14), that is, not directly in manufacturing. One third of the planned sum was expected to be covered by central public investments while the remaining amount by local government or private investments (Cai, 2011). Financing sources of central and local investments were different according to the different chances to create, acquire or exract resources.⁷

⁷ "The financing sources of the central government's investment are fourfold – that is, the investment was supposed to be financed by budgeted central investment, central government funds, other public investments of the central budget, and recovery construction fund established at the central level. The counterpart investments were arranged to include local governments' budget, local governments' bonds issued by the central government in the name of individual provincial governments, policy loans, enterprises' (firms') medium-term notes, bank loans, and private investments. From those sources, one can see that the supporting investments following the central investment had to be compulsory for the local governments and state banks, while for enterprises and private investors they could be only realized through encouraging policies."(Cai, 2011, p. 3.)



Background of expanding network output and expanding state role

Central directives supported the strong sectoral preference of the stimulus package towards construction industry to the detriment of the manufacturing sector. According to Cai Fang's data (Cai, 20011, p. 6, Fig. 2.) ratios of real investments only slightly deviated from planned ones. Let us analyze the impact of this preference in the construction industry involving infrastructure (Figure 15 and Table 4). First of all, what catches our sight is that expansion rate differentials between the market field and the network field continuously decreased owing to the tendency of acceleration of the expansion of the latter and tendency of slow-down of the expansion of the market field since 2000. Second, the two large sectors' dynamics compensates each other's acceleration or slow-down both considering the network field or the market field.



Compensatory role of state intervention in construction: infrastructure building

Source: Michigan University China Data Center

Third, owing to the previous characteristics, compensation tendency stands for the dynamics of transformation. This is also true for 2009, as industrial transformation dynmamics slows down by 2009, so does it accelerate in construction the same year with slightly faster growth of the market field. This means that slow-down in industry was compensated by the acceleration of the expansion of both fields in construction. Meanwhile, the direction of the dynamics of relative retreat of the network remained unchanged, though less characteristic in its relative speed differentials. None of the sectors demonstrated the hypothetically expected contraction of both fields. This was due to the state intervention and its activizing impact on short-term.

Table 4.

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Network %	95,9	88,3	99,6	97,5	114,5	102,5	113,8	113,9	123,0	103,2
Emerging	140,0	127,3	123,9	140,4	139,5	138,1	127,8	130,0	125,5	108,7
field %										
Ei – Ni	44,1	39,0	24,3	42,9	25,0	35,6	14,0	16,2	2,5	5,5
Construction										
Network %	101,0	99,5	102,7	104,6	105,8	114,0	107,8	113,7	112,1	119,6
Emerging	150,1	177,4	144,0	143,2	139,3	121,7	126,3	126,6	125,0	125,2
field %										
Ec – Nc	49,1	86,9	41,3	38,6	33,5	7,7	18,5	12,9	12,9	5,6

Dinamics of the network field and emerging field in manufacturing and construction

Note: Preceding year = 100% Ei = Emerging field in industry Ni = Network field in industry Ec = Emerging field in construction Nc = Network field in construction Source: Compiled from Michigan University China Data Center Table

Concluding the above, sectoral priorities and their impact should be considered when analyzing adaptation pressures and reactions to them even on the short term. Also longerterm impacts of these priorities should be analyzed both regarding the dynamics of system transformation and its spatial disparities and their consequences.

We can also argue that time-span of external and internal adaptation pressures matters. On the short run, there is no sign of the hypothezed transformation dynamics on national level that would have contributed to the preconditions of political transformation. Thus, original hypothesis might work in case of long-term external and internal adaptation pressures, but in case of short-term, adaptations are different. State intervention expands the network field and has a dynamizing impact on the emerging field. The impact of the crisis on manufacturing industry should not be examined in isolation but connected to the impact of the stimulus package that focused on construction.

SPATIAL DISPARITIES OF THE IMPACT OF EXTERNAL DYNAMICS AND CONSEQUENCES

National level characteristics however were not homogeneously reflected in space. Instead, spatial clusters of different dynamics may be perceived. This was true both regarding the investments in fixed assets, the FDI the GDP growth, and also in the spatial distribution of types of transformation dynamics. Colors on Map 3 show the different speed of grow regarding investments in fixed assets. They range from red towards blue reflecting the decline in the speed of growth. Little circles within provinces in non-blue colors are signs of acceleration in growth-rate in 2009/2008 compared that of 2008/2007. The same circles in provinces with blue colors mean the deceleration of decline. Based on that classification we may detect the faster development of the central and western provinces both compared to former years to the detriment of the four coastal provinces where we know that the highest was the share of the export in the GDP (Map 1).

