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Reforming Intergovernmental Fiscal Relationships in China: A Political Economy Perspective Bin Chen.....	1
Balancing Values, Pressures and Demands: Strategies for Public Administration in Hong Kong and China Ahmed Shafiqul Huque.....	9
Government Performance Auditing in the U.S. and China: Lessons Drawn from a Comparative Review Mark Funkhouser and Joan Yanjun Pu.....	18
Morality Policy and Unintended Consequences: China's "One-Child" Policy Jerome S. Legge, Jr. and Zhirong Zhao.....	30
The MPA Curriculum Development in China: Learning from American Theories and Practices Lin Ye.....	46
Does China's Civil Service System Improve Government Performance? A Case Study of Education of Education Bureau of Ningbo City Zhiren Zhou, Haitao Yin, and Feng Wang.....	54

Reforming Intergovernmental Fiscal Relationships in China: A Political Economy Perspective

Bin Chen, University of Southern California

Abstract: This paper first explores some key principles central to a well-functioning, central/local fiscal relationship from a political economy perspective of federalism. It then applies these principles to an examination of reforming intergovernmental fiscal relationships in China from 1980s to the early 1990s. It is argued that the economic principle central to fiscal federalism is the determination of the optimal structure of the public sector in terms of the assignment of decision-making responsibility for specified functions to representatives of the interests of the proper geographical subsets of society. Fiscal decentralization, as evidenced in China, provides local government with incentives to build a hospitable environment of competition for people and capital and, therefore, prospers local economies. However, China's experience also suggests that fiscal decentralization without the relevant political institutional foundation will bring about negative effects. The political foundations of fiscal federalism are as essential as its economic principles in preserving and sustaining fiscal federalism.

Along the spectrum in the degree to which public policy decision-making is decentralized, there are two polar or nearly polar forms of government. At one end of the spectrum is complete centralization — a unitary government form that assumes all responsibilities of delivering public goods and services. In the opposite direction on this spectrum is a total decentralization of government — a state of anarchy or practically, a highly decentralized system in which the central government is almost completely devoid of responsibilities. A central question to the students of intergovernmental relations is what form of governance is in the best position of performing different tasks. Some argue that state or national governments perform these functions more efficiently, while others believe that local governments enjoy more advantages. Students of economics and political science argue that each level of government has a comparative advantage in performing relevant functions and thereby, they recommend fiscal federalism — a form of government between the two extremes — as an ideal form of government for performing different functions. Then comes with another two questions: what are these principles guiding the design of the intergovernmental fiscal relationship? How do they work in reality? The purpose, then, of this paper is two-fold. It is intended first to identify these principles central to a well-functioning, central/local fiscal relationship drawn upon economics and political theories of federalism. It then applies these principles to an examination of reforming intergovernmental fiscal relationships in China from 1980s to early 1990s.

Political Economy of Fiscal Federalism

Conceptual and theoretical developments in the study of intergovernmental relations have a number of

dimensions, including the division of powers and functions among levels of government and administrative political relations between levels and units of sub-national governments. There are two major traditions and approaches. On the one hand, intergovernmental relations are close to being coterminous to the study of fiscal federalism, which primarily draws on the field of public finance. Theories of intergovernmental competition based on economics have been influential for the study of federalism and sub-national governments. On the other hand, the study of central/local relations has also been influenced by legal and institutional approaches in political science.

Fiscal Federalism from An Economic Perspective: Division of Functions

The central question for economists is what kind of central/local government structure promises the greatest success in maintaining economic stability, establishing an equitable redistribution of income, and efficiently allocating resources. There seems to be consensus on the proposition that there should be a distribution of responsibilities between the central and local governments. A centralized government has some advantages over the functions of stabilization and redistribution while local governments more efficiently allocating resources (Oates, 1999).

A centralized government would be far more capable to maintain economic stability through two instruments: monetary policy and fiscal policy. It is imperative that there must exist a central agency to control the size of money supply. Otherwise, any local government would have incentive to print paper money with which to purchase real goods and services from neighboring communities. It would be in the interest of each community to finance its expenditures by creating money rather than by burdening its own constituents

with taxation. A very likely outcome would be rampant inflation.

The local governments are also ill-equipped to utilize fiscal policy to stimulate their own economies mainly because of small size, the open nature of local economies, and the mobility of people and capital. Two implications are obvious. First, the expenditure multiplier will be quite small. For example, much of the expansionary impact of a local tax cut will be dissipated, since only a relatively small proportion of the new income generated will be spent on locally produced goods and services. Second, the expansionary fiscal policy carries with it a cost to local residents, a cost that is largely absent at the national level. Therefore, it concludes that a central government is in a position to make good use both of monetary and fiscal instruments in maintaining a high level of economic output without excessive inflation. Local governments, by contrast, are seriously constrained in their capacity to regulate the aggregate level of economic activity in their jurisdictions (Oates, 1972).

In the case of redistributing functions, local governments cannot be effectively provided for by competing localities because of Tiebout's (1956) "voting with feet" theorem which states that the mobility of individual economic units among different localities places fairly narrow limits on the capacity for income redistribution at any local level. On the one hand, for example, an aggressive policy to redistribute income from the rich to the poor in a particular locality may, in the end, simply drive the wealthy to other jurisdictions and attract those with low income (Oates, 1991). Areas with high political demand for redistribution services will progressively be deserted by above-mean income residents. On the other hand, without the intervention of authorities, there may be a strong motivation for individuals with similar income and wealth to either directly or indirectly exclude others (Atkinson & Stiglitz, 1980). Consequently, areas with most need will lack resources to effect provision, while areas with plentiful resources will have little or no demand for redistribution. Since mobility across national boundaries is generally more difficult than within a nation, a policy of income redistribution has greater success if carried out at the national level.

When turning to the allocation of resources, because of the different nature of goods, there are a certain class of collective goods and services whose benefits extend to the individuals in all communities, such as national defense and diplomacy. A highly centralized government is likely to be far more successful than a system of local governments in the provision of public goods and services of this kind. However, a basic shortcoming of a unitary form of government is its indifference to varying preferences among the residents of the different communities (Oates, 1972). Hence, a centralized government produces some welfare losses when providing a uniform

package of public services and goods to meet the different local preferences.

A decentralized system of government offers the promise of increasing economic efficiency for several reasons. First, a local government can provide a range of outputs of certain public goods that corresponds more closely to the differing preferences of groups of consumers in its community (Tiebout, 1956). Second, the most important implication for a decentralized system is to induce competition among local governments. Competition among jurisdictions extends to factors of production, such as capital and labor. This induces jurisdictions to provide a hospitable environment for those factors, by establishing a basis for the secure rights of factor owners and by providing local public goods, such as infrastructure, utilities, access to markets, etc. Third, a decentralized system implies that local governments bear more fiscal responsibilities and can go bankrupt if inappropriately managed, which provides them with incentives for proper fiscal management (Weingast, 1995). Fourth, under a decentralized system, one should observe a diversity of policy choices, experimentation and innovation. Largely because of competition, local governments are compelled to adopt the most efficient techniques of producing public goods.

A significant feature of fiscal federalism is fiscal decentralization, which is illustrated by Oates' 'decentralization theorem' (1972): "...it will always be more efficient (or at least as efficient) for local governments to provide the Pareto-efficient levels of output for their respective jurisdictions than for the central government to provide any specified and uniform level of output across all jurisdictions." More specifically, as far as central/local fiscal relations are concerned, one way to realize some advantages of centralized taxation without relinquishing local expenditure authority is through revenue sharing. That is, the national revenue authority simply collects a prescribed level of taxes, which it then distributes in the form of lump-sum grants to local governments. However, local authorities continue to raise some significant portion of their own revenues (Oates, 1991).

The Political Foundation Of Fiscal Federalism: Division of Power

For economists, what matters most about federalism is that decisions regarding levels of provision of specified public services for a particular jurisdiction reflect to a substantial extent the interests of the constituency of that jurisdiction (Oates, 1972). They show little interest in the structure of government unless it has implications for patterns of resource use and income allocation. The essence of federalism for economists is not to be understood in a narrow constitutional sense and lies not in the institutional or constitutional structure. The economists' central concerns are the allocation of resources and the redistribution of income within an economic system.

Political scientists, in contrast, are interested in the division and use of power. Their argument is that a market economic system is subject to the fundamental political dilemma: a government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens. Their essential concern over fiscal federalism, is what form of political system is required to self-sustain and self-enforce its economic benefits. In parallel to fiscal decentralization, it is emphasised by political scientists that the other essential aspect of fiscal federalism is to provide a sustainable system of political decentralization (Weingast, 1995). In terms of political institutional arrangements, as many as five principles of the political decentralization in so-called “market-preserving federalism” are suggested to supplement fiscal decentralization (Rike, 1964; McKinnon, 1994 and Weingast, 1995):

1. There exists a hierarchy of governments with a delineated scope of authority so that each government is autonomous in its own sphere of authority.
2. An institutionalized degree of autonomy imposes strong limits on the discretion of the national government so that it cannot unilaterally alter the distribution of authority between governments.
3. The sub-national governments have primary responsibility over the economy within their jurisdictions.
4. The national government has the authority to preserve a common market ensuring the mobility of goods and factors across sub-government jurisdictions.
5. All governments are subject to hard budget constraints.

The first two principles define a viable system of federalism in terms of constitution and institutional mechanisms, but they touch little on authority over economic issues. To have economic effects, fiscal federalism must satisfy the third, fourth, and fifth principles. The central government’s authority to make economic policy must be limited. This authority must be in the hands of lower political units. Moreover, the local government must face hard budget constraints, which induce proper fiscal management. The economics of fiscal federalism is interested in functional decentralization and the politics of fiscal federalism is concerned over power decentralization. Both perspectives work together to form a political economy perspective of fiscal federalism. That is, a desirable form of government that combines the advantages of centralization and decentralization and mitigates the shortcomings of each is believed to be federalism that represents, to a large extent, a compromise between unitary government and extreme decentralization. The central government should assume the primary responsibility for stabilization and redistribution, while local governments assume primary responsibility for allocation and economic development. But such a functional decentralization should be accompanied and

supplemented by political decentralization in a “market-preserving federalism.”

China’s Reform of Intergovernmental Fiscal Relationship from the 1980s To Early 1990s

Until the late 1970s, China’s government carried out virtually all the economic activities in the country. Prior to the reforms, China’s intergovernmental fiscal system was characterized by multiple transfers moving up and down with the purpose of ensuring equality. All its revenues were collected at the local level and then channelled up to through its unitary fiscal system to the central government. The intergovernmental fiscal system was highly redistributive, operated by sharing revenues produced by government-owned enterprises. Most of these revenues were generated by urban industry and transferred to rural areas. In other words, the state budget, which was shared by all levels of government, captured all significant financial flows up and down the system: remittance up and transfers down.

Since 1980s, one saw important economic reforms formulated, initiated and implemented in China’s transition from a command economy to a market-oriented one. One of the critical components of China’s market-oriented reforms has been to decentralize public finance decision-making, which exerts far-reaching impact on central/local fiscal relations. It is also the crucial period during which fiscal federalism took shape according to its economic definition: the central government provided incentives for local governments to undertake reforms, generate more revenues and allocate resources to meet their own needs.

There are three significant features of fiscal decentralization in China. First, local governments would be allowed to disburse expenditures if they generated more revenue. Second, reforms have led local governments to become increasingly self-reliant in meeting expenditure responsibilities by hardening budget constraints. Last, revenue sharing schemes are results of a continuing but *ad hoc* negotiation between central and local governments. It is fundamentally a system of bilateral contracts hammered out through protracted negotiation between one level of government and the next higher level.

Expanding of Local Budget Autonomy

Reforms of central/local fiscal relations are motivated by a commitment to greater decentralization of expenditure decision-making from a central government to local governments. Local governments were allowed to disburse expenditures if they generated more revenue. The average share of local government expenditures in total government expenditures increased from 49 percent for 1970-79 before the reform to 53 percent for 1982-91 after reform. The average share of local government spending in the total governmental spending is 34 percent for developed countries and 22 percent for developing countries (World Bank, 1996).

Only a few countries' (for example, Switzerland and the United States) share of local government expenditures are above 40 percent. Simply by this measure of decentralization alone, China can be regarded as very decentralized as compared to other countries (Jin, Qian and Weingast, 2001).

The share of local government expenditures is only one of the important aspects of decentralization in China. The other important aspect is the degree of decentralized spending decision authority. If the local government has the authority over its spending structure, one can argue that the higher the share of local spending in total government spending, the more the fiscal decentralization. Before the reforms, the central government monopolized decision-making authority over the structure of local expenditures. After the reforms, in compliance with a set of guidelines set by the central government, provincial governments are granted many expenditure decision-making powers on regulating the local economy, such as negotiating fiscal arrangements with their sub-provincial governments, licensing, defining the scope and role of non-state firms, coordinating urban development plans, and even resolving business disputes. Local governments also assumed the responsibility of attracting foreign investment into their jurisdictions.

The dominant form of fiscal decentralization is the revenue-sharing system. Revenue income is divided between "central fixed revenue," all of which is supposed to be remitted to the center, and "local revenue," which is subject to sharing, between the center and localities. The appeal of revenue sharing, as Oates (1991) suggests, is that it puts highly elastic central revenue system at the disposal of local governments. It matches growth in expenditure needs with an automatic growth in revenues and thereby moderates the revenue gaps and associated fiscal crises besetting local governments. Collecting some revenues locally outside the central budget and applying them to local expenditures creates a much closer link between

resources and needs. It gives local officials more freedom to make decisions about local problems. Putting it in a Chinese way, the principle for the local governments is "the more you collect, the more you spend; the less you collect, the less you spend; rely on yourself to balance the budget."

Benefits of China's Fiscal Decentralization

The reform unleashes the entrepreneurial spirit of local bureaucrats, fuelling the rapid growth of local economies. There are two major sources with which local governments can generate more revenues at their disposals: extra-budgetary and self-raised funds. Extra-budgetary funds consist of state-owned, enterprise-retained profits and depreciation funds and a variety of surcharges and users' fees collected by local governments and other local agencies. These funds are "off-budget" and are generally discretionary funds to be spent by local governments to which they accrue, usually on infrastructure projects. Before the reform, the extra-budgetary revenue was relatively small, 9 percent of gross national product (GNP) in 1978 compared with the budgetary revenue of 35 percent. By 1991, the extra-budgetary revenue was up to 15 percent and the budgetary revenue was down to 18 percent (Sicular, 1992). Self-raised funds refer to amalgam of user fees and levies similar to extra-budgetary funds levied by local governments, but they are not explicitly categorized by state policy to be budgetary or extra-budgetary.

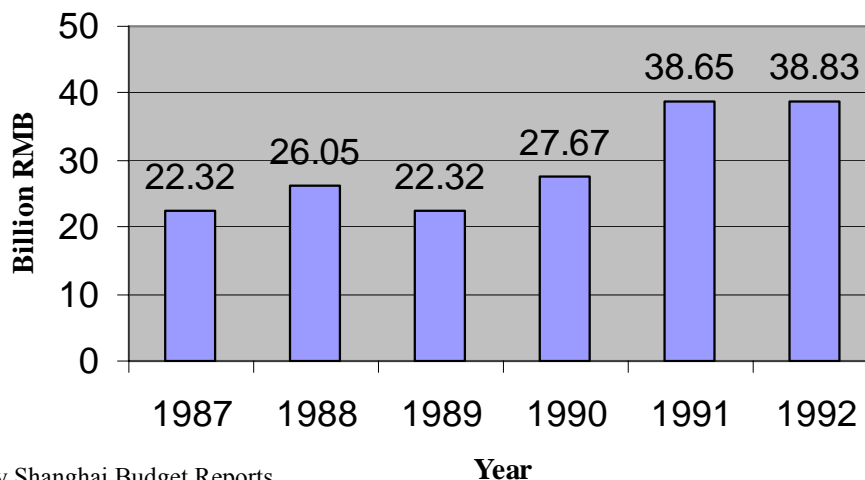
Let us take Shanghai, the biggest economic center in China, as an example: Since 1988, the city's budgetary revenue showed little increase, with the exception of 1992 when the high economic growth rate pushed up the revenue level. However, on the one hand, extra-budgetary revenue, especially the funds collected by the city itself, grew considerably, as shown in **Table 1**. On the other hand, the city was able to increase its spending on its infrastructure (**Chart 1**).

Table 1: Shanghai's Revenue, 1987-1992 (Billion RMB)

Year	Total	Budgetary	Extra-Budgetary	Self-Raised
1987	16.89	16.51	0.38	0.38
1988	16.16	15.36	0.81	0.42
1989	16.69	15.87	0.82	0.39
1990	17.00	16.27	0.73	0.43
1991	17.52	16.51	1.01	0.68
1992	18.56	17.56	1.00	0.74

Source: Shanghai Statistic Year Book, 1993.

Chart 1: Infrastructure Expenditure of the City of Shanghai, 1987-1992 (Billion, RMB)



Sources: Yearly Shanghai Budget Reports.

Costs of Fiscal Decentralization

It is generally recognized by proponents that objectives of fiscal decentralization are more efficient provision and production of public services; better alignment of costs and benefits of government for a diverse citizenry; greater responsiveness to citizen preferences; and increased competition, experimentation, and innovation in the public sector. But opponents argue that decentralization will elevate efficiency over equity, produce “race-to-the-bottom” competition where local governments reduce welfare spending, and impair redistributive social welfare programmes that should be financed and provided by the central government.

Many studies of central/province fiscal relationships in China find that a number of side effects have been produced by the fiscal decentralization: local protectionism, over-investment, administrative interference and rent seeking, fiscal disparities and an inability for the central government to provide critical public goods and services to the poor regions (Shirk, 1993; Huang, 1996; Li, 1998 and Park et al., 1996).

While central authorities kept talking about coordinating the national economy as a common market, local authorities in pursuit of revenue were dividing it up. Fiscal decentralization encouraged local officials to

protect local markets of their own industries by erecting administrative blockades. The Balkanisation of the Chinese market was exacerbated greatly by the 1980 fiscal reform that is blamed for reverting the country to many dukedom economies, with each locality walling itself off like a feudal manor. The gains in a common market from specialization and economy of scale were lost as local barriers segmented the national market. The problem of intergovernmental cooperation also arises when central governments must rely on lowest levels of government for contributions. Even when the central government enjoys authority over units of the lower-level government, it faces the problem of monitoring the compliance of multiple jurisdictions that may have very different local conditions.

Local officials were spurred by the revenue-sharing system and thereby, this led to leading to over-investment in revenue-generating industry and “race-to-the-bottom” competition. These officials competed with one another for foreign business in ways central authorities viewed as detrimental to national interests. Profit-seeking local officials rushed to import production lines so that production capacity exceeded domestic demand. The ability of central government to pursue macroeconomic policy was compromised.

Table 2: Fiscal and Economic Concentration in Rich and Poor Provinces

	1990	1995
<i>Five richest provinces</i>		
Percentage of GDP	22.8	23.9
Percentage of population	12.7	12.4
Percentage of revenue collections	26.0	30.3
Percentage of local government expenditure	19.8	25.5
<i>Five poorest provinces</i>		
Percentage of GDP	12.7	10.6
Percentage of population	18.9	19.0
Percentage of revenue collections	12.3	10.5
Percentage of local government expenditure	14.0	12.4

Source: Bahl, Roy. *Fiscal Policy in China: Taxation and Intergovernmental Fiscal Relations*. San Francisco: The 1990 Institute, 1999: pp. 103.

Another negative effect of fiscal decentralization was increasing administrative interference in enterprise management. The local government had become both a player and the referee in local economic competition. Decentralization reforms had granted local officials the authority to regulate access to the market and to redistribute fiscal benefits and burdens, investment fund, access to foreign investment and trade, etc. With these economic powers, local officials were given new opportunities to collect rents from bureaucratic subordinates and state-owned enterprise managers.

Fiscal decentralization produced wider fiscal disparities across the regions. One would expect that wealthier provinces to have a significant advantage over poor provinces in generating revenues as is illustrated in a comparison of five richest provinces (Shanghai, Beijing, Tianjin, Guangdong and Zhejiang) and five poorest provinces (Guizhou, Gansu, Sha'anxi, Jiangxi and Henan) in 1990 and 1995 (Table 2). While the population shares in rich and poor provinces remained almost unchanged between 1990 and 1995, the revenue share of the five richest provinces rose from 26 to over 30 percent while the share of the five poorest provinces fell from 12.3 percent to 10.5 percent. The share of GDP in the poorest provinces declined by about 2 percent while the share in the richest provinces rose by about 1 percent. These results indicated a worsening distribution of income among the regions (Bahl, 1999).

Fiscal decentralization also undermined the central government's ability to redistribute public financial resources from rich regions to poverty-ridden ones in order to provide critical public goods and services. Although redistribution could be achieved by varying types of grants and subsidies for deficit regions and the sharing rates of collected revenue for surplus regions, a study (Park et al., 1996) shows a strong evidence of declining redistribution of financial resources from the richer to the poorer regions. Forcing

revenue-scarce localities to be more fiscally independent may have adverse consequences for their ability to provide critical public goods and services and pursue coherent investment strategies to further economic development. As a consequence, the new central/local fiscal relations have increasingly led to inequality because poor regions are short of money while rich ones keep a greater share of locally generated revenues.

Lessons from China's Fiscal Decentralization

Economists may argue that these negative effects arising from China's fiscal decentralization should be attributed to difficulties in realizing full mobility of labor and capital in practice, especially in China. It is true that in the real world, there will always be limits to the mobility of both labor and capital. People are tied by language, culture, family and friends. It takes a lot to get people to move into another location. Mobility of capital is more limited than people think. New capital can be put anywhere, but once it has been turned into a factory, a building, a trained workforce or a distribution network, it is less than perfectly mobile.

Political scientists may devote more attention to political institutions behind the fiscal decentralization in China and thus have different accounts of its negative side. Such decentralization is argued to be largely fiscal, purely for the purpose of administrative convenience, motivated by the intention of central bureaucracy to divest responsibility (Shirk, 1993). In reference to the five principles presented in the second section, Chinese fiscal federalism appears to have satisfied principles 1, 3 and 5 but not 2 and 4. The problematic aspects of China's experience are imperfect common market (principle 4) and *ad hoc* decentralized mechanisms (principle 2). First, modern China after fiscal decentralization has difficulty strengthening the central government's ability to maintain a common market. The tendency toward dukedom economies has occurred in China because the common market cannot

be preserved voluntarily by the decentralized units themselves.

Second, China lacks rule-based decentralization with an institutionalized balance of authority between central and local governments. China implemented fiscal decentralization in the absence of a tradition of limited government, private rights and representative government. Once the central government has delegated authority to local governments, there is no mechanism designed to guarantee the proper use of power at the local level (Qian and Weingast, 1996). The negotiated revenue-sharing system among the central and local governments is not transparent and provides different incentives for revenue-collection efforts. Truly decentralized systems are transparent. Local governments clearly understand their revenue-raising powers and their expenditure assignments. Without transparency, local governments cannot effectively plan their fiscal programs and therefore accountable to their local electorate. In China, expenditure assignments between central and local governments are not clear.

What differentiates China's decentralized system from that of other countries is the absence of popular representation. Local officials are appointed by the central government, not elected locally. Even if they do not live up to expectations, they are not be voted out. On the one hand, despite fiscal decentralization, China remains under the one-party political system. It is particularly worthwhile to note the role of the Party in personnel selection and dismissal. A fundamental attribute peculiar to China's political and economic institutions is known as 'the Party controls personnel'. The Party exercises its ultimate control over personnel decisions through its Organisation Departments. Through the Communist Party's control, the central government's monopolistic political authority over the selection, appointment, promotion and dismissal of top provincial government officials, to some extent, is ironically argued to serve as a brake against complete fiscal and economic power of the local governments (Huang, 1996).

On the other hand, such a power check has been limited since the initiation of reform. The effective influence of the central government over provincial government policy varies with the characteristics of local government officials. It is because local government officials appointed by the central government are far from homogeneous. Some are promoted from within the provinces and therefore have deeper roots in their localities. Others are more loyal to the central government either because they serve concurrently in the Party's political bureau or because they are transferred from the central government ministries or Party apparatus.

