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DISTRIBUTIVE PERFORMANCE OF THE CHINESE POLITICAL SYSTEM (CENTERED ON EDUCATIONAL EXPANSION, 1922, 1949-1957)

The Ohio State University PH.D. 1983

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DISTRIBUTIVE PERFORMANCE OF THE CHINESE POLITICAL SYSTEM

(CENTERED ON EDUCATIONAL EXPANSION, 1922, 1949-1957)

DISSERTATION

Presented in Partial Fulfillment of the Requirements for

the Degree Doctor of Philosophy in the Graduate

School of The Ohio State University

By

Keun-Sang Lee, Ph. D.

* * * * *

The Ohio State University

1983

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INTRODUCTION

Among comparative political scientists, there is a growing commitment to study the performance of political systems, that is, policy performance.[1] Since policy performance is the behavior of the political system as measured against goals, an analysis of policy performance is useful in evaluating the political system independently of ideology-ridden rhetoric or propaganda. For example, egalitarianism is one element at the core of Mao Tse-tung's ideology. But we cannot say systematically how successful Communist China has been in achieving egalitarianism unless we examine the distributive consequences of his policy.

Donald Munro points out two aspects of egalitarianism in China; one pertains to equitable distribution of income and wealth. The other one is status equality, which is to break down barriers between town and country, worker and peasant, mental and manual labor, and party and non-party. In order to achieve status equality, Communist Chinese leaders had attempted to use education as a means. As to major strategies, they considered at least the following three methods: (1) to expand educational opportunities as much as possible; (2) to relate education to the needs of production by establishment of the "half-work, half-study" principle;[2] (3) to foster political consciousness to serve the proletariat by intensive education of Mao's thoughts. Of these three strategies, distribution of educational opportunities usually becomes an indicator

of distributive performance of a political system and can be quantifiable by student enrollments. In this respect, if we examine distributive patterns of educational opportunities over years, that is, the quantitative aspect of distribution, we can assess more systematically the distributive performance of the Chinese political system. Of course, there is another aspect of distribution, that is, distribution of quality education. But I do not deal with the qualitative aspect of distribution in this study because it could make another lengthy dissertation.

Analysis of a policy performance includes studies on the conversion processes of policies as well as policy outputs. Among scholars of public policy, who consider policy as a dependent variable in their analysis of policy process, one group of scholars focus their research on identifying principal competing political actors or group of actors in the decision-making process, their objectives, techniques, strategies, personality and perception of issues and on examining the patterns of their interactions to each of the others.[3] This approach is useful to studies on the pattern of power struggles among political elites and on the configuration or distribution of political power. However, it has a disadvantage not to capitalize on the impact of environmental factors on policy outputs.[4] On the other hand, another group of scholars lay special emphases on policy output and its conditioning factors such as socioeconomic and political attributes of a political system. This approach supplements the weakness of the former approach but loses important information on the conversion process of policy, that is, what politics is really about. This approach is, however, useful when assessing performance of a political system as a whole in the long run.[5] As has been

discussed above, both the approaches are complementary. Thus, if we are not equipped with well balanced knowledge on policy performance from the viewpoints of both the approaches, we will lose much analytic leverage.

In regard to policy performance of the Chinese political system, there are a number of impressionistic and descriptive studies but few systematic studies, particularly in relation to environmental factors. Therefore, this dissertation will be designed to provide more knowledge on the political process of the Chinese political system at the policy level by examining the relationships between the performance of educational policy and its environmental factors. According to Gabriel Almond and Bingham Powell, policy performance can be approached in terms of four categories of policy outputs:[6] (1) the extraction of resources (e.g., goods, money, servives, status, prestige, etc.); (2) the distribution of economic goods, services, status, prestige, etc.; (3) the regulation of human behavior; (4) the communication of symbols and information. Among these four categories of policy outputs, this study examines the distributive performance of the Chinese political system, which will tell us: (1) what and how much has been distributed?; (2) how equally and to what sectors of the society? These two aspects respectively refer to aggregate growth and equal distribution aspects of the distributive performance of the Chinese political system. To be more specific, this study will examine both the aspects of the distributive performance of Chinese educational policy relative to expansion of educational opportunities throughout the country in the 1950s, by answering the following questions: (1) What have been the aggregate national student enrollment levels in the 1950s? (Answers to this question will

tell us about the magnitude of what has been really achieved in expanding educational opportunities throughout the country in the 1950s, but cannot tell us how equally and which sectors of the society actually enjoyed expanded educational opportunities.); (2) How equally have Chinese provinces performed in the provision of educational opportunities; (In regard to the selection of province as a level of analysis, I will briefly discuss its reasons below.); and, (3) What are the determinants of the aggregate national student enrollment levels and of interprovincial variations in the provision of educational opportunities?

With respect to the level of analysis, someone may ask why the province is chosen despite the fact that there are more tiers of the political system such as special district, county, urban district, commune, and production brigade. One of the biggest problems with the other tiers of the political system is that there are not enough enrollment data to produce any rough picture of the distribution of student enrollments in China. On the other hand, a considerable amount of enrollment data at national and provincial levels are available for us to get at least a rough picture of the distribution pattern of student enrollments. One thing about which to be cautious is the fact that distribution patterns of student enrollments at the provincial level do not necessarily represent or correspond to those of the lower levels. In other words, some provinces may perform better than the others in the provision of educational opportunities, but this does not necessarily mean that the better province achieves more equality within the province as compared with other provinces. In addition, equality in distribution of educational opportunities can also be assessed between the rich and poor and the

urban and rural areas at the grass-root level, but the interprovincial distribution pattern does not necessarily represent this pattern at the grass-root level. However, if we can find some meaningful relationships between interprovincial variations in the provision of educational opportunities and in the socio-economic attributes (e.g., wealth, urbanization, industrialization, etc.), we can at least infer how important such socio-economic attributes are in achieving equal distribution of educational opportunities in China.

This dissertation is composed of three chapters. Chapter I will discuss crucial research problems and methodology. Chapter II will discuss the aggregate growth educational opportunities in China in the 1950s and its determinant factors. First, I will discuss an aggregate aspect of the growth of student enrollments at the national level in the 1950s. Second, I will examine what environmental factors affect changes in national enrollment levels. Answers to this question are expected to give us at least preliminary knowledge on the relationships between policy outputs and the environment. Findings noted in Chapter II can give us some idea of the aggregate growth of educational opportunities in China and its determinant factors. But they cannot tell us what segments of the society benefitted from aggregate growth. In regard to this question, Chapter III provides some insights. First, I will discuss how equally provinces of the People's Republic of China have achieved expansion of educational opportunities in the 1950s as compared with those of 1922. As to the selection of the case years, I will give some explanation later in Chapter I. Second, I will examine the relatiohship between interprovincial variations in student enrollment levels and its

determinant factors in the 1950s. Then, on the basis of Chapters II and III, I will draw conclusions on the major research problems posed in Chapter I.

INTRODUCTION

FOOTNOTES

1. Almond and Powell view functions of the political system in terms of three different levels: the system level, the process level, and the policy level, that is to say, performance of the political system. See Gabriel A. Almond and G. Bingham Powell, Jr., Comparative Politics, 2nd ed. (Boston, Mass.: Little Brown and Company, 1978),p. 392.

2. Donald J. Munro, "Egalitarian Ideal and Educational Fact in Communist China," in John M. H. Lindbeck, ed., China: Management of a Revolutionary Society (Seattle Wash.: University of Washington Press, 1971), p. 258.

3. This concept of decision-making approach was developed most notably by Harold D. Lasswell and Richard C. Snyder and his associates. See Harold D. Lasswell, The Decision Process (College Park, MD.: University of Maryland Press, 1956) and Richard C. Snyder, H.W. Bruck, and Burton Sapin, eds., Foreign Policy Decision-Making (New York: Free Press of Glencoe, 1962).

4. Robert H. Salibury, "The Analysis of Public Policy," in Austin Ranney, ed., Political Science and Public Policy (Chicago: Markham Publishing Co., 1968), p. 164. This line of argument also appears to be supported by the incrementalist view of American politics.

5. Norman C. Thomas, Education in National Politics (David McKay Company, Inc., 1975), p. 5. This approach does not offer any explanation of individual, group, or institutional policy-making behavior.

6. Almond and Powell, op. cit., pp. 286-89 and 299.

CHAPTER I

RESEARCH PROBLEMS AND METHODOLOGY

A. Search for Research Problems

A growing body of literature in the West is gradually illuminating how the Chinese policy process functions. Doak Barnett played a pioneer role in this field, exploring how Chinese leaders had interacted with each other and with their subordinates.[1] Michel Oksenberg has written on the process of policy formulation and implementation in water conservation, taking into account the socio-economic and bureaucratic constraints.[2] He also wrote on Mao's role in China's decision-making process,[3] various policy arenas,[4] and the methods of communication within the bureaucracy.[5] Roderick MacFarquhar has explored the interactions among the highest level leaders during the 1956-57 period.[6] Parris Chang discovered the importance of informal high level party meetings and of the provincial elites in debating a wide range of policy issues.[7] David M. Lampton studied the relationship between changes in health policy and decision makers' perceptions constrained by their personal background and environmental conditions.[8] These studies concentrated on the roles of elites in the policy-making process, their interactions, perceptions of issues, strategies, and communication methods. A major concern of these studies is the conversion process of policy at the

national level. As mentioned earlier, studies on the conversion process of policy can provide us some knowledge about what politics really is but give us little insight into the ultimate outcome of policies. For example, I will briefly review John Gardner's article, "Educated Youth and Urban-Rural Inequality, 1958-66."[9] In his article, John Gardner basically dealt with the following questions: (1) What were the changes in Chinese education policy between 1958 and 1966?; (2) Who were the actors or groups of actors affecting changes in the policy?; (3) What were their objectives and strategies?; and, (4) What was the political situation at the time?

