China Analysis 73
May 2009
www.chinapolitik.de

Maximum Tinkering under Uncertainty: Unorthodox Lessons from China

---

Sebastian Heilmann

Professor of Comparative Government / Political Economy of China

Department of Political Science
Trier University, 54286 Trier, Germany

E-mail: heilmann@uni-trier.de

Maximum Tinkering under Uncertainty: Unorthodox Lessons from China[1]

Sebastian Heilmann

Abstract

In a time when many Western standard recipes for economic policy are losing credibility, it is imperative to step back from past orthodox explanations and rethink the unconventional approaches to managing economic change that we find in China's developmental experience. The key to understanding the adaptability of China's political economy over the last few decades lies in an unusual approach to policymaking that can be characterized as "foresighted tinkering": pursuing broad long-term policy priorities while constantly searching for and experimenting with novel policy instruments. China can serve as an extremely instructive case to look for lessons on creative management of uncertainty in policymaking.

The Great Disillusionment with Hegemonic Western Paradigms

We are living in a time when many people wonder whether the dominant models that explain market-based political economies may just be the product of a blinding ideology that served to legitimize unfettered business greed and wealth concentration while unloading the social costs and economic risks onto society at large. Economic paradigms that have enjoyed hegemonic status in the past, such as the much-praised information efficiency of financial markets, are falling apart. In the context of massive state rescue schemes and nationalization of many financial firms, even the previously hegemonic marketization-cum-privatization paradigm (henceforth: "marcump") is rapidly loosing credibility.

The dismantling of the "marcump" paradigm represents a major watershed for the social sciences, since this paradigm has defined the debate about economic and welfare policymaking in advanced and developing political economies as well as about post-socialist transformation in Eastern Europe and China during the last few decades. While many Western standard recipes for economic policy are running out of steam, it is imperative to step back from past orthodox explanations and rethink the unusual approaches to managing economic change that we find in China's developmental experience.

In this article, I criticize the drawbacks of synoptic models of reform-making and stress instead the strengths of processual and open-ended approaches to political economy. I argue that the key to understanding the adaptability of China's political economy over the last few decades lies in the unusual combination of extensive policy experimentation with long-term policy prioritization – in a short formula: *foresighted tinkering* – that has been practiced under the shadow of a hierarchical authority structure. I conclude with the suggestion that China is an extremely instructive place to look for general lessons on creative management of uncertainty in policymaking. Western social scientists and policymakers can learn much from China's distinctive experimentalist approach to structural and policy reform.

---

[1] This is the abridged version of a contribution to the special issue on China's political economy in the journal *Modern China*, July 2009. A Chinese translation of the long version appears in the social science journal *Kaifang Shidai*, Summer 2009.

The Limits to Synoptic Models of China's Reform Process

How do we make sense and build models of China's reform process? Fan and Woo's (2009) critique of the policy sequencing approach to economic transition is certainly well founded. Yet, most of the sequencing models were formulated against the background of early post-socialist transformation when issues of fundamental institutional design were at stake. The prescriptive value of "optimal sequencing" models and their usefulness to policymakers who have to navigate and make compromises in an often incalculable environment was questioned from early on.[2]

More importantly, Fan and Woo's "Parallel Partial Progression" approach appears to share one basic weakness with the sequencing models. Fan and Woo assume that a government can "keep the reforms in different institutions compatible with each other," with the overall aim to "optimize the coherence" of policies and institutional reforms. Such a synoptic view of government as a super-coordinator of extremely complex reform packages is not a robust foundation for building an explanatory or even prescriptive model.

As Braybrooke and Lindblom (1963: chapter 3) point out, synoptic, rationalistic-deductive conceptions of policymaking are generally untenable since they assume, first, that the entire spectrum of alternative policies is somehow known to the analyst and, second, that the ultimate objectives of policymaking are well defined and stable. Yet, it is precisely the discovery of policy and institutional alternatives in a constantly changing political-economic context which is the most uncertain and demanding part of the policy process (Rodrik, 2007).