Conclusion

As the literature of federalism has suggested (Oates, 1972), the economic principle central to fiscal

federalism is that the optimal public-sector structure for the assignment of specified functions of decision-making responsibility is best given to representatives of the interests of the proper geographical subsets of society. A general consensus is that central government should focus on stabilization and redistribution, while local governments focus on allocating resources to meet local needs. Fiscal decentralization provides local government with incentives to build a hospitable environment of competing for people and capital and therefore prospering the local economies. However, fiscal federalism's political foundations are as essential as its economic principles if it is to be preserved and sustained. Although China is not a federal country, its public financing system has many features of a fiscal federalism. But fiscal decentralization without relevant political institutional foundations will bring about negative effects as China's experience of reforming its central-fiscal relations suggested. The implication is that a transparent, institutionalized central/local relationship, with clearly-defined functions and local governments accountable to local constituents are essential to a well-functioning fiscal federalism.

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Balancing Values, Pressures and Demands: Strategies for Public Administration in Hong Kong and China

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Abstract: Hong Kong, as a part of the People's Republic of China, has been experiencing new challenges since 1997. The reintegration of capitalist Hong Kong within the socialist framework of China was resolved with the innovative concept of "one country, two systems." The application of the system has met with some problems, but the advent of globalization and its demands have imposed new and more formidable challenges. This article examines the challenges of globalization from the perspective of Hong Kong as a unit of China. The key argument is that Hong Kong has long been prepared for dealing with the routine problems of management, internationalization and development of human resources. However, operating as a unit of the Chinese political and administrative system entails a different set of challenges. These include a comprehensive understanding China's place in the world system, dealing with internal issues, and developing a system and public service that can strike a balance between the local and international demands. A series of reforms have been initiated, but their impact is not clear yet and further changes are required to integrate Hong Kong as an effective component of the system for improving governance in China. The main challenges lie in striking a balance between the values of traditional public administration and new public management, between local and national interests, between external and internal pressures for change, and between demands from the society for service and the capacity of the government to respond.

There is a difference of opinion on the state of affairs of Hong Kong public administration since 1997, the date of reversal of sovereignty to the People's Republic of China. The plan for handing over Hong Kong to China by the United Kingdom was based on the understanding that there was to be no major change in the system until the year 2047 (*Basic Law* 1990, Article 5). The government of Hong Kong and its supporters frequently reiterate that the transition has proceeded smoothly and the territory (now a Special Administrative Region of the People's Republic of China) continues to retain all the features that had helped turn it into a leading commercial and financial center in the last three decades of the 20th century. On the other hand, there are critics who argue that Hong Kong has lost its economic edge, autonomy and the ability to compete with the other economies in the region since the reversal of sovereignty in 1997.

This article intends to assess the direction and dimensions of change that have taken place in Hong Kong and determine the state of public administration, with particular reference to the challenges posed by the advent of globalization. It is necessary to identify the specific nature of challenges and devise strategies for dealing with them. For this purpose, a number of questions need to be addressed. What has been the structure and process of public administration in Hong Kong before and after 1997? How has China sought to integrate Hong Kong into its wider framework of political and administrative arrangements? Has Hong Kong been able to retain its high quality of service to the public and is the civil service performing to a satisfactory level of excellence? What have been the

impacts of globalization on Hong Kong as a part of China? How can the inherent differences between Hong Kong and China be reconciled to establish a complimentary system?

An investigation into these questions will help discern some of the contrasts and parallels in different areas related to the transition of Hong Kong. As change is a continuing process, it will be interesting to review the types of reforms planned and implemented in Hong Kong and their contribution in making public administration effective. Therefore, this article focuses on three main areas: the interplay of internal and external pressures, the tension between national and local interest, and the balance between demand and capacity of the administrative machinery in Hong Kong. At the same time, it must be recognized that the forces of globalization have added to the complexity of the process, as there are external pressures to conform to international standards and practices. The principal argument is that the practice of good governance in Hong Kong, a unit of the People's Republic of China, will help in transforming governance in the latter as well. This depends, to a considerable extent, on establishing a balance among the three areas stated above.

Public Administration in Hong Kong

Public administration in Hong Kong has been influenced by strong British traditions, a natural consequence of its historical legacy. The structure of the administrative system was simple under British administration. Colonial Governors appointed by the British Crown exercised full control, while a British-dominated bureaucracy with a senior public servant in

charge of the administrative machinery provided strong support. Policies were discussed and decisions made at the Executive Council, a body of officials and advisers appointed by the Governor. The entire process of policy initiation, formulation, and implementation was dominated by the executive branch (Lee and Lam 1992, p. 45). The legislature acquired some strength in the 1990s as the global wave of democratization influenced Hong Kong. However, with the withdrawal of British control over Hong Kong, the initiative of opening up the government's administrative process to intense legislative scrutiny has waned as the composition of the legislature underwent changes in view of new political realities.

However, it can be argued that the basic nature of public administration in Hong Kong has largely remained unchanged, in spite of the major event of reversal of sovereignty. Under the current system, a Chief Executive holds widespread power similar to the position held by the former British Governor. The key officials — Chief Secretary for Administration, Financial Secretary and Secretary for Justice — provide the lead, and the civil service retains most of the power and privileges it has enjoyed over the past century. A new measure was introduced in 2002 to establish the framework of ministerial responsibility, but Lam remarked that although “the civil servants make most of the decisions; they are immune from political responsibility” (2002, p. 80). However, it is pertinent to state some of the changes that have taken place in the society and the government's response to them, the image and position of the civil service in it, and the reality of managing Hong Kong as a Special Administrative Region (SAR) of China.

The winds of worldwide change were making small ripples in Hong Kong public administration since the 1970s as the territory began its transformation toward an emerging economy in the region. Social disturbances in the late 1960s alerted government to the fact that the system of public administration required streamlining, the channels of communication between the government and the public had to be strengthened, and public service delivery had to be made more proactive (Commission of Inquiry 1967). The government responded by introducing plans to expand a range of social services in the areas of health, welfare, education and municipal services with the objective of promoting social stability and initiating an examination of the civil service (Huque 2002, p. 9). The exercise led to a number of changes including the location of policy secretaries within the central administrative machinery. A consequence of these changes was a highly centralized system, which ensured that the Governor receives complete information, and remained in full control (Miners 1995, p. 88).

The 1980s witnessed other changes in public administration in response to rapid economic growth in Hong Kong. The structure and organization of the civil service continued to grow as the government got

involved in additional activities and assumed responsibilities in new areas. Meanwhile, major changes in the approach and strategies in public administration had appeared on the global scene in the form of “new public management.” This was a common set of responses to problems of oversized bureaucracies, expensive public services and demands for a transparent and responsive public service. In 1989 Hong Kong government responded to the changing circumstances by publishing plans to initiate major changes. The aim was “to improve the quality of management within the civil service by promoting an increased awareness of what results are actually being achieved by the government and at what cost” (Finance Branch, Hong Kong Government 1989, p. 1).

These proposals continued to be implemented throughout the last decade of the 20th Century. By 1992, an Efficiency Unit was established to plan and guide the implementation of reforms. All government departments developed performance pledges, and senior public officials emphasized service to the community. The Legislative Council, composed of directly elected members for the first time in Hong Kong's history, along with an enthusiastic media, acted as important catalysts in transforming public administration philosophy, approaches and strategies. It did succeed to some extent, and Lam reported improved performance in some service areas (2002, p. 79). Thus, Hong Kong appeared to be on the brink of major breakthrough as the time for reintegration with China approached. There was a clear shift in the values to be accorded prominence in public administration, and economy, efficiency and effectiveness as well as increased care in using financial resources became the predominant theme. Institutional arrangements began to stabilize after government responses to perceived and actual problems helped chart the courses of actions to be taken, particularly drawing lessons from the experience of other countries across the world.

Integration with China

The issue of reintegration with China has been discussed and debated ever since the decision to return Hong Kong to China was finalized in 1984. The *Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China* (1990) was the product of collective wisdom of a preparatory committee composed of leaders from China and the United Kingdom, and it received approval from the highest level of government in both countries. However, a noticeable point was the lack of interest between the two key protagonists to include representatives of the citizens of Hong Kong in the process. The *Basic Law*, a mini-constitution for Hong Kong, laid out the details of the structure of government, relationships between the executive and legislature and ground rules for the operation of the government.

Integration with China was to be achieved a number of ways, yet guarantees were provided to retain

the advantages Hong Kong had carved out for itself in the world system. For example, the capitalist system and the way of life in Hong Kong were to remain unchanged for 50 years (*Basic Law*, Article 5), and there was to be no interference from the central government except in the clearly specified areas of defense and foreign affairs (Articles 13, 14). The region was to be administered autonomously, and the concept of “one country, two systems” allowed the co-existence of different economic and political systems to function within greater China.

There are certain areas that deserve special attention in such endeavors aimed at integrating two units that have followed distinctly diverse systems over a long period of time. Hong Kong had no military force during the colonial period, and the defense needs of the territory were served by troops of the British Army. The strategic location of Hong Kong called for the stationing of platoons of the People’s Liberation Army (PLA) in the territory, as the responsibility of its defense rested with China. Although there were some initial concern about the power and role of the PLA in Hong Kong, the arrangement has worked well. The units of PLA have maintained a low profile in Hong Kong, and there has been no conflict with the local agencies of the government.

A second area of concern in the process of integration is the synchronization of the legal system. The Chinese legal system is considerably different from the continental system that has prevailed in Hong Kong for a very long time. Issues related to crime, procedures for trial and prosecution, extradition of criminals wanted in the other jurisdiction, and the judicial system have often been the cause of discontent, as complications arose with regard to these areas. There have been a few cases of alleged or actual crimes committed on both sides of the Hong Kong/China border, after which the perpetrators crossed over to the other side. The absence of death penalty under the British penal system has encouraged perpetrators from China to seek refuge in Hong Kong.

The problem with two different legal systems has spilled over into the area of commercial disputes as well. There are several cases of litigations on matters related to share and ownership of enterprises, and it is quite difficult to settle such problems when two diverse legal systems are in operation at the same time. Issues of jurisdiction, procedures, and the nature of sentences can lead to complications that affect the process of integration. But the convergence of the two distinct legal systems is bound to cause rifts and irritations between Hong Kong and China and will require a series of substantial reforms.

Finally, different levels of political development and diverse political orientation cause further roadblocks on the way to integration. Hong Kong’s course of political development has been uneven. For more than a century of British rule in Hong Kong, the system has remained typically colonial in nature, with the Governor and his Executive Council exercising

absolute control. Minor modifications to this approach were made in the 1970s and 1980s, as the changing nature of society in Hong Kong rendered it necessary to relax some degree of control. To some extent, increased awareness of human rights, trade practices, environmental problems and the importance of democratization across the globe influenced such changes in Hong Kong. In the last five years of colonial rule, there were efforts to empower the legislature and make it composed exclusively of directly elected members. Much of the paraphernalia of democratization were removed or rendered powerless soon afterwards in 1997. The net effect has been the initiation of expectations and aspirations among the people of Hong Kong that were found to be inconsistent or irrelevant with the realities of reintegration with China.

Thus, the task of integration of Hong Kong with China must be considered with a number of factors in mind. Hong Kong has flourished as a financial and commercial center due to its location and strategic advantages, and it has achieved a high standard of living for the population. It is in both Hong Kong and China’s interest to continue building on the success already achieved. However, it is also necessary to consider that, for various reasons, China has lagged behind in several areas. Therefore, there may be conflicts between the local (Hong Kong) and national (China) interests. For example, is it productive to pose Southern China or Shanghai as a potential competitor for Hong Kong? Such a move will only result in unhealthy competition and may damage the prospects of both parties. Thus it is essential to devise a scheme for considering national and local interests and develop policies to make them complimentary.

Service, Performance and Reforms

Traditionally, Hong Kong has been described as an “administrative state” in which administrative organizations and operations were particularly prominent in spite of the presence of legislative and judicial organs (Harris 1978, p. 55). Under British rule, mostly expatriate officials occupied the key positions in the bureaucracy and were under the direct control of the Governor and the Chief Secretary. Understandably, the style of administration in the public sector was modeled on the British system, and some of the reforms introduced in the United Kingdom in the late 1970s and 1980s were emulated in Hong Kong. However, before the new culture emphasizing service to the public and stronger customer orientation could take root, Hong Kong was handed back to China.

The new circumstances encountered in 1997 opened up possibilities for major changes in the philosophy, values, structure and processes of public administration. The Basic Law stipulated that “only Chinese citizens among permanent residents of the Region with no right of abode in any foreign country may fill the following posts: the Secretaries and Deputy Secretaries of Departments, Directors of Bureaus,

Commissioner Against Corruption, Director of Audit, Commissioner of Police, Director of Immigration and Commissioner of Customs and Excise” (Article 101). This provision had significant implications, as many senior civil servants with extensive experience were no longer eligible to rise to the top echelon, and many chose to leave public service.

The rising expectations of the public in Hong Kong are a function of the combined effect of several factors, including the emergence of a middle class and the economic and social progress achieved over the previous three decades. The standard of living increased steadily and consistently, and many Hong Kong citizens were exposed to overseas administrative systems and practices as they traveled or emigrated. The underlying current of a democratic movement encouraged effective scrutiny of the government’s operation, management, performance and efficient use of financial resources. A strong and vocal independent media developed rapidly and emerged as an invaluable facilitator of such changes.

A number of reforms were introduced in public administration in line with changes taking place worldwide. The basic principles of the reforms emphasized regular and systematic review of public expenditure as well as a proper system of management of resources and policies. There was to be clearly defined and delegated responsibilities for formulating policies and implementing them. Moreover, public officials were to be made aware of resources used in pursuing policy objectives and held accountable for the outcome. Finally, services were to be provided through an appropriate framework of organization and management conducive to the nature of each service (Finance Branch, Hong Kong Government 1989, pp. 1-2).

A key initiative has been the establishment and inculcation of a culture of service in the framework of public administration. The Efficiency Unit served as the engine behind changes aimed at improving the quality of service, enhancing efficiency and ensuring customer orientation. Over a short period of time, there were evidences of increased awareness of customer needs and preferences, and senior public sector managers repeatedly emphasized the importance of service to the community (for example, see Chan 1996; Lee and Huque 1996).

A number of unfortunate events hit Hong Kong soon after its return to China in 1997. The problems related to the management of crises arising from an outbreak of the avian (bird) flu in the poultry markets and an increase in micro-algae (red tide) in coastal waters indicated a weakening of the capability of the civil service. Furthermore, the problem of system failures on the day of opening of the expensive new Hong Kong International Airport drew severe criticism from the public, media and observers (see Huque and Lee 2000). It was felt that the high level of efficiency attributed to the civil service in the previous decade had declined and the capability of Hong Kong public service

came under intense scrutiny. As a result, the government decided to review the system in an effort to restore its reputation. The situation was made worse by the Asian economic crisis that hit immediately afterwards. Hong Kong government responded to the fallout of these crises by devising a plan to introduce further reforms to introduce substantial changes with special emphasis on the areas of personnel management, performance and pay, and a result-oriented management culture (Huque 2002, p. 14).

Under British colonial rule, Hong Kong’s public administration system had developed and undergone reforms that were intended to respond to local needs and challenges. The organizational structure and distribution of power reflected a high degree of centralization that was quite unlike the United Kingdom, which adopted a parliamentary democratic system with an effective arrangement of checks and balances. So the structure was British in orientation, while the spirit was quite the opposite with practically no arrangement for ensuring accountability. Under Chinese sovereignty, Hong Kong has been allowed a high degree of autonomy, and hence the structure and spirit remain basically unchanged. This should not affect the operation of administrative agencies, but there have been problems in the areas related to law, trade and commerce, and the appropriate balance between control and autonomy that makes central/local relations an important issue. It is possible to trace the links of these problems to globalization, which blurs national and regional boundaries and hinders more often than helps the process of integration.

A major challenge in service and performance are the perceptions and aspirations of the public and the ability and capacity of the government to deliver. Hong Kong has faced rising public expectations for some time and had to reform the system of public administration to improve capacity. China, too, has also embarked upon such reforms. Zhang and Straussman noticed a number of factors that provided the impetus for administrative reform in China: criticism of the bureaucracy, concern over the economy, demonstration of capacity for good governance, and restoration of trust and confidence of the public in government (2003, pp. 171-72). The nature of the reforms are quite similar to those attempted in Hong Kong, but it may take more time for the changes to take effect in China due to the immense size, long tradition of socialist rule, and the complexities involved in planning and implementing reforms. Meanwhile, the transformation to good governance will have to progress with a noticeable gap between the demands from the public and the capacity of the government to deliver.

Globalization and Public Administration

One of the most potent developments in contemporary public administration has been the enigma of globalization. The move towards an integrated world economy began as major business corporations sought to expand their markets — and subsequently, operations

— across national boundaries. Globalization thus is a consequence of the liberalization of states and the opening up of economies. The process took off in a big way after the cessation of the Cold War. The process was facilitated by remarkable progress achieved in information technology, and the net result has been the free movement of capital, commodities, services, people and ideas across national borders. It can be said that globalization has succeeded, to a considerable extent, in opening up societies and standardizing rules of governance.

Public administration has been influenced by a number of factors over the years, and globalization has added considerably to the change. As a result, problems facing governments worldwide are viewed in similar ways and solutions are developed within universally accepted frameworks. One of the most common problems confronting most nations has been the diminishing pool of resources and rapidly rising demands from the public for better and new services. In searching for solutions to these problems, the private sector served as a point of inspiration and governments have sought to change established practices and procedures, revise priorities, and reassess the value of outcome and efforts undertaking and managing the public sector (see, for example Hood 1991, Peters 1996, and OECD 1995). As the 20th Century drew to a close, a changed macroeconomic environment and expectations on the part of the citizens led to new problems, and these were further compounded by “a changed international context, the change in organizational paradigm in the private sector, and the modernization policies being pursued in competitor countries” (Naschold and von Otter 1996, pp. 57-60). Globalization “is an important tool of modern state for not only governance but also for distribution of goods and services” (Ramaswamy 2002, p. 53), and points to the need of thinking outside the traditional framework to make public administration effective.

The issue of integration of Hong Kong with China deserves special attention with reference to the challenge of globalization. China, a major world power and strict adherer to socialist ideology, has embarked on the difficult road of liberalizing the economy. At the same time, the country is striving to become a major player in the world system. Achievement of these goals entails major changes in the social system that includes administrative organizations that ensure compliance with acceptable international standards and procedures as well as improved performance in public organizations. This is an extremely difficult task for a vast and diverse country like China, particularly in view of the fact that the economy has remained closed and rigid for more than half a century and the political system provides limited scope for input by ordinary citizens.

In contrast, Hong Kong has been exposed to the vagaries of international competition for many years as the territory earned the reputation of being the “freest” economy and a major financial center for

successive years in the 1990s. The physical location and economic realities of Hong Kong have compelled the SAR to adapt to changing circumstances and, as a consequence, the administrative machinery and public officials have remained attuned to emerging trends and practices.

A series of reforms was initiated in China since the 1980s with the objective of liberalizing the economy and transforming the approach to public administration. The first attempt at reforms took place in 1982, and, within a year, the number of commissions, ministries, departments and bureaus of the State Council was reduced to 61 from the previous level of 100, and more than 30,000 veteran cadres were retired (Lan 2001, p. 443). In 1988, another round of reforms was initiated to adjust the administrative structure to the needs of the new circumstances resulting from reforms in the political and economic systems. “Functional changes, delegation of power to lower levels, streamlining and macro-regulation were the keywords of the reform and the Ministry of Personnel was established” (Huque and Yep 2003, p. 145) to lead the implementation of changes in public administration.

By 1992, it became clear that free market economy with political control was to be the guiding principle for the reforms, and eventually another 27 ministries and departments were eliminated from the administrative structure. Thus, the government demonstrated its determination to emphasize further streamlining and staff reduction. The latest round of reforms was initiated in 1998 and followed the same trend. Zhang reported the following achievements from this effort: (a) elimination of 11 out of 40 ministries of the State Council; (b) discharge or transfer of about 32,000 civil servants in the central government and almost one million in provincial and local governments; (c) functional changes in the administrative system; (d) abolition of 15 industrial ministries that were responsible for managing the economy; and (e) creation of new ministries of labor, national and land resources, and information industry (2002, p. 128).

Changes along similar lines were already in motion in the Hong Kong public sector. In fact, the small size and simple administrative structure had helped the SAR avoid many of the problems that required attention in China. The forces of globalization compelled both China and Hong Kong, with strikingly different features, to follow similar paths for streamlining and strengthening the administrative systems. The principles, values, procedures and practices of public administration are increasingly becoming similar across the globe, and China and Hong Kong are following the trend to respond to the strong influence of globalization.

One of the most striking impacts of globalization has been the exertion of pressure — direct or indirect — on countries to converge toward a common system of governance. This calls for, among other prerequisites, mature political and economic

institutions, as well as a system of public administration that emphasizes economy, efficiency and effectiveness. While many countries seek to introduce reforms along these lines after succumbing to external pressures, problems arise if there are strong internal pressures that are ignored in the process. There are several compelling reasons for Hong Kong and China to converge with the demands of globalization. However, these acts need to be balanced with the internal pressures that point to the need for strengthening the economy and the capacity of the government, as well as respond to the social needs of health, housing, education and employment for the local population. There may be conflicts between the internal and external pressures, and the need for balancing them becomes very important.

Dialectics and Contrasts

No country has been able to remain immune from the wave of changes that took place in the area of public administration over the past several decades. There has been a clear shift from the aim of overall social, economic and political development to narrow economic growth. There has also been a shift towards adopting a mere support role for the state rather than leading service delivery, establishing a structure of managerial autonomy rather than public accountability, and striving for standards based on business norms rather than public ethics (Haque 2001, p. 1405). Increased emphasis on cost-cutting, efficiency and consumer orientation has transformed the state of public administration across the globe.

Reactions to globalization have been varied across the world. While some scholars have found the phenomenon immensely beneficial, others have reacted with extreme caution and apprehensions about its outcome. These are reflected in a number of studies published over the past decades. Even before globalization became a well-recognized phenomenon, Ball (1967) noticed the growth of multinational companies. Ohmae (1990) predicted a “borderless world” characterized by interdependence, harmony and prominence of market forces, and the obsolescence of national economies in view of strengthening globalization. Other scholars added their voice of support to a reduced role of national governments and increased international interactions (see Fukuyama 1992; Keohane and Nye 1977).

Criticism of globalization was also obvious. Some views argued that it can have unfavorable impacts on national sovereignty, economies and human values and that globalization’s effects are particularly severe for developing countries (Farazmand 2001, p. 440). Globalization could lead to loss of work, adverse effects on local power structures, dependency and fiscal crisis (see, for example, Rifkin 1996; Korten 1995; Kregel 1998). A third set of reactions suggests that globalization is inevitable, and there is no point in trying to resist. Brydon, Coleman, Harting and Rethmann (2003) pointed out: “One cannot be for or against

globalization. One is in it,” while Friedman stated that “Globalization isn’t a choice; it’s a reality” (1999, p. 93).

However, it is useful to consider the different aspects of globalization, rather than taking a one-dimensional view. In economic terms, globalization emphasizes liberalization, deregulation, market economy, structural reforms and adjustments. With reference to politics, the process pushes towards similar governmental systems across the globe, and liberal democracy has emerged as the preferred style. But the aspect that has direct relevance to public administration is the emphasis on good governance. This aspect emphasizes a clear move toward improving law and order, enhancing social stability, holding free and fair elections at regular intervals, attaching increased importance to public opinion, initiating reforms in the economy, curtailing corruption, and reducing the size of the bureaucracy and bureaucratization.

Thus, globalization presents the challenge of maintaining diversities in a country while remaining a part of the global system of increased interdependence and exchange. In considering the integration of Hong Kong within China — and subsequently, China within the global system — a number of noticeable trends can be discerned. These include structural and institutional reforms, privatization and marketization, withdrawal of the state, and streamlining as well as reorganization of the bureaucracy. While these steps followed as a natural consequence of conformity to the liberal and international trends over several decades in Hong Kong, there were concerns over the potential conflict of direction with strategies adopted by the People’s Republic of China. Interestingly, the wave of liberalization initiated in China since the 1980s to modernize the system and make it compatible with the international structure has helped both systems converge.