According to Gardner, fluctuation in Chinese education policy between 1958 and 1966 reflected shifts in the power balance between two rival factions (Maoists and Liuists) offering different education policy choices.[10] Maoists attempted to use education as the means by which they desire to eliminate differences between the urban and rural areas, workers and peasants, mental and manual labor. The essential measures of Maoist education policy which were jointly adopted by the Central Committee and State Council on September 19, 1958 were as follows:[11] (1) Regular schools were to establish farms and factories in order to become fully integrated with the productive process; (2) such schools were to be run on a half-work and half-study system so that study could be combined with normal work. This education policy was rurally oriented and egalitarian. But when it conflicted with Liuist education policy, it failed to gain political supports from the people. Many provincial officials were reluctant to enforce Mao's radical education policy. Cadres and teachers also refused to accept Mao's education policy, acting in

accordance with the desires of students and parents. Even from the masses in whom Mao had such faith, he could not get support for his radical education policy.[12] Eventually, as of 1964, Liuist education policy was adopted. The essence of the policy was to keep a "two track" system of education: quality, full-time schools to create educated elites of professional and half-work, half-study schools to expand educational opportunities in the rural areas.[13]

As I have just reviewed, John Gardner's article tells us about the political process through which China's education policy has changed. But it does not tell us how well the Chinese political system performed in expanding educational opportunities and what the determinant factors were. The lack of knowledge concerning these questions can be overcome by systematic studies on policy performance. David Lampton's preliminary studies are good examples. In his first paper, "Performance and the Chinese Political System,"[14] Lampton discusses an aggregate growth trend of student enrollments at the national and subnational levels. In the article, he makes a preliminary observation on interprovincial variations in the provision of educational opportunities and its determinant factors. One of his contributions to the study of policy performance of the Chinese political system is that he found interprovincial inequality in the distribution of student enrollments and that he shed light on the possibility of systematic study of policy performance of the Chinese political system. In his recent paper, "Roots of Interprovincial Inequality in Education and Health Services in China,"[15] he has been more analytic as compared with his former article. He has dealt with questions in a more systematic manner. First, he has carefully chosen five provinces

to be cases of analysis: Anhwei, Hunan, Kwangtung, Shansi, and Shantung. Then, he asks the following questions: (1) What are the interprovincial variations in the provision of educational opportunities?; and, (2) What are the factors which best account for such variations? He concludes that the percapita gross value of industrial output (GVIO) and the urbanization rate are the factors which best explain policy performance in the field of education policy. In addition, he comes up with some other findings: (1) provincial political and social attributes, such as leadership stability, percentage of Chinese population in the Chinese Communist Party (CCP), and the availability of surface transportation, do not seem to be important variables in explaining interprovincial variations in the provision of educational opportunities; (2) central government policy choices, such as regional distribution of investment, changes in the financing system of education, the central government's subsidies to backward provinces, are important in as much as they affect patterns of industrial and urban growth; and, (3) shortening the length of schooling time favored poor provinces in the 1970s.

In the sense that he opened up a new perspective in approaching the performance of the Chinese political system, Lampton made a great contribution to the study of Chinese politics. However, in order to make the study more generalizable, we need to refine his study. First, we need a greater number of case provinces to better test Lampton's hypotheses. Second, Lampton uses per capita grain output as an indicator of gross agricultural output. But it does not seem to be a good indicator of gross agricultural output since gross agricultural output should include not only agricultural crops, such as grain crops, vegetables,

fruits, etc., but also products of husbandry, forestry, and fishery. As long as some data are available for gross agricultural output of the 1950s, it is desireable for us to use such data. Lardy reported the gross value of agricultural output by province for 1957.[16] Nai-ruenn Chen also compiled data on the gross value of provincial agricultural output for the years of 1952, 1954, 1957, and 1958.[17] When we use these data, we can find different results from those of Lampton's study. According to Lampton's data on per capita grain output, his five case provinces are ranked in the following order: Hunan, Kwangtung, Anhwei, Shansi, and Shantung.[18] But if we use per capita gross value of agricultural output by province, we can find somewhat different rank-ordering of the same case provinces, as Table 1 presents below. Third, Lampton thought that the length of schooling was another potential variable in accounting for interprovincial variations in the provision of educational opportunities. Although the shortened length of schooling time favored the poor performing provinces, it may not be a good variable for the following reasons: (1) The length of schooling is not an attribute of province; it did not vary province to privince; and, (2) Even if it is indirectly associated with interprovincial variations in the provision of educational opportunities, it is not feasible to sort out the effect of such a factor. Lampton says that when the number of years in school was reduced, it became difficult for the provinces leading in the 1950s to boost their rates of student enrollment. In other words, this means that the "poor performing provinces" cound take advantage of such change more than the "leading provinces." But in regard to this question, we cannot still find any good explanation, unless we

Table 1. Rank-Orders of the Five Provinces by Per Capita Gross Grain Output and Per Capita Gross Value of Agricultural output in Yuan

	Anhwei	Rank	Hunan	Rank	Kwangtung	Rank	Shansi	Rank	Shantung	Rank
1957a Gross Value of Agricultural Output Per Capita in Yuan	106	1	103	2	102	3	98	4	82	5
1958b Gross Value of Agricultural Output Per Capita in Yuan	240	1	96	3	114	2	N.A.		94	4
1949-1957c Gross Grain Output Per Capita in Catties	521	3	570	1	551	2	486	4	423	5
1974-1975d Gross Grain Output Per Capita in Catties	683	3	747	1	684	2	565	4	451	5

Source: a. Per capita figures were derived from Nicholas R. Lardy, "Regional Growth and Income Distribution: Chinese Experience," Economic Growth Center Discussion paper, No. 240, Yale University (November, 1975), p. 11. See Table 1.

b. Per capita figures were calculated on the basis of the following sources: agricultural output from Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), p. 364. See Table 5.94; provincial population figures from John S. Aird, Population Estimates for the Provinces of the People's Republic of China: 1953 to 1974, International Population Reports, Series P-95, No. 73 (February, 1974), U.S. Department of Commerce, p. 23. See Table II.

c. David M. Lampton, "The Roots of Interprovincial Inequality in Education and Health Services in China," The American Political Science Review, vol. 73, No. 2, June, 1979, p. 463. See Table 3.

d. Ibid., p. 467. See Table 5.

can prove a significant association between interprovincial variations in performance of education policy and the length of schooling. There is another variable similar to this one, that is, the alternation of financing teacher salaries. Lampton argues that when the salary of elementary teachers was appropriated from the National Treasury, this promoted the equalization of enrollment rates between provinces. With respect to this variable, we also have the same problem as with the variable the length of schooling. It is not feasible to sort out the impact of such a vairable on the interprovincial variations at present. However, it does not mean that such variables have no impact on the levels of student enrollments at all. These might be good variables to account for interprovincial variations in the provision of educational opportunities. For a similar case to those two variables, we can think of the Cultural Revolution in the late 1960s. Political disroder during the period had definitely disrupted the normal operation of elementary and secondary schools until the fall of 1968.[19] We know that the Cultural Revolution had significant impact on the level of student enrollments at that time, but we cannot sort out its impact on the interprovincial variations in the provision of educational opportunities. Fourth, Lampton adopted Teiwes' stability category[20] as the indicator of provincial leadership stability. Probably, he uses this category in the sense that instability in the provincial political leadership in the long-term period can hinder the implementation of education policy. But one problem with this indicator is that Teiwes' stability category indicates personnel instability of a decade (1956-1966) while data on the interprovincial variations are of each individual year. In this respect, it may

not be desireable to adopt the stability category for now, even though the variable might have some significant impact on the interprovincial variations. Finally, as I mentioned in the Introduction of this study, we need to study not only the aggregate growth but also the equality aspect of the distributive performance of the Communist Chinese political system. The study of the pattern of interprovincial variations in the provision of educational opportunities alone cannot tell us whether interprovincial inequality in the distribution of student enrollments has increased or decreased over the years. It also cannot tell us about the national aggregate growth of educational opportunities over the years. Therefore, this study will reinforce Lampton's study on the interprovincial performance disparity with a study of the aggregate growth of educational opportunities at the national level and its determining factors and with a study on the interprovincial inequality in the distribution of educational opportunities. Accordingly, this study will answer the following questions: (1) What is the aggregate growth trend of student enrollments in Communist China in the 1950s and its determining factors?; (2) How equally have provinces performed in the distribution of educational opportunities in the pre- and post-1949 period?; and, (3) What are its determining factors?

B. Significance of Study

First, this study is expected to provide an empirical basis for the systematic explanation of the policy performance of the Chinese political system. With descriptive and impressionistic information only,

it is difficult to systematically analyze changes in interprovincial inequality in the distribution of student enrollments. Second, this study will provide another chance to test the reliability of the findings from the studies of American public policy on the relationship between socioeconomic variables and policy performance in another context of political culture. Richard Rose argues that the study of policy problems within the context of a single nation has some disadvantages: (1) One cannot test generalizations or draw conclusions beyond a single nationa context;[21] and, (2) It is difficult to examine the effect of ideological differences on government actions.[22] As American scholars of public policy have sought to get around the first problem by comparing differences in policy outputs among fifty American states, this study will also give us another opportunity to tackle the same problem by comparing differences in policy outputs among Chinese provinces. Third, Almond and Powell discuss the concept of political development in relation to policy capacity. They argue that a developed political system has the possibility of adopting policies that can change the environment more effectively.[23] If I adopt this concept of political development, this study, particularly a comparison of performances of educational policies in the pre- and post-1949 period, will give us some insight into the effectiveness of the Chinese political system in the two different contexts of political culture (i.e, the time period around 1922 and after 1949).

C. Framework

As mentioned earlier in this chapter, the study of Chinese policy performance has not been very analytic. Under this circumstance of low theoretical yield, we need a relatively systematic analysis of the Chinese political system. The demographic approach which is derived from the Easton's system theory will be a good device for such purpose. Before I discuss any details of the framework, I will briefly sketch Easton's system theory.

David Easton defines the political system as a mechanism of converting inputs--which are created by societal stress--in the form of demands and supports into outputs or public policies.[24] Easton conceives of the political system analytically separate from all other systems. He believes that all other systems have exchanges or transactions of influence with the political system.[25] In other words, these other systems create stress which, in turn, influence inputs into the political system. Then, the political system produces changes in the other systems or environments by converting inputs into public policies and implementing them.