How can we derive the content of the "partial reforms" ("20 percent") that Fan and Woo are proposing if the ultimate goals (the "100 percent" of "complete" and "required" reforms) remain ambiguous and undefined among both policymakers and social scientists? The underlying assumption that a political economy is transiting from "status I" to a definable or desirable "status II" is highly problematic due to its teleological or even ideological bias: Isn't it the now discredited "marcump" paradigm that has served as the benchmark for most economists in assessing China's transitional status? How can we be sure that China is really moving in the "marcump" direction? And how do we know whether this paradigm will be working and be acceptable for future Chinese society?

Lindblom formulates a central proposition for policy studies that has been bolstered by broad empirical evidence from all types of polities over recent decades when he states that policy is "made and re-made endlessly. Policymaking is a process of successive approximation to some desired objectives in which what is desired itself continues to change under reconsideration" (Lindblom, 1959: 86, 88). Fan and Woo tend to downplay the inherent ambiguity and discontinuity of this search for policy options under uncertainty. In their concluding paragraph they state that research on optimal coherence of reform packages may become "more of a science" if intensified.

In the light of the Lindblom proposition, this represents a "scientistic" misunderstanding of the policy process and ignores the "wicked" character of complex reform agendas. Interlinked institutional and policy reforms represent particularly "wicked problems" or "complex social messes" (Rittel and Webber, 1973; Ritchey, 2007) that are characterized by extensive uncertainty about the feasibility and consequences of interventions, pervasive ambiguity, controversy, and indecision on the part of policymakers, unique and rapidly shifting conditions for intervention and interaction, multiple unforeseeable feedbacks, as well as unexpected endogenous and exogenous developments or shocks that can transform the entire playing field within a short period of time.

China's concrete reform experience has rarely been characterized by coordinated reform packages but rather by an unsynchronized, piecemeal process of reform-making whose strength is

---

[2] Gerard Roland (2000: 42-50), who was a major contributor to the debate, presents formal models of reform sequencing that are designed to shed light, retrospectively, on "the observed regularities in the sequencing of reforms" and account for the numerous factors that constrain policymakers. The prescriptive value of these models remains extremely vague.

not its coherence but its openness to unexpected and tentative policy solutions that are seized upon when they come up.

The tension between synoptic and piecemeal policymaking is strikingly illustrated by reforms of the urban state sector. Chinese policymakers had become well aware of the necessity of "comprehensive complementary reform" (*zonghe peitao gaige*) in restructuring the urban political economy already in the mid-1980s. They initiated numerous experimental programs to deal with interlinked reform requirements in enterprises, bureaucracies, and welfare provision. Though these efforts at coordinated reform were modestly sized, they got stuck already in their early stages, thereby demonstrating how complex, costly, and risky "coherent" reform packages for the urban state sector would be. Throughout the 1990s we find experimentation with "comprehensive complementary reform" while state sector debts kept accumulating. Though many experiments were seen as failing, they helped policymakers to understand the underlying institutional, social, and financial exigencies, discover the cost and risk structure of state sector reform, and try out diverse approaches to problem-solving.

Broad-based tinkering effectively enriched and transformed the economic policy know-how of local and central decision-makers and administrators. Protracted policy learning was helped immensely by the massive growth in private and transnational economic activity that lessened the pressure for immediate structural reform in the public sector and thereby provided policymakers with an opportune environment for adaptation over an extended period. Reform breakthroughs that contained comprehensive packages of interlinked restructuring policies came in 1992/3 (program for market-oriented restructuring), 1997/98 (SOE and financial industry reform) and 2001/2 (foreign trade and investment liberalization) when external push factors (Soviet collaps, Asian financial crisis, and WTO negotiations, respectively) propelled top-level policy decisiveness that could, however, build on the diverse experiences obtained through years of piecemeal tinkering.

In sum, China's policymakers had understood from very early on that complementary and coherent reform packages would be the optimal way to deal with the administrative and welfare impact of SOE reform. But they could not, and still cannot, build a policy consensus, vision, or agenda on what the state sector should look like at the end of its transformation since sweeping privatization seems neither desirable nor acceptable to most policymakers. Beyond ultimate policy goals they were also not sure about the policy instruments. They did not know what type of polices would at least solve the most pressing deficiencies of the state sector without losing control. Instead of settling for a deadlock in economic reform as in Brezhnev's Soviet Union, Chinese policymakers tinkered around with incoherent, yet still instructive, piecemeal restructuring. And in the end, they grasped the opportunity for decisive reform only when they were driven forward by exogenous events, felt confident enough to know what might work, and what should be avoided, thanks to previous experimentation, and could afford to pursue a proactive fiscal policy that allowed them to placate the losers of state sector reform through ad hoc compensations. In short, the challenges and the extent of change in China's political economy were tantamount to *"rebuilding the ship at sea"* in uncertain waters and winds (cf. Elster, Offe, and Preuss, 1998). The essential fluidity and unpredictability of the policy environment must be taken seriously as a universal constraint for any attempt at designing comprehensive reform packages.

