

China's Challenge to Economic Orthodoxy: Asian Reform as an Evolutionary, Self-Organizing Process

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ABSTRACT: This paper argues that the success China's economic reform, contrasted with the difficulties of Eastern Europe and Russia, stems mainly from China's willingness to tolerate decentralized experimentation and a gradual evolution of new institutions, whereas in Eastern Europe and Russia a sense of urgency led to wholesale importation of foreign institutions. This contrast in turn has implications for the usefulness of non-linear, dynamic analysis over the traditional neoclassical paradigm.

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INTRODUCTION

Old beliefs often shatter on the rocks of historical events, and new thinking emerges from the wreckage. The twentieth century offers two such historical events: the Great Depression of the early 1930s, and the collapse of the command economies in the late 1980s. The Great Depression shook classical economics to its foundations, and gave birth to Keynesian economics. The transition from command to market economies in the 1990s, the other transcendent event of the 20th century, and the rise of the Asian economies, may well have equally profound repercussions for economic dogma.

After the Berlin Wall fell in 1989, most observers predicted that the 21st century would be a European century, led by a unified Germany's financial capital and high technology and a Russia rich in human capital and natural resources. China was seen as a coming source of turbulence because of chronic poverty and population pressure. The big-bang prescription for Eastern Europe and the former Soviet Union - wholesale privatization, rapid liberalization - was hailed as the optimal design for quick conversion from command to market systems, while China's experimental approach - controlled decentralization and gradual liberalization - was criticized as a halfhearted reform full of traps and contradictions.

But historical realities, like rocks beneath the waves, threaten to shatter the theories with which these social scientists and policymakers have embarked. After trying various sorts of shock therapy, and huge injections of Western aid, the economies of Eastern Europe and Russia are still in persistent decline.

Consider the following contrast in cost-benefit calculation.

Transfer payments to eastern Germany now amount to about 50% of that region's GNP (or 8% for western Germany). These are huge amounts compared with the Marshall plan, which was barely 2% of Western European GNP. Yet, despite the transfers, GNP in eastern Germany has declined over 40% (Schrenk 1993). Meanwhile, the huge cost of German reunification has prolonged the recession in the Western economies, and delayed European integration (Pohl 1990, Summers 1991, Marsh 1993).

In contrast, China has received little foreign aid during its economic transition. The largest source of foreign capital has come from Hong Kong (and overseas Chinese), but roughly the same amount of Chinese capital has flowed outward into Hong Kong. Accumulated foreign investment in China was \$33 billion in 1992, or only \$28 per capita (Gao 1993). The Chinese level of foreign aid and foreign capital inflows per capita is miniscule - 4% that of Poland, 0.3% that of eastern Germany, despite their higher per capita GNP. And in return for this much more modest investment, we observe in China over the last 14 years an average growth rate in GNP of 9%, and in exports of 13%.

Can we explain the spectacular rise of the Chinese economy, and the mysterious fall of the Russian and Eastern European economies, using neoclassical or endogenous growth theory? Alas, only a few economists recognize the need to fit the Chinese experience into our model (Singh 1991, Amsden 1993). Most mainstream economists still set China aside, on the grounds of different initial conditions or cultural traditions (Bogetic 1991, Hirschler 1991).

To some extent, this may reflect the primacy of political over economic concerns. In the current debate over big bang versus gradualism, both sides accept as the primary goal, not the growth-with-stability at which China excels, but rather the rapid and permanent displacement of the command economy by the western-type market economy, as a political end in itself (Islam 1993). Within this sort of cost-benefit calculus, China's experience drops out of the equation.

But does Asia have no lessons to teach us? Alan Blinder once observed that the rise of the Japanese economy posed a serious challenge to the neoclassical model based on the western market economy, since Japan had succeeded by doing everything "wrong" (Blinder 1990). For example, the Japanese stood on its head the American paradigm of serving the consumer, searching for profit, benefiting stockholders, and seeking free trade. Blinder's observation reminds us that China's experience in development strategy and institutional reform may have lessons for developing and developed countries both.

Consider some challenging Chinese paradoxes. How, within the neoclassical model, can we explain the fast growth of township and village enterprises, which have no clearly defined property rights and yet play a dynamic role in economic growth and community development? How will we fit into traditional micro and macro analysis the catalytic role played in China by provincial, county and even village government?

Consider China's approach to improving the efficiency of state enterprises. Privatization in this area is feasible only for small-scale firms; for larger firms, especially in heavy and defense industry, this approach is much more problematic (Sachs 1992b). Here, China improved large-scale state sector efficiency mainly by introducing competitive pressure from the growing non-state sector.

The current crisis of the Western economies is deeply rooted in the Western tradition of unchecked individualism, excessive welfare provision, unequal income distribution, and insufficient provision of public infrastructure designed to meet the challenge of global competition and technological change (Bellah et al 1985, Etzioni 1988, Daly and Cobb 1989). Is there a parallel crisis in economic orthodoxy? A careful study of the experience of Asian economies may stimulate fresh thinking in economic science and public policy.

This paper suggests one such lesson, having to do with the nature of institutional change. Part II argues that the success of Chinese reform stems not so much from its gradualism as from its decentralized approach. Part III extends this argument, suggesting that decentralized change is effective because economic institutions must be self-organizing. Part IV suggests even broader implications for the nature of economic growth and the need for paradigmatic change in economics.

II. Rational Design versus Decentralized Experimentation

To characterize the reform debate as "big bang versus gradualism" is misleading. The

important choice posed by competing reform strategies today is between the experimental, decentralized Chinese approach and the top-down, designer approach of Russia and Eastern Europe. Prior to 1989, after all, reform in Hungary, Poland and elsewhere was amply gradual; indeed, it was the failure of that very gradualism which precipitated the radicalism of today (Hirshler 1991). The constant feature of Eastern European reform efforts, both before and after 1989, was that reform measures were designed centrally and then prescribed in a top-down fashion.