Growth of investment in fixed assets: higher and accelerated at central-western regions



Source: Michigan University China Data Center

Similar tendency is shown by the spatial distribution of FDI growth. During the short period of the crisis FDI's higher growth propagated toward inland provinces instead of the previously preferred coastal provinces where the inflow of FDI stagnated or declined. Acceleration was overwhelmingly at some scattered provinces throughout the country, most of that meant deceleration of decline in provinces where FDI declined (Map 4).

Distribution of FDI growth-rates: propagation to central-western regions, while stagnation at the coastal regions



Source: Michigan University China Data Center

The clear tendencies in the spatial distribution of investment in fixed assets and FDI growth are not that explicitely reflected in the spatial distribution of the GDP/capita growth (Map 5). Regarding yearly data, despite the drastic but short crisis period with severe export drop, growth at coastal provinces were around the national average⁸ and only two of the provinces produced lower level GDP/capita during 2009 than in 2008. Still, we may experience overwhelmingly more frequent higher growth rates at central and western provinces.⁹

⁸ <u>http://www.exxun.com/China/e_ec.html</u>

⁹ "The GDP growth rate was 9.1 percent, comparing with 9.0 percent in 2008 and 13 percent in 2007. Given the severe drop in export – the contribution share of net exports of goods and services in GDP increment was -47.7 percent, the stimulus package aiming at stimulating domestic demand

Overwhelming growth of the GDP/cap at central-western regions



Source: Michigan University China Data Center

We suppose that timely central and local government intervention must have had a substantial role in these results. This supposition is supported by the similar tendencies that may be detected in the spatial disparties of the dynamics of the gross industrial output of the economic units belonging to the network field (Map 6). Concerning the network field we may see two clusters of fastest growth: one in the coastal and the other in the west-central regions where government activity and network preference must have been the most intensive. Earlier news analysis (Csanádi, 2010) have suggested that at coastal provinces more local, while at west-central provinces more central government activities were registered within the network. One can also detect that accelerated expansion of the network were the crisis hit the most. Meanwhile,

lifted the contribution share of final consumption expenditure to 53.1 percent and that of gross capital formation to 94.6 percent in 2009."(Cai Fang, 2011 p. 5.)

contraction was experienced in several north-western provinces and at some provinces neighboring coastal provinces. ¹⁰

<figure>

Spatial disparities in the dynamics of the network field in the industry

Map 6.

Source: Michigan University China Data Center

Looking at the dynamics of the emergent field's GOV in manufacturing (Map 7) it is clear that except for some heavy industrial provinces central and western regions boomed while most of the coastal provinces experienced a more modest growth. We may suggest that the impact of the crisis and parallel government investment activity expanding the network field at central-western regions must have attracted the inflow of FDI and the relocation of economic units from the coastal region towards central western regions. These processes have incited the expansion of the market sphere.

¹⁰ These contractions must have an economic policy background that should be researched more deeply. This however, would exceed the required extension of this paper.





Source: Michigan University China Data Center

Spatial distribution of the dynamics of the two spheres has its repective consequences on the diversity of dynamics of transformation in the manufacturing industry (Map 8). The map shows the spatial distribution of the different types of transformation dynamics. Firstly, we may also detect scatterred and clustered distribution of the absolute retreat of the network where network field contracted while the market field expanded. Thereby economic transformation with absolute retreat of the network field took place. Secondly, a clear cluster of relative retreat may be perceived from south-west to north. Thirdly, we may identify the slow-down of economic transformation at several coastal provinces. However, this slow-down was different from the hypothetically expected contraction of both fields that would have contributed to the preconditions of political transformation. In the concrete cases slow-down occured due to the faster expansion of the network field than that of the emergent field.