Getting the Policy Process Right: Tinkering, Learning, and Adapting

In order to deal creatively with uncertainty, political actors must tinker with diverse measures, processes, and institutions and adapt them to their concrete conditions, thereby finding out what works at acceptable costs. As Dani Rodrik puts it, "getting the policy *process* right" is the key to a conducive role of governments in developing political economies. Successful policymaking is "a process designed to find areas where policy actions are most likely to make a difference." The type of policies used will depend critically on a country's specific circumstances, and the value of standard recipes for economic restructuring will thus be extremely limited (Rodrik, 2007: 100, 104-

5, 117). Policymaking that is undertaken as an intensive, yet open-designed search process and entails positive exposure to accidental discoveries will be the most conducive to problem-solving.

Wang Shaoguang (2009) demonstrates how important a particular policy process has been for dealing with the complex challenges posed by rural health care. Wang aptly states that the "resilience of the Chinese system lies in its *deep-seated one-size-does-not-fit-all* pragmatism." He traces idiosyncratic processes, patterns, and conceptions to their historical origins and explains the reasons for their formation and acceptability in the Chinese context. Wang presents strong evidence for the importance of bottom-up input to China's policy process that has been facilitated by open-ended experimentation during as well as after the Mao era. With surprising continuity, local knowledge and tinkering have had the legitimacy and the potential to influence national policymaking in the realm of rural health care.

Decentralized generation of policy options represents a crucial asset for policy innovation that had never been realized in top-heavy, centralized Soviet-type party-states. China's remarkable deviation from the Soviet pattern can best be explained through particular revolutionary legacies of the Chinese Communists, such as policy generation "from point to surface" (*youdian daomian*) or policy implementation "in accordance with local conditions" (*yindi zhiyi*) that had been a key to revolutionary victory for the Chinese Communists and also proved to be extremely conducive to economic reform and opening (Heilmann, 2008a).

The problem with policy learning is that it is basically unobservable while it is happening. Analysts infer that it has happened by looking at the changing debate and content of policymaking or cognitive and normative shifts in the policy community over time. While policy learning is thus ascertained retrospectively, experiments in the guise of pilot tests, model sites, special zones, or experimental regulations constitute observable "policymaking in action" by which we can trace the mechanisms that drive adaptive and learning capacity. Policy learning represents a rather unspecific cognitive *ex post* category that does not tell us what causes Chinese policymakers to be more welcoming to locally generated policy options than policymakers in other countries. Therefore China's distinctive strengths in institutional and policy adaptation are much more likely to be grounded in the unusual traditions and mechanisms of experiment-based policy generation than in the cognitive superiority of China's policymakers.

As demonstrated by Wang Shaoguang, a tremendous merit of diachronic policy studies is their open and dynamic research design. If new actors, interests, ideologies, or feedbacks enter the game, analyses of the policy process provide an adaptive framework to discover and integrate such changes and move beyond the predefined and overstructured models of institutionalist political economy. Studies of the policy process make researchers sensitive to creeping changes, unorthodox mechanisms, unexpected interactions, and random results. We can step back from stating what the ultimate status of a certain policy or institution will have to be after reform. And we can thereby avoid the teleological bias ("When and how does China become a 'real' market economy or democracy?") that is so pervasive in social science debates on China's transformation (cf. Heilmann, 2008b).

Nassim Taleb (2008: xxi) suggests that innovative capacity in political economies does not vary according to systemic features (market vs. plan, democracy vs. authoritarianism) but is determined by the opportunities that political economies provide for "maximum tinkering." Such tinkering can take place under non-democracies if rulers are willing to give a free hand to decentralized generation of new knowledge. China obviously is very good at this decentralized tinkering. Herein lies a major challenge for Western studies of political economy that tend to cling to the dichotomous categories, rigid assumptions, and so-called rigorous models that are part of the "marcump" paradigm.