Choice of Strategies

The task of introducing public administration reforms — that have the twin objectives of improving the capacity as well as facilitating the convergence between China and Hong Kong — is an extremely difficult challenge. There is the risk of several undesirable effects emanating from these endeavors. For example, reforms aimed at diminishing the role of the state, contraction of the public sector and government’s activities, privatization, and reduction of public expenditures have some beneficial outcomes. But it has been reported that these “policies increased the gap between rich and poor, the powerful and the weak, the well-connected and the isolated, the skilled and the unskilled; multiplied worldwide the poverty-stricken and underprivileged; aggravated crime, violence and corruption; and degraded the environment” (Caiden and Caiden 2002, p. 41). Those choosing strategies for reforms in public administration need to resolve such dilemmas.

Therefore, it is necessary to look beyond the existing framework of public administration to identify and deal with the challenges in the integration of Hong Kong with China. The current arrangements appear to be effective as there have been minimal problems in the center/local relationship for the first seven years of Hong Kong's existence as a Special Administrative Region of China. But the undesirable effects of reforms along the planned lines must be dealt with by trying out new approaches. Giddens has pointed to the need of pursuing a "Third Way" that includes the following features:

- a) developing effective government and responsive political leadership committed to partnership with non-state institutions;
- b) strengthening of civic society and a new kind of mixed economy and social markets that better manage risk, improving social security;
- c) providing a safe environment, and working for sustainable development;
- d) avoiding top-down bureaucratic government by emphasizing decentralization and devolution, but also supporting more active government at the international level;
- e) restoring national economies, revitalizing declining regions, increasing employment, assisting the poor, revamping the welfare state and reducing its inefficiency and bureaucracy (1998, pp. 99-128).

These measures could be difficult to implement, and the governments of Hong Kong and China may need considerable time to attempt and attain them, even to a limited extent.

China has been governed for a very long time under a strong central institution, the Chinese Communist Party (CCP). Through half a century, the country has gone through shifts in program objectives and power relationships. Heady noted "a determination to politicize the bureaucracy and make it responsive to party direction" and "decentralization by the transfer of administrative power to the lowest feasible level" in China (2001, p. 260). More recent reforms have underlined the importance of technical qualifications and expertise for initial recruitment and advancement, structural streamlining, and scope for direct public control over lower level officials (Heady 2001, p. 261). Liou summed up the objectives of the reforms as "stability, marked by efficiency and production" (1997, p. 510). Although there seems to be a substantial break from the traditional approach to public administration and a move towards the more focused approach found in new public management, Hood reminds us that there is little difference at the core: "The difference between the traditionalists and the modernizers, however, is that the former use rose-tinted spectacles to view the past and grey-tinted glasses to look at the present, while for the latter the lens tints are reversed" (1998, p. 5). In China, however, the reforms go beyond these boundaries and

focus on regulation and rule of law, transformation of government function, and an adjustment of relationship between the government, Central Communist Party, public enterprise and the society at large (Zhang and Straussman 2003, p. 174).

Conclusion

In conclusion, a number of challenges faced in integrating Hong Kong with China can be highlighted. First, there are obvious signs of transformation in China's system of governance with respect to the administrative structure. There are tensions between the traditional values of public administration such as equity, equality and justice and the emphases brought about by the concept of "new public management." Under new public management, the focus has shifted to economy, efficiency and effectiveness, and there is increased awareness of cost, return and marketization of public services. There is a need to employ extreme caution and resist pressures to make a complete shift with the main emphasis on the core values of new public management. A balance in the core values of traditional public administration and new public management is extremely important in planning transformation of the systems in Hong Kong and China.

Secondly, Hong Kong has functioned for a long time as an entity virtually independent of China or Britain. Over the years, Hong Kong has developed a set of institutions, priorities and policies to protect and promote its own interests. With the reintegration, the SAR is now a part of China. This new reality imposes upon Hong Kong the additional task of promoting the national interest as well. The promotion and protection of local and national interests is a second area in which a balance must be struck.

Thirdly, there is the issue of the capability of a system to provide services and perform at an expected level. The public service in Hong Kong has performed at a high level of efficiency for several decades, with infrequent lapses, mainly in the 1990s. China, too, has embarked on comprehensive programs to raise the level of efficiency. However, the needs and expectations of the community continue to rise, and this makes the task immensely more difficult. It will be critical to maintain a balance between the demands and expectations of the public with the capability for meeting them on the part of the public services.

Finally, the forces of globalization have brought to the fore the potential conflict between internal and external pressures. There are local pressures for providing better governance and establishing new and improved services in a number of areas. Citizens of both Hong Kong and China look towards the government to deal with the immediate problems affecting employment, housing, health and a decent life for all. In the past, these services have been provided under a somewhat authoritarian framework of public administration — colonial in Hong Kong and a single dominant party-led government in China. Such

arrangements allowed leverage to the governments to allocate and utilize resources without getting involved in controversies, and the process was facilitated by political and legal systems that added to the governments' power. With globalization, there are external pressures to establish accountable and transparent systems of government, with power shared by various social and political institutions. This impacts upon the government's power and capacity to adopt and implement hard choices and may weaken the state, leading to an erosion of capability. Transformation of governance in China will entail striking a balance between the internal and external pressures to ensure that local demands are met, while satisfying the expectations of the international community.

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Government Performance Auditing in the U.S. and China: Lessons Drawn from a Comparative Review

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Abstract: Performance auditing plays a key role in improving government performance and public accountability. This paper examines the concept of government performance auditing in the U.S. and China from a comparative perspective. The paper begins with a brief introduction of the origin of auditing and performance auditing. It then discusses the variances in definitions, names, and underlying values of performance auditing; describes the authorities and organizational structures of performance auditing in the two countries; and reviews the roles of performance auditing in improving government. It concludes with a discussion of challenges as well as opportunities that face government performance auditing in the U.S. and in China.

The concept of auditing is as old as human civilization, but performance auditing, evolving in the 1940s in the U.S. and emerging recently in China, is still relatively young and has rarely been a subject of academic study. With various definitions, names, and underlying values both in the U.S. and China, performance auditing plays a key role in improving government performance and public accountability.

We have two main purposes in undertaking this analysis and two distinct audiences that we hope to reach. First, we want to deepen the understanding of performance auditing among professional government auditors in each of the two countries, thereby improving the practice of performance auditing. Second, illuminating the similarities in the practice of performance auditing in these two very different countries should demonstrate to public administrators the very fundamental nature of performance auditing's contribution to effective government. Since in many respects the practice of performance auditing is not well developed or fully institutionalized in either country, this comparison can benefit audit professionals and public administrators in each country.

The Origin of Auditing and Performance Auditing

Auditing is a discipline beyond examining records or financial accounts to check their accuracy. Originating thousands of years ago, it is a specialized field of knowledge.

Concept of auditing originated thousands of years ago

The concept of auditing can be traced back to over 5,500 years ago. Tiny marks beside numbers in the records of the Mesopotamian civilization are evidence of a system of verification — one scribe prepared

summaries of transactions; another verified the assertions. The English word “audit” originated from Latin *auditus* (hearing). Ancient Rome employed an oral verification to keep officials in charge of monies from committing fraudulent acts, which is called the “hearing of accounts” — one official compared his records with those of another. *Quaestores* (those who inquire) examined the accounts of provincial governors, seeking to detect fraud and the misuse of funds (Sawyer, 1990).

The practice of an auditing system in China began as early as 3,000 years ago in the Western Zhou Dynasty, the first dynasty to unite most of China under a single government. According to Confucius' *the Rites of Zhou (Zhouli)*, which describes Zhou Dynasty's government system, revenues and expenditures were audited in order to reward or punish an administrator (Confucius, BC841). A royal audit court was set up in the Song Dynasty in 922 A.D. From then on, every dynasty established specific institutions or offices in charge of monitoring state revenues and expenditures (National Audit Office of the People's Republic of China, *year unknown*).

Performance auditing evolved in the U.S. with expanded role of auditing in the 1940s

Since its inception in 1921, the United States General Accounting Office (GAO) had traditionally focused on whether government spending was handled legally and properly by reviewing vouchers. After World War II, the GAO began to conduct comprehensive audits of federal spending and to examine the economy and efficiency of government operations (The United States General Accounting Office, 2001).

The GAO broadened its work and moved into program evaluation in the late 1960s and early 1970s. During the 1960s, both the number and dollar amounts of government programs which were aimed at

improving the quality of American life, increased substantially. In the 1970s, the number of new programs established was considerably less, but total dollar amounts continued to grow (Comptroller General of the United States, 1981). The increase in government spending and programs brought with it an increased public demand for more information about how well government programs were meeting their objectives. As such, auditing was becoming a discipline beyond examining records or financial accounts to check their accuracy

In 1967, the GAO began to examine anti-poverty programs to determine their efficiency and the extent to which they carried out their objectives, which resulted in over 60 reports and solidified Congressional support of GAO's program evaluation activities (The United States General Accounting Office, 2001; Funkhouser and Butcher, 2002). Auditing, previously the exclusive domain of accountants, became a multi-disciplinary field that included professionals with a wide variety of backgrounds.

The GAO officially brought performance auditing into government in 1972 when it issued the first edition of the *Standards for Audit of Governmental Organizations, Programs, Activities & Functions* (known as the "Yellow Book") to guide the auditing practices of performance auditors. The standards expanded the scope of the audit function to include not only examination of financial reports, but review of a program's compliance with applicable laws and regulations, evaluation of economy and efficiency in the use of allocated resources, and examination of effectiveness in achieving intended program results (Malan, et al, 1984).

Performance auditing is emerging in China

The auditing function, focused solely on controlling revenues and expenditures, was carried out by internal supervisory bodies of public finance departments in the first 30 years after the founding of the People's Republic of China. In December 1982, the National People's Congress adopted a resolution to establish an auditing system in China. The National Audit Office of the People's Republic of China was formed in 1983 followed by local audit institutions being set up in provincial, municipal, and county levels of government.

Government auditing in China has been mostly budget implementation audits of governments; financial audits of governments, state-owned entities (i.e. enterprises, non-profit entities and monetary institutions) and special projects; and regulation compliance audits of earmarked funds and projects sponsored by endowment or loans from international organizations or foreign governments. The Constitution amended in 1982 and the Audit Law adopted in 1994 stipulate the duties and responsibilities of audit institutions.

Performance auditing has been mentioned and discussed more frequently among China's researchers and auditors in recent years (Liu, 2001). Its practice has

also been more prevalent as auditing economic responsibility and evaluating effectiveness of earmarked funds have grown. Audit institutions began to audit leading officials in county and above governments and state-owned enterprises after two regulations on economic responsibility audit were issued by the Central Committee of the Communist Party of China and the State Council in May 1999: (1) *Provisional Regulations on Economic Responsibility Audit of Leading Officials During Their Terms of Office in the Party and Government at and Above the County Levels* and (2) *Provisional Regulations on Economic Responsibility Audit of Chief Officers During Their Terms of Office in State-Owned or State-Holding Enterprises* (Embassy of the People's Republic of China in Australia, year unknown). Auditors not only check truthfulness and legality of the revenues and expenditures of an entity, but also evaluate the economy, efficiency, and effectiveness of the entity within the responsibility of the leading official. Therefore, the economic responsibility audit is the combination of financial auditing, compliance auditing and performance auditing (Liu, 2001).

For example, one audit bureau in Shandong Province examined the accounting transactions and gathered information from departments of finance, taxation, planning, science and technology, statistics, transportation, education and environment (Feng, 2002). It also evaluated a list of economic indicators, some of which included: measuring such indicators as returns and efficiency of projects, exports and foreign investment, and income per capita—all of which moves the role of government auditing beyond being solely concerned with revenues and expenditures. Government auditing is evaluating the efficiency of government projects and the impacts of government performance on economic development and residents' quality of life.

Besides verifying accounting information and compliance, earmarked fund auditing began to evaluate the effectiveness of fund-supported programs. One of the objectives of the "Audit of the Pilot Project of Reversing Cultivated Land to Forest and Prairie" performed in 2001 by the National Audit Office was to evaluate the effectiveness of the project, along with compliance auditing of fund utilization and checking the availability and completeness of policies and procedures (Liu, 2001). Effectiveness evaluation thus becomes another indication of the emergence of performance auditing in China.

Performance Auditing: Definitions, Values, and Organization

In this section we focus on the evolving definition of performance and the underlying values, authorizations, and organizational structures associated with the growth of performance auditing in the U.S. and China.

Definitions of performance auditing

Performance auditing can be defined in many ways. Lennis Knighton, the inventor of modern performance auditing, provided the first definition of performance auditing in the professional or academic literature. In his 1967 book, *The Performance Post Audit in State Government*, Knighton wrote:

A performance post audit is an independent examination, conducted by the Auditor General, for the purpose of providing the legislature with an evaluation and report of the manner in which administrators of the agencies and departments of the state have discharged their responsibilities to faithfully, efficiently, and effectively administer the programs of the state. Faithfulness refers to whether or not programs have been administered in accordance with promises made to the legislature and the expression of legislative will. Effectiveness refers to whether or not planned program objectives have been achieved. Efficiency refers to whether or not program accomplishment has been achieved by using the least-cost-combination of resources and with a minimum of waste (Funkhouser, 1997).

Some other definitions include:

The American Accounting Association (AAA) defined performance auditing in 1993 as:

The systematic and objective assessment of the performance of an organization, program, function or activity by an independent auditor, who reports findings, conclusions and recommendations to a party or group with legal responsibility to oversee and/or initiate corrective action (National Association of Local Government Auditors, *year unknown*).

GAO's definition of performance auditing in the 1994 revision to the audit standards is:

A performance audit is an objective and systematic examination for the purpose of providing an independent assessment of the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making by parties with responsibility to oversee or initiate corrective action (Comptroller General of the United States, 1994).

The Chinese definition by Qi (2001) from Beijing Municipal Audit Bureau is close to those provided by the AAA and the GAO:

Performance auditing is performed by an auditor who, through modern techniques and methodologies, independently, objectively and

systematically evaluates the economy, efficiency and effectiveness of a program, activity or function of government, a government agency or a government-owned enterprise to provide recommendations, improve public accountability and provide information for decision-making of related parties.

Although variant in words and emphases, these definitions describe *how* performance auditing is performed, *what* is evaluated and reported, *why* it is performed, and to *whom* it is reported:

- Performance auditing is conducted *independently, systematically, and objectively* through *obtaining and evaluating* or *assessing* performance evidence.
- The criteria are *faithfulness, economy, efficiency, and effectiveness* in achieving *expected results*. *Findings, conclusions, and recommendations* are reported.
- The purpose of performance auditing is to *provide information, to improve public accountability, and to facilitate decision-making*.
- Performance auditing is reported to *interested users, such as, legislature or parties with responsibility*, to oversee or initiate corrective action.

Various names of performance auditing

Like its definitions, performance auditing has a variety of other names in the United States and around the world: operational auditing, program auditing, results auditing, comprehensive auditing, management-oriented auditing, value-for-money auditing, effectiveness auditing, and efficiency auditing (Sawyer, 1990; Sheldon, 1996; Qi, 2001). In China, performance auditing in Hong Kong follows Great Britain's term in English, value-for-money auditing. However, its Chinese translation is "heng gong liang zhi shen ji," meaning "measuring the work and its value" auditing. When performance auditing was first introduced in China in the late 1980s, it was translated into "jing ji xiao yi shen ji" (economic efficiency auditing). This is the time period when China's economy was transferring from central government controlled economy to market economy. Economic efficiency was a major issue facing the country and auditing began to help state enterprises identify production potentials and analyze inputs and outputs of productions (Qi, 2001). Since the early 1990s, "ye ji shen ji" (achievement or results auditing) and "ji xiao shen ji" (achievement/results and effectiveness/efficiency auditing) have been used interchangeably.

Values underlying the practice of performance auditing vary

The variance in definitions and names of performance auditing reflects the variance in the values underlying performance auditing, audit objectives, and audit scopes. This is partly the result of the profession's dual origins. Auditors with a traditional accounting background developed an approach that emphasizes "economy and efficiency" concerns, while those trained in social science developed an approach that emphasizes questions about program goals and results.

Three "E's": economy, efficiency and effectiveness

Since almost the beginning, performance auditing has been built around three "E's": economy, efficiency and effectiveness. However, there are no consistent definitions of these terms in literature. Funkhouser (1999) questioned what these concepts are — "They could be principles, objectives or values." The traditional model of performance auditing views the three "E's" as objectives or criteria against which programs are evaluated, such as input economy, process efficiency, output effectiveness, and outcome effectiveness.

The GAO's *Government Auditing Standards* states that performance audits "include economy and efficiency and program audits." The standards do not define the meaning of economy and efficiency or the two types of audits (presumably subsets of performance audits); rather, it describes what each type of audit includes and gives examples of potential generic audit objectives for each.

With the advances in performance auditing and other areas, particularly performance measurement, considerable progress has been made in refining the meaning of "efficiency" and "effectiveness." Efficiency is the concept with least controversy. Knighton defined its meaning in 1967 as this: "Efficiency refers to whether or not program accomplishment has been achieved by using the least-cost-combination of resources and with a minimum of waste." Funkhouser (2002) simplified it to "doing the most good you can with limited resources".

Knighton stated that effectiveness refers to whether or not planned program objectives have been achieved. Funkhouser defined effectiveness as "getting the results that we want — solving the problems we want solved — creating the community condition we collectively desired" (Funkhouser, 2002). However, Sheldon (1996) referred effectiveness to "selecting the best alternative method of achieving objectives." Sheldon then added "relevance" and "sustainability" to relate the "methods" to goals: "Relevance" evaluates the relationship between the outputs achieved and their influence on program goals. "Sustainability" is a factor in performance audit in gauging the effects of the outcomes over time.

Economy is the word that has least consistency in its meaning and application. Sheldon (1996) referred to economy as the utilization of resources, whether these resources are tangible, such as current or fixed assets, or intangible resources, which are not "booked" on the financial statements, such as human resources inside the organization. Economy is achieved by having obtained these resources at the lowest possible cost. Funkhouser (2002) stated, "Economy is a concept that adds nothing to our understanding of audit that is not already supplied by the values of efficiency and effectiveness."

The three "E's" described by Qi (2001) in Chinese are generally consistent with the most definitions cited above:

(1) Economy refers to obtaining a certain amount and quality of outputs with the least resources. It measures the degree of waste reduction.

(2) Efficiency refers to the relationship between outputs (e.g. products and services) and inputs. Specifically, efficiency is to obtain the most outputs with a certain amount of inputs or to obtain a certain amount of outputs with a minimum amount of inputs.

(3) Effectiveness is how much the expected objectives are achieved, or the relationship between the expected effects of an activity and the actual effects. Examples are how the budgeted goals are accomplished, how policy is implemented, or how planned goals are achieved (the relationship between the outputs and the objective). It is the task of auditing to check whether the expected objective is achieved, without considering the resources that were input to achieve the objectives.

The fourth "E": equity

Recently, "equity" has been suggested to be added as the fourth "E" or to replace "economy." Equity considers the policy itself, such as the distribution of goods and services among citizens, states, and nations in the global village (Sheldon, 1996). Funkhouser (2002) defined four types of equity:

- Service costs — taxes and fees charged by the government, but need not only include such charges;
- Service delivery — includes direct services such as trash pick-up and indirect services such as response time for police and the proximity and quality of neighborhood parks;
- Police power — concerns the government's use of its powers of coercion. Those powers include arrest, property seizure, eminent domain, and various regulatory authorities

such as granting liquor licenses or building permits; and

- Access to communication — the ability to provide and receive information about the government.

Another sweeping example that audit work focuses on the equity issues is *The New Urban Direction*, a book-length special report by the City Controller's Office of Philadelphia. The report reviews the very tenets of governance, which are and are not served well by the city's governing structures, and how the system of governance might be changed (Funkhouser and Butcher, 2002). A smaller, more typical example of an audit that covers the concept of equity is the audit of emergency medical services by the City Auditor's Office of Kansas City, Missouri, which raised issues of equal access to services in terms of response times for emergency medical services (City Auditor's Office of Kansas City, Missouri, 2000).

Funkhouser (2002) believes the three "E's" — economy, efficiency, and effectiveness — reflect the underlying values that drive performance auditing. He states that the concept of equity is a core value underlying the practice of performance auditing along with the concepts of efficiency and effectiveness. As "economy" has included the meaning or values of efficiency and effectiveness, he suggests that "equity" replace "economy." He recently further explained why to include equity, along with efficiency and effectiveness, in performance auditing (Funkhouser, 2002): "Governments use both money and power to achieve results — efficiency and effectiveness address money; equity addresses power." Thus, "accountability should extend to the use of power as well as of money." "Public administration involves pursuit of equity as well as efficiency and effectiveness — therefore equity should be evaluated as well."

Authority and organization of performance auditing in the U.S.

The performance auditing function in the U.S. is usually established in the form of a legal sanction — either through charter amendment or state statute, or through modification of the jurisdiction's code or adoption of a specific ordinance. Performance audits can be conducted by external auditors such as the GAO or by internal auditors such as U.S. Inspectors General. Performance auditors or heads of the performance audit function are elected by the public and report to a legislative body, appointed by and report to the legislature, or appointed by the chief executive officer and answer to the executive branch. **Figures 1, 2 and 3** illustrate three organizational structures of performance auditing.

National level

The GAO conducts performance and financial audits within the federal government; over 80 percent of its audit work is performance auditing. It reports to Congress. The Comptroller General of the GAO is appointed by the president.

In addition, the Inspectors General in the federal government's departments and agencies also conduct performance audits. Nearly 60 federal agencies have an Inspector General, who serves under the general supervision of the agency director, but by statute, has a dual and independent reporting relationship to the agency director and Congress. Inspectors General are appointed by the President and with the advice and consent of the Senate (The U.S. Federal Government, 1978).

State level

More than two-thirds of the states have added performance audit to their audit function (Funkhouser and Butcher, 2002). In Kansas, for example, performance audits are the most common audits conducted by the Legislative Division of Post Audit, the audit arm of a legislative committee. These audits answer questions raised by individual legislators or legislative committees about potential problem areas in state agencies or programs. In Missouri, by contrast, performance audits are one of five types of audits performed by the office of an elected state auditor. The office did not begin to conduct performance audits until 1999.

Local level

Performance audits are also performed in county, municipal, and other local governments, such as school districts and transit authorities. A review of the membership of the National Association of Local Government Auditors (NALGA), which has about 1,100 members, suggests that cities may be more likely than counties to have a performance audit function (Funkhouser, 2002).

Funkhouser surveyed about 200 American cities with a population of 100,000 or more and found the number of cities that adopted performance auditing increased rapidly beginning in 1990. He also found that only 50 percent conducted performance audits as of 1999 (Funkhouser 2000). In those cities that did have an audit function, performance audits were found to be far less common than financial audits. Indeed, performance audits accounted for more than half of the audit work in only 19 cities. Based on that study, however, it is expected that the performance audit field at the local level will continue to grow, both in the number of cities that adopt performance auditing and the number and variety of audits performed.

Authority and organization of performance auditing in China

In China an unusual extension of the performance concept is present, although the scope of the performance audit function is still limited. The Constitution amended in 1982 mandated an audit office with an Auditor General. The 1994 Audit Law stipulates that the Auditor General is nominated by the Premier, approved by the National People's Congress, and appointed and removed by the President of the State. The National Audit Office is under the direct leadership of the Premier of the State Council and reports to the State Council. According to the Audit Law, government auditing exercises its power of supervision through auditing independently in accordance with the law and is subject to no interference by any individual, department, or organization.

The governments at and above the county level have established corresponding audit institutions. The audit institution at the next higher level mainly directs the audit work of these audit institutions. They report to their corresponding level government and to the next higher level audit institution (National Audit Office of the People's Republic of China, *year unknown*). **Figure 4** describes the organization of audit institutions in China.

One difference between auditing agencies in the U.S. and in China is that there is a reporting relationship between an audit institution and other audit institutions at the higher and lower government levels in China. In addition, the National Audit Office has offices in 25 ministries under the State Council to perform auditing work. It also has offices in 18 cities to conduct audits and help the audit institutions at that government level. The audit institutions below the National Audit Office also have similar offices in the other government departments and at the lower government level.