The originally expected type of slow-down through contractions in manufacturing occurred in two provinces: one in Qinghai, where the network field declined faster than that of the market, the other in Xinjiang where the private field declined faster than the network field. Interestingly enough, in both cases about the half of the population belongs to a national level minority and during the last years high level political conflicts occurred in both provinces.¹¹ Locally increased adaptation pressures however provoked only short-term reactions: national level military and political intervention and segregation to hinder the propagation of conflict.

¹¹ Tibetan Exiles, Chinese Authorities Report on Unrest in Qinghai, April 30, 2008http://www.voanews.com/english/news/a-13-2008-04-30-voa9-66816592.html China riots: 300 Uighurs stage fresh protest in <u>Urumqi</u>10 Jun 2011 http://www.telegraph.co.uk/news/worldnews/asia/china/8572680/Migrant-workers-in-Chinaattack-police-in-third-day-of-riots.html

Timeline: Xinjinag unrest. Ethnic violence has erupted in China's western region of Xinjiang, with scores of people being killed and hundreds injured. Friday, 10 July 2009http://news.bbc.co.uk/2/hi/asia-pacific/8138866.stm

Map 8.





Source: Michigan University China Data Center

How does this picture change if we considered the transformation of the construction industry that was the main focus of the stimulus plan? Spatial disparties in the distribution of network dynamics in the construction industry clearly show the spatial preferences of the state action (Map 9). Hightened expansion is spreading towads the central and western regions with overwhelmingly stagnation, slow growth or contraction at coastal region. This latter is experienced only in one province nationwide. Accelerated expansion is visible from south to north and east to west. Spatial distribution of network expansion in construction industry seems to compensate the slower growth of the network in the industrial sector. This finding matches the national level tendencies shown in Figure 15.

Dynamics of the net in construction – spatial compensation



Source: Michigan University China Data Center

Map 10 demonstrates the multiplicative effect and attracting capacity of the government activities on private ventures in the construction industry. Distribution of the dynamics of the emergent field involves similar spatial distribution and acceleration characteristics as that of the network field. However, direction of growth towards the central and western regions is more accentuated and the speed of expansion is even higher than that of the network field.

Map 10.

Dynamics of the emergent field in construction



Source: Michigan University China Data Center

As a result of the dynamics of the network and emergent field, spatial characteristics of transformation dynamics in the contruction sector in 2009 showed an almost homogeneous picture of relative retreat of the network owing to the faster expansion of the emergent field compared to that of the network field (Map 11). Thus it looks like that government activity in the network field induced the overwhelmingly higher activity of the private sphere contributing to the accelerated transformation of this subfield. It is worth to mention that Qinghai is one of the provinces where slow-down due to faster expansion of the network in construction might have been a strategy to compensate double contraction in manufacturing. The dynamics of transformation in the construction industry does not contain any double contraction.

Dynamics of transformation in construction



Source: Michigan University China Data Center

Compensatory role of the construction sector to industrial dynamics is even more accentuated if we check the transformation dynamics of the two sectors in 2008 and in 2009. Opposite tendencies may be traced in the spatial characteristics of the changes in transformation dynamics regarding manufacturing and construction. In the manufacturing sector, the almost homogeneous picture of relative retreat in 2008 owing to the faster growth of the emergent field became much more diversified by 2009. Oppositely construction industry shows a more diversified picture in 2008 compared to that of 2009. This diversity is due to the slow-down of transformation in the west in 2008 as a result of faster network expansion, and the relative retreat of the network at coastal and central provinces. This picture becomes more homogeneous in 2009 as a result of activized market field also in the western regions by pre-empted network expansion. (Map 12 and Map 13). It is worth to mention that Qinghai is among those exeptions where slow-down of transformation due to faster network expansion occurred already the second year in the case of construction. In manufacturing similar type of slow-down also occurred in 2008 that turned into double contraction in 2009.

Map12.



Relative retreat of the net in the manufacturing due to faster expansion of the market field in 2008/2007

Source: Michigan University China Data Center

Map 13.