Confirming the same line of logic of the system theory, the demographic approach involves testing a set of socio-economic and political variables to examine its relationship with public policy outputs without regard to the conversion process of public policy. There are an enormous number of projects which have employed this approach in the studies of American public policy at the state and municipal levels. Since Thomas Dye's work, Politics, Economics and Public Policy,[26] is a landmark in the

field, I will briefly review his study and point out the strengths and weaknesses of his framework, which are, in turn, applicable for the demographic approach per se. In the study, Dye asks questions such as whether political system characteristics mediate between socio-economic variables and educational outputs or whether policy outcomes are determined by socio-economic variables without regard to system characteristics.[27] In his study, he finds that the traits of income, industrialization, urbanization, and education are highly inter-correlated and that economic variables are the most significant determinants of policy outputs.[28] With regard to political variables, he argues that political characteristics of the system, such as party competition, electoral participation and legislative appointment, do not have a strong effect in relationship to policy outcomes.[29] Similar findings on political variables are confirmed by Frederic Pryor and Harold Wilensky in their cross-national studies of public policy.[30] They contend that social and economic characteristics have much stronger association with policy outputs than with political variables.

Such findings produced by Dye and the other scholars have provoked a number of constructive criticisms concerning their political variables and the weakness of the demographic approach per se. First, Dye regards the indicators of his economic variables as inputs and not as environmental factors. But environmental factors are not input. As Jacob and Lipsky point out, environmental factors may have a high correlation with inputs in some circumstances but not necessarily a perfect correlation.[31] For example, when variations in the supply of economic resources in a country may influence variations in the demand for the resources, but

they are not necessarily correlated perfectly. Second, Dye uses the term "policy outcome" for the tangible manifestation of public policy, which is usually understood as policy output. According to Anderson, policy output refers to the service level affected by public policy, while policy outcomes refer to the effect which the services have on population.[32] Third, Dye's political variables, generally receive two criticisms: (1) the indicators of Dye's political variables, such as party competition, electoral participation and legislative appointment, might not exhaust the range of significant political variables.[33] In addition, these political variables are not suitable to the study of a "closed society" like China; and, (2) he chose the political variables which are probably insignificant to variations in policy performances of concern. [34] Fourth, his study lacks theory explaining the relationship between policy outputs on the one side and environmental variables and political system variables on the other side.[35] This criticism is also applicable for the demographic approach per se. Without any linking theory between variables, the strength of demographic approach will be weaker than it initially appears.[36] Thus, we need to reinforce somehow the weakness of the demographic approach. Particularly for the study of the Chinese political system, which is marked by a low theoretic level, we need to choose logically well associated variables. For instance, when education policy output is measured in expenditures, socio-economic variables are more important than political variables. For example, changes in educational budget is more likely to be explained by changes in national income than by political ideology. Conversely, it is questionable whether the socio-economic variables are still

important in influencing policies which reflect more closely the manifest political value of a community.[37] In this respect, it will be desireable for us to choose the variables which closely reflect environmental stresses that create demands for the expansion of educational opportunities.[38] The logic supporting this statement is that environmental stresses generated by different needs or claims for scarce resources produce organized activities to be directed toward the political system. Then, the organized activities produce policy outputs which might reduce the original environmental stresses. By the same logic, in selecting the variables of this dissertation, I will apply the same logic as above. I expect that an application of such logic will maximize the heuristic value of the demographic approach in arranging and categorizing existing data and knowledge and in an understanding of the relationship between variables.

In the process of maintaining a society or state, formal education is a prerequisite element. Frederic Pryor says,

> It is a commonplace idea that a state or democratic society is impossible without a minimum degree of literacy, knowledge, and acceptance of a common set of values and that for all these purposes formal schooling play a major role.[39]

The importance of education stems from its functions as a fundamental underpinning of the social and economic system and political stability. In the traditional sense, the most cogent reasons for financing education in the public sector seem to be social and political stability.[40] Particularly, in times of rapid change accompanied by social and political turbulance, education has a critical role to play in helping the people to adapt to the change.[41] But in the modern society, where

economic productivity is closely related to the skill and knowledge of its members, education also plays another crucial role of maintaining economic stability and promoting economic prosperity by supplying skilled manpower. The same logic as above is applicable for the Chinese political system.

In 1949, when the Chinese Communist Party came to power, its leaders faced tremendous problems at home and abroad from the beginning. Particularly, in the domestic sphere, they had three urgent tasks: (1) to consolidate political power through the establishment of a civil administration throughout the country; (2) to reconstruct the national economy; and, (3) to build a new socialist society with a new culture. In regard to these tasks, Mao Tse-tung also enunciated:

> For many years we Communists have struggled for a cultural revolution as well as for a political and economic revolution, and our aim is to build a new society and a new state for the Chinese nation. That new society and new state will have not only a new politics and a new economy but a new culture. In other words, not only do we want to change a China that is politically oppressed and economically exploited into a China that is politically free and economically prosperous, we also want to change the China that is being kept ignorant and backward under the sway of the old culture into an enlightened and progressive China under the sway of the new culture.[42]

The consolidation of political power through the establishment of a civil administration was one of the most important objectives of the new regime in the early 1950s. Thus, Mao appealed to the rank and file bureaucrats en masse:

> All cadres should learn how to be good at managing industry and commerce, good at running schools . . . If we do not pay attention to these problems, we shall be unable to stand on our feet, and we shall fail.[43]

At the outset of the new regime, however, one of the biggest obstacles to the establishment of a civil administration was the shortage of administrative cadres. During the Nationalist period, governmental officials were needed only to run the government organs. But after the Communists assumed power, the regime needed more cadres not only for expanded state and Party bureaucracy but also for the large number of non-governmental organizations. In addition, the new government also needed more cadres to carry out land reform, water conservancy projects, placement services for urbanites. These expanded administrative tasks required an enormous number of cadres. At the founding of the People's Republic of China (PRC) in 1949, in fact, there were only 720,000 government cadres.[44] According to Emerson's estimate shown in Table 2, it was 796,000. At any rate, when these figures were compared with the counterpart figures of 1952, we can see the seriousness of the shortage of cadres relative to the immediate needs of the new regime. According to Table 2, the number of government cadres reached 1,461,000 in 1952. Similarly, there were about 700 cadres in the local government of Canton in 1950. But this number increased to several thousand in 1952.[45] This indicates that the shortage of government cadres could be a serious hindrance to the consolidation of the civil administration. Before any further discussion, I will briefly describe the definition of cadre. The term "cadre" (kan-bu) came into commom use in the 1920s as a general term for persons in a position of leadership in the Chinese Communist Party (CCP), then it had been changed over the years until 1953 when its meaning became stabilized. Since then, cadres include: (1) government administration cadres at all levels, (2) technical personnel, (3) public

health workers, (4) literary and art workers, (5) press and publishing workers, (6) scientific research workers, (7) translators, and (8) teachers and other school personnel.[46] However, these do not exhaust all the categories of cadres.

The prolonged Sino-Japanese War, subsequent civil strifes, Russian confiscation of industrial equipment in Manchuria, and the corruption of Kuomintang (KMT) governmental authority had left an inflation-ridden economy to the new regime. Therefore, the new government concentrated on restoring plants, production, and transportation facilities and on bringing inflation and government revenues under control.[47] In addition to economic reconstruction, the new government embarked upon industrialization to break the vicious cycle of backwardness and poverty. Industrialization, however, requires the creation of a labor force with command of modern skill and technology, including engineers, technicians and other specialists as well as management personnel who are essential to modern industrial operations. Therefore, in the early 1950s, the shortage of skilled personnel could be a serious problem to industrialization and economic reconstruction. As Table 2 presents, the number of specialized cadres was 1,194,000 in 1949, then it increased to 2,043,000 in 1952. From the fact that the number of specialized cadres increased by a great number in three years, we can infer that the supply of cadres in 1949 was very low relative to the demands at the time. In addition, the number of educated persons, who had been one of the sources of skilled personnel in China, was less than the manpower needs of the country.[48] However, formal education was not the only road to specialized cadre positions. The majority of cadre positions in the engineering profession

Table 2. Number of Administrative and Technical Personnel, By Professional Field: Selected Years, 1949-1958 (Figures Are in Thousands)

Professional Field	1949	1952	1955	1956	1957	1958
Total	2,993	5,345	6,692	7,547	8,091	0,179
Administrative Personnel	1,799	3,302	3,800	4,215	4,212	4,424
Government Administration and Mass Organizations	796	1,461	1,516	1,680	1,634	1,397
Other Branches of the Economy . .	1,003	1,841	2,284	2,535	2,578	3,027
Technical Personnel	1,194	2,043	2,892	3,322	3,879	4,773
Engineers and Technicians	126	212	626	730	800	901
Agricultural Specialists	16	68	165	250	389	786
Teachers	834	1,441	1,632	1,830	2,116	2,489
Scientific Research Personnel . .	3	8	11	20	28	32
Medical and Public Health Specialists	180	244	370	411	452	466
Cultural Affairs Specialists . . .	35	70	88	91	94	99

Source: John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population reports, Series P-95, No. 72, U.S. Department of Commerce, April, 1973, p. 37.

were filled by "practicals" who were the persons with training-through-work experience. "Practicals" accounted for 81 percent of those hired as engineers and technicians during the years of 1949-52, 64 percent in 1953-55, and 71 percent in 1956 and 1957.[49]

As described above, the shortage of cadres was a major obstacle to the establishment of a civil administration and economic reconstruction in the early 1950s. Under the given situation, Chinese leaders adopted every possible measure to solve the problem of cadre shortage. First, with regard to the solution of the problem of administrative cadre shortage, the new government assigned the People's Liberation Army (PLA) to much of administrative work. One of the reasons for assigning the military to duties of civil administration was that the shortage of Party members qualified for cadre positions was so severe. The Party had, in fact, a membership of approximately 4.5 million in 1949, but a majority of Party members had neither the required quality nor training to qualify as cadre. It was partly because the Party recruited most of its members from the peasantry before 1949.[50] Second, the new government hired former officials of the Nationalist government. Sometimes, the new regime begged them to stay at their posts, guaranteeing them their previous rank and pay.[51] However, neither the PLA nor former officials of the Nationalist government was the permanent source of administrative cadres. Particularly, the PLA had a problem supplying a permanent source of cadres because almost 80 percent of the PLA was formed by young peasants with little or no education at all.[52]

On the other hand, a majority of specialized cadre positions were filled by "practicals". These "practicals" also could not be a permanent

source of specialized cadres, for Party leaders gave the highest priority to planning the industrialization with heavy emphasis on heavy industry which requires normally a large number of highly skilled and educated personnel in a short span of time. Consequently, great demands for specialized cadres as well as administrative cadres necessitated the expansion of education in China and education planning came to be included in central planning for manpower training and utilization.[53]

The expansion of educational opportunities has an important implication for the political socialization of masses into new political culture and ideology.[54] The importance of education to the process of political socialization can be ascribed to the fact that educational institutions are inevitable agents of political socialization in China. Unlike the other agents of political socialization, such as the family, communication network and generalized political experience, the schools are subject to a high degree of state control and provide a mechanism for universal, sustained and structured contact with all school-age population.[55] In this respect, rapid expansion of education was very important for political socialization in the early 1950s when the illiteracy rate was estimated to be as high as 85 to 90 percent of the whole population[56] and when almost half of the population were adults who had received primary socialization and education in a non-Communist setting.[57]

Education also has a very important impact on the fate of efficient administration and implementation of policies because these are related to the paperwork down to the household. For example, cadres at the low level in China need sufficient enough education to carry out information gathering for policy formation and policy interpretation functions.