Another difference is that the audit institutions in China are law enforcement agencies because they are implementing the Audit Law. The audit institutions themselves have the power to give sanctions and penalties (National Audit Office of the People's Republic of China, *year unknown*). This mechanism is seen as consistent with the government's effort to transform the country from rule of power to rule of law.

The Roles of Performance Auditing in Government

Performance auditing plays important roles in improving government accountability and public trust. It is an information provider by assuring the quality of existing information and creating new information. It is a program evaluator with its independent status. It is a watchdog that catches evil acts — both by organizations and by individuals. It helps keep the good and get rid of the bad in government. It is a catalyst for change that proactively improves the government. Last but not least, it holds government accountable to the public and

government officials and managers accountable at their positions.

Information provider

Performance auditing provides reliable, accurate and relevant information about organization performance to elected officials, legislative bodies, management staff, and the public. The minimum role of performance auditing is an information provider. It assists the elected officials and management staff in carrying out their responsibilities by providing them with objective and timely information on the conduct of government operations, together with auditor's analysis, conclusions and recommendations. Elected officials sometimes request information directly from performance auditors in the absence of management staff taking on the responsibility of providing such information that elected officials need to plan, direct, control and make decisions.

The public is another major receiver of the information. On one hand, citizens are demanding more information about government performance while they are expanding the traditional contact between themselves and government. Previously, citizens had direct contact with their elected officials, and public managers were accountable to legislatures or other governing agencies. Today, citizens demand government performance information so that they are able to assess the efficiency, effectiveness, and fairness of government services, rather than delegating this task to public managers and allowing the public managers to evaluate both managerial and program performance. The existence of performance auditing and reporting has made possible the expanded contact between the public and the government.

On the other hand, many citizens distrust government but know little about it. Negative views about government are strongest among those least informed (Desautels, 1997). People tend to imagine the worst in the absence of credible and understandable information about their government's overall financial position and operations and about the results and costs of individual programs. Information reported from performance auditing makes government performance information available and accessible. Even when the information is negative, performance auditing analyzes the causes of negative conditions and provides recommendations to address problems, which helps build public trust.

It is not raw data that performance auditing reports, rather reliable, accurate, as well as understandable information. Performance auditing plays a key role in providing assurance to the governing body about the fairness and completeness of the information management staff has provided (Leclerc, et al, 1996). The GAO's standards require assessing the validity and reliability of data when testing management controls of an audited entity, when using data gathered by the auditee as part of evidence and when using data from computer-based systems (Comptroller General of

the United States, 1994). Funkhouser (2002) addressed why performance data needs to be verified — “to enhance the credibility of information, and thus, its value to both preparers and users.”

In addition, performance auditing does not just provide “assurance” regarding existing information, but in fact produces valuable new information. Its analyses of existing information, findings and reporting of real problems, and recommendations of effective solutions are vital information for all the parties that use the information.

Program evaluator

Performance auditing is the evaluation of government programs, functions and activities. The role of traditional financial auditing expanded when it began to assess managerial and organizational performance in the 1940s. Performance auditing assesses whether programs achieve government policies and whether they are administered efficiently. As a matter of fact, the GAO re-classified most of its auditors and management analysts as evaluators in 1980 to reflect the nature of their work.

Watchdog

Performance auditing is often described as an organization’s watchdog function. The GAO regards itself as “the government accountability watchdog.” It serves Congress and the public interest by keeping a close eye on virtually every federal program, activity, and function. Its highly trained staff examines everything from missiles to medicine, from aviation safety to food safety, from national security to social security (The United States General Accounting Office, 2001).

Funkhouser (2000) described the responsibility of performance auditors as watchdog over two levels: individual and organization.

Performance auditing can provide an institutional and structural means of addressing administrative evil, which can complement solutions at an individual scale. The head of a government audit agency is a civil servant who can and by right ought to publicly disagree with political authorities when the facts of the situation warrant the auditor so doing. Most government auditors recognize that the public is their ultimate client and not the organization or jurisdiction that pays their salary. This being the case, their client, the public, is well served when the auditor uncovers abuses on the part of the organization that employs him or her as well as when the auditor uncovers abuses by other individual employees.

Some auditors may not like the image of a watchdog whose distant cousin is a junkyard dog. Funkhouser said in 1996 that a metaphor he liked then was “editor” — “as every good writer needs an editor,

every good manager needs an auditor.” Performance auditing clearly plays a critical role in defining good performance. Auditors, no matter a watchdog or an editor, identify the existence of problems and weakness, make recommendations for improving the system, which allowed the problem to occur, and sometimes suggest alternative ways to achieve performance objectives. The major benefits derived from performance auditing include cost savings, increased revenues, improvement in service delivery, and improved accountability. Thus, as Sawyer (1995) said in his “An Internal Audit Philosophy,” auditors should strive to “leave every place a little better than they found it”.

Catalyst for change

Performance auditing provides a mechanism for proactive improvement in government. It identifies areas in which significant improvements can be achieved in operational efficiency and program effectiveness and equity. Its goal is to make appropriate actions happen to achieve improvement. Some performance auditors have been gradually playing a role in political agenda-setting.

Richard C. Tracy, Audit Director of the Portland City Auditor’s Office, first described performance auditing as a catalyst for change in his article entitled “Performance Auditing: Catalyst for Change” in 1988 (Funkhouser, 1997). He wrote, “Like most bureaucracies, local governments resist organizational change. ... The City of Portland, Oregon, has developed a method of bringing about operational and administrative change—performance auditing.” To “be a catalyst for improving city government” is also the mission of the City Auditor’s Office in Kansas City, Missouri (City Auditor’s Office of Kansas City, Missouri, 2001).

Funkhouser (1997) stated that performance auditors “must intend to control and direct the organizational and administrative change toward some end and manage the process in some way. The end we seek is greater accountability, guided by principles of efficiency, effectiveness and equity”.

Holding government accountable

Government accountability in a representative democracy has its roots deep in history and is based on the underlying principle that the ultimate power to decide is vested in the people. Under a democratic system of government, the making of laws and the taking and use of public resources carry with them the responsibility to answer to the people as a whole (Governmental Accounting Standards Board, 1994). Performance auditing plays a significant role in fulfilling government’s duty to be publicly accountable in a democratic society. One of its objectives is to help the governments it serves become governments to trust and respect.

Accountability implies responsibility and public trust. The Governmental Accounting Standards Board (GASB) states:

Accountability requires government to answer to the citizenry, to justify the raising of public resources and the purposes for which they are used. Governmental accountability is based on the belief that the citizenry has a “right to know,” a right to receive openly disclosed facts that may lead to public debate by the citizens and their elected representatives.

Improved accountability resulting from performance auditing is twofold. First, there is internal accountability for management and the governing body. Performance auditing assists program managers and department directors to achieve their objectives and goals in the most efficient and effective manner. This results in improved accountability for those programs and services.

Secondly, there is external accountability to the citizens and other users of government services. Transparency leads naturally to greater accountability to the public. Performance auditing discloses more information, in more depth, and with greater clarity in reporting in most cases than is currently available to the public (Sheldon, 1996). Timely and accurate information provides a backdrop from which the public is able to discern government accountability.

Opportunities and Challenges Facing Performance Auditing in the U.S. and China

Performance auditing, young and growing in both the U.S. and China, has great potential in contributing to increasing the efficiency and effectiveness of government programs and entities, enhancing government accountability, and ultimately improving democratic governance in both countries. At the same time, it faces the similar challenges and opportunities in both countries.

For example, performance auditing can help government decision-making. In the U.S., a developed country, social problems including drugs, poverty, violence, and joblessness absorb vast resources. In China, a developing nation, funds are desperately needed to improve infrastructure in goods and services such as transportation, education, healthcare, and communications systems. Hence, performance auditing, in both countries, can help in the decision-making process by assessing how best to allocate scarce resources and evaluating the effectiveness of supplying funds for the common purposes.

Opportunities are often encompassed in challenges. Some of the challenges include changing the environment to speed up the evolution of performance auditing, establishing uniform standards to guide performance auditing, maintaining the independence of performance auditors in appearance

and in reality, and promoting performance auditing education in colleges and on-the-job audit staff training.

Environment change

While performance auditing is evolving to more jurisdictions and for more functions, a change in the environment is needed to speed up this evolution. Public education is to promote the idea of performance auditing. Technical assistance to performance audit offices and training of performance auditors need to be provided by professional audit associations, academic institutes, and, in China, audit offices at the higher level. Academic research on performance auditing and other relevant issues needs to be encouraged and supported.

Uniform standards

More uniform standards for conducting and reporting results of performance auditing are needed. In the U.S., clear standards and practice guides for performance data verification do not exist. The government audit standards should address this issue, as they currently do with internal controls and illegal acts (Funkhouser, 2002). In China, the National Audit Office needs to establish the performance auditing standards, in the same way as it has issued several standards related to financial auditing.

Independence

The concept of independence requires that auditors be independent of the activities they audit. They cannot audit the individual to whom they report nor should they audit the agency exercising direct or indirect control over their activities. Internal auditors should report to a position as high in the organization as practicable. In addition, auditors should have direct communication with the legislative body. An auditor reporting to the controller or finance director effectively is “hamstrung.” See **Figure 3**. The placement of the performance audit unit within a department or agency with a peer relationship to the organizations it will be auditing should be avoided (National Association of Local Government Auditors, *year unknown*).

It is not clear how many cities in the United States have an independent audit function. A survey conducted in 1999 of cities in the United States with populations of 100,000 or more showed that about 20 percent have an independent audit function (Funkhouser, 2002). In China, about one third of the audit institutions are *nominally* under the top government official, but they *actually* report to a lower level official who often also receives reports from the finance department. Also, some government officials have interfered with the audit work because they were afraid that audit results would make them look bad (Xiang, 2002). Auditors must have adequate authority to plan, implement, access and assess evidence, and report on their audit task. The auditors, within the scope of the audit, must be empowered to collect and analyze data and must have complete knowledge of their accountability function.

In addition, in China, the government at the corresponding level funds an audit institution and its finance and budget department decides the audit institution's budget and spending (Xiang, 2002). This funding mechanism has a negative impact on the independence of an audit institution as the department that budgets for the audit institution as well as approves its spending could be an auditee at the same time.

Performance auditing education and staff training

Performance auditing is a part of public administration. However, not many public administration programs in the U.S. teach about performance auditing. It is unique that China has a college, Nanjing Audit Institute, specializing in audit education. It is very exciting to see how performance auditing can fit in along with other majors, such as economics, law, public finance, and business administration.

Conclusion

In this article, we have shown that auditing has endured for centuries and that performance auditing is experiencing a somewhat parallel development in both the United States and China. This is because accountability for large and powerful government organizations has become more important as the

problems the governments are created to solve become more complex. The need to create government organizations with sufficient power to solve problems while being held true to the purposes for which they were created is fundamental in human societies. Despite differences in culture and political organization, performance auditing has grown and developed because it provides an institutional means for addressing this fundamental need.

The principal lesson drawn from this comparison is that the problems and conditions that lead to the development of performance auditing transcend cultural and political differences. In the U.S. performance auditing may be slightly more fully developed, but it is certainly not a mature discipline fully integrated in the administrative apparatus of government. In China the size of the country and the rapid pace of economic change and growth pose enormous challenges for public administration and as performance auditing develops in that environment there will certainly be lessons learned that auditors in the U.S. can benefit from. Finally, as we have shown, the central challenges facing performance auditing are similar in each of the two countries. There are clearly lessons for each to learn from the other.

Figure 1 External Performance Auditor under the Legislative Body

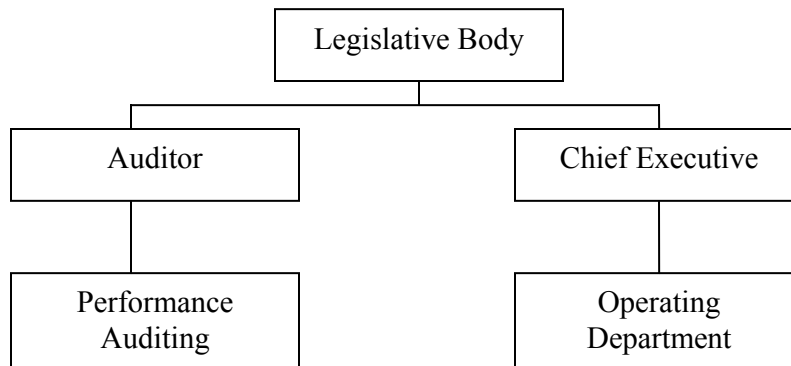


Figure 2 Internal Performance Auditor under the Chief Executive

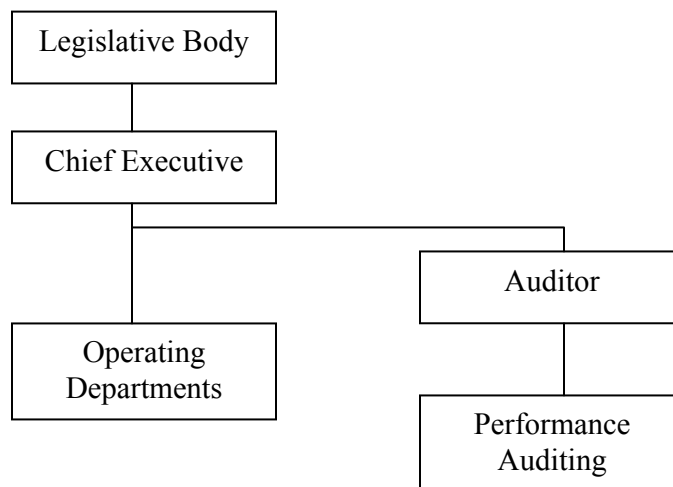


Figure 3 Internal Performance Auditor under the Controller or Finance Director

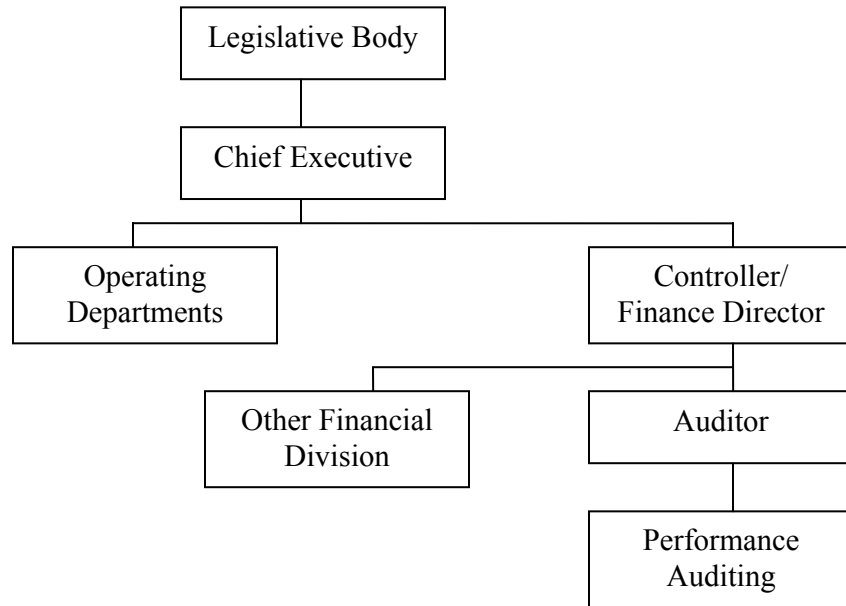
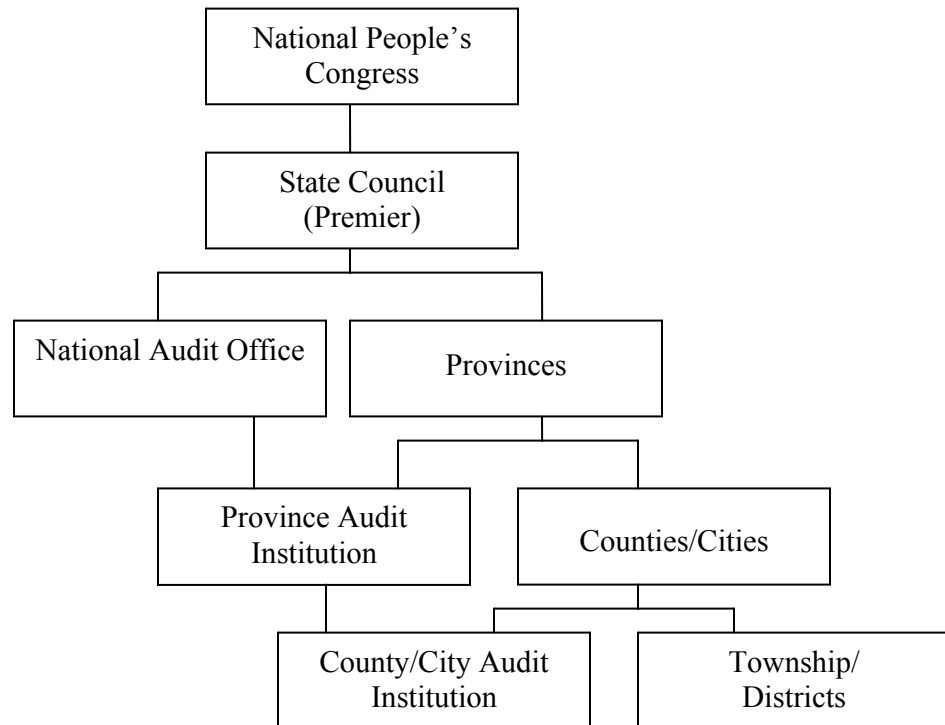


Figure 4 Organizational Structure of Auditing Institutions in China



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Morality Policy and Unintended Consequences: China's "One-Child" Policy

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Abstract: The ability of government to change human behavior by altering policy has severe limitations. Nowhere are these limitations more evident than in the area of fertility policy and sexual behavior. This paper considers the impacts of China's restrictive population policy with regard to two dependent variables. First, we attempt to explain the impact of the "one child" policy on population growth. Secondly, we examine the effect of the policy on an unintended consequence: the sex ratio, or the imbalance between males and women in Chinese society. We utilize a time series, cross-sectional (TSCS) research design for 31 Chinese provinces and municipalities for the years 1996-1999.

We consider the Chinese experience within the theoretical framework of morality policy and argue that, while China has been remarkably successful in lowering the growth rate of its still escalating population, the policy has had the unanticipated and harmful effect of an increasingly unbalanced sex ratio. While many Chinese have become convinced of the advantages of smaller families, their preference for sons has created a gender imbalance in the marriage market which potentially may have severe consequences for the future of Chinese society. We discuss these implications and argue that given the strong Chinese preference for sons, especially in rural areas of China, the government is now facing a new challenge in its effort to achieve a gender-balanced society.

Of the infinite number of public policies with which government concerns itself, one of the most difficult and invasive is fertility. Whether one considers abortion policy in the United States, contraception policy in India, or the many attempts by the former Communist nations of Eastern Europe to stimulate fertility, government has struggled to achieve its policy objectives because of the difficulty in changing sexual behavior. Often, government attempts to regulate fertility either have failed or resulted in unintended consequences. For example, failure of conservative governments to support contraception has resulted in increased abortion rates, while restrictive laws in the U.S. have apparently not altered abortion-seeking behavior (Meier et al., 1996).

The purpose of this article is to examine some of the consequences of China's efforts to limit the size of families. The "one child" policy went into effect in 1979 and has been credited by the government and by Western scholars with a slowing of the rate of population growth (Population Census Office, 2002; Information Office of the State Council, 1995; Family Planning Commission of China, 2001; Rosenberg and Qichen, 1996; Feeney and Feng, 1993; Scotese and Wang, 1995). But some of the long-term consequences of the policies have not been analyzed. Nor is it clear in what parts of the nation that the policy has achieved the most success. We utilize a pooled time series, cross-sectional (TSCS) design to examine the impact of the policy on two important dependent variables: the birth

rate and the sex ratio, utilizing data from the 31 Chinese provinces.

With regard to the birth rate, the need for China to control its population is obvious if the nation is to transform itself into a modern industrial power. But the policy of one child is unevenly enforced, particularly in rural areas and in provinces with heavy concentrations of minorities. In addition to policy enforcement, we are interested in determining what other factors are influential in slowing the birth rate.

Considering the second dependent variable, one of the less fortunate aspects of the policy has been an unbalanced sex ratio at birth: a disproportionate number of boys are born and retained by families, as opposed to girls. Because of the traditional Chinese family preference for boys, it has been documented that the differentiation in the birth rate between the sexes has grown (Graham, Larsen, and Xu, 1998). With the development of new technology such as ultra-sound techniques, which have become more widely available throughout China, it is possible for couples to monitor the gender of the fetus and abort it if it is not of the desired sex. Other problems associated with an increasingly problematic sex ratio include the possibilities of the abandonment of female children, infanticide, and adoption of girls out of country. The unbalanced sex ratio at birth may lead to an unbalanced ratio later in the larger society. This problem has important implications for the future of Chinese society. The demographic literature already speaks of an imbalance in the marriage market in addition to the

already established inferior treatment of girls and women (Guo and Deng, 1996; Li, Tuljapurkar, and Feldman, 1995; Xie, 1994; Tuljapurkar, Li, and Feldman, 1995; Johannsson and Nygren, 1991).

We begin by explaining Chinese efforts to limit family size within the context of the one-child policy as it is actually practiced. We then describe the policy theoretically within the context of “morality policy.” After formulating hypotheses, based upon theories of choice developed out of the concept of morality policy, we test a model which explains variation in birth rate and sex ratio across Chinese provinces using a time series/cross sectional (TSCS) model.

Family Planning Policy in China

Being the most populous country in the world, China has developed a well-defined policy to regulate population growth. As early as the 1950s, the incompatibility between unchecked and accelerated population growth and planned economic development began to gain the attention of the government. After some experimentation with pilot family planning projects during the 1960s, the control of population under central state guidance became much stronger during the 1970s. By that decade, China’s population had already exceeded one billion (more than 20 percent of the world’s population) and was about to enter another “baby boom” period. It was toward the end of the decade that the government made a decision to keep the population within 1.2 billion by the end of the century.

The revised constitution in 1978 included the statement that “the state advocates and encourages family planning,” and, in 1979, a “one-couple, one-child” policy was approved by the second session of the fifth National People’s Congress. The policy basically called for the achievement of “later...and fewer” births. Late marriage along with delayed childbirth was encouraged as was the spacing of children at intervals of three to five years. But most important was the mandate for a fewer number of births as decreed by the “one-couple, one-child” provision of the law. In addition to concern for population size, the law was also motivated by the desire for healthier children; for instance, close relatives and persons with congenital and genetic diseases were prohibited from marrying. In summary, China’s population policy can be described as “the control of population quantity, the improvement of population quality, and the mutual adaptation of population and socioeconomic development” (Qian, 1983: 301).

In contrast to popular understanding, the one-couple, one-child policy is not a compulsory single-birth law to be enforced throughout China without regard to local circumstances. For instance, one unique feature is the treatment of national minorities. Besides the Han nationality, there are 55 ethnic minorities in the nation which are distinguished by language, custom,

religion, and historical and cultural background. While imposing a reduction in the growth rate of the Han majority, family planning policy favors an increase of at least some ethnic minorities (Hardee-Cleaveland and Banister, 1988). Another feature concerns the different treatment in urban as opposed to rural households. In most rural areas, the family is the basic unit of small-scale agricultural production. Rearing children, especially males, is very important as it brings new labor to a family and benefits its economic welfare. Therefore, the control of family size is more lenient for rural households (Hardee-Cleaveland and Banister, 1988; Chang, 1987).

Implementation of Family Planning Policy

The Chinese government states that its family planning policy combines the voluntary spirit of the masses with state guidance. The government directs national population development through population planning “in accordance with socio-economic development and the peoples’ living standard and psychological acceptance,” and it has developed a complex but systematic network to implement the policy. Each year, following discussions with individual provinces, the national government sets provincial targets consistent with the broader national goal of keeping the population within 1.2 billion. The provincial population targets are then encompassed into the state’s comprehensive economic and social development plans. These provincial plans are distributed to lower levels of government, where they are specified as task assignments and work targets to be achieved by local government leaders and family planning administrators (Hardee-Cleaveland and Banister, 1988).