Slow-down of transformation in the west in the construction industry due to faster network expansion, 2008/2007



Source: Michigan University China Data Center

Concluding the above, spatial disparities should be also considered regarding external and internal adaptation pressures and reactions. On the short-term, state intervention both in industry and construction dynamized the network and also the market field at a high pace at central and werstern regions. State intervention in infrastructure complemented the direction and speed of transformation at central and western regions and to some extent might have eased the slow-down in the coastal regions where the overhwelming impact of the crisis occurred. In case of provincial level occurrence of double contraction that would hypothecize the adaptation pressure for the formation of preconditions for political transformation is rare. Moreover, double contraction in manufacturing also provoked short-term reactions in the form of military and political interventions and political segregation. Apparently, it also enhanced government efforts to economic integration in the form of increasing the speed of state intervention in the construction industry that activized the private field.

THE MISMATCH AND OVERLAP BETWEEN THE PRIORITIES OF THE STIMULUS PACKAGE AND THE DIMENSIONS WHERE CRISIS HIT

However, compensatory impact of the stimulus package and within that the focus on construction was much more complex, both structurally and spatially. Complexity arises owing to the fact that in several dimensions the focus of the crisis and the priorities of the stimulus package did not overlap (Table 5). To what extent this "mismatch" was a conscious economic policy and what were its concrete previewed or unexpected consequences is still to be researched. So far we have demonstrated in detail the spatial mismatch: the crisis hit the coastal regions meanwhile the stimulus package was oriented overwhelmingly towards the central-western regions. Sectoral mismatch is also clear: while the crisis hit in the manufacturing sector, the package's main priority was the infrastructure building. The mismatch is evident also in trade orientation: the crisis hit the export, while the focus of the package was to increase the domestic consumption. Mismatch may be revealed also regarding enterprise size: the crisis attained overwhelmingly small and medium sized enterprises while the focus of the package was on large enterprises. Also ownership preferences and crisis ownership impacts did not match: the crisis drastically shook the private enterprises while the stimulus package focused on state owned enterprises. From this follows the mismatch regarding the affiliation: overwhelmingly foreign enterprises closed down as a result of the crisis while the package's preferences were domestic enterprises.

Table 5.

Mismatch	Crisis direct impact	Stimulus plan direct impact
In location	Coastal	Central and western
Priority sectors	Manufacturing	Infrastructural
Trade orientation	Export	Domestic
Participant ownership	Private	State owned
Enterprize size	SME	Large
Affiliation	Foreign	Domestic

Mismatch of state intervention and crisis impact

Source: Compiled by the author from different documents and data

On the other hand, both national level and provincial level data suggest that state intervention activized the private sphere and we are also aware that infrastructural investments are activizing several sub-sectors of the manufacturing industries and both domestic and foreign enterprises. On the other hand, preliminary consultations revealed that owing to the campaign characteristics of the implementation of the stimulus package many inefficient, parallel functions and production, and polluting investments got green light, too many loans were provided and within those increasing number of nonperforming loans were released to enterprises. Also local governments' budgetary deficits and indirect depts accumulated into possible debt crisis through financing vehicles set up by regional authorities where 30 percent of the bank loans are expected to turn sour, generating a 2 to 3 trillion yuan of non-performing loans (Moody's, 2011; Credit Suisse, 2011; Standard Chartered, 2011). Local government debt could be 30 percent of the GDP. Moreover, owing to increased resource distribution and purchasing capacities and land selling, corruption cases substantially increased. It is also evident, that infrastructure building requires the similar low-level educated migrant work-force that several other subsectors of manufacturing industry is seeking and is presently in shortage. Absorption of that migrant manpower in large masses however is needed only during the building and not the operation of the network of infrastructure.

The above circumstances raise several questions for further research: what are the long-term consequences of short-term adaptation with increased state intervention and spatial mismatch? What are the long-term consequences of overlap? How do these consequences appear in the spatial disparities of development, temporary and longer-term spatial migration routes (e.g. deviations from former destinations, wages, bargaining capacities, migrant education level etc)? What are the spatial disparities of short and long-term consequences of the apparent mismatch and overlap on enterprise behavior, economic and export structures and economic transformation? This is our present field-work subject in collaboration with BNU SEBA, Fudan University, Institute of Economics CASS and Institute of Economics HAS^{.12}

CONCLUSIONS

The subject of the analysis was the sensitivity and reactions to the adaptation pressures the global crisis exerted on system transformation and its spatial disparities. Our approach was systemic, based on the theoretical cornerpoints of an analytical party-state model (Interactive party-state model Csanádi, 2006, 2011). By introducing the concept of "transformation dynamics" in order to roughly quantify system transformation we could measure the direction and speed of expansion and contraction of the network field and market field relative to each other. We hypothesized an indirect relationship between global dynamics and the direction and speed of transformation and party legitimacy. We argued that as global growth accelerated economic transformation and preserved party legitimacy, so may global decline decelerate economic transformation and by decreasing party legitimacy, lead to the evolution of the preconditions of political transformation.