Education also provides the peoples with broad knowledge so that they may have some understanding of their relations to the economy and society at large and so that they may grasp government policies. In this situation, the expansion of educational opportunities was inevitable in the early 1950s.

D. Variables

1. Dependent Variable

Since the major objective of this study is to explain how the Chinese political system has performed in the distribution and expansion of educational opportunities in response to the country's needs for educated and skilled manpower, I will take the performance of education policy at the national and provincial levels as the dependent variable. The performance of education policy is usually measured by the ratio of student enrollments to the total number of school-age children.[58] However, since data on the number of school-age children are not available in the West, I will take the ratio of student enrollments at the national and provincial aggregate levels to the totals of national and provincial population as an alternative indicator of the dependent variable. In so doing, I can still measure relative interprovincial differences in performance and changes in the distributive performance of the national political system as a whole in relation to the distribution and expansion of educational opportunities. The indicator of the dependent variable includes enrollments of regular primary and general middle schools. Of course, this assumes that provincial age structures are similar.

As to the selection of general middle school instead of secondary school as a whole: (1) There are not many enrollment data available for the analysis of interprovincial variations in the expansion of secondary education in the 1950s (2) Changes in general middle school enrollment levels can represent changes in secondary school enrollments as a whole. General middle school enrollments accounted for about, on the average, 83 percent of secondary school enrollments in the 1950s, as Table 3 shows. However, this alternative indicator still includes various methodological shortcomings.

First, the major sources for enrollment data are provincial government work reports, many of which are included in provincial newspapers that usually include government directives, editorials, and speeches and articles by high governmental officials. Among these sources, the most comprehensive statements of governmental activities are work reports delivered at Provincial People's Congresses and Provincial Party Congress. Work reports examine past government activities and lay down policies or programs to be pursued in the coming years. Work reports cover provincial activities of economic communications, and commercial and public finance. Education also receives considerable comment in work reports. The distribution of work reports is, however, limited and seriously uneven for provinces in the 1950s.[59] Therefore, we need to supplement work reports with speeches and articles by leading provincial leaders, budget reports, editorials of major provincial newspapers and New China News Agency dispatches.

TABLE 3. The Ratio of Students Enrolled for General Middle Schools to the Totals of Secondary Schools

Year	1949	1950	1951	1952	1953	1954	1955	1956	1957
Percent	82%	83%	80%	79%	81%	84%	87%	86%	89%

* The ratio of students enrolled for general middle schools to the totals of secondary schools are computed based on the data from the source below and rounded to the nearest point.

Source: John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, U.S. Department of Commerce, International Population Report, Series P-95, No. 72, p. 95.

Enrollment data extracted from these sources are also subjected to the same methodological problems as other Chinese press materials suffer from: (1) inconsistancy in coverage; (2) unintentional or intentional inaccuracy.[60] Particularly, unintentional inaccuracy comes from China's weak statistical network. As Oksenberg points out, factors such as the vastness of China and the low educational level of local leaders hindered the development of standardized a statistical network. In addition, local leaders have learned to some extent to control the upward flow of information. Since government reports and newspaper reports are based on such unsophisticated statistical reports, data derived from such sources are bound to contain errors. Such errors can be introduced not only in the process of reporting data as described above but also in the process of reproducing data from the original reports. For example, enrollment figures are often reported not by absolute figures but by the percentage of the previous year's achievement. To be more specific, in the case of Anhwei Province, the number of students enrolled for primary schools in

1957 was 2,810,000 which was a 0.29 percent increase over that of 1956.[61] Then, from such a statement, we can compute the 1956 figures of primary school enrollments. It will be 2,806,191. It seems to be very accurate, but it could include a great number of errors, for a small fraction of errors derived from a weak reporting system can multiply in the process of computation. Inconsistancy in coverage is another source of errors. For instance, in the case of Shansi Province, general middle school enrollment for 1957 was 157,429.[62] This figure, however, includes enrollments of normal schools, while other provincial enrollment data include general middle school enrollments only. For another instance, some provinces report the level of general middle school enrollments exlcuding private middle school students, while other provinces include both the private and public middle schools.[63] Taking into account such reliability problems of Chinese enrollment data, we cannot overly employ sophisticated statistical analysis.

Second, another limitation of the dependent variable of my analysis is that it covers ordinary primary and general middle schools. The reasons for the selection of these two types of schools are as follows: (1) vocational schools and other irregular schools, such as "spare-time shools," might make this analysis less tractable although such schools were important in the rapid expansion of student enrollments, particularly in the rural areas. These schools on the communes are also in no way comparable with full-time schools in the cities. For example, irregular secondary vocational schools do not require applicants to complete primary education.[64] In this situation, it is prudent to exclude those special schools, which might confuse the enrollment statistics even

further. One other thing we have to be aware of in using enrollment data of general middle schools is that general middle school enrollment data for 1957 include agricultural middle school enrollments in most instances. In fact, agricultural middle schools fall under the vocational headings, but its enrollment statistics in 1957 suggest that they are included in the secondary general middle schools.[65] Thus, we cannot avoid the fact but must count the 1957 level of general middle school enrollments less than reported. Agricultural middle schools were not operated long enough to change the pattern of interprovincial variations in the provision of educational opportunities in the long run.[66] In 1960 the number of the agricultural middle schools reached over 30,000 roughly one for each commune; total enrollments in those schools accounted for about three million students.[67] However, most agricultural schools were dismantled by the end of 1962 after three economic hard years (1958-1961).[68] As to the enrollments of higher educational institutions, provincial data are not much available for the 1950s.

Third, I will briefly discuss problems with national and provincial population data, which are vital in computing per capita enrollment statistics of primary and general middle schools. Chinese population data must be used gingerly; they are incomplete and, sometimes, inaccurate. Even official data issued during the First Five Year Plan (FFYP) period, which are the most reliable data in the 1950s, are subject to the same sorts of problems. First of all, scholars who use national population data have to depend upon estimates made by foreign scholars for all years except 1949-57. In regard to provincial population data, only two sets of data are available; 1953 census data and the

registration data for the year end of 1957. Other than this, we have to depend upon estimates. Second, Chinese population data, whether officially reported or estimated, suffer from a great number of problems. According to Aird, provincial population data may differ from the actual population data by as much as 25 percent.[69] Such a great margin of error reflects biases from various factors. Some common problems with both the provincial and national population data are: (1) the lack of fully developed methodology; (2) variations in data-collecting procedures adopted in different provinces; (3) absence of central supervisions, etc. As to the first problem, for example, population of minority peoples in frontier areas could not be counted directly. Thus, it had to be estimated by methods which have not been disclosed. In regard to the second problem, national population data obtained by summing up totals of provincial population often does not agree with the officially published totals even in the same publication.[70] This tells us that population data have not been the products of uniform demographic procedures. In addition, there are some other factors that bring errors into provincial data. The loss of registration through unauthorized migration was one of them. This factor could introduce a downward bias into the overall population of the mid-year 1957.[71] Another one is changes in provincial boundaries, which could introduce errors into provincial population data by five to ten percent.[72] In recognition of these problems, I believe that we have to be very cautious in carrying out any statistical analysis and drawing any rigorous conclusions. Since enrollment and population data include a great number of errors, it will be advisable to perform a simple statistical analysis such as rank-order correlation or

product-moment correlation rather than an overly sophisticated one.

2. Independent Variables

Many students of political science have recognized that economic development of a society has important effects on various policy outputs. It is also recognized that economic development creates a great number of public demands for education and has close relationships with educational development. To be more specific, the major components of economic development are industrialization, urbanization, wealth, and education. They are closely related to each other.[73] Industrialization requires the expansion of education to maintain the supply of skilled and educated workers. It also supports and requires urbanization, which involves the expansion of social services with reference to education, welfare, and public health.

Once public demands for education are created in a complex society, then, people have to have a sufficient number of professional teachers, school facilities, equipment, and educational expenditures. These factors are prerequisite conditions to maintain a certain level of educational development in a society. By the same token, they may have significant effects on the level of student enrollments in China. For instance, according to Kuang-ming Jih-pao (April 10, 1966), once a small village in Szushillichieh commune Poyang hsien, Kiangsi Province received school facilities and teachers from rich cities and brigades, and the percent of school-age children enrolled for schools in that village rose from 74 percent to 95.1 percent.[74]

Wealth or national income is another variable which may have an effect on the educational development. It determines a society's ability to achieve a certain level of student enrollment by affecting the level of expenditures for education. In the case of the PRC, redistribution of national income through government policies provided the sources of revenues for public services, such as regular school education.[75] For instance, after January, 1954, regular primary school expenditures incurred in connection with school equipment and repair and construction of premises should have been borne by the budgetary expenditures of municipal or hsien governments.[76] The salaries of elementary school teachers were also to be appropriated from the local government until 1957 when the State Council announced the decision that salaries would be appropriated from the national treasury.[77] In the final account for 1956, half the costs of primary schools at that time were to be met by local authorities out of local supplementary agricultural tax, which is extra-budgetary funds.[78] Extra-budgetary funds mean various items of revenue at the disposal of local authorities of different grades, which are not entered in the budget and which might be used without higher authorization.[79] Therefore, there was a possibility that the expansion of primary education was influenced by the level of agricultural outputs, which was a major portion of provincial income. In this respect, national income may have had an effect on the level of educational expansion in the 1950s. However, the effect of national income has a certain limitation. According to Salibury's study, "State and Politics," wealth or income determines a state's ability to achieve a certain plateau in its educational programs until a certain degree of affluence is achieved.