To implement the policy, the state conducts propaganda and educational work to enhance citizens’ understanding of the need for family planning and its benefits in relation to the interests of the individual, the public, and the nation as a whole. Instruction on the techniques of contraception is provided. In addition, each province has a system of rewards and penalties for those complying with or disregarding family planning regulations. Couples who already have one child are eligible to sign a one-child pledge and receive a single-child certificate that entitles them to certain financial rewards. On the other hand, those who violate family planning policies and have more pregnancies and children than allowed undergo administrative interventions and economic sanctions. For instance, those who disobey family planning regulations may be given a warning from the Communist party, be deprived of the opportunity for promotion, or even be discharged from their position. Workers may suffer from salary reductions or even cancellation of employment contracts; farmers may be fined.

Over the past two decades, family planning policy in China has been implemented continuously (although it may differ in its degree over time and location), and has achieved a remarkable impact.

According to the government, the birth rate and natural growth rate have dropped respectively to 17.7 per thousand and 11.2 per thousand in 1994 from 33.43 per thousand and 25.83 per thousand in 1970. But as stated in a report from the State Family Planning Commission of China (2001), the absolute number of births remains high, especially in rural areas. Along with the continued high although reduced numbers of births, other social problems such as the unbalanced sex ratio have arisen.

Fertility Control as Morality Policy

In terms of Lowi's (1964) typology of public policies, morality policy most often would involve the "redistributive" aspects of policy in that government attempts to alter deeply-held social values (McFarlane and Meier, 2001: 3).¹ In regulating fertility, government has an especially arduous task because the demand for sex is inelastic. While demand may vary somewhat depending upon age and personal desire for sex, individuals engage in this behavior, sometimes for procreation but primarily for fulfillment in a relationship or simply for personal enjoyment.

But the interesting moral value which is present in China and largely absent in the U. S. and other Western cultures is the strong Chinese preference for sons. Confucianism continues to exert a strong influence and instills male superiority. Families still hope for the birth of sons in the face of severely limited opportunities to procreate, under the present policy (Xi, 1994). Sons are viewed as being crucial to the perpetuation of the family and are vital in the care for elderly parents. In contrast, especially in rural areas, daughters are perceived as being members of the in-laws' families and once marriage takes place, they are of limited economic or social value.

McFarlane and Meier (2001: 121-130) make a strong argument that in the case of fertility control in the U. S., women who want abortions will be successful in procuring them regardless of state efforts to limit the procedure. In a similar vein, we believe that demand for sons is inelastic in China and argue that couples who desire to have male offspring will go through considerable risk to have one. Still, in contrast to McFarlane and Meier, we believe that the literature on China provides propositions which suggest that the elasticity of demand for sons would vary, depending upon factors such as a province's level of economic development, density, urbanization, present level of population growth, level of available health care, demand for school enrollment, and the educational level of women, among other factors.

Developing Hypotheses

Utilizing a comparative framework, we present a "filtering model" in order to describe the determinants

of policy outcomes, either intended (birth rate) or unintended (sex ratio), in 31 provinces of China (to include municipalities). The subfield of comparative policy analysis is concerned with explaining variation of policy outcomes across large numbers of states or localities. With the influence of Dye (1966), Sharkansky (1970), and Hofferbert (1974) a basic policy model was developed, which presented a sequence of related sets of variables. These include the broadest background variables which capture historical and geographical environments of the policy, on through socioeconomic attributes of the population, mass political attitudes, and elite behavior, among other factors. Although interest in this approach has declined somewhat in the U.S., the Dye-Sharkansky-Hofferbert (DSH) approach is still popular in OECD nations, particularly in explaining variation in social welfare programs.

The "filtering" model presented in **Figure 1** is actually a reduced form of a DSH-style study. In this particular context, the provinces have been strictly mandated to implement family planning policy for decades. Variation in political attitudes are unmeasurable but can be ruled out as a factor because officials at each level have the incentives to do their best at enforcement, since achievement of this policy is considered one of the most important criteria of their administrative capability and is closely tied to future promotion. Elite behavior or policy innovation can likewise be eliminated as a concern because of the frequent exchange of both information and personnel among the different provinces. Consequently, given that the provinces are all informed and the cadre consists of loyal and experienced policy makers, the internal characteristics of the provinces to include physical characteristics, socioeconomic attributes, and different levels of policy strictness due to minority composition should be able to explain a large amount of variation in both the birth rate and sex ratio.

The model posits that a province's fertility behavior is a product of several different factors. The first set of variables concern the physical aspects of a province. These natural factors tend not to vary over time and cannot be manipulated by policymakers. Included in these characteristics are elevation, the amount of rainfall, and whether or not a province is seaside or interior. Intuitively, the impact of physical characteristics on fertility behavior can go through several different channels to include biological characteristics, living style, wealth, or social norms. Although not all of these factors can be measured comprehensively, controlling for variation in physical conditions is helpful in assessing the impact of socioeconomic variables as well as policy implementation.

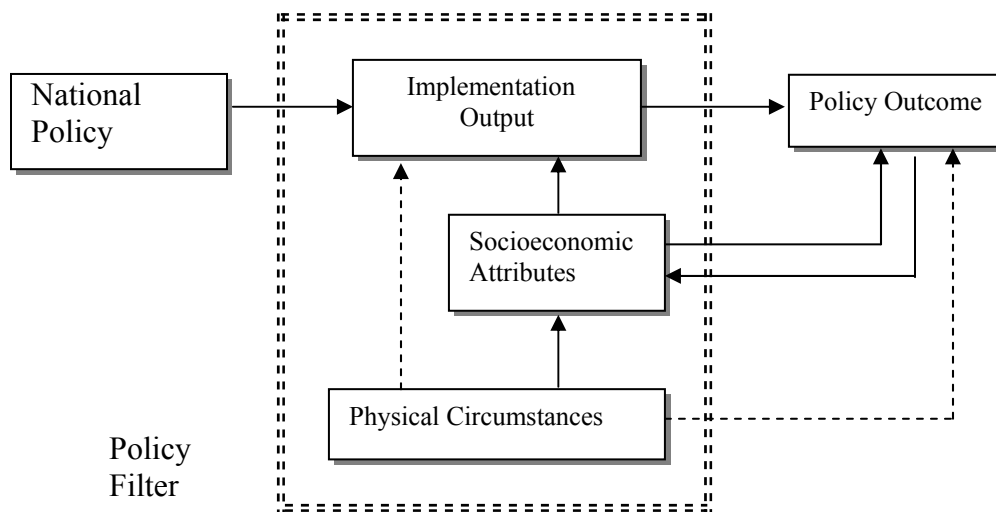


Figure 1: The “filtering” Model of Family Planning Policy Implementation

A second set of predictor variables is socioeconomic. These include population density, the gross domestic product (GDP) per capita, the percentage of GDP produced by the primary industry, cultivated area per capita, the percentage of illiterate women, the volume of international trade per capita, health resources as measured by hospital beds or health personnel per capita, and whether or not a unit of analysis is a municipality such as Shanghai or Beijing.

In general, we hypothesized that the more concentrated the density within a given province, the greater would be the pressure to limit the number of births and the less likely that the sex ratio would emerge as a problem (Cheng, 1992). Survey work has demonstrated that preference for sons has been declining primarily in urban areas (Zhang and Sturm, 1994). In addition, we believed that the government and party are in a better position to control the population through various inducements and penalties in more urbanized areas (Yi and Vaupel, 1989).

We also considered the gross domestic product (GDP) adjusted for the population, and the proportion of the province’s economy which is dominated by the primary industry (in China this is a measure of agricultural dominance due to the diversity of the economy in more urban areas).² Low levels of industrial and other economic output are indicative of a more agricultural society where there may be more dependence on sons. Likewise, the domination of a single industry in a province limits diversity and restricts economic opportunity beyond an agricultural existence (Yang, 1993). In areas with a basic economy and limited economic opportunity, we hypothesized that preference for sons would be higher. Because of this preference, we believe that couples will take more risks

to give birth to sons, even if it is a second child; consequently, the lower the economic development, the higher the sex ratio. Finally, in provinces which are highly agricultural (as measured by the percentage of land that is cultivated), we would expect traditional Chinese preferences to be present: there should be a high birth rate, and, because of the effort to have sons, the sex ratio should exhibit an imbalance.

Other factors which may impinge on the birth rate and sex ratio are the characteristics of the women themselves in a given province. Education, as measured by the percentage of illiterate women, could be a primary determinant of reproductive behavior. Research has shown that the sexual behavior of educated Chinese women differs a great deal from their less educated counterparts. For example, they are more likely to have pre-marital relations and have a fertility rate which is far lower than the uneducated (Wang and Yang, 1996; Zeng, 1994). In addition, it is likely that they will be somewhat more relaxed in their preference for sons. In terms of the McFarland and Meier terminology, the demand for sons becomes more elastic with educated women, probably because they rely upon their greater achievement to attain status in society. Thus, in areas where the percentage of illiterate women is lower, we expect a more balanced sex ratio as well as a lower birth rate.

The extent to which a given policy is obeyed may be partly a function of the extent to which the Chinese are exposed to outside contacts, especially the Western world. The amount of international trade (imports and exports combined) may be a useful predictor in that such commerce not only involves an exchange of goods and capital but also information, communications, and exposure to ideas outside of one’s culture. We hypothesize the greater the international

trade in a given province, the greater the probability of families with balanced genders.

Health facilities and personnel also figure in the calculation to have another child. One might think that where health resources are the greatest, in proportion to the population, couples would be more likely to have additional children. This, however, may not be the case in China. In developed metropolitan areas such as the four municipalities – Beijing, Shanghai, Tianjin, and Chongqing, where health resources are most accessible, families generally do not have the incentive to have more children, neither do they have a strong son-preference, due to different social norms and the urbanized lifestyle.³ Therefore, the birth rate in these areas tends to be low, and sex ratio at birth is more balanced. In rural areas with fewer resources, ironically, families would prefer to have more children because of labor-intensive, family-based agricultural production. Hence, violations of the one-child policy have been more common. The issue of the sex ratio is also complicated in this situation. If health facilities are so scarce that prenatal sex determination such as ultrasound B techniques are not widely accessible, the sex ratio remains balanced no matter how many children a family would have. In other rural areas, where health facilities are better and the techniques are more available, the possibility is much greater that some families will abort female fetuses so as to insure that their second child is a son (Gu, 1995). As a result, the sex ratio at birth would be raised. Overall, we expect that the existence of health facilities would be negatively correlated with the birth rate. But, on the other hand, the relationship between health facilities and the sex ratio may be much more complicated – the sex ratio may be relatively low at both ends of a distribution with the greatest imbalance occurring in provinces with a moderate number of health facilities.

A final predictive variable outside of physicality and socioeconomic characteristics is a policy index.⁴ The policy index is an indicator of how strict the family size is controlled and how vigorously the Chinese government enforces sanctions against couples who violate the reproductive policy. In provinces where the policy is enforced strictly, the birth rates are expected to be lower, while sex ratios, on the other hand, may be higher as an unintended consequence of the policy implementation.

Data and Methods

Data were gathered from the *China Statistical Yearbook* for the years 1996-1999. The study design consists of a pooled time series, cross-sectional (TSCS) analysis of 31 provinces for four years for a total of 120 observations.⁵ Because the data are not consistent in that many important variables are omitted prior to 1996, we are limited to these four years.

Methodologically, the TSCS design presents special problems in statistical estimation that are not present in ordinary least squares (OLS) regression. The

TSCS can suffer from the problems of autocorrelation which is a common feature of univariate time series analysis (McCleary and Hay, 1980), simultaneously, there can be problems of heteroskedasticity which are peculiar to the particular panels (provinces in this case) (Stimson, 1985). There are a number of strategies to cope with these problems. One such approach is to utilize generalized least squares (GLS) (Parks, 1967; 1985; Greene, 2000). This method involves correcting for both contemporaneous and serial correlation of errors. But this strategy has been criticized in that the standard errors which are generated through GLS tend to be grossly deflated; a researcher may conclude falsely that a variable is significant when in fact it is due to statistical artifact. In addition, it has been asserted that it is not possible to employ GLS in TSCS analysis reliably when the number of cross-sectional units exceeds the number of time points. In the present instance, the number of time points is small and the cross-sections greatly exceed them (Beck and Katz, 1995) so another strategy was deemed more appropriate: generalized least squares regression (a Prais-Winsten solution) with panel-corrected standard errors (STATA, 2001). Since our time frame is quite short ($t = 4$), it is clear that our preference should be to employ the GLS with panel-corrected standard errors.

Data Analysis

We attempted to estimate the birth rate and sex ratio of the Chinese provinces for the years 1996-1999, utilizing generalized least squares regression, correcting with the Prais-Winsten technique in the face of auto-correlation. But we were unable to utilize any estimation technique initially because of the high multicollinearity among the predictor variables, especially in the socioeconomic category. In particular, there were high correlations between variables such as GDP per capita, the amount of land being cultivated, and the percentage of illiterate women in a province. Thus, it was difficult to untangle the effects of these variables without combining them in some fashion.

Principal Components Analysis

Principal components analysis has the advantage of reducing a large number of variables into a smaller number of factors. While one loses the information that can be detected from the individual variables, the principal components technique, combined with an orthogonal rotation, makes the generated factors uncorrelated with each other by definition. Once the factors are derived and found adequate, factor scores can be generated which makes it possible to utilize the factors in combination to predict the dependent variable. We performed two principal component analyses. The first consisted of a confirmatory factor analysis which is presented in **Table 1**.⁶ Confirmatory analysis is used when one is reasonably certain that predetermined variables fit together in a single dimension. Such seemed to be the case with the variables which measure

the physical aspects of the provinces. Thus, province elevation, precipitation, and seaside/inland location were analyzed to determine if they fit a single

dimension. The data presented in **Table 1** indicate that this is the case.

Table 1

**Principal Components Analysis of Natural Characteristics of the Provinces
Factor 1
(Natural Characteristics)**

Variable	
Elevation	-.714
Precipitation	.729
Seaside Location	.664
<hr/>	
Eigenvalue	1.48

The sole Eigenvalue of 1.48 for the single factor generated in the analysis indicates that the three variables are part of a unique dimension. The negative coefficient for elevation, combined with positive estimates of precipitation and seaside/inland location suggest that the less elevated provinces tend to be located nearer to the sea and to experience greater amounts of rainfall. The loadings for the three variables for this factor were converted into factor scores to be utilized in the multivariate analysis.

The second principal components analysis was exploratory. When one is not exactly certain of the relationship among a complex number of variables, exploratory factor analysis is typically employed. In the case of the socioeconomic variables, we were uncertain as to the how the variables would be related to each other given their greater number and complexity. Accordingly, we employed a second principal components analysis which we report in table 2.

Table 2

**Principal Components Analysis of the Socioeconomic
Characteristics of the Provinces
(Rotated Factor Loadings)
Factor 1
(Industrial)**

Variable	
Municipality	.889
GDP per capita	.858
Density	.704
Cultivated area per capita	.045
Percentage of illiterate Women	-.498
Imports and exports per capita	.867
The primary industry (agriculture) as a percentage of the GDP	-.800
Hospital beds per capita	.786
Health personnel per capita	.873
<hr/>	
Eigenvalue	5.33

An initial solution demonstrated two factors discerned from the socioeconomic variables. However, a scree plot diagnosis suggested that only one factor be kept in the analysis. The factor might be termed “industrial” as the highest loadings indicate a dominance of municipalities (.889), a high amount of GDP per capita (.858), a dense population (.704), a high volume of imports and exports per capita (.867), a high concentration of hospital beds per capita (.786), a large number of health personnel per capita (.873), and, finally, a low percentage of the GDP being devoted to the primary industry (-.800). Stated differently, there is an indication of considerable economic diversity.

Time Series/Cross Sectional Analysis

The regression equation used to estimate the variation in the birth rate and the sex ratio in China’s provinces is the following:

$$Y = b_0 + b_1 (\text{NATURAL}) + b_2 (\text{INDUSTRIAL}) + b_3 (\text{ENFORCEMENT}) + e$$

where NATURAL is equal to the principal component measuring the physical characteristics of the province, while INDUSTRIAL is equal to the variables which load highly on the socioeconomic dimensions of the provinces. Examination of the data reveals that the NATURAL variable is highly correlated with the economic development levels of the provinces, with the commonly perceived “poorest” provinces such as Tibet and Qinghai having the lowest scores. The “richest” locations such as Shanghai and Jiangsu possess the highest scores. This suggests that the disparities of economic development among the provinces in China are determined in great part by their different levels of natural resources. The INDUSTRIAL variable, on the other hand, seems to reflect more of the characteristics of socio-economic development in a province than its absolute development level. Provinces that are populous, relatively poor, and dominated by agriculture (e.g. Guizhou and Anhui) have lower INDUSTRIAL scores than Tibet, which is commonly perceived as the “poorest” but does not have a polar position in the agricultural-industrial continuum. Finally, ENFORCEMENT is measured by the policy index which indicates the degree to which the Chinese government implements the one-child policy.

Results of the Prais-Winsten estimation are presented in **Tables 3** and **4**. Analyzing the birth rate first (**Table 3**), it is possible that the birth rate may fluctuate over time. In the Chinese case, we expect there to be some natural decline in the birth rate as a result of the one-child policy. In other words, there should be some continuing decline in births as time passes. In order to investigate this possibility, we established the years 1997, 1998, and 1999 as dummy variables and used 1996 as a reference category against which the

other years could be compared. If the birth rate is continuing to decline in response to the one-child policy, we should observe a decline in all years following 1996. **Table 4** indicates that this is the case as the coefficients for the three dummy years are negative and significant.

With the factor of time controlled, it is obvious that all the predictor variables impact the birth rate and in the hypothesized direction. The coefficient for NATURAL is negative, indicating that in areas with larger amounts of rainfall, located near the coast with low elevations, there tend to be lower birth rates. The estimate for the INDUSTRIAL variable demonstrates that in provinces which are primarily rural and agriculturally-based, government has a difficult time controlling the birth rate; conversely, birth rates tend to be lower in urban and industrialized areas, where couples are more apt to comply with officials who enforce the policy, either out of choice or because of fear of sanction. Considering the high loadings of individual socioeconomic variables in INDUSTRIAL, the results suggest that the birth rate, as is hypothesized, tends to be lower in municipalities, and provinces with higher population density, higher GDP per capita, lower percentage of GDP from the primary industry, higher concentration of hospital beds per capita and health personnel per capita, and lower percentage of illiterate women.⁷

Finally, the data indicate that enforcement has an important impact on the birth rate. As expected, the greater the degree of policy enforcement, the more couples will be inclined to limit the size of their families. Overall, the fit of the model is very good as illustrated by the multiple R² of .935. The Rho statistic (.869) indicates that the amount of autocorrelation is substantial. More important than increasing the amount of variance explained by the model, by including the autoregressive component, we are able to insure that the estimates that we attain are not significant by virtue of inflated standard errors which would not be controlled by a standard OLS estimation.

A somewhat different picture is evident with regard to the sex ratio (**Table 4**), when it is analyzed with the same equation. First of all, the coefficient for NATURAL is not significant, even though the variable is related to the overall economic development of the provinces. The variable of primary impact is INDUSTRIAL, which again depicts the characteristics of economic development within the provinces. The table indicates that the sex ratio is significantly lower in provinces where there is a higher level of urbanization and a lower concentration on agriculture. This is congruent with our expectations, as citizens in more urbanized and industrialized areas have a lower preference for sons and are less likely to conduct sex-selective abortions.

If the unbalanced sex ratio is an unintended effect of policy implementation, we would expect it would be greater in provinces where enforcement is stricter. The coefficient for ENFORCEMENT is in the

expected direction (positive) but is not significant. The insignificance may in part be caused by a measurement problem — if sex ratio at birth were considered as opposed to sex ratio for the population at large — it might be easier to assess the impact of enforcement more directly. Changes in sex ratio at birth in any given year would cause a much smaller change in the sex ratio at large.⁸ Second, the migration pattern and death rates of women and men may be quite different, and these could also lead to changes in the sex ratio at large.

The most striking finding is, nevertheless, indicated by the dummy variables 1997, 1998, and 1999. **Table 4** demonstrates that the sex ratio increases every year with growth greater than 2 percent within the four years. The overall fit of the model is very good with a multiple R^2 of .977. Apparently, the sex ratio rises simultaneously as the birth rate decreases. This suggests that in terms of morality policy the intended impacts which the Chinese government produces with regard to limiting births has had the ironic and unintended consequence of accelerating an imbalance of the sexes. While couples are somewhat elastic in their demand for the number of children, they are less flexible when it comes to the gender preference of a child.

Sex Ratio and the Socioeconomic Variables

Gu and Roy (1995) argue that sex ratios cannot be explained by a simple linear model which is based on the supposition that rural areas will have unbalanced ratios and urban provinces more balanced ones. Instead, these scholars assert the dynamic component of fertility behavior in China, holding that what might be more important is the actual pace of socioeconomic development as well as “accelerated fertility transition(s)” in explaining an unbalanced ratio. Provinces at the extremes, with fertility patterns already in place, have the best chances for an even ratio. The scholars indicate that the provinces with the lowest sex ratios tend to be those which are highly urbanized, such as Shanghai and Beijing, and, at the other extreme, areas such as Tibet and Xinjiang, which are rural in character. As a final step in this analysis, we attempted to uncover more fully the exact circumstances under which an unbalanced sex ratio is likely to occur. To accomplish this, we decomposed the relationship between the ratio and the variables which comprise the INDUSTRIAL factor.

Table 3

**Estimates of Regressors with Chinese Birth Rate
(Praxis-Winsten Solution with Panel-Correlated Standard Errors)**

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>Z</u>	<u>prob.</u>
Natural Characteristics	-1.70	.106	-16.02	<.001
Industrial	-1.94	.249	-7.81	<.001
Enforcement	-3.76	.179	-20.97	<.001
1997 dummy	-.388	.009	-39.41	<.001
1998 dummy	-.813	.017	-48.50	<.001
1999 dummy	-1.38	.018	-75.31	<.001
Constant	22.03	.309	71.27	<.001

$R^2 = .935$
 Prob. < .001
 Rho = .869

Table 4

Estimates of Regressors with Chinese Sex Ratio
(Praxis-Winsten Solution with Panel-Correlated Standard Errors)

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>Z</u>	<u>prob.</u>
Natural	.28	.221	1.25	.212
Industrial	-1.91	.296	-6.46	<.001
Enforcement	.490	.521	.930	.350
1997 dummy	.581	.012	49.66	<.001
1998 dummy	.650	.020	32.44	<.001
1999 dummy	.870	.022	39.50	<.001
Constant	102.04	.917	111.32	<.001

R² = .977

Prob. <.001

Rho = .394

As the scattergrams presented in **Figure 2** show, the general patterns, as suggested by Gu and Roy, can be observed. Specifically:⁹

1. The sex ratio reaches its peak in provinces with relatively low population density and GDP per capita. In areas with extremely low population density and GDP per capita, such as Tibet and Qinghai, however, the sex ratio is very low.
2. In provinces where agriculture takes up a higher percentage of the GDP, the sex ratio is

higher, but then it drops in provinces which are most agriculturally-based.