One general caveat: Is it plausible to classify entire political systems according to their adaptive capacity, as suggested by Wang Shaoguang in his concluding thoughts? One methodological principle of policy studies lies in disaggregating political systems into policy subsystems, each of which is characterized by very different dynamics (Howlett, Ramesh, and Perl, 2009). Thus, we will find strong capacity to learn and adapt in certain policy areas, such as China's

foreign trade, while finding persistent blockades to learning and problem-solving in other policy realms, such as China's fight against corruption. Due to such crass variation, exercising restraint on generalizing across diverse policy subsystems and jumping to general hypotheses about the entire political system belongs to the core lessons of contemporary policy studies.

The hard test for systemic adaptive capacity always arrives with disruptive crises in which not only economic and social learning but also political-institutional responsiveness and societal support for the political system and the incumbent government are stretched to their limit. Most political systems are on their way to go through such a hard test presently, and it remains to be seen how China's government, beyond the creative policy process that has been so productive in times of normal politics, deals with a crisis that may hit basic social cohesion and several crucial policy areas at the same time.

Why Maximum Tinkering is Not Enough: The Shadow of Hierarchy

Though Wang Shaoguang stresses the importance of bottom-up policy input in rural health care, his article makes it clear that local initiative did not go anywhere, or at least not very far, if higher-level support was not forthcoming. As the peasant quoted by Wang states: "With no push from the top and no action in the middle, the base simply falls apart." Thus it is certainly wise not to underrate the weight of higher-level attention upon decentralized tinkering.

Senior patronage and advocacy is decisive in defending and scaling up local initiative. Top-level policymakers are setting broad policy goals and priorities that often provide the legitimacy and the leeway to local tinkering. Unapproved experimentation can be justified as a search for policy tools that meet the priorities signalled in the speeches, documents, or development plans of higher levels. Senior leaders have the power to protect or stop local policy innovators depending on how useful the results of local tinkering appear to them. Most importantly, higher-level policymakers serve as the gatekeepers and advocates in the dissemination of locally generated innovations.

Thus China's adaptive capacity in policymaking is not just based on maximum local tinkering. It is better understood as foresighted tinkering under the shadow of hierarchy, serving policy agendas that are constantly set and re-set by higher levels. Even for the most courageous or self-serving local policymakers, the shadow of hierarchy never disappears completely.

It is clearly worthwhile to invest more thinking in the *intriguingly ambiguous effects of China's hierarchical authority structure*. According to one influential interpretation, China's authority structure is split between "political centralization" and "economic decentralization" (cf. Huang, 1996; Cai and Treisman, 2006). The political/economic dichotomy built into this model has led to an unceasing controversy about how to understand or model the dynamics of central-local relations in China's political economy. Instead of diluting the wicked puzzle of hierarchy by applying tame Western models of federalism to China, it may be much more helpful to take a finer-grained look at the varying effects of hierarchical structures (Naughton, 2009).

In his studies of hierarchical coordination, Fritz Scharpf distinguishes between two very different variants and effects of hierarchical structures that are both applicable to China. Hierarchical coordination (as in Soviet-type central planning or in Communist Party top-down cadre appointments and removals) is characterized by direct, imperative intervention and control overriding the decision preferences of lower-level actors. Yet, this type of strict hierarchical control is rarely enforceable and usually confined to a few policy domains and to periods of political campaigns and repression. More frequently, and this also appears to be the prevailing variant in China's polity, we find a less coercive hierarchical authority structure that exerts an indirect and patchy effect on lower-level actors, though the shadow of hierarchy (i.e. the threat of sanctions if something goes wrong) is permanently felt. Unilateral action, self-interested bargaining, infringement of laws and regulations, or outright corruption on the part of lower-level administrators can be common. Yet local officials still remain embedded in the overall authority structure and vulnerable to ad hoc hierarchical intervention. They are "not freestanding," as Scharpf

(1997: 197-198) puts it. Even if hierarchical authority does not achieve effective control, it still affects the calculations, behavior (be it evasive or loyal), and interactions on lower levels and across levels of state administration. I would suggest that the shadow of hierarchy continues to play a crucial role in the ambiguous, oscillating interplay between China's policymakers and administrators across different administrative levels, no matter how decentralized economic administration and how disloyal local policymakers may appear.