But once this is achieved, effort to achieve a higher level of educational development depends on its commitment to education.[80] A problem with national income data is that no provincial national income data are available for the 1950s, although aggregate national income data are available for the same period.[81] National income in Communist China is defined in terms of production, distribution, or final expenditures.[82] In practice, however, State Statistical Bureau appears to employ the definition of national income derived from the standpoint of production.[83] National income figures of such definition can be obtained by summing up the net value outputs of seven materially productive sectors: industry, agriculture, construction, restaurant, freight transportation, and that part of communication and trade serving material production. Although we cannot obtain per capita provincial income data by such a definition, we can still obtain a reasonable approximation of per capita provincial income, which will be the sum value of per capita gross industrial and agricultural outputs.[84] Gross value of other sectors are hardly tractable. According to Lardy, about 70 percent of China's gross domestic products originated in industry and agriculture in the mid-1950s.[85] Since these sectors of economy account for the majority of national and provincial national income and are the only alternative at present, we can use these data to compare relative economic strength between provinces.

Table 4. National Income at 1952 Price, By Materially Productive Sectors, 1952-1956

Indicator	1952	1953	1954	1955	1956
Percent Distribution:					
National Income	100.0	100.0	100.0	100.0	100.0
Agriculture[a]	59.2	N.A.	N.A.	N.A.	48.1
Industry[b]	18.0	21.0	23.4	23.6	26.4
Construction[b]	3.0	3.8	4.1	4.3	5.6
Transportation and Communications[b]	4.0	4.2	4.5	4.4	4.4
Trade[a]	15.8	N.A.	N.A.	N.A.	15.5
Amount, Million of Yuan:					
National Income[c]	61,130	70,040	73,880	78,880[e]	88,750
Agriculture	(36,189)[d]	N.A.	N.A.	(41,255)[e]	(42,689)[d]
Industry[d]	(11,003)	(14,708)	(17,288)	(18,597)	(23,430)
Construction[d]	(1,834)	(2,662)	(3,029)	(3,388)	(4,970)
Transportation and Communications[d]	(2,445)	(2,942)	(3,325)	(3,467)	(3,905)
Trade	(9,659)[d]	N.A.	N.A.	(12,248)[e]	(13,756)[d]

Source: Cited from Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), p. 142.

[a]SSB, Research Office, "A Preliminary Analysis of Production and Distribution of China's National Income," TCYC, No. 1 (January, 1958), p. 7.

[b]"Socialist Educational Materials for the Workers," Chinese Workers (Chung-kuo kung-jen), No. 4 (February 27, 1958), p. 7.

[c]Chen, op. cit., p. 151, Table 2.4.

[d]Derived by applying the percengages to the national income figures.

[e]"The Basic Situation of China's Construction Enterprise," TCKTTH, No. 24 (December 29, 1956), pp. 31-33.

Policy is a set of ends and means.[86] Therefore, we cannot overlook the complexity of the interrelationship between policies when we study policy performance. For example, although the immediate ends of tax policy may be to obtain resources for implementing government policies, the incidence of taxes, however, will directly shape government programs and activities. Sharkansky also argues that the spending of government expenditures by themselves may not meet popular demand for services, but the level of expenditures may influence other types of policies by affecting the level of public services rendered to the populace.[87] By the same token, in the case of China, economic construction, which required a great number of educated and skilled workers in the 1950s, should have affected the expansion of education in the same period. In light of the same logic, I hypothesize that changes in priority of the policy that required and created demands for educated and skilled workers would have affected changes in the levels of student enrollment. A way to measure the priority of a policy is to measure the magnitude of material and human resources allocated to the policy since various public policies compete for limited resources and the government allocates its resources to diverse functional categories.[88] Likewise, policy priority in China can be measured by the distribution of government expenditures and cadres. Audrey Donnithorne also argues that the relative significance of a policy in China can be measured by its percentage of total government expenditures.[89] Communist China's government expenditures include three broad functional categories: (1) economic construction; (2) social services, culture, education, and public health; and, (3) administration.[90] Central government budget includes one more category, defense. Cadres can

also be classified into the three functional categories.[91] All those three economic, social, and administrative categories of policy required and created demands for educated and skilled workers in the 1950s. Therefore, I will examine whether changes in priorities of these policy categories have had any significant relationship with changes in the levels of student enrollment at the national level. The limited availability of data on the provincial government expenditures and cadres restricts my analysis to the national level.

Stability of the political system may be another important variable affecting educational expansion, for it is closely interrelated with other environmental conditions, such as economic stability, military policy, defense policy, foreigh policy, political organization, law-enforcement, education, etc.[92] But I will drop this variable from my study for several reasons. First, data on the stability of the Chinese political system are rarely available. Second, even if some data are avilable, they are not sufficient enough for my study. There exist diverse definitions of political stability among the scholars of comparative politics.[93] Some essential conditions to the political stability are, however, commonly accepted by many scholars: (1) legitimacy of government; (2) civil order; (3) the longevity of government, that is, the stability of leadership in government or political party. Data on the first two indicators of political stability are not available for the Chinese political system for now, particularly on a provincial basis. As to the third indicator, some data are available and they may be the most important indicator for the study on the political stability of the Chinese political system. Since the CCP is a locus of dominant and

pervasive political power in China, it is most likely that serious instability of leadership within the Party can hinder the implementation of policies of various arena and dimensions. In this respect, purge and changes in the CCP leadership at the provincial level may be one of the major political variables that would affect the level of student enrollments in China. In fact, Teiwes and Lampton use purges and changes in the CCP leadership at the provincial level as the indicators of provincial political stability. But these are not sufficient for my analysis, for these stability data refer to personnel instability of a ten-year duration as one unit of time. But my study deals with the levels of student enrollments on a yearly basis from 1955 to 1957. Consequently, I will leave this variable out of my analysis, although it might be a good variable for other studies of Chinese politics. So far, I have briefly described what variables will be included and which ones will be left out. Now, I will discuss more in detail.

a. Economic Development.

(1) Industrialization. The best indicator of industrialization is that one minus the percentage of the work force engaged in agriculture, fishery, and forestry.[94] But since no such data are available in the West, the best alternative for now is per capita industrial output. Of course, these data include various problems. First, rather comprehensive per capita industrial output at the provincial level are available for 1957 but very few for other years in the mid-1950s.[95] On the other hand, per capita industrial output at the national level are available for the years from 1949 through 1957.[96] Therefore, as to the effect of

industrialization on the levels of student enrollment at the provincial level, we can examine only one year, 1957. Second, Chinese data of industrial output generally suffer from a number of problems, of which I will take two examples: (1) gross value outputs aggregated in different branches of industry appear to have different level of bias; (2) gross value reported from more vertically integrated branches of industry appears to be systematically underweighted, while that from less integrated branches of industry is overvalued.[97] Third, Chinese Communists report gross value of indsutrial output on the basis of officially established constant prices. The use of constant prices over a period of many years introduce another bias. For instance, the use of early 1950s prices to measure the level of industrial output of an economy experiencing rapid changes in structure and relative scarcity tends to result in an upward bias in estimating the rate of industrial growth.[98] In spite of these methodological problems, China specialists commonly acknowledge that data of the mid-1950s including 1957 appear to be better than those of the early 1950s. At any rate, since very limited data on per capita provincial industrial output are available for the other years except 1957 in the mid-1950s, I will use 1957 industrial output in 1952 constant prices. 1952 constant prices were officially adopted constant prices during the FFYP period.[99] On the other hand, national industrial output data are available for the years between 1949 and 1957.[100]

(2) Urbanization. Through the Chinese history, urban centers have had very important functions in many respects in spite of the waxing and waning of their importance over the years. Above of all, the role of

urban centers as administrative centers had been the most important one until communicational and transportational development brought up the cities as major industrial and commercial centers. In regard to education, the cities also had been major educational centers.[101] As a matter of fact, most secondary and higher educational institutions were located in relatively large cities and provincial capital cities until 1958.[102] This fact tells us to some extent about the importance of urbanization in relation to educational expansion.

The best indicator of urbanization is the percentage of people living in the urban areas. However, it was not until November, 1955 that the State Council attempted to define "urban". The State Council defined an area urban if it met any one of these three criteria: (1) seat of municipal people's committee or people's committee above the hsien level; (2) a minimum resident population of 2,000, at least 50 percent of which is nonagricultural; and, (3) a resident population of between 1,000 and 2,000, 75 percent of which is non-agricultural.[103] As compared with general population data, urban population data raises even more serious problems. One of them is that detailed reports on urban population are not available. Thus, it is necessary to assemble much of the needed information indirectly from a number of different sources, such as speeches, newspapers, journal articles, and atlas, etc.[104] Urban population data collected in such a manner often appear to be estimates. They are seldom accompanied by an explanation as to the method by which they were originally obtained.[105] In regard to provincial aggregate data of urban population, the 1953 census reports did not include the interprovincial distribution of urban population, but listed

those cities with over 100,000 persons.[106] In spite of such problems, Morris B. Ullman and Ernest Ni made some efforts to estimate inter-provincial distribution of urban populations.[107] Between these two, I use Ernest Ni's urban population data for my analysis. Ullman listed urban places of 20,000 inhabitants or more only, but Ni made estimates of interprovincial distribution of urban population including all urban places by applying the growth rates of the total population of the cities of 100,000 inhabitants or more. The basic assumption underlining Ni's estimates of provincial aggregate data of urban population is that the growth of the urban population within each province was directly related to the growth of the total population of its larger urban centers.[108] One thing favorable for Ni's estimates is that national aggregate data of the urban and rural population 1949-56, which were published by the State Statistical Bureau in June, 1957, showed no abrupt changes in the components of urban population.[109] In other words, there was no abrupt change in the components of urban population so that Ni's assumption may not be rejected.