3. The relationship between sex ratio and women's education level presents a curvilinear pattern as well. The sex ratio is the highest in provinces with moderate percentage of illiterate women.
4. The provinces which have moderate accessibility to health facilities have the highest sex ratio.¹⁰

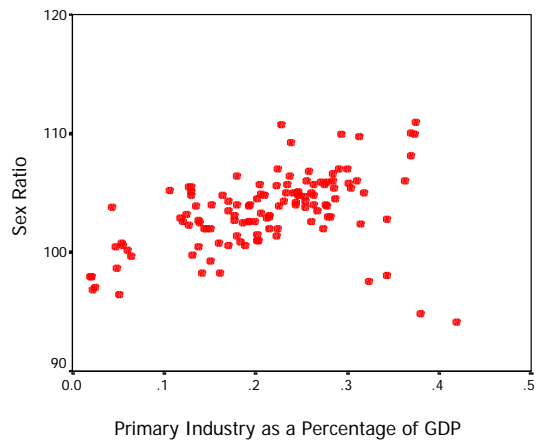
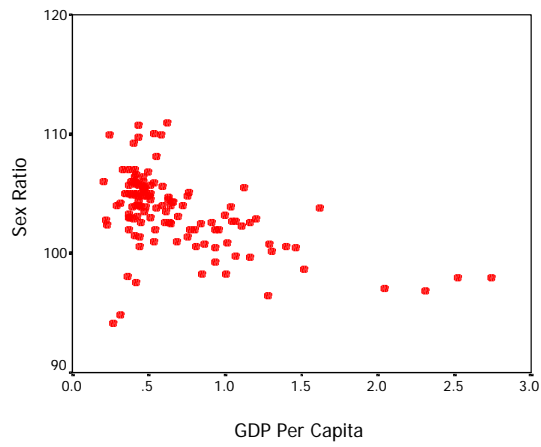
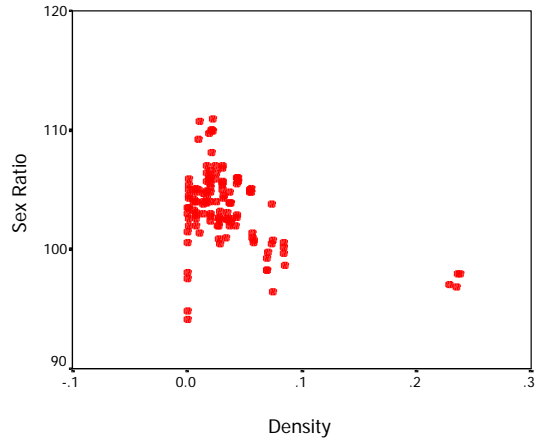


Figure 2-1, 2-2, and 2-3: Sex Ratio with Population Density, GDP Per Capita, and Primary Industry as a Percentage of GDP

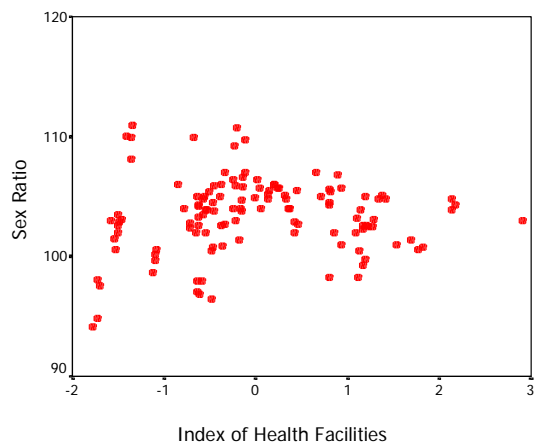
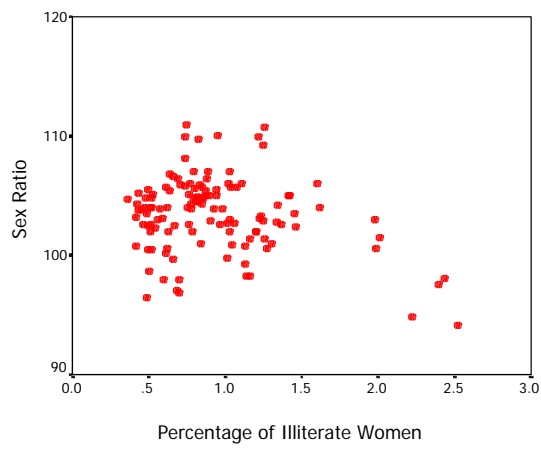
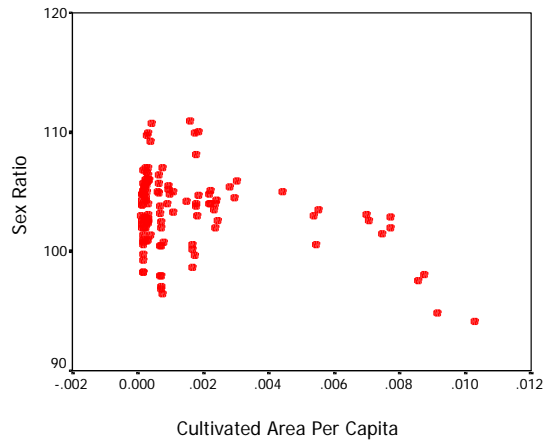


Figure 2-4, 2-5, and 2-6: Sex Ratio with Cultivated Area Per Capita, Percentage of Illiterate Women, and Index of Health Facilities

In short, there is no linear relationship between the sex ratio and the set of socioeconomic variables which compose INDUSTRIAL. In most urban and industrial areas, such as Shanghai and Beijing, it is most likely that couples are less tied to the traditional preference for sons, so the sex ratio would remain natural even when the birth rate is lowered. In the most

remote and undeveloped provinces such as Tibet and Qinghai, on the other hand, the sex ratio is still balanced either because of the less strict policy enforcement or the lack of new technology such as ultra-sound techniques.

A summary of our major findings is presented in **Table 5**.

Table 5

Summary of Findings

Variables	Birth Rate and Sex Ratio
Natural Resources	<ul style="list-style-type: none"> ● The birth rate tends to be lower for more resourceful provinces located near the coast, with lower elevations and larger amounts of precipitation. ● The sex ratio is higher for those areas as described above, but the result is not statistically significant.
Socioeconomic Conditions	<ul style="list-style-type: none"> ● The birth rate tends to be lower in more industrialized areas, such as the municipalities, and provinces with higher population density, higher GDP per capita, lower percentages of GDP from the primary industry, higher concentrations of hospital beds per capita and health personnel per capita, and lower percentages of illiterate women. ● The sex ratio tends to be lower for those areas as described above. Careful examination, however, shows that the relationship is non-linear. The unbalanced sex ratio becomes most serious in provinces more agriculturally based and with middle-level socioeconomic development.
Policy Enforcement	<ul style="list-style-type: none"> ● The birth rate tends to be lower where population control is more strictly implemented. ● The sex ratio tends to be higher where population control is more strictly implemented, but the result is not statistically significant.
Year Dummies	<ul style="list-style-type: none"> ● The birth rate significantly decreases during the study period. ● The sex ratio significantly increases during the study period.

Conclusions

The Chinese government has been successful to a large extent in decreasing the rate of population growth, though the problem is far from solved. The enormous population in proportion to the amount of resources necessary to achieve a prosperous and modern society continues to make economic progress lag. On the other hand, this somewhat successful policy appears to have an unfortunate unintended consequence of a severely unbalanced sex ratio which has worsened over the past several years. This sex ratio problem is unlikely to occur in provinces with either extremely high or low birth rates; rather, like the relationship between sex ratio and the different components of INDUSTRIAL, the relationship between birth rate and sex ratio is presented convincingly as a curve (see **Figure 3**). In areas with

high birth rates and relaxed policy enforcement, the sex ratio problem takes care of itself as families have more freedom to create the family composition they prefer. In the low birth rate areas with strict enforcement, couples seem to settle for the political and social norm of a smaller family, regardless of the gender of the child.

The sex ratio problem is likely to become more serious in the “middle” provinces where individuals struggle with the desire to have sons coupled with the political requirement of the state to limit families. Men may find it increasingly difficult to find spouses and to start new families. A legitimate question is why the unintended consequence exists despite the success demonstrated in family limitation.

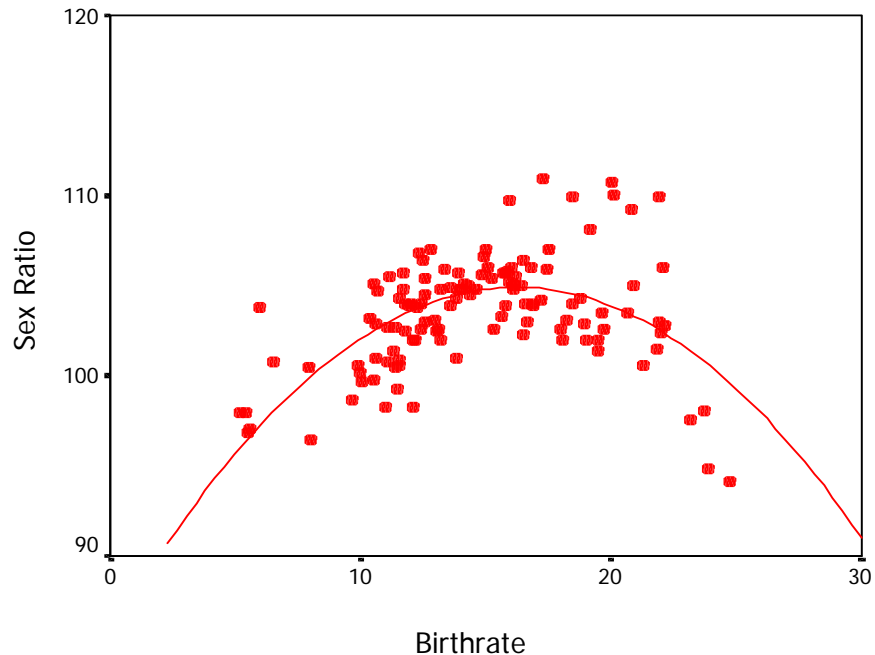


Figure 3: The Curvilinear Relationship between Sex Ratio and Birth Rate

We believe that the unanticipated consequence of an unbalanced sex ratio relates to the concept of morality in the public policy setting. The Chinese government has been successful in lowering the rate of population growth because it has offered alternatives to couples in terms of contraception and abortion to limit families. Through propaganda as well as the experience of living in a resource-scarce society, some Chinese have come to appreciate the value of a small family. This approval has accelerated as China has developed commercially and industrially. But government has not been able to address the very deep and traditional preferences many families have in terms of wishing for sons. While some of the reason for preferring sons is economic, it is also a widely held social norm. Couples are given very limited opportunities to have children and when the gender of a baby is not one they care for, they will take steps to alter gender, regardless of enforcement.

One approach out of this dilemma is that in the long run, the imbalance of genders may create a market to solve the problem; in other words, girls may become more valuable should there be fewer available for marriage. But the market solution creates several sociological problems which violate traditional Chinese culture. A market solution assumes that two individuals enter a marriage arrangement to start a completely new family. But especially in rural areas, young women will be absorbed by the male's family and a corresponding shift of labor to that family will occur. Western wisdom would assume that in a female-scarce society some men

would be willing to be absorbed by the young woman's family if the competition of being married is very high; however, Chinese culture would treat such maneuvering with deep disdain.

A second difficulty with the market solution is that given the value placed on the different genders, females are more likely to be "upward moving" in Chinese society than are men. Rural women are far more likely to marry urban males than the reverse; likewise, females from poor areas are more likely to marry wealthier men than the other way around. Thus, the negative effect of the unbalanced sex ratio will be directed to poor areas where many men of marriage age cannot afford to get a spouse. Perhaps because of this problem, there have been some reports of illegal trading of young women in rural China. Some women may be kidnapped or forced into an involuntary marriage and lose their freedom for years. All of these undesirable externalities may work to block the market solution in the Chinese case.

Notes

¹As McFarlane and Meier (2001:3) indicate, morality politics most frequently address social relationships but have a primary concern with values. Social values were not an original concern of Lowi's typology which dealt more with the regulation of economic relationships.

²In China, the primary industry refers to the agricultural sector (including forestry and fishery); the secondary industry refers to the industrial production sector, and the third industry is concerned with the service sector.

³It has been widely reported that, as in western counties, more and more Chinese couples living in big cities like Beijing and Shanghai have chose to maintain a DINK family — “Double Income, No Kids.”

⁴Family planning policy in China allows minority nationalities to have more than one child. Thus, the more minorities in a province, the less stringent the policy control. There are four Minority Autonomous Regions in China. In addition, there are a few Minority Areas within provinces. Since the population control for those living in Minority Regions or Areas is relaxed, the policy index is coded according to the following formula.

$PI = 2 - MP$ (MP = the population in Minority Areas as a percentage of the total population of a province).

Thus, for a Minority Autonomous Region, $PI = 1$; for a province where there are no Minority Areas, $PI = 2$; for a province with some Minority Areas internal, PI ranges between 1 and 2.

⁵Chongqing Municipality was not created until 1997 and data are missing for 1996.

⁶For each province, there is little variation across the limited time period and the variables are, for the most part, permanent characteristics of the provinces. Therefore, we performed the factor analysis across all years rather than within years.

⁷The correlation between birth rate and cultivated area per capita cannot be inferred from the coefficient of INDUSTRIAL, however, as cultivated area per capita is barely loaded (0.045) in INDUSTRIAL.

⁸As an example, if the sex ratio at birth increases 2 percent (which is considered a large increase) in a particular year, given that the birth rate is 1.5 percent (if normal), the sex ratio at large would increase by only .03 percent, which is hardly detectable.

⁹There is a great deal of variation shown in these figures, because there are quite a lot of other things that influences the sex ratio. As noted above, for instance, sex ratio for the population at large, as measured in this study, is not solely decided by sex ratio at birth, an indicator which may relate to these socioeconomic variables much more directly.

¹⁰In order to improve the construct validity of the health measure, the data presented in **Figure 2-6** consists of a factored variable which is composed of:

- a. the number of health institutions per capita;
- b. number of hospitals per capita;
- c. number of hospital beds per capita;
- d. number of health personnel per capita; and,
- e. number of hospital personnel per capita.

Authors' Notes

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The MPA Curriculum Development in China: Learning from American Theories and Practices

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Abstract: As China is experiencing its dramatic transition from planned economy to market economy and undergoing its economic and political reform during the last two decades, there are many new phenomena worth studying. The emergence of Master of Public Administration (MPA) education is certainly one of them. Borrowing and learning experiences from advanced countries has been a main theme for the curriculum development for China's MPA education. Using personal experience as a graduate from a full-time MPA program in the United States and research in this field, the author discusses in this article the issue of how to learn from the American theories and practices and develop an MPA curriculum that fits China's specific political, economic and social environment. The four main areas of discussion include theory development, quantitative skills, technology training, and case study.

Current MPA Education Development in China

While the Master of Public Administration (MPA) education has more than 50 years of history in advanced western countries like the United States, it is rather new in China. The Academic Degree Evaluation Commission under the State Council of China approved the introduction of MPA degree program in China in May 1999. In 2001, 24 Chinese universities were selected to initiate the MPA degree program. Each university was permitted to have an initial class of 100 students and the nationwide enrollment was 2,400. Surprisingly, the applicants for admission exceeded 12,000 in the following year, which produced a 5:1 admission ratio nationwide. With the high demand for MPA education, the nationwide enrollment was increased by 1,000 in 2002. Most of the current MPA programs are part-time and on-job education. The selection criteria include the applicant's score on a national examination, completion of a university degree, and a minimum of four years of work experience.

The spring of public administration education in China followed the profound transitions of Chinese society from planning economy to market economy, enclosed system to open system, and unprecedented urbanization and modernization of the public service system. The approval of MPA degree in China is the most recent decision in a 20-year effort to reform and professionalize China's administrative system. China's progressing reform and opening-up drive have resulted in an increasing demand for professional public administrators. As the role of government evolves from a control orientation to a service orientation, many of the service functions are also being delegated to non-government sectors. Chinese government realized the importance of recruiting and promoting younger, better-

educated professionals to management positions in the public sector. According to the State Council of China, MPA education is designed "to meet the needs of a more modern, scientific and professional management for society, to increase the efficiency and effectiveness of serving a socialist market economy, and to improve the quality of administrative corps in the public sector" (State Council of China, 1999). The present educational composition of China's public-servant team is not satisfactory. Among China's 5.41 million public servants, only 10 percent have a college degree while 1 percent have a graduate degree, with very few majoring in administration affairs (Tang, 2001; Tong and Straussman, 2003). Because of the size of the government bureaucracy, plus more than 10 million people working in non-government, social, and service organizations, the potential demand for MPA education is substantial.

Therefore, the more challenging question is not about whether China needs its professional MPA education but about how China can succeed to adopt such a Western-style program to fit its specific political and cultural context. Many scholars have realized that China needs to learn from advanced western countries and adopt their sophisticated techniques in MPA education (Chen, 1999; Cheng, 2000; Xue, 2002; Tong and Straussman, 2003; Xu, 2002). Curriculum development is certainly one of the biggest challenges and top priorities for new MPA education development in China. As a graduate from a full-time MPA program in the United States, the author agrees that there are many theories and practices in the field of public administration education in the United States that can be borrowed to help develop an MPA curriculum that has Chinese characteristics and fits the economic, political and social environment in China. This article addresses some of the main issues of MPA curriculum

development in China. The issues discussed here may well be applied to other professional public administration degrees such as Master of Public Policy, Master of Public Affairs, or Master of Public Management.

Curriculum Development — Implications of the U.S. System

There are 191 MPA programs across the United States, among which 120 are accredited by the National Association of Schools of Public Affairs and Administration (NASPAA) and 71 are not (National Association of Schools of Public Affairs and Administration, 2003). NASPAA is a nationally recognized professional association in public affairs and administration and responsible for accrediting all the graduate programs in this field. There are about 50 other programs such as Master of Public Policy, Master of Public Affairs, and Master of Public Management across the country.

While widespread agreement exists among scholars of public administration that public managers should not study for the same degree or take the same courses, many believe that the master's degree is the central element of academic public administration's efforts to help educate public managers. The answer to the general question about for what students are being educated has been consistently stated as for professionally expert work in public bureaucracies devoted to public service (Ventriss, 1991). Needed are administrators with competence in the techniques and methods of organization and management and who understand the political, social, and economic environments in which they operate (Cleary, 1990). Therefore, the MPA curriculum has traditionally been characterized as an applied field oriented to the development of theory for practice. This requires the field to focus its research efforts on what practicing public administrators actually do. Waldo characterizes public administration as a necessarily multi-disciplinary field, given the variety and complexity of the public's business (Waldo, 1975). MPA education must introduce into its curriculum the substance of individual public service areas such as criminal justice, public health, environmental policy, education administration, and so on, in order to reflect the activities in which public administrators are actually engaged. The broad coverage of public administration determines that every program has its own curriculum emphasis on its specific area such as personnel, budgeting, financial management, organizational theory, and so on. However, there are some common parts applicable to most of programs. From the author's personal experiences and research, there are at least four important areas that need to be discussed for the MPA curriculum development in China. The following section will discuss the four areas of theory development, quantitative skills, technology training, and case study. For each area, the theories and practices in the United States will be discussed followed

by their implications in China's situation with current challenges and opportunities.

Theory Development

The question of theory versus practice has long been discussed in public administration education (Cunningham and Weschler, 2002; Denhardt, 2001; Denhardt, Lewis, Raffel, and Rich, 1997; Sellers, 1998; Ventriss, 1991; Weschler, 1997). Some point out that theories of public organization provide a basis for understanding practices. Others suggest that theories typically stand at some distance from practices, so understanding theory may not aid practice and practice is what makes the difference. Denhardt (2001) argues that students require different kinds of knowledge and skills at different points in their careers. Pre-service students need analytic skills in the next several years, while in-service students are likely to need management skills right away.

Even in such a western country as the United States, the requirement for courses on theories about political institutions and processes is highly emphasized for graduate public administration program (Cleary, 1990). Educating MPA students to competency in theory adds at least three potential aspects to their capacity for effective administrative action: richness of perspective, flexibility of attention, and modesty (McSwite, 2001). Due to the interdisciplinarity of MPA education, theories tend to cover a variety of fields including public policy, organizational behavior, sociology, and political science. For example, the program the author graduated from requires Organizational Behavior, Public Policy, Human Resources theory courses as core courses for first-year students. All these theoretical core courses particularly focus on the concept of the topics and provide an overview of classic theories. The program continues to help students develop strong theoretical foundations in their second year's study. After students declare their areas of specialization, more advanced theory courses are offered accordingly. As in the public policy and administration specialization, advanced theoretical courses include Strategic Management, Advanced Organizational Behavior, and Urban Development Theory. It is believed that a solid theoretical foundation helps students understand and practice their professions, and the theory development needs to be addressed throughout the study.

However, the theory development for MPA students is more issue-related and practice-oriented than theory educations in pure art and science disciplines or doctoral level studies. Due to the practitioner profiles of students, the main objective of theory development is not to bury students in theories but to provide them with effective theoretical instruments to improve their practical skills. Since MPA students come from different professional backgrounds, they bring into the classroom lots of experiences and questions. Theory education can be more inquiry-based, can help students

develop incisive understanding of issues, and can provide a strong theoretical foundation for their problem-solving skills. One innovative way to approach the theory/practice issue is to create diverse opportunities for students to meet their particular needs and interests. For example, we might try to more carefully identify the stages, both in the students' career development and in their psychological development, where greater attention to theory makes more sense, and to emphasize theory in educating students who find themselves at those stages (Denhardt, 2001). MPA students not only need the knowledge about the field but also need to act effectively and consistently to make things happen.

As China is facing its dramatic economic, political, and social transition, an emphasis on theory education is very important for its fledging MPA education. The current core courses required by the State Education Commission have shown an important focus on theory-based courses. Of the 10 core courses, the State Education Commission has mandated nine and each university can decide the 10th core course on their own. Three of the nine mandated core courses are theory-based, including Construction of Socialism, Public Administration, and Political Theory. A solid theoretical foundation for the education for future public servants will guarantee the leadership of the Communist Party, point the right direction for China's political reform, and strengthen the fundamental political principles such as Marxist Theory, Deng's Socialist Theory, Four Fundamental Principles, and Three Represents.

Besides those fundamental political theories, China needs to develop its own public administration theories. Nowadays, Chinese universities usually rely on the western theories or directly translate textbooks from countries like the United States in their MPA education. There has yet been a systematic framework for the theory of public administration or public service that is built upon a thorough understanding of China's specific political, economic, and social environment. However, this process won't be completed within several years. In the United States, the nature of education for public administration has been studied for 100 years. In order to establish its own theoretical system, China needs to have its own scholars in the field of public administration who not only grasp the fundamental ideas of public administration but also have the ability to apply the established western theories to China's situation. Before this mission can be accomplished, the MPA education in China might still need to focus on teaching existing western public management theories and exploring a unique way to establish Chinese public administration theories through ongoing practices.

Quantitative Skills

The need for greater quantitative skills in MPA education has long been realized. It is expected that MPA programs provide students with requisite skills in quantitative analysis to be successful and effective public administrators (Waugh, Hy, and Brudney, 1994). According to the curricular standards published and promoted by the NASPAA, MPA degree programs are encouraged to "enhance the student's values, knowledge, and skills to act ethically and effectively" in the application of quantitative and qualitative techniques of analysis in (1) policy and program formulation, implementation and evaluation; (2) decision-making and problem-solving (NASPAA, 1988).

For most MPA programs in the United States, quantitative training is a very important part of the core curriculum. It generally means research methods, statistical analysis, and/or management science or problem-solving skills. For example, the program the author graduated from requires several core quantitative training courses. The fundamental quantitative core course is Statistics for Public Affairs, which covers descriptive statistics, probability, sampling, tests of significance, correlation, regression analysis, and the use of statistical software packages. The other two core courses, Applied Research Method and Public Budgeting and Finance, also require a lot quantitative skills. These quantitative courses follow traditional homework-quiz-exam teaching models, which are not very commonly used in other qualitative courses. Exercises are assigned after every class and students are required to complete about 10-12 quantitative questions using the formula they learn from class. This course is very demanding and needs students to commit approximately one-two hours for homework after every class. The extensive exercises reinforce students' understanding of basic concept and methodology and help them develop solid quantitative skills. The department encourages students who need to pursue advanced quantitative skills to take elective courses from other departments such as sociology, psychology, and mathematics where more quantitative courses are offered.