In sum, though locally generated policy innovations have shaped important elements and junctures of China's reform trajectory, decentralized policy tinkering is not equivalent to freewheeling trial and error or spontaneous policy diffusion in the context of China's polity. Rather, it is a purposeful activity geared to producing novel policy options that are injected into official policymaking and then replicated on a larger scale, or even formally incorporated into national law. It is precisely the dialectical interplay between dispersed local initiative and central policymaking – maximum tinkering under the shadow of hierarchy – that has made China's economic governance so adaptive and innovative from 1978 to 2008.

Conclusion

Overall, China's unorthodox approach to policymaking that was characterized in this article as "foresighted tinkering" – pursuing broad long-term policy priorities while constantly searching for and experimenting with novel policy instruments – may become a huge processual advantage in the years to come, if this variant of steady, yet flexible governance is being maintained and adapted in creative ways.

It is time for Western social scientists to take those aspects of China's developmental experience, such as China's policy process, that deviate from constricted standard models much more seriously as a way to gain general insights into alternative mechanisms that may be conducive to managing large-scale social change and allowing maximum tinkering in a highly uncertain environment.

References

BRAYBROOKE, DAVID AND CHARLES E. LINDBLOM (1963) A Strategy of Decision: Policy Evaluation as a Social Process. New York: The Free Press.

CAI HONGBIN AND DANIEL TREISMAN (2006) "Did government decentralization cause China's economic miracle?" World Politics 58: 505-35.

ELSTER, JON, CLAUS OFFE, and ULRICH K. PREUSS (1998) Institutional Design in Post-Communist Societies: Rebuilding the Ship at Sea. Cambridge: Cambridge Univ. Press.

FAN GANG AND WING THYE WOO (2009) "The Parallel Partial Progression (PPP) Approach to Institutional Transformation in Transition Economies: Optimize Economic Coherence Not Policy Sequence." *Modern China*, July 2009.

HEILMANN, SEBASTIAN (2008a) "From local experiments to national policy: the origins of China's distinctive policy process." The China Journal 59: 1-30.

——— (2008b) "Policy experimentation in China's economic rise." Studies in Comparative International Development (SCID) 43, 1: 1-26.

HOWLETT, MICHAEL, M. RAMESH, and ANTHONY PERL (2009) Studying Public Policy: Policy Cycles and Policy Subsystems. 3rd ed. Toronto: Oxford Univ. Press.

HUANG, PHILIP C.C. (2009) "China's Neglected Informal Economy: Reality and Theory." *Modern China*, July 2009.

HUANG YASHENG (1996) Inflation and Investment Controls in China. New York: Cambridge Univ. Press.

LINDBLOM, CHARLES E. (1959) "The science of 'muddling through'." Public Administration Rev. 19, 2: 79-88.

NAUGHTON, BARRY (2009) "Singularity and replicability in China's developmental experience." China Analysis 68 (www.chinapolitik.de).

RITCHEY, TOM (2007) "Wicked problems: structuring social messes with morphological analysis." Swedish Morphological Society, Discussion Paper, November 2007 (www.swemorph.com/pdf/wp.pdf).

RITTEL, HORST and MELVIN WEBBER (1973) "Dilemmas in a general theory of planning." Policy Sciences 4: 155-169.

RODRIK, DANI (2007) One Economics, Many Recipes. Princeton, NJ: Princeton Univ. Press.

ROLAND, GERARD (2000) Transition and Economics: Politics, Markets, and Firms. Cambridge, MA: MIT Press.

SCHARPF, FRITZ W. (1997) Games Real Actors Play: Actor-Centered Institutionalism in Policy Research. Boulder: Westview.

TALEB, NASSIM NICHOLAS (2008) The Black Swan: The Impact of the Highly Improbable. London: Penguin.

WANG SHAOGUANG (2009), "Learning through Practice and Experimentation: The Case of China's Rural Healthcare Financing." *Modern China*, July 2009.