Because I use Ni's estimates for my study, I have to use his 1958 urban population estimates for 1957. As of now, there is no other alternative. In addition, since there was no abrupt change in the trend of urban population growth, we can assume that there was no great change in the pattern of interprovincial distribution of urban population between 1957 and 1958. On the other hand, national aggregate data of urban population are available for the 1950s.[110]

(3) National Income. As I have already discussed, provincial national income data are not available at present, while national aggregate income data are available for the 1950s. Thus, I use per capita sum value of gross industrial and agricultural outputs as an alternative to the provincial national income data. As to the methodological shortcomings of the industrial output which is a part of provincial national income, I have already discussed earlier in this chapter. Now, I will briefly discuss a problem with agricultural output data. Reliability of these data is worse than that of any other functional field of the economy. According to the director of the State Statistical Bureau in early 1955, reliability of industrial output data is fair; trade is worse and agriculture is the worst.[111] In spite of such methodological problems, we cannot disregard the effect of agricultural output on the level of national income, for it accounted for almost a majority of national income until the mid-1950s. For instance, agricultural output of 1956 accounted for about 48 percent of national income.[112]

b. Resources for Educational Expansion: Teachers, School Buildings, and Educational Expenditures.

Variables such as industrialization and urbanization refer to the factors creating the public supply and demand for education in a society, while the factors such as number of teachers and school buildings and the level of educational expenditures refer to human and material resources which are needed for the realization of educational expansion. In order to measure the effect of these educational resources on the level of student enrollments, I will use the number of teachers and school building spaces per thousand students and educational expenditures per student.

Particularly, educational expenditure per student is a measure of expenditures relative to the educational need of the country.[113] However, provincial data on these resources are not available at present, while national data are available for the 1950s. Therefore, I can examine the effect of the educational resources on the level of student enrollments at the national level only. One problem with data on the resources is, however, that they include all types of secondary schools,[114] while enrollment data include general middle school only.[115] At present, these are the only available data. Besides, general middle schools accounted for almost 80 to 90 percent of the total secondary school enrollments in the 1950s as I mentioned earlier in this chapter.

c. Policy Priority.

Public policy is a goal-oriented government action or actions which produce changes in the environments of the political system in response to stresses generated in the environments. In such a policy process, policies rarely rely on a single means or category of policy output. Instead, policy is usually influenced by other policy or policy outputs. For example, government revenues and expenditures directly shape other government policies or activities.[116] Public policies are not only interrelated with each other but also compete with each other for limited resources, for the implementation of each policy requires manpower and revenues. Consequently, policy makers have to make careful plans to allocate such limited resources to each policy. In that case, there are various important factors which influence the allocation of limited resources. One of them is priority of policy perceived by policy makers in terms of its economic and political importance.[117]

In the case of China, government policies relative to rapid consolidation of a civil administration system, rapid economic reconstruction and development and the like in the 1950s created a tremendous demand for educated and skilled workers, which, in turn, necessitated educational expansion. These government policies competed for limited human and material resources and the government allocated them to each policy according to its different economic and political importance in each year. In this respect, I will explore the relationship between changes in priorities of those social, economic and administrative policies, all of which necessitated educational expansion, and changes in the level of student enrollments in the 1950s. The priority of each policy will be measured by the size of its expenditures and the number of cadres. First, as Ashbrook points out, Chinese Communists adopted the Soviet model of economic development and centralized all economic activities during the FFYP period, prescribing the rate of growth for all branches of economy. Thus, all government spending should have priority, once minimum defense and consumption needs had been met.[118] In this situation, budget data of the government can become an indicator of policy priority. To be more specific, I will calculate government expenditures of each functional category as percentage of total government expenditures. Donnithorne also suggests that any expenditure by government should--to determine its relative internal significance--be calculated as a percentage of total government expenditures.[119] By the same token, I will calculate cadres of each functional category as a percentage of total cadres.

Second, the number of cadres can become another indicator of policy priority in the sense that the economy of the PRC operates on labor and

cadre plans to balance the supply of and demand for manpower. Philip Emerson also points out that the growth of the number of cadres will become a good measure of the efforts and progresses made in the basic services provided by the government.[120] One problem I encountered was that I could not trace priorities of all the government policies. Thus, I will examine the policy priorities of three of the most basic functional categories of the government policies: (1) economic construction; (2) social services, education, culture, and public health; and, (3) administration. Economic construction expenditures refer to those used for investment in the following branches of productive activities: Industry, agriculture, forestry, water conservation project, meteorological services, transportation, post- and tele-communication, trade, banking and urban public utilities.[121] Expenditures for social services, culture, education, and public health are composed of the following subcategories: (1) cultural activities and broadcast, (2) expenditures for all the levels of school and labor training, (3) science and researches, (4) public health, (5) social relief and pension funds.[122] Administration expenditures are used for maintaining government and Party organizations. Wage and fringe payments constitute the bulk of these expenditures.[123] Cadres will be classified into three as the expenditures.

In addition to the data availability problem, expenditures and cadres have some other methodological shortcomings. Inaccuracy appears to be an unavoidable problem. For instance, in the 1955 final budget report of Kirin Province, the sum value of all the components of the 1955 budget did not add up to the total in the same source.[124] There is another problem, particularly with educational expenditures of primary schools. In China,

primary education was funded by national budget and extra-budgetary funds. Concerning extra-budgetary funds, I will discuss more in the end of Chapter III because it is more related to the topic of interprovincial variations in performance of education policy.

At any rate, we do not have comprehensive data on extra-budgetary funds of each province at present. We do not know the size of extra-budgetary funds allocated to educational expenditure of each province or national aggregate data. Thus, I cannot include extra-budgetary funds in my analysis. However, with the educational budget of the central government only, I can still see the effect of policy priority given to educational budget by the central government on the level of national aggregate enrollments since I examine the relationship between policy priority given to education by the central government and the level of student enrollments at the national level. In recognition of these problems, we must be very cautious of drawing any rigorous conclusions.

With regard to cadre data, Philip Emerson identified two major categories of cadres, that is, administrative and technical cadres. He also traced the growth in the supply of these personnel for the 1950s. First, administrative cadres take charge of the following activities: (1) government administration and mass organization; (2) other branches of the economy, which are trade, industry, transportation, communication, financing and banking, water conservancy, forestry, state farm, urban public utilities, meteorology, etc.[125] Cadres of this category are all administrative personnel in the sense that they are salaried in governments but they are, in fact, more related to economic construction in terms of its functional field. As a result, I will try both ways. One way, I will include this

subcategory in the economic construction category; another way is that I will include it in the administrative cadre category as Emerson did. According to the Chinese government's classification, economic construction includes following group of productive activities: heavy industry, large-scale light industry, communication, trade state-private joint enterprises, state material reserves, transportation, fishery, public utilities, urban construction, and development programs for agriculture, water conservation, and forestry.[126] Emerson's second category, technical cadres include:[127] (1) engineers and technicians, (2) agricultural specialists, (3) teachers, (4) scientific researchers, (5) medical and public health specialists, (6) cultural specialists. Among these subcategories, I will include subcategory one and two in the economic construction category and all the other subcategories in the social services, culture, education, and public health category. The reason why I include subcategory one and two in the economic construction category is that engineers, technicians, and agricultural specialists engage in the activities that pertain to the category of economic construction. Engineers and technicians engage in industry, capital construction, and transportation and communications. Agricultural specialists engage in agriculture, forestry, water conservancy, and meteorology. One thing we have to be aware of in dealing with cadre data is that the pre-1955 cadre data are less reliable than those of 1955 and later years. The pre-1955 appears to be made estimated by the State Statistical Bureau, data of 1955 and the later year were derived from the periodic reporting system.[128]

E. Data, Measurement, and Unit of Analysis

1. Unit of Analysis

The unit of analysis will be the policy performance, that is, behaviors of the national and provincial political systems of the PRC. Chapter II will deal with policy performance at the national level and Chapter III will deal with policy performance at the provincial level. Since I have already discussed some problems with the unit of analysis at the national level early in this chapter, below I will discuss that of the provincial level only. The first problem is how to decide case provinces since data are not available for all the socio-economic attributes and educational performance of all 29 provincial level administrative units in China. It would be desireable to examine all the provinces at cross-section times and over a series of years. But it is not, in fact, feasible to examine all of them at present because data are not available for all provinces and for all the variables over the years. Thus, I employ four criteria to select case provinces. (1) The minority provinces where at least one quarter of total provincial population is minority ethnic people are excluded from my analysis.[129] In other words, the provinces where Han-Chinese are dominant will be examined. By so doing, I can eliminate the effect of interprovincial differences in culture and ethnicity and make the analysis simpler. (2) Border defense areas are excluded because the border provinces have been given special concern by the central government for defense purposes and for the stabilization of urban demographic growth.[130] For instance, the central government made efforts to resettle families from densely populated urban and rural areas in the

sparsely populated border areas in order to solve the problems of surplus labor and to increase production on the one hand and in order to reclaim wasteland in sparsely populated border areas.[131] If we do not exclude such factors, bias introduced by such factors will make it difficult to measure the effect of other idiosyncratic attributes of each province on educational expansion. The provinces which are excluded by the criteria one and two are: Inner Mongolia, Sinkiang, Tibet, Kwangsi, Ninghaia, Kansu, Kirin, Tsinghai, Yuannan, and Heilungkiang. (3) Provincial-level municipalities such as Peking, Shanghai, Tientsin will be excluded from this analysis, although Peking and Tientsin have geographically belonged to Hopeh Province and Shanghai has belonged to Kiangsu Province, they have been administered directly by the central government. In addition, the centrally administered municipalities were mostly urbanized, while an average urbanization rate of 16 provinces as of 1957 was about 12 percent.[132] Consequently, if those provincial-level municipalities are included, it will overweigh the effect of urbanization on the dependent variable. (4) Availability of data is the most crucial criterion to restrict this study. When this criterion is applied, only ten provinces are included in the analysis of interprovincial inequality in the distribution of enrollments in the 1955-57 period, and 11 provinces in the analysis of interprovincial variations in 1957. All these case provinces account for about 70 percent of total national population, although they account for less than half of the total number of provincial-level administrative units.[133]