In China, many MPA students are from the backgrounds of arts, social science, and political science, and they lack of strong quantitative training. Even if they had some college mathematics or statistics courses, since they have been out in the workforce for several years before they come back for MPA study, they still need fundamental quantitative training in basic mathematics and statistics. It is crucial for them to gain some quantitative training at the very beginning of their study in order to conduct further research. The State Education Commission has mandated Quantitative Research Methods as one of the core courses. Public Economics and Public Policy Analysis are the other two required quantitative-based core courses. But the intensity of quantitative training varies in different programs due to the profiles of the universities they are affiliated with. More particular quantitative-based courses such as Introduction to Statistics and Probability

or Applied Research Method need to be offered to first-year students at the very beginning of their study. These courses can help students understand the basic concepts and knowledge and develop solid quantitative foundations. Once students develop basic quantitative knowledge and skills, a more important goal is to organize their quantitative skills and make them applicable to professional public administration tasks such as budgeting, financial management, economic forecast, and statistical analysis. Public Budgeting and Finance is one of the core courses required in the program the author graduated from. Although the course examines public budgeting and finance from economics, political, and institutional perspectives, great emphasis is put on the quantitative training part. Weekly homework assignments are picked from some real-world budgeting cases for students to exercise and execute. Almost all the assignments require proficiency in Microsoft Excel spreadsheets, since students are required to present their calculations in charts and tables and make recommendations about the budgeting and finance issues. Another good course that can be designed is Applied Research Methods, which covers a broad range of research methods that apply to data analysis, policy evaluation, and economic forecasting in daily public administration. The course teaches students how to collect data from different sources (government agencies, publications, or online sources), integrate data into computerized models, conduct analysis, and help daily decision-making. Some widely introduced economic analysis techniques include location-quotient analysis, shift-share analysis, and cost-benefit analysis. In many occasions, quantitative class projects will take the local community as a case study and students are asked to apply various techniques to issues including demographic analysis, program evaluation, and economic development. Practical applications of quantitative skills to real-world projects help students understand how the skills they learn in class can be applied to their daily administration tasks and develop critical and analytical thinking at work.

In general, since Chinese students are used to the traditional homework-quiz-exam teaching, they should feel comfortable about the context of the quantitative courses. More attention needs to be paid to the content of the quantitative training. Courses need to integrate pure quantitative trainings into real-world administration tasks such as budgeting and finance, data collection and analysis, and economic forecasting. The department may not have enough resources to offer all the needed quantitative courses for MPA students. One solution is to invite faculties from other departments such as mathematics, statistics, and sociology to help design courses that apply quantitative techniques to professional public administration tasks. Those faculties can be jointly appointed and co-teach at MPA programs. Their interdisciplinary expertise and experience can help develop strong quantitative-based curriculum and

provide a broad academic foundation for new MPA programs.

Technology Training

As we discussed above, MPA students need to know how to operate a computer in order to complete their quantitative training. In professional life, a public administrator needs knowledge and skills to use and manage information technology and “formal professional education is the best vehicle for imparting that knowledge and those skills” (Laverty and Sorg, 1986). Laverty and Sorg (1986) identified three levels of computer-related knowledge and skills including applications, management, and policy. Public administrators must possess basic skills sufficient to allow them to use the computer, manage information technology, and promote technology policies. MPA programs should teach their students how to use the computer by providing instruction in computer applications related to the various managerial tasks of the work place. In-depth instruction in applications associated with management control can be most efficiently and effectively provided by core quantitative methods, budgeting, and personnel courses, while those applications associated with planning/policy making and operational control should be introduced into courses in substantive areas of specialization. Rather than teaching applications in a course separate from the areas in which they will be applied, computer use needs to be integrated into every appropriate core course in the curriculum, such as quantitative methods, financial management and budgeting, policy/program analysis and evaluation, human resources management/personnel courses, and so on. More communication skills, microcomputer and other information technology, and advanced research techniques are on the increase in public administration programs (Hambrick 1990; Manns and Waugh, 1989; Waugh, Hy, and Brudney, 1991, 1994). More and more courses such as statistics, accounting systems, and other computer-based training courses are held in well-equipped auditoriums where students can actually operate a computer while their instructors give lectures using a computer-connected screen and providing hand-on guidance.

In China, only one of the core courses mandated by the State Education Commission, Information Technology and Application requires technology training for MPA students. As mentioned above, among China’s 5.41 million public servants, only 10 percent have a college degree while 1 percent has a graduate degree. Computer skill training is of great importance for professional public servants who can utilize advanced technology in day-to-day problem-solving and decision-making. Probably the most realistic goal for China’s MPA programs is to achieve the first-level Laverty and Sorg (1986) pointed out, which is to help MPA students to learn basic or intermediate computer applications including the Microsoft Office Software package, spreadsheet

application, and statistical analysis software like Software Package for Social Science (SPSS). Those students who need highly specialized knowledge such as finance, accounting, human resources, economic forecasting, and so on can be taught the more advanced techniques and software as they require. One of the emerging techniques in public decision-making is the Geographic Information System (GIS), which is becoming widely used in most large and many small American local governments. GIS uses geographic location to relate otherwise disparate data and provides a systematic way to collect and manage location-based information crucial to local government decision-making in planning, zoning, transportation, and real estate development (O'Looney, 2000). As long as China can develop an integrated GIS database and train well-equipped GIS specialists, tens of thousands of local governments can benefit from the strong power of GIS. To date, about more than 30 universities in China have GIS majors but none of them is affiliated with public administration programs.

A major obstacle to implementing the information technology curriculum is the lack of faculty experience in both public administration and specialized computer applications. Implementation will require an investment in faculty development as well as course development. There have not been many software packages that are designed specifically for public administration. Coordination and cooperation are needed from other departments like computer science, electronic engineering, or geographic science to form a strong faculty team and curriculum design for MPA programs.

Case Study

The use of case study approach has been increasingly emphasized in the MPA education. Cases used in the classroom resemble the approximate situations public managers will encounter in their professional lives. Cases yield generalizations, help students take ownership of knowledge from the process of active participation and self-discovery, and develop further repetition of behavioral characteristics important to students such as empathy and self-confidence (Robyn, 1998). In the United States, many MPA course books are written in the format of case study. Specific cases will follow the theory and principle introductions to give students a real sense of their applications. It has been a widely used technique for MPA faculties to assign class time for students to discuss cases and present their understandings about the cases and how they can be improved.

MPA programs in China will need at the very least to develop more extensive teaching notes and encourage accumulation of experiences using various cases in a wide range of settings. The central obstacles to the case study approach are well-entrenched attitudes that have dominated the Chinese education system for thousands of years and hinder open exploration of

alternatives. The old system penalized those who challenged the accepted wisdom and students of management believe that there is one best solution or correct answer. In addition, Chinese faculties are used to teaching via lectures only. Case study teaching can break down this orthodoxy, provided the teacher is sensitive to the cognitive dissonance that can arise from decentering both the teacher and the text (Eliason, 1995, p.153). Even if the traditional teaching method can be overridden, there are still some technical problems to successfully launch the case study method. As Tong and Straussman (2003) pointed out while the State Education Commission already requires the case study method be used in all MPA programs, there are very few cases available that focus on subject matter pertinent to China.

In order to encourage the case study method, those Chinese universities that have MPA programs need to work together to expedite the dissemination of existing cases. Since most of MPA students enrolled are full-time public sector employees, they are great sources for good cases. Students can be organized to report practical problems and cases they run into in their professional occupancies. Case study writing can be considered as a component of student exercises under the instruction of experienced faculties. This can also be an efficient way to keep the cases most up-to-date and pertinent to real-world experiences. Publishing real case studies should be encouraged. Some internally circulated materials will provide great feedback and advice for revision, which makes a case study more applicable and teachable.

Another good source of a case study can be the thesis or internship reports from MPA students. Case studies can be encouraged as a preferred research method for masters theses. Internship are extremely important for MPA candidates, enabling them to apply knowledge and skills they develop through the education to real-world work. This will become more significant after Chinese universities start recruiting full-time pre-service MPA student from new college graduates who will seek employment with their MPA degrees. An internship between the two segments of their education will provide them with a great opportunity for exposure to potential employers and help them launch their professional careers. In the United States, more than 50 percent of recruitment is completed within those candidates that did or are doing internship with the employer. Considering the practical characteristic of MPA education, the practical implication of a thesis or internship report determines its good quality and provides valuable sources for case studies.

A Note on Program Assessment

Besides the curriculum development issues discussed above, the author wants to add a few notes on the program assessment for China's MPA programs. One of the most sensitive and difficult topics in education is the

measurement of program quality. There are three generic types of evaluation: the quantitative emphasis, reputation studies, and productivity studies (Thayer and Whelan, 1987). In the United States, Lewis (1987) tried to evaluate whether an MPA degree can increase more career success in the federal government than other graduate degrees and found out that MPA graduates were benefiting from their degree in terms of annual average salary, promotion, and career stabilization (Lewis, 1987). Lewis's evaluation was for the general MPA program. For evaluating and assessing the success of a specific MPA program, accreditation may well be a good tool. A NASPAA survey in 1989 found that its accreditation had a specific and identifiable impact on MPA programs (Cleary, 1990). Cleary (1990) found out those MPA programs that were accredited and passed annual review of NASPAA generally had more solid credit-hour requirement and curriculum. NASPAA's annual review requires MPA programs to include in their annual report their eligibility for peer review, program mission, program jurisdiction, curriculum, faculty, admission of students, student services, support services and facilities, and off-campus programs and distance education. NASPAA also established a Pi Alpha Alpha Honor Society for excellent MPA graduates provided that they have an overall grade-point average (GPA) of 3.75 out of a 4.0 scale and are recommended by at least two faculty members. The honor society strengthens the network among MPA graduates and helps them with future career development.

There has not been an academic association for public affairs or administration in China. The State Education Commission is currently the administration agency for MPA education and performs some of the functions the NASPAA in the United States. Strict accreditation and annual review are crucial to guarantee the quality of the fledging MPA education and its further healthy development. Specific and detailed requirements need to be established for accreditation and annual review. As the number of Chinese universities that offer MPA programs increases, an independent academic association will be very much needed to better perform the assessment functions.

Conclusion

The professionalization of China's public servants team is one of the missions of current political and economic reform in China. MPA education is very much needed to help the modernization of Chinese society and public service. Curriculum development is one of the most important tasks the new development needs to accomplish. Just as all other new development, China needs to learn from existing theories and practices in advanced countries such as the United States and develop an MPA curriculum with Chinese characteristics. The four areas of theory development, quantitative skills, technology training, and case study are very important for the MPA curriculum

development in China. Challenges and opportunities always co-exist. The future for successful MPA education in China is very promising but the progress will need great coordinated efforts from government, academic institutions, scholars, and students.

Author

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Does China's Civil Service System Improve Government Performance?

A Case Study of Education Bureau of Ningbo City

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Abstract: Performance improvement sits at the heart of the study of public administration. Performance improvement requires performance measurement and relies heavily on effective management of human capital. This paper addresses both performance measurement and management of human capital in the context of China.

China introduced its civil service system in 1993 with performance improvement as its ultimate goal. After years of implementation and practices, we attempt to make an overall assessment of the reform with a straightforward question "Has the civil service system improved government performance?"

Taking the Education Bureau of Ningbo City as a case, our research design begins with efficiency measurement of the bureau and Data Envelopment Analysis (DEA) is applied as the measurement tool. A comparison of agency performance before and after the introduction of the civil service system is carried out to obtain the basic judgment on the effects of the reform. Then seven contributing factors are ranked on the basis of structured focus-group interviews with civil service reform as one of them. It is found that limited efficiency gain was achieved in the Education Bureau and civil service reform made little impact on agency performance. Some theoretical explanations to those findings are provided. We hope that the study not only provides a case for assessment of the civil service reform against its stated goals, but also sheds light on the use of DEA method in efficiency measurement.

Performance improvement sits at the heart of the study of public administration. Wilson (1887) argued that one of the two objects of administrative study is to discover how government can do the proper things with the utmost possible efficiency and at the least possible cost either of money or of energy. In spite of the vigorous advocacy by the school of New Public Administration, ethics never takes the place of efficiency and effectiveness¹ (Yin and Wang, 2000; Lui, 1994). The past two decades witnessed the rapid growth of performance management. In response to a series of economic pressures and social dissatisfactions with public services, governments, especially those in OECD countries, moved away from the traditional focus on inputs and control toward a focus on results and performance.

Performance measurement is a key component of performance management. As Armstrong (1994) has argued, you cannot improve performance if you cannot measure it. However, there are genuine difficulties in measuring performance. An extensive literature has underscored these difficulties and emphasized the dangers of misleading performance indicators (OECD, 1994; Downs and Larkey, 1986; Turner, 1995).

Performance improvement relies heavily on effective management of human capital. Many scholars have explored the relationship between personal management and government performance. For example, Downs and Larkey argued that improving the motivation and skill of the government workforce seem

to be a promising area for productivity gains given the limited opportunities to improve the productivity of agencies through capital substitution and the creation of new work procedures and organizational forms. And this is especially true if one believes that the lassitude of government workers is a chief source of inefficiency (Downs and Larkey, 1986). In their performance management movements, most OECD countries adopted new personal management approaches in the public services which stemmed from their clear recognition that more effective management of people in areas such as pay and employment practices, working methods, organizational culture and job satisfaction will lead to more effective and efficient public service organizations (U.S. Office of Management and Budget, 2002; Maguire and Lidbury, 1996).

This paper addresses both performance measurement and management of human capital in the context of China. China introduced its civil service system in 1993 after years of pilot experiment and debate. The official goals of the reform were set "to optimize the civil service workforce, curb corruption and improve administrative efficiency and effectiveness (*Xiaoneng*)" (State Council, PRC, 1993; Ministry of Personnel, PRC, 1993).

After years of implementation and practices, it is now possible as well as desirable to make an overall assessment of the personnel system reform with a straightforward question "Has the civil service system improved government performance?"

Our research design begins with performance

measurement and evaluation of selected government agencies. A comparison of agency performance before and after the introduction of the civil service system is carried out to obtain the basic judgment on the effects of the reform. Then seven contributing factors are ranked on the basis of structured focus-group interviews with civil service reform as one of them. The ranking of the civil service reform among the seven is thus an illustration, albeit subjective, of its relative importance in agency performance improvement in the eyes of stakeholders. As a case study, this paper focuses on the Education Bureau of Ningbo in Zhejiang Province, a large city with a population of more than 5 million. For reasons discussed in the next section, efficiency is our main concern and Data Envelopment Analysis (DEA) is applied as the measurement tool which allows the use of scattered data from various sources.

The paper proceeds in five sections. Section 2 clarifies the terminology, discusses the methodology and describes the data. Special attention is paid to the DEA tool, including the basic idea and procedures, data requirement and its advantages and limitations. Section 3 reports our main findings. Section 4 offers some theoretical explanations to those findings. And the paper concludes with a summary of our study. It is our hope that the study not only provides a case for assessment of the civil service reform against its stated goals, but also sheds light on the use of DEA method in efficiency measurement.

Terminology

Performance and related concepts such as economy, efficiency, effectiveness and productivity are often discussed by scholars, politicians, government officials and others interested in public affairs, but the meaning of these terminologies are more often assumed than explicitly defined (Prachyapruit, 1994; Lui, 1994). While volatile and imprecise concepts might be acceptable — even desirable — for politicians, it is unimaginable for policy analysts to measure performance unless it is clearly defined. So our first effort is to find way out of the maze of terminologies.

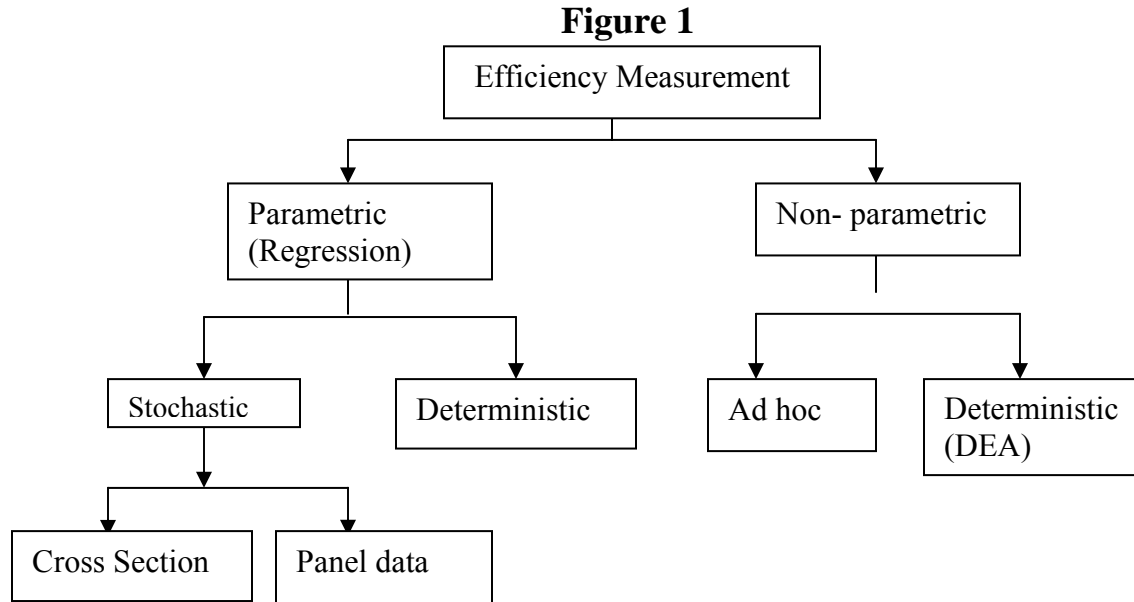
An extensively accepted framework for performance measurement is the “3Es” recommended by the British Treasury, in which performance is decomposed into three indicators: Economy, Efficiency and Effectiveness (Lewis and Jones, 1990; Zhou, 1995). According to British Treasury, economy describes the extent to which the cost of inputs is minimized, efficiency is defined as the relationship of the output of an activity or organization to the associated inputs, and effectiveness refers to the extent to which output contributes to final outcomes. To make a better

understanding, it is necessary to distinguish “output” and “outcome” clearly. Williams (2003) provides the following definition: “output refers to the immediate material effect of government processes,” while “outcomes are the social changes following outputs or processes.”

Effectiveness is arguably the most important one in that, resources, although organized economically and used efficiently, will be largely wasted if goods and services produced do not achieve their intended objectives (outcomes). However, we will focus on efficiency for the following reasons. First, it is very difficult to measure outcomes. For example, the World Bank (1980) defines the outcomes of education as the external effects of output — that is, the ability of people to be socially and economically productive. Secondly, like most other cities in China, Ningbo’s performance management is still at primitive stage compared with those in OECD countries. The absence of strategic performance planning and systematic performance indicators leads to a genuine lack of performance information and data, which in turn makes sound and comprehensive performance measurement impossible. Thirdly, China’s public sector performance management is still characterized by a top-down approach in which the chief executive (the mayor in the case of Ningbo) decides what outcomes to pursue and what outputs to produce and holds agency heads accountable. A review of the performance contract between the mayor and head of the Education Bureau will find that the performance objectives are quite vague and focused on outputs rather than the achievements of outcomes. And finally, our concern is the effects of one specific program — civil service system reform. However, very few outcomes may be attributed unambiguously to particular programs because in most cases there are several factors affecting a particular outcome (OECD, 1994).

Methodology

The parametric approach requires the imposition of a specific functional form (e.g., a regression equation, a production function, etc.) relating the independent variables to the dependent variable(s). The functional form selected also requires specific assumptions about the distribution of the error terms (e.g., independently and identically normally distributed) and many other restrictions, such as factors earning the value of their marginal product (Charnes, Cooper, Lewin and Seiford, 1994). Considering the highly complex input-output relationships of education (Psacharopoulos and Woodhall, 1985), it seems not a good idea to employ parametric approach in this study.



Sources: Barrow 1990.

Figure 1 presents the different methodologies that have been developed to assess efficiency.

Unlike parametric approaches, DEA does not require any assumption about the functional form.² Now let us illustrate input-oriented³ Data Envelopment Analysis with a simple, one-output, two-input example (Coelli, 1996a, 1996b, 1998). Consider a group of five private colleges that teach computing courses to students (the single output) using staff and computers (the two inputs). If we are willing to assume constant returns to scale (CRS)⁴, we can plot the DEA frontier on a two-dimensional diagram. The data for our simple example is listed in **Table 1**. The input/output ratios for this example are plotted in **Figure 1**, along with the piece-wise linear DEA frontier. The DEA frontier

envelops the data points. All points that lie on the frontier are efficient, while all points that lie within the frontier are inefficient. All the efficient points have efficiency value of “1”. The inefficiency of a particular point, for example college 3, is measured along a ray from the origin to that point. The efficiency of college 3 is 0.833. This is the ratio of the distance from the origin (point 0) to point 3’ (on the frontier) over the distance from the origin to point 3. This implies that college 3 should be able to proportionally reduce the consumption of all inputs by 16.7 percent without reducing output. That is, production at the point denoted 3’ in **Figure 2**.

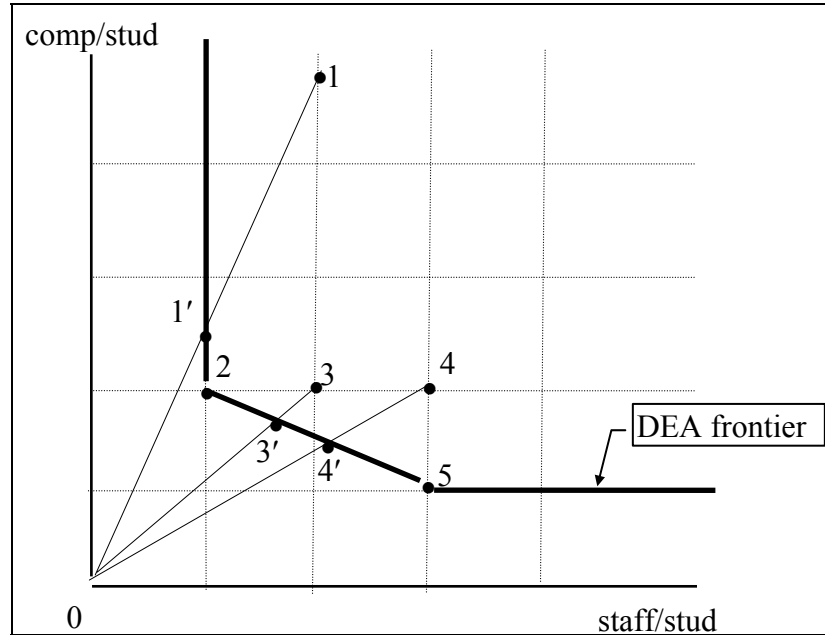
Table 1: Example Data

College	Inputs		Output	Ratios	
	Staff	Computers	Students	Staff/Stud	Comp/Stud
1	2	5	1	2	5
2	2	4	2	1	2
3	6	6	3	2	2
4	3	2	1	3	2
5	6	2	2	3	1

For those interested in DEA methodology, please refer to Coelli and Rao (1995, 1998), Lovell (1993), Ganley and Cubbin (1992), and Charnes, Cooper, Lewin and Seiford (1994). What I want to highlight is that DEA calculation tends to show the governmental agency in a favorable light in the following sense. It produces only

relative efficiency measures, because efficiency scores are generated from *actual* observed data for each Decision Making Unit (DMU). As a result, the efficiency value “1” does not say the DMU is absolutely efficient, but says it is efficient relative to all other DMUs in the observed data.

Figure 2: CRS Input-Orientated DEA Example



The biggest challenges in this study are raised by the small sample size. The first one is how to defend the reliability of our results. Second is how to discern the efficient points (the points on the efficient surface/frontier). If we cannot discern the efficient points, the power to compare different DMUs would be significantly reduced with the small sample, since all the DMUs defining the frontier have the same efficiency value of “1”. To ensure the reliability of our results, we include robustness test by changing the number and types of input and output measures.

We adopted the following methods to address the second challenge. First of all, we employ Constant Returns to Scale (CRS) model, not Variable Returns to Scale (VRS) model. CRS can dramatically decrease the number of DMUs on the efficient surface (frontier).⁵ Second, we rank the efficient points. The earliest attempt to address this problem is due to Andersen and Petersen (1993). Their paper presented a procedure to evaluate an efficient DMU by comparing it with a linear combination of all other DMUs in the sample, i.e., the DMU itself is excluded. The efficiency value attached to the efficient DMU indicates how much it may increase its input vector proportionally while preserving efficiency. (Recall the efficiency value attached to the inefficient DMU indicates how much it has to decrease its input vector proportionally to reach the efficient

frontier). Thanks to a Lovell and Rouse (2002) working paper, Andersen and Petersen’s ideas not only become operationalized, but we are able to use the conventional DEA software to compare the efficient DMUs. The software we used is DEAP version 2.1 provided by the center for Efficiency and Productivity Analysis, the University of New England⁶.