Our hypothesis was only partially supported by the events. Global crisis and its consequences on internal dynamics exerted parallel adaptation pressures on system transformation in late 2008 and early 2009. The crisis however was short-term, thus critical adaptation pressures and adaptations were aquin. Short of long-term adaptation pressures incite different kind of adaptations that have different consequences on the dynamics of system transformation. Government reacted sensitively, with promt and substantial intervention in the economy. Short-term government interventions prioritized the investments by the state owned enterprises expanding the network field. State intervention through the temporary slow-down of transformation contributed to the preservation of political legitimacy. The transformation dynamics did not change direction Instead, owing to the faster expansion of the network field compared to the slow-down of the private field, the relative retreat of the network temporary decelerated (slowed down)

¹² The field-work involves two cities, one central and one coastal, questionnaire in 1000 enterprises in the two cities, fourty manager interviews of selected enterprises based on the questionnaire and 200 interviews with migrants working in those 40 enterprises.

in the industry. Thus, hypothesized evolution of adaptation pressures that decline party legitimacy leading towards the transformation of the political subfield did not occur. Thus, we have to acknowledge that time-span of external and internal adaptation pressures matters.

Temporary character of pressures suggests the *reversibility* of the direction and speed of dynamics of economic transformation on the short run, depending on the development of external and internal factors.

Statistical data reveals that short-term government interventions expanded the state sphere but also activized the market sphere. Sectoral focus of state intervention on infrastructure compensated industrial decline. Dynamics of transformation was spatially divergent: in the case of industry a slow-down occured in the transformation of critical regions hit by the crisis. Though government interventions increased also at coastal provinces in some cases even faster than in other regions, FDI, investments in fixed assets and market expansion grew faster in central and western regions. Thus, except for Guangdong, slow down of transformation was overwhelmingly concentrated to coastal provinces and the two provincial level cities, Beijing and Tianjin.

Regional dynamics of transformation was different in the two sectors (manufacturing and construction) and also compared to the dynamics preceding the crisis. Regarding manufacturing industry, three dominant types are visible spatially: both relative expansion of the network field compared to growth of the competitive field, the relative contraction of the network and its absolute contraction. Types involved several provinces as spatial clusters. Different types show the different regional impact of the crisis and reactions to crisis. Regarding construction industry, the relative retreat of the net is overwhelming which means the overall faster expansion of the competitive field in this sector suggesting the dynamizing impact of state infrastructural investments. However, the dynamizing impact is much more visible in the central and western provinces where the crisis did not hit directly.These investments reinforced the previous government policy to increase domestic consumption and develop central and western regions and decrease export dependency of the country.

Comparing industrial transformation dynamics preceding the crisis 2008/2007 with that of during the crisis 2009/2008, one may conclude that the shift was dramatic: it has changed from an almost homogeneous -- dominantly relative retreat of the network to a diversified picture of types from absolute retreat, to relative retreat and relative expansion. We may wittness an opposite shift in the case of construction industry: a slow-down of transformation in the central-western regions owing to the higher speed of expansion of the network field in 2008/2007 to be followed by an almost unanimous relative retreat of the network field in all provinces owing to the faster expansion of the private sphere in 2009/2008.

Not only spatial focus of government interventions with developmental and transformation consequences is discernible. Spatial disparities and long-term consequences emerge potentially in several dimensions if we take the declared or implicitely suggested directives regarding scale, ownership trade orientation and affiliation preferences of the Stimulus Package and the same characteristics of those who were attained directly by the crisis.

Spatial focus of short-term government interventions and shortly following private sphere have substantial long-term spatial consequences on so-far development disparities, on "traditional" eastward migration routes, economic and export structures and dynamics of transformation. So-far non-available 2010 data will allow us to compare the spatial disparities and shifts of dynamics before, during and after the critical period, in both sectors. Migrant routes will be discernible only by 2015 when census statistics will be published.

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