The second problem is time legnth of coverage by this analysis. Again, the availability of data and reliability of data compel me to

choose only a limited number of years for my analysis. For the analysis of interprovincial inequality in the distribution of enrollments, I chose four years. These are 1922, 1955, 1956, and 1957. Comprehensive performance data for most of the ten case provinces are available only in these four years. For the analysis of interprovincial variations in performance, I chose 1957 simply because comprehensive data on all the variables are available for 1957 only. In regard to the 1922 data, it was my sheer luck to have obtained the 1922 student enrollment statistics and compare them with those of the mid-1950s. This comparison will help provide with a better understanding of distributive performance of the Chinese Communist political system in comparison with the Chinese political system of the early twentieth century. In fact, I have no special reason to select 1922 data except that they are the only available data for the pre-1949 years at present. However, one thing good about the year 1922 is that it was one of the golden years in the history of modern Chinese education. At that time, Chinese education was less influenced by political ideology such as nationalism. In fact, mostly in the period between the T'ung-chih restoration (between the late 19th century and the early 20th century) and the Republican era, Chinese education had been influenced by nationalism.[134] In that period, major objectives of education were: (1) awakening of the people to a self-conscious awareness of their nation; (2) using education as the means of militarization of the people. These objectives were also pursued by Kuomintang with increased intensity after 1925. But in the period between 1919 and 1925, the Nationalist education system modeling after that of Germany was gradually abandoned by the Chinese people; and American education system was adopted under

strong influence of a great American educator, John Dewey, and his prominent Chinese students.[135] At that time, the power of the Ministry of Education was very limited because of political dissension among the warlords. Thus, professional educators were able to attempt to build up the educational system more in harmony with professional ideals rather than in harmony with any political ideology.[136] In the same period (1919-1925), major efforts in the field of education were the universalization of primary education. For an evidence, according to George R. Tewiss' field research, 96.5 percent of all students in China in the years between 1919 and 1924 were primary school students.[137] In regard to the collection procedure of 1922 data, the Chinese National Association for the Advancement of Education summarized its source and time. The association had collected enrollment data directly from provinces and institutions between May, 1922 and April, 1923, while political dissension among provincial governments made it impossible for the Ministry of Education of the central government to collect such data from provinces.[138]

Among the 1922 data, enrollment data of government and private secondary schools were secured directly from the institutions, the list of which was furnished by the province upon the request of the association. About two-thirds of these data were secured in that manner; and the one-third was derived from the 1919 reports of the Ministry of Education. Data on both higher and lower primary schools established by the government and private individuals were secured directly from the counties (hsien). Four-fifths of the data on lower primary schools and nearly three-fourths of the data on higher primary schools were based on returns from hsiens; and the rest of the others were derived from the 1919 unpublished reports

by the Division of General Education, Ministry of Education. Primary school enrollment data did not include those of traditional private schools which were almost equal to those of modern schools in number. A problem with the 1919 data is the fact that data were derived from two different sources; a majority of the data were from the 1922 investigation and the rest of the other data from the 1919 reports. There is about a three-year lapse between the two different sources of data in terms of a time gap. However, since I cannot obtain any other data for 1922 at present, I will use them until more adequate data for 1922 are available.

2. Data and Sources

As I have already discussed, Chinese statistics in general have various methodological problems, such as inaccuracy, inconsistancy and variations in quality between data. Nevertheless, they are adequate enough for simple statistical analysis. In addition, provincial statistics have another problem which is derived from changes in provincial boundaries. The Peking government started with 35 provincial-level administrative units in 1949. Then it underwent four phases of reorganization of the administrative system in accordance with existing conditions and the programs of political consolidation until it ended up with 29 provincial-level administrative units in October, 1958. Even after that, there were some changes in boundaries between some provinces.[139] These changes in provincial boundaries create some methodological problems because provincial population data, which are some of the most crucial data for this analysis, are calculated on the basis of 1971 provincial boundaries. For

some provinces, the 1971 boundaries are different from those of the 1950s. Therefore, it is possible that changes in such provincial boundaries would result in an overestimate or underestimate of the 1950s provincial attributes. However, we can somehow figure out the over- or underestimate of the 1950s provincial populations which might be affected by boundary changes, referring to John Aird's comparison of the 1953 population figures in the 1955 and 1971 provincial boundaries.

I will briefly discuss provincial boundary changes before and after 1958, which are directly related to my study, and its effect on the provincial population data. First, as to Kwangtung Province, four counties and a small municipality of Kwangsi Province were given to Kwangtung Province in 1955. Then they were returned to Kwangsi in 1965.[140] Consequently, if we use the 1971 boundary to compute the 1955 through 1957 population estimates, Kwangtung Province population in that period should have been underestimated. According to Table 5, we can find that the 1953 population of Kwangtung Province in terms of the 1971 boundary was underestimated by as much as 1,970,000, as compared with that in the 1955 boundary. These figures are equal to about 5.4 percent of the 1953 Kwangtung population in the 1955 boundary. Following the same logic, we can infer that the mid-1950s Kwangtung population could be underestimated as much as the 1953 population in the 1971 boundary.

Table 5. Midyear 1953 Populations in 1954, 1955 and 1957 Boundaries for the Provinces Affected by Boundary Changes Between November, 1954 and December, 1971 (in thousands)

	In 1954 Boundaries	In 1955 Boundaries	In 1971 Boundaries
Heilungkiang	11,897	11,897	12,681
Kirin	11,290	11,290	12,609
Liaoning	18,545	20,566	22,269
Inner Mongolia	6,100	7,338	3,532
Hopeh	41,447	43,348	42,394
Kansu	12,928	12,928	11,326
Anhwei	30,344	30,663	30,663
Kiangsu	47,457	47,137	47,137
Shangtung	48,877	48,877	50,134
Honan	44,215	44,215	43,911
Kwangsi	19,561	17,591	19,561
Kwangtung	34,770	36,740	34,770
Szechwan	62,304	65,685	65,685

Source: John Aird, Population Estimates for the Provinces of the People's Republic of China: 1953 to 1974, International Population Reports Series, p-95, No. 73, February 1974, Department of Commerce, p. 17.

Second, during the Cultural Revolution, some significant boundary changes took place among Inner Mongolia and Heilungkiang, Kirin, and Liaoning.[141] As we did above, if we use the 1971 boundary to compute the 1955-1957 population of Liaoning Province, it will be overestimated. The 1953 Liaoning Province's population in terms of the 1971 boundary is overestimated by 1,703,000, as compared with that in the 1955 boundary. This is equal to 8.3 percent of the 1953 Liaoning population in the 1955 boundary.

The third boundary changes involve transfers of areas between Shantung and Honan and Hopeh during the years from 1963 to 1965. On March 23, 1963 Tung-ming County was transferred from Honan to Shantung.[142] On September

9, 1964, a part of Fan County was transferred from Shantung to Honan. On October 31, 1964, a part of Shou-chang County in Shantung was transferred to Honan.[143] Between January and March of 1965, parts of Kuan-t'ao, Lin-ch'ing, Wu-ch'eng, and Wu-ti Counties in Shantung were transferred to Hopeh Province, and parts of Hing-chin, Ch'ing-yun, Wu-ch'iao, Tung-kuang, Yen-shan, and ku-ch'eng Counties in Hopeh were transferred to Shantung Province.[144] According to these boundary changes, the 1953 population of Shantung Province in the 1971 boundary is overestimated by 1,257,000, as compared with the 1953 Shantung population in the 1955 boundary. This overestimate is equal to about 2.6 percent of the 1953 Shantung population in the 1955 boundary. On the other hand, the 1953 Hopeh population in the 1971 boundary is underestimated by 954,000, as compared with that in the 1955 boundary. It is equal to 2.2 percent of the 1953 Hopeh population in the 1955 boundary. By the same token, the 1953 Honan population is underestimated by 304,000. This is equal to 0.7 percent of the 1953 Honan population in the 1955 boundary. On the basis of the above discussion, we can infer that the 1955-57 Shantung population is overestimated, while that of Honan and Hopeh is underestimated. These provincial boundary changes might introduce some bias into the provincial data of the provinces discussed above because all provincial data are calculated by the ratio to the provincial population. However, except Shantung and Kwangtung, boundary changes of the other provinces are not too distorting.

As to the sources of data, particularly population and other socio-economic attributes of provinces, I will mainly rely on Western scholars' compilations of statistics and estimates. In regard to student enrollment data, its major source is work reports of provincial governments.

However, these work reports are not evenly available for every province. Thus, I supplement work reports with budget reports of provincial governments, speeches and articles by provincial leaders, editorials of major provincial newspapers, journals, books, monitored provincial broadcasts. Two most important holdings of the major provincial newspapers are available in the Library of Congress and the Union Research Institute, Hong Kong. For most of the data on socio-economic attributes of provinces, I primarily use Western scholar's, Western government's, or private research institutes' compilations of statistics. Then, I will supplement them as much as possible by extracting data from Chinese newspapers, summaries of press materials and monitored provincial broadcasts translated by Western governments or private institutions.[145] Since I have used diverse sources of data, criteria for the selection of data should be made explicit. In those cases in which several Western compilations of statistics exist on a certain subject, I will select the one compiled by the specialist in the field of the subject. If conflicting figures exist between different set of data, primary references are checked for accuracy. When primary sources are used, data derived from official reports, such as government work reports and budget reports, are preferred. If data from the same source conflict, then yearend data or more recent ones are preferred. In general, I will take into account the contextual situation of each province in deciding each case of ambiguous data selection.

3. Measurement

Aggregate data include some methodological problems. Particularly, Chinese aggregate data include significant problems of inaccuracy and the

lack of data. These problems lead to another problem, the lack of representativeness of Chinese aggregate data. However, according to Erwin Scheuch, one safe way to reduce problems of aggregate measures is by comparing aggregate measures over a period of time,[146] on the basis of logic that even faulty measurement may permit a statement about the patterns of variations, if the faultiness of measurement remains constant.[147] Scheuch also points out that a single observation is likely to permit some false findings, because its result might be obscured by many accidental factors. My study involves, in a sense, such a danger in Chapter III because I examine the relationship between the dependent variable and some of the independent variables for a single year, 1957. However, the weakness of findings in Chapter III will be reinforced by the findings from Chapter II which involve aggregate measures over nine years (1949-57), since 1957 is one of those nine years.