Data

To conduct Data Envelopment Analysis, we need data on inputs and outputs. So the first job is to look for the variables that can best describe inputs and outputs of Education Bureaus. Two considerations dominated our variable selections. First, DEA studies suffer from a problem similar to the “degrees of freedom” problem in statistical analyses. That is, with a small sample size, such as 10 in our study, one can only consider a small number of inputs and outputs. If one included too many variables (i.e., inputs and outputs) into the DEA model, one would observe that the majority of data points would be on the frontier. As a result, we will lose the ability to compare different data points. In this study, only two output variables and two input variables are employed. We also do the DEA in the case of one-output and two inputs to test the robustness of our results.

The second consideration is data availability. It imposes the biggest difficulty for conducting empirical study, especially in developing countries. This difficulty limits our selection of variables. Our quantitative data are mainly from *Ningbo Statistics Yearbook* and *Zhejiang Statistics Yearbook*. Other data are from our 1999 survey in *Education Bureau of Ningbo*, in which face-to-face interviews were conducted.

Finally, we select the following variables to describe inputs and outputs. The number of enrolled students is used to describe the *quantity* of output. How to incorporate information regarding the *quality* of the output is a great challenge to measure efficiency (Harry et al., 1979). The World Bank defined education as achievement of pupils or students, which refers to knowledge, skills, behavior, and attitudes — as measured by tests, examination results, and the like (World Bank, 1980). However, Psacharopoulos and Woodhall argued that such tests may be difficult or expensive to administer or may be regarded as unreliable measures of *quality*. Scholars often measure it in purely quantitative terms, such as the number of graduates or qualified school dropouts produced in the education system.⁷ In our empirical study, we employed the percentage of junior high school students who enter senior high school to describe the quality of output (*graduation rate* hereafter). Since our aim is to measure the efficiency of the Education Bureau (*Jiaoyu Ju*) in Ningbo city, not junior high schools, this is an extremely rough indicator. However, this is the best indicator we can use. First, we do not know how many senior high school graduates entered colleges. Second, almost all the elementary school students can enter the junior high schools since the nine-year compulsory education regulations. So this is not a meaningful indicator. Third, a comprehensive report provided by Education Bureau of Ningbo (*Jiaoyu Ju*) views this variable as the best indicator for its performance.

Two input variables used in our empirical study are the number of school employees (including teachers and administrative staff) and the education expenditure. To test the robustness of our study, we also employ the number of schoolteachers as one input indicator. A little trouble arises in collecting education expenditure data. For 1993-1994 and 1996-2000, we can get it directly from the *Ningbo Statistics Yearbook* and *Zhejiang Statistics Yearbook*. However, we only have the expenditure data combining education, culture, and sanitation for 1991, and expenditure data combining education and culture for 1992 and 1995. We adjusted these data in the following ways. We obtained the

percentage of education and culture expenditure in the expenditure combining education, culture and sanitation from 1992 data (percentage 1), and the percentage of education expenditure in the expenditure combining education and culture from 1993 data (percentage 2). Then we multiply the 1991 data by percentage 1 and percentage 2 to get the education expenditure in 1991. We multiply 1992 data by percentage 2 to get the education expenditure in 1991.⁸ In the same vein, we adjust the 1995 data, multiplying it by the average percentage of education expenditure in the total expenditure combining education and culture of 1994 and 1996.

Results

Table 1 illustrates the results obtained from the Data Envelopment Analysis based on input-oriented CRS model. Four cases are designed to test the robustness of our results. Case 1 is the basic model, in which school employees and education expenditures are employed as input variables, and enrolled students and graduation rates are used as output variables. Case 2-4 are the variants of case 1. In case 2, we use schoolteachers as input variable instead of school employees, that is, we exclude the administrative staff in schools. In case 3, we only use enrolled students as an output indicator. And in case 4, we only use graduation rates as output. In **Table 1**, we report the results from both non-ranking efficient points procedure and ranking efficient points procedure, which are abbreviated into NREP and REP respectively. The inefficient points have the same efficiency score under the two procedures, and the efficient points with score “1” under NREP were ranked by the method Lovell and Rouse recommended under REP.⁹

Ningbo City introduced its new civil service system in 1995. In order to examine the effects of that introduction on government efficiency, we need to look at whether there exists significant difference between efficiency scores before 1995 inclusively and those after 1995 exclusively. T-tests are conducted, and **Table 2** reports the mean, standard deviation, t-value and p-value. Obviously, there is no significant difference between the efficiency scores before 1995 inclusively and those after 1995 exclusively. This conclusion is robust across different cases and procedures. Now we can answer the question raised by the title, that is, in terms of efficiency, the introduction of China’s civil service reform has no significant influence on governmental performance. At least this is true for the Education Bureau (*Jiaoyu Ju*), Ningbo City.¹⁰

Table 1: Results from DEA

	Case 1		Case 2		Case 3		Case 4	
	NREP	REP	NREP	REP	NREP	REP	NREP	REP
1991	1.000	1.256	1.000	1.256	1.000	1.016	1.000	1.256
1992	1.000	1.136	1.000	1.096	1.000	1.136	0.969	0.969
1993	0.972	0.972	0.993	0.993	0.972	0.972	0.885	0.885
1994	0.951	0.951	0.982	0.982	0.951	0.951	0.877	0.877
1995	0.943	0.943	0.958	0.958	0.938	0.938	0.903	0.903
1996	0.964	0.964	0.984	0.984	0.906	0.906	0.957	0.957
1997	0.972	0.972	0.980	0.980	0.946	0.946	0.948	0.948
1998	1.000	1.040	1.000	1.048	1.000	1.040	0.919	0.919
1999	1.000	1.056	1.000	1.048	0.955	0.955	1.000	1.040
2000	0.983	0.983	0.982	0.982	0.852	0.852	0.983	0.983

Table 2: Results from T-test

	Case 1		Case 2		Case 3		Case 4	
	NREP	REP	NREP	REP	NREP	REP	NREP	REP
Mean Difference	0.0106	-0.0486	0.0026	-0.0486	-0.0404	-0.0628	0.0346	-0.0086
Std.Error	0.0140	0.0649	0.009	0.0574	0.0279	0.0474	0.0282	0.0742
T-value	0.76	-0.75	0.29	-0.85	-1.4470	-1.3253	1.2277	-0.1159
P-value*	0.470	0.475	0.781	0.422	0.1859	0.2217	0.2545	0.9106

* Two side t-test for data before 1995 inclusively and data after 1995 exclusively.

Table 3

Factors/Order	Important (1-3)	Neutral (4-5)	Unimportant (6-8)
<i>Increase of Education Expenditure</i>	3	1	3
<i>Technical Progress</i>	2	1	4
<i>Management by Objectives</i>	3	3	1
<i>Political Support from above</i>	6	0	1
<i>Introduction of Civil Service System</i>	1	4	2
<i>Perfection of Laws and Regulations</i>	3	2	2
<i>Management Improvement</i>	1	3	3
<i>Public Support</i>	2	0	5

Note: The numbers in the cells indicate the number of the interviewees who view the corresponding factor “important,” “neutral,” or “unimportant.” For example, the number “3” in the upper-left corner cell indicates that three respondents think the factor “Increase of Education expenditure” important in influencing government performance.

Source: Yin, 1999.

This conclusion is also confirmed by our field survey conducted in 1999. Seven officials in the Education Bureau (*Jiaoyu Ju*) were interviewed based on a structural questionnaire. The answers to question,

“Please rank the following factors in terms of their contribution to improve government performance,” are summarized in **Table 3**.

Of the seven interviewees, only one listed

“introduction of civil service system” as an “important” factor affecting government performance. This survey also shows that “political support and attention” has the most powerful influence. Among the seven interviewees, six listed it as an “important” factor affecting government performance. In the same field survey, a similar question also was asked to five clients.

Table 4 reports the answers. Again, only one of them listed “establishment of civil service system” as an important factor affecting government performance, while four of them view it as “unimportant.” Again, “political support and attention” seems to have the most powerful influence. Four of five interviewees list it as an important factor and only one thinks it is unimportant.

Table 4

Factors/Order	Important (1-3)	Neutral (4)	Unimportant (5-7)
<i>Increase of Education expenditure</i>	3	1	1
<i>Technical Progress</i>	0	1	4
<i>Political Support from above</i>	4		1
<i>Establishment of Civil Service System</i>	1		4
<i>Perfection of Laws and Regulations</i>	3	1	1
<i>Management Improvement</i>	2	2	1
<i>Public Support</i>	2		3

Note: The numbers in the cells indicate the number of the interviewees who view the corresponding factor “important”, “neutral” or “unimportant”. For example, the number “3” in the upper-left corner cell indicates that three respondents think the factor “Increase of Education expenditure” important in influencing government performance.

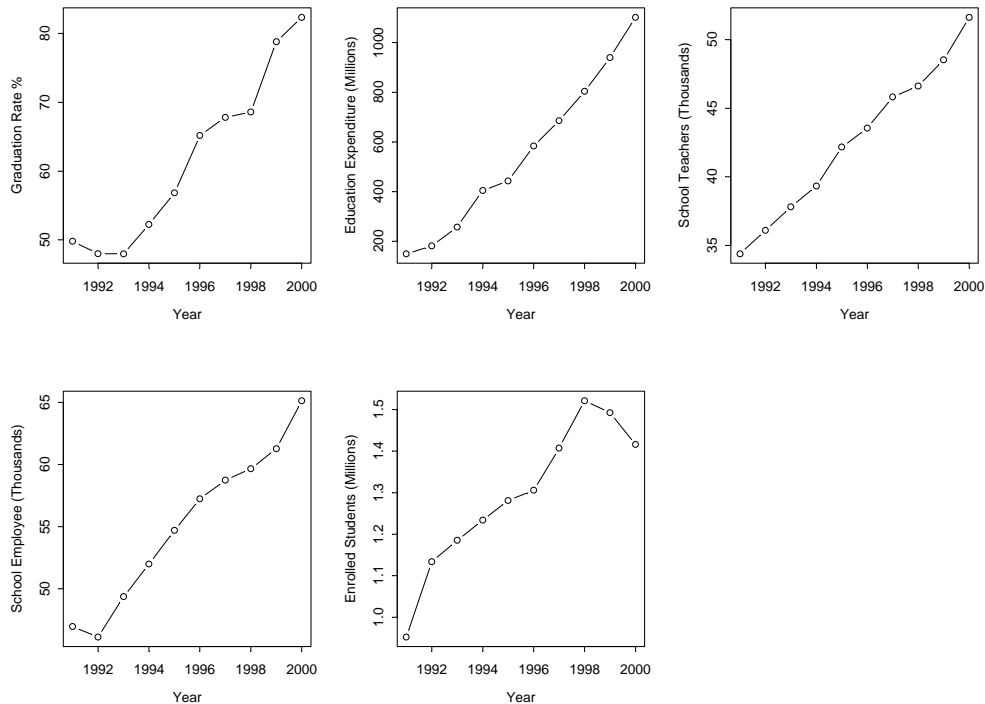
Source: Yin, 1999.

Let’s return to **Table 1**. Combined with **Figure 2**, some comments run as follows: 1) As mentioned before, a comprehensive report by Education Bureau (*Jiaoyu Ju*) of Ningbo views the percentage of junior high school students who enter senior high school as the best indicator for its performance. From **Figure 2**, we can see this indicator increases steadily over years. Case 4 which employed only the graduation rate as output indicator, we also found a rough increasing trend in government efficiency. (It also has the relatively small *p*-value). This suggests that the internal objective of a government agency might influence its behavior and performance in a significant way. A more detailed analysis calls for careful examination of programs initiated by the Education Bureau of Ningbo. However, this is beyond the scope of this paper, and we leave it for future occasions.

2) Case 1–2 outputs combine enrolled students and graduation rate, the lowest efficiency score arises in 1995. A possible explanation is that the agency is changing its output priority from quantity to quality. The increase of enrolled student has slowed down, while the graduation rate still increased slowly.

3) As indicated in **Figure 2**, education expenditure, schoolteachers and school employees have increased smoothly over the years. They do not reflect the changes of the number of enrolled students. This suggests the government budget basically is an outcome of historical conjecture, not an outcome of demand analysis. This is why the government efficiency scores fluctuate most and exhibit a rough decreasing trend in Case 3, which has the number of enrolled students as the only output indicator.

Figure 2: Time Trend of Key Variables



Civil Service Reform and Efficiency Improvement

China’s civil service system reforms initiated systemic adjustments in the rules pertaining to job definition or classification, deployment, job security and membership, reward structures and wage rules. Theoretically, these changes should have a major impact on government employees and further on organizational efficiency and effectiveness (Wise, 1996, as quoted from Burns, 2001). As indicated in the introduction, the increases in efficiency and effectiveness are also what the reformers expected. However, our empirical studies are not positive in this regard. That is, the efficiency of the Education Bureau (*Jiaoyu Ju*) in Ningbo City is not improved significantly after the introduction of civil service systems. Why did this happen? Here are some explanations we are turning to:

Peters (1994, as quoted from Farazmand, 2002) raised three perspectives on administrative reform and reorganization — purposive (top-down) models, environmental (bottom-up) models, and institutional models. Admittedly, China’s civil service reform is a purposive (top-down) one. As Burns (2001) had noted, the impetus for recent administrative reform in China has come at the intervention of paramount leader Deng Xiaoping and the need to propel China to market economy. The biggest challenge for purposive reforms is allowing them to stay only on paper. This is the very problem of China’s civil service reform. Actually, we

can borrow Tocqueville’s comments on the French Revolution to describe China’s civil service reform: the changes it led to are far less than what people imagined, especially in local governments (Tocqueville, 1856; Gilbert [*English version*], 1955).

Most regulations of the new civil service system are the continuance of the old cadre-management regime. And the innovations are implemented in practice mainly by words not by spirit.

The civil service reforms still do not include such concepts as political neutrality and protection from political interference. The party/state forms a single, integrated authority hierarchy to which civil servants are politically responsive. This is why the interviewees (both officials and clients) view “political support” as the most powerful factor influencing governmental performance. Aside from this, few changes can be identified even in technical facets. Entry through open, competitive examinations is viewed as an important advance of the civil service system superior to the old cadre-management regime. However, Ningbo City only organized these examinations twice in 1996 and 1997. In 1997, only five college-students were employed by Education Bureau, and they worked at low-level clerical and technical positions. Cadres in old systems must take qualification examinations to be “transformed” into civil servants. However, these examinations are no more than “nominal” in the sense that only 37 among 19,029

cadres failed and were not allowed to “transformed” into civil servants.

Performance appraisal is the critical component of an incentive mechanism in the new civil service systems. However, it also makes little difference in substance from the old cadre-evaluation regime. The procedure almost stays unchanged (Yin 1999; Yin, 2000). Appraisals comprise only ratings of “excellent,” “satisfactory,” and “unsatisfactory” (Article 25 in Provisional regulations). In practice, less than 1 percent of appraisees receive “unsatisfactory” ratings in the nationwide (Burns, 2001). In Ningbo City, only 0.1 percent and 0.14 percent of appraisees are rated as “unsatisfactory” in 1997 and 1998 respectively (Yin, 2000). According to the internal guidelines, no more than 15 percent of appraisees may receive “excellent” ratings. As a result, most appraisees are doomed to be in the “satisfactory” category, and this significantly reduces the incentive power of performance appraisal.

Provisional regulations mandated that “excellent” ratings should be connected with salary increase and position promotion; however, these connections are extremely weak in practice. One working unit often gives “excellent” ratings to its employees in turns to keep comfortable personal relationships (Yin, 2000). As to compensation,¹¹ the new civil systems reaffirmed “pay according to work” as guiding principles of the civil service salary system (Article 26 in Provisional regulations). As Burns noticed (2001), civil service salaries in China are graded according to levels of responsibility and complexity. This principle has been in operation in China *for decades*. The “new” principles included both rewards for seniority or time-in-service (annual increments) and pay for performance (appraisals-based bonuses). However, because of the nature of the performance appraisal system, the pay-for-performance element is severely attenuated. The appraisals-based bonuses failed to motivate civil servants. After describing the procedure for performance appraisal, one official in Education Bureau (*Jiaoyu Ju*) of Ningbo City concluded that the performance appraisal and the appraisal-based bonus system have no any influence on the organization efficiency (Yin, 2000).

In a nutshell, the introduction of civil service system in Ningbo City makes few changes in personnel management. As a result, we should not be surprised at the conclusion that no significant efficiency improvement is observed. Another lesson we learn is that civil service system reform should be integrated and coordinated with specific organization objectives and other reforms. It is clear from our interviews that civil service reform in Ningbo City only followed the general national reforms and was not linked closely with specific public service objective. In the eyes of Education Bureau officials, it is an ad hoc, top-down reform and has no relationship with their own business. As a result, we cannot expect the hoped-for efficiency gains which relate to the outputs of specific public

service. OECD recommended that high priority should be given to finding ways of integrating human-resource management with the core business of public service (OECD, 1996). We also note that civil service reforms should coordinate with other reforms. After examining the civil service reform in developing countries, Das (1998) argued that civil service reform is more likely to succeed if taken up in the context of structural adjustment. China’s civil service reform fails to integrate itself with broader administrative reforms. In 1998, China’s government began its new administrative reform aiming to streamline and downsize the state. As a result, the open and competitive examination for selecting new civil servants was stopped in Ningbo City.

Furthermore, as a response to financial incentives aiming to encourage government employee to leave, and thus downsize government bureaus, many young and high-educated civil servants go back to university or “drop into the sea” of commerce, which negatively affects the government efficiency.

Now two explanations are suggested for the failure of civil service reforms to improve government efficiency. First, few critical and real changes were made by the purposive (top-down) civil service reforms in Ningbo City. Second, civil service reform fails to be integrated with specific organization objectives and other concurrent administrative reforms.

Data Envelopment Analysis and Efficiency Measurement

Data Envelopment Analysis is a powerful tool to measure efficiency. It requires specific assumptions neither on the functional form relating independent to dependent variable(s) or the distribution of the error terms. Furthermore, since DEA assesses efficiencies along a ray from the origin to the observed production point, the efficiency measures are *units invariant*. That is, changing the units of measurement (e.g. measuring the education expenditure in Million per year instead of Billion per year) will not change the efficiency values. The parametric approaches, however, are not invariant to the measurement units. These properties simplify the data analysis greatly and make DEA attractive.

Our empirical study is limited by the small sample. Otherwise, we can do more. 1) If we have more data, we can do our analysis under Variable Returns to Scale (VRS) model and Non-Increasing Returns to Scale (NIRS) model. Employing VRS model, we can identify scale efficiency. Employing NIRS model, we can further indicate whether the DMU is operating in an area of increasing or the decreasing returns to scale. Based on these analyses, we can give some specific suggestion on operation scale with the objective to improve efficiency. 2) If we have panel data, we may use DEA-like liner programs and a (input- or output-based) Malmquist TFP index to measure productivity change, and to decompose this productivity change into technical change (identifying the natural trend) and technical-efficiency change. 3) If we have more data or

panel data, we can construct some econometric model. Basically, these models will take efficiency or productivity scores obtained from DEA as dependent variable, and the variables affecting efficiency or productivity as independent variables. The advantage of econometric models is that we can identify the factor influencing efficiency or productivity, and raise suggestions based on the results. The purpose of these discussions is not to show off DEA, but to outline some prospects for our project. We leave all of these for future occasions.

The potential challenges to our empirical study not only come from the small sample, but also comes from the nature of the data. Data Envelopment Analysis is first developed to do cross-section data analysis. In our empirical study we use time-series data and treated each DMU as if it were a different DMU for each period. However, the theoretical implications of representing each DMU as if it were a different DMU for each period is a “blind point” in the research of DEA and remains to be worked out. We discussed this problem with Professor Lovell at University of Georgia, who has contributed a lot to the development of DEA. He insisted that there should no problem. However, we still expect that DEA experts pay attention to this problem and give a detailed theoretical explanation. This is important because historical comparison is the basic method to evaluate performance changes in public sector (OECD, 1994).

In all, Data Envelopment Analysis is a powerful and amenable method to assess efficiency. We recommend getting it involved with performance management as a practical technique. Two points worthy of notice are: First, DEA measures efficiency and says little to effectiveness. To evaluate performance more comprehensively, we need to find ways to measure effectiveness. This is a more challenging task. And we have to admit that it might be misleading to focus on improving efficiency while ignoring the difficult task of measuring and improving effectiveness. For example, if you employ graduation rates and enrolled students as output indicators and use the resultant efficiency assessments to evaluate Education Bureaus, no Education Bureau (*Jiaoyu Ju*) will care about developing students’ ability to apply knowledge, let alone building their good virtue, which are more important for a healthy society. Second, we must use caution when we use DEA to assess government efficiency. The details of every case should be examined before conclusions are drawn because different efficiency scores employ different measures of outputs and inputs. The more accurate measures you choose, the more you can say. The selection of outputs and inputs needs to combine the efforts of education experts, schoolteachers, education officials and so on.

Conclusion

In this study, we use Data Envelopment Analysis to measure the efficiency of Education Bureau of Ningbo City. No significant difference was found between the efficiency levels before 1995 inclusively and those after 1995 exclusively. This means that in terms of efficiency, the introduction of China’s civil service reform has no significant influence on governmental performance.

Theoretically, we found that the claimed positive effects of the introduction of civil service systems on governmental efficiency were not achieved in practice. We suggest two explanations for this: First, few critical and real changes were made by the civil service reforms in Ningbo City. Second, civil service reform fails to be integrated with specific organization objectives and other concurrent administrative reforms.

Methodologically, we identify the data requirements, the advantages and limitations of applying DEA. We recommend getting it involved in performance management as a practical technique. Furthermore, we put forward the technical problems DEA experts are expected to address. Finally, we agree that for the sake of a more comprehensive performance evaluation, more efforts should be devoted to assess its effectiveness.

Notes

¹As to the relevant history of productivity measurement in government organizations in USA, please see Downs and Larkey, 1986.

²Ad Hoc methods do not require any assumption about the functional form either. These methods are the oldest tools to measure efficiency, including such approaches as the use of pupil-teacher ratios, pupil-educational budget ratios and so on. The shortcomings of these methods are 1) it is essentially hard to draw any definite conclusions based on ad hoc measures of efficiency. For example, inefficiency could occur when the pupil-teacher ratio were either too high or too low (Barrow, 1990); 2) they do not work in the situation of multi-inputs or multi-outputs.

³There are two approaches to define technical efficiency—one is the input-oriented approach and the other is output-oriented approach. Input-oriented approach addresses the question: “By how much can input quantities be proportionally reduced without changing the output quantities produced?” And output-oriented approach answers the question: “By how much can output quantities be proportionally expanded without altering the input quantities used?” Generally one should select an orientation according to which quantities (inputs or outputs) the decision making units’ managers have most control over. (Coelli, 1996b) In our study, we choose input-oriented approach based on the reasonable assumption that city government and education agencies have more control over education expenditure and school employee than the number of enrolled students. Actually, in many instances you will

observe that the choice of orientation will have only minor influences upon the obtained efficiency scores (Coelli, 1996b).

⁴Alternatively, you could choose Variable Returns to Scale (VRS) model and Non-increasing Returns to Scale (NIRS) model. For the difference between them, please refer to Coelli (1996a, 1996b, 1998).

⁵The price is that we cannot tell the “pure” technical efficiency from the scale efficiency. Since what concern us is the aggregate efficiency assessment of Education Bureau, Ningbo City, a comprehensive technical efficiency is enough for our research purpose. Again for more on VRS, please refer to Coelli (1996a, 1996b, 1998).

⁶<http://www.une.edu.au/febl/EconStud/emet/deap.htm>.

⁷In their paper, Meier, Polinard and Wrinkle used the percentage of students who pass the TAAS test in each school district to measure student performance (Meier, Polinard and Wrinkle, 2000).

⁸Why do we only use 1992 and 1993 data, instead of some averages, to adjust the expenditure data of 1991 and 1992 respectively? The reason is that both percentage 1 and 2 are strictly increasing over years.

⁹All the raw results are available on request.

¹⁰This conclusion is consistent with the World Bank. After examining the civil service reforms in developing countries, Das concluded that the fiscal and efficiency impact was negative; the efficiency gains from the reform in the larger context are not visible (Das, 1998).

¹¹ Pay/incentive systems play an important role in the conceptual framework to guide the future civil services that affect performance (Das, 1998).

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