China's reforms have been gradual, but more importantly, they have consistently followed an experimental approach. Examples include the rapid quasi-privatization in rural areas (the family responsibility system), a series of mini-big-bang price and trade liberalizations in the special economic zones (SEZs), the two-tier system for prices and exchange rates, and gradual, diverse institutional reforms in the state sector. Government leaders, including radical reformers, were initially suspicious of many of these non-orthodox practices, such as the family contract system, the "illegal competition" of village enterprise, and even the SEZs. Formal institutional changes typically lagged several years behind successful experiments and widespread imitation.

In this process, the most important contribution of China's reform leadership was that they refrained from making quick judgments and suppressing "illegal" practices; instead, they let time be the judge. This tolerance of heterodoxy fostered innovation in institution-building. The "gradualness" of China's reform, then, was not a conscious design of the central government, but rather the inevitable result of compromises among a myriad of conflicting proposals, through a long process of trial and error. China's success demonstrates the effectiveness of providing time for learning and adaptation, rather than importing foreign systems overnight.

III. Decentralized Social Change and Paradigm Conflict in Economic Science

Why is it that a decentralized, bottom-up, experimentally based approach to reform brought China institutional change at much lower social cost than reforms elsewhere? This section argues that the sense of urgency felt by other reformers led them to choose imported over home-grown solutions; but that the enormous uncertainties inherent in social change make this approach a high-cost one in the end. The fact that top-down "designer reform" is nonetheless being prescribed by Western economists reflects their failure to recognize the limitations of the neoclassical, "equilibrium" paradigm in our discipline.

The big-bang approach to transition put the highest priority on privatization, liberalization, and macroeconomic stabilization. That is, these reformers sought a rapid "return to Europe" by adopting the legal framework of private property, importing the world trade price structure through liberalization, and imposing harsh stabilization policies softened by huge foreign loans (Sachs 1992). In all three ways, this approach in effect amounted to importing a whole structure from the outside world, rather than stimulating a gradual development of new institutions and forces within the existing economy.

This approach, which assumes a high degree of transferability of institutions from one society to another, reflects the underlying paradigm of modern economics - an equilibrium-oriented approach that says, "Get the prices right, and the rest will follow". But in reality, social change is a complex, path-dependent, and unpredictable process (Stark 1992). Great uncertainty exists during the bifurcation and transition stage (Chen 1987, 1991), particularly for large countries like Poland and Russia. This uncertainty translates to a high risk of expensive errors when coupled with the high cost of any social restructuring (the eastern German experience makes it clear how very high these costs can be).

Big-bang proponents like to argue that "you cannot leap over a chasm in two steps". But what if you leap and then discover that you're even farther on the wrong side of a chasm? Chinese reformers counsel instead that "you can only walk across a river by feeling first for the stones". This clash of metaphors reflects a difference in the underlying paradigms. The former approach,

based on the Newtonian paradigm of classical mechanics, believes that after shock therapy knocks the economic system out of the orbit provided by central planning, the forces which move individual markets toward an equilibrium position can and will steer the entire economic system into a new, stable regime.

Few have questioned the analytic foundations of this belief (Murrell 1991, Stark 1992). But the new discovery of chaos in dynamic systems suggests that they are far more unpredictable than this, more complex, and more subject to instability, explosive oscillation, or chaos (Day and Chen 1993). "Rational designers" are oversimplifying complex, non-linear aspects of social systems, and are also overlooking the bounded rationality of human behavior (Prigogine 1993).

IV. Non-equilibrium Economics, Positive Feedback, and Growth

The foregoing has argued that equilibrium economics is an inappropriate paradigm for anticipating the path, which social institutions will take when they change rapidly; and that policies based on that paradigm may therefore fail. But in what sense does dynamic economics had better capture these processes? To answer this question, we must consider the catalytic role of positive feedback mechanisms (Buchanan 1991).

The traditional theory of equilibrium economics emphasizes the role of negative feedback mechanisms in achieving equilibrium and stability. Excess supply generates rising unsold stocks, which leads price to fall, decreasing excess supply. Any positive feedback is viewed as destructive: it will cause increasingly large deviations from equilibrium.

But Pareto equilibrium is a static concept; no growth occurs. Yet, growth is a crucial ingredient of rapid but stable social change. It provides the lubricant, which reduces social friction, the expanding pie with which to buy off injured constituencies. Growth, in turn, depends on innovation, and the driving force behind innovation is the presence of some positive feedback mechanism.

One classic case of positive feedback generating path- dependent growth is the story of Silicon Valley (Arthur 1989, 1990). But China's experience abounds in similar examples - the family responsibility system in poor, rural inland areas, the SEZ experiment in rich, urban coastal areas, foreign investment in joint ventures, all interacting with each other through waves of positive feedback: communication, learning, imitation. The tiny absolute size of foreign investment, relative to its large result, strongly suggests that the underlying process is catalytic in nature.

To summarize: a complete picture of the social change and economic development, which China is experiencing, must include not just negative but also positive feedbacks. The new science of evolutionary self- organization reveals the constructive role played by positive feedback mechanisms in a world of nonlinearities and uncertainty. It sheds new light on the catalytic mechanism and on how order emerges under non-equilibrium conditions (Nicholas and Prigogine 1977, 1989; Day and Chen 1993). Endogenous growth theory may add a further dimension: the role of catalytic mechanisms in emerging new technology and new organization through non-optimization dynamics under non-equilibrium conditions. These are the lessons, which the historic events of the waning twentieth century will eventually provide to economic science.

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