Another way to reduce problems of aggregate data even in a small measure is to use low level measurement.[148] Thus, in Chapter II, I will adopt the Spearman rank-order correlation to analyze the relationship between the national aggregate growth of student enrollments and its determinant factors.[149] The Spearman rank-order correlation is used to determine the degree to which two sets of scores are related to each other. This measurement is appropriate to ordinal data and does not require any great precision of statistics attached to case units but require rank-ordering of case units. The Spearman rank-order correlation coefficient is symbolized by "rho". The "rho" yields numerical value ranging from -1.0, indicating perfect negative association, to +1.0, indicating perfect positive association, with zero indicating the

absence of any association between variables. This correlation can prove neither causation nor the strength of the relationship between variables, but it can demonstrate at least the absence or presence of any significant association between variables. The significance attached to the correlation coefficient is arbitrarily decided by individual researchers. But I will consider any coefficient significant when it could not have occurred by chance more than five times out of one hundred, that is, the significant level of 0.05. In the second step, I will examine the product-moment correlation coefficient, which is symbolized by "r", in order to see the strength or closeness of the relationship between variables.[150] The value of "r" ranges from +1.0 indicating a perfect positive relationship, to -1.0, indicating a perfect negative relationship, with zero indicating no relationship. The high value of "r" indicates a strong relationship between variables; and a low value of "r" indicates a weak relationship between variables. This correlation coefficient is simply a measure of the strength of the association between variables. It can neither tell the causation of the relationship between variables nor represent a scale of equal measurement. In other words, we cannot say that "r" equal to 0.8 is twice as large as an "r" equal to 0.4.

In Chapter III, I will first adopt the Gini Index and the Lorenz Curve[151] to measure and visualize the level of interprovincial inequality in the distribution of student enrollments. Then, second, I will use the Spearman rank-order correlation and product-moment correlation coefficients in order to examine interprovincial variations in performances of education policy and its determinant factors. In order to get the Lorenz Curve and the Gini Index, first, we rank provinces in order

from those receiving the highest enrollment figures to those receiving the lowest figures. Then, the ranked provinces are grouped in deciles (groups of 10 percent). Then, the percentage of the enrollment figures of the case provinces being received by each decile or quintile is computed. The Lorenz Curve is derived from decile or quintile analysis. It simply plots the cumulative percentage of enrollment figures each decile receives against the cumulative share of enrollment figures, which each decile receives. A 45-degree line from the origin represents a perfect equal distribution and the further the Lorenz Curve from that line, the more unequal the distribution. The area between the Lorenz Curve and the 45-degree line represents the actual inequality of the distribution. The Gini coefficient is the ratio of the area of actual inequality to the area of maximum possible inequality. The smaller the Gini coefficient is, the more equal the distribution is. The Gini coefficient varies between zero and one.

CHAPTER I

FOOTNOTES

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CHAPTER II

AGGREGATE GROWTH OF CHINESE EDUCATION AT THE NATIONAL LEVEL AND ITS DETERMINANTS, 1949-1957

A. Environmental Stresses and Needs for Educational Expansion

The specific objective of this chapter is to obtain answers to the following questions: (1) What did create the urgent needs for expansion of education in the period between 1949 and 1957? The reason this study covers only a limited length of time is mainly ascribed to the shortage of data. (2) How well did the Chinese political system at the national level perform in response to the needs for expansion of education? (3) What are the environmental variables which influenced the performance of the system?

1. Economic Reconstruction and the Need for Educational Expansion

When the Chinese Communists came to power in 1949, the Chinese economy was inflation-torn, war-disrupted, and fragmented. The economy suffered greatly from the Sino-Japanese War (1937-1945) and from the Civil War and then from deprivation of industrial equipments by Russia. Following the Japanese surrender in 1945, Russian troops occupied Manchuria and selectively dismantled industrial installations, carrying them off to the Soviet Union and left the old and obsolete machinery in place.

About 50 percent of Manchuria's industrial capacity was dismantled.[1] This affected Chinese capacity of heavy industry. According to Chinese Communists' estimates, under the impact of this war devastation, heavy industry output of 1949 was about 30 percent of the previous peak level; consumer goods output was at about 70 percent of the previous peak, as indeed was agricultural production.[2] Not only production but also transportation and trade were badly disrupted and sharply curtailed so that even shrunken quality of goods and foods could be distributed only with great difficulty. In addition, rising government expenditures fueled the flames of inflation, because government expenditures were largely financed by deficits covered by new note issues. And this, in turn, led to a continuous expansion of the money supply. This inflation contributed to the further decline in production and disruption in distribution. This vicious circle between lowering production and inflation, which was aggravated by the disruption of transportation, was one of the biggest and urgent problems to be tackled by the Chinese Communists in 1949.

It is difficult to say exactly how serious the economic situation in 1949 was as compared with that of the pre-1949 years. One simple reason is that the Chinese did not have an effective national statistical reporting system until the State Statistical Bureau (SSB) was established on August 8, 1952. However, it is possible to get a rough picture of the economic situation of 1949. The gross value of the national income of 1949 was less than the net domestic product of 1933, which was a relatively normal pre-war year, by more than 20 percent. The combined gross output value of industry and agriculture of 1949 was 46.6 billion

yuan,[3] which was compared with 59.5 billion yuan worth of net domestic product.[4] Both figures are in 1952 yuan. The level of grain output of 1949 was almost 30 to 40 percent less than that of the 1930s. Grain output of the 1930s amounted to about 170 to 180 million metric tons, which is compared with 111 million metric tons of 1949.[5]

Under these circumstances, economic reconstruction was not only an end in itself, but also a means of furthering Chinese military and political power at home and abroad. Economic policy was a part of the Communist policy of consolidating political power at home and laying the ground work for the development of the country. Accordingly, for the first few years in the 1950s, the Chinese Communist government concentrated on restoring plants, production, and transportation facilities and on the land reform and on bringing inflation and government revenues under control.

In so doing, the government desperately needed a literate work force and skilled technical personnel. However, China was, in fact, seriously short of skilled personnel in 1949. Leo A. Orleans points out that there were only 125,000 persons with a higher education in 1949. These figures increased to 625,000 by 1959.[6] But it still constituted less than one percent of the urban labor force in China; this compared with 12 percent in the United States and six percent in the Soviet Union.[7] The shortage of secondary general middle school graduates was also startling. In 1948-49, only 280,000 persons graduated from secondary general middle schools with additional 72,000 graduates from specialized and technical secondary schools.[8]

High illiteracy of the people is another obstacle not only to the economic reconstruction, but also to the socialization of the people

into new social values. The rate of illiteracy was not exactly known but was estimated to be as high as 85 to 90 percent of the total population in the early 1950s.[9] This high rate of illiteracy did not curtail much during the 1950s. According to Chang Hsi-jo, Minister of Education, in his report to the First National People's Congress, 78 percent of the total population in China was still illiterate as of 1956.[10] During the First Five Year Plan (FFYP) period (1953-1957), widespread illiteracy was an important obstacle to the attainment of economic growth.

Consequently, elimination of illiteracy among the masses of workers and peasants became a task of great strategic significance. In fact, half the skilled workers were reported illiterate in 1955.[11] Under these circumstances, it was natural that elimination of illiteracy among the masses of workers and peasants should become a task of great strategic significance. The positive elimination of illiteracy became one of the Chinese Communists' political tasks in the course of industrialization and agricultural cooperativization. The Chinese Communist Party, Central Committee, and the State Council made a decision concerning the elimination of illiteracy in April, 1956:

> As was taught by Chairman Mao, who said that elimination of illiteracy among 80 percent of the population was of importance for new China. The unfoldings of the movement for eliminating illiteracy on a large scale at the moment in coordination with the development of Socialist industrialization and agricultural cooperation with the object of having illiteracy basically eliminated throughout the country in five or seven years of time is most essential and can very well be brought into realization.[12]

2. Establishment of a Civil Administration and Need for Educational Expansion

The consolidation of political power through establishment of a civil administration throughout the country was another major concern of the Chinese Communist Party (CCP). In a remarkably short period, the new government aimed at restoring political law and order as well as the economy, planning and controlling much of national life by means of coercion and organization. The scope of government activities was expanded to include not only government administration work but also land reform, water conservancy projects, mass organizations, finding jobs for the urban unemployed, etc. In addition, the government established a strong local administration, creating and staffing new administrative structures at the local level. It was partly because of the vast territory under the central government and communication system. But it was primarily because of the unprecedented demands placed on local government.[13]

The expanded government activities of the central and local governments were naturally accompanied with expansion of government and Party bureaucracy. Concerning the expansion of bureaucracy, Merle Fainsod argues as follows:

> Normally expansion of government bureaucracy in developing nations can be considered a function of the modernization process and the increasing involvement of the state in the process, particularly in states oriented toward socialism where the governments plan and control much of national life.[14]

As a result of unprecedented expansion of the state and Party bureaucracy, the new government needed an enormous number of qualified personnel. A great demand for cadres of the expanded state and Party bureaucracy added another serious problem to the existing shortage of

state cadres.

During the Nationalist era, state officials were needed only to staff government organizations. According to the Nationalist government, there were about two million officials and functionaries in 1949 who might be considered rough equivalents of what the Chinese Communists called "state cadre" (Kuo-Chia Kanpu).[15] On the contrary, when the Chinese Communists assumed administrative responsibility for the whole country in 1949 and when they needed more cadres for the expanded state and Party bureaucracy, the new government had only 720,000 qualified cadres available for administrative tasks.[16] The shortage of government cadres also can be evidenced by regional reports.

In the Southeast region in 1950, the new government was able to make only 30,000 new appointments, filling a mere 17 percent of the region's 180,000 cadre posts.[17] In the Northwest, which the Communists liberated much earlier, the conditions were no better; in the spring of 1950, the Party was able to fill only ten percent to 30 percent of all cadre posts in various sections of the region.[18] The shortage of cadres seemed to be serious, particularly at the middle level, for the number of cadres for the level was large but the Party could not find sufficient number of cadres with political qualifications.[19]

As has been briefly discussed, the Chinese Communist leaders were faced with two major problems: (1) economic reconstruction; and (2) consolidation of political power. In tackling these two problems, they were immediately confronted with other problems, that is, the shortage of cadres and the high rate of illiteracy. These immediate problems, in turn, necessitated expansion of education at all levels.

Chinese leaders were fully aware of such educational needs, particularly at the time of all-out national construction. They perceived that national construction could not be accomplished without a literate and technically competent populace. Thus, they formulated culture and education policies in accordance with practical needs as well as ideological needs for educational expansion. From an ideological viewpoint of the nation's educational need, the culture and education must serve the needs of the masses under the leadership of the proletariat. On the other hand, from the practical point of view, a major task of education is to create a literate and technically competent work force, which is a necessary condition to national construction.

First of all, Chinese leaders defined the major goals of education policies from both the viewpoints in the interim constitution, the Common Program. Article 41 of the Common Program said:

> The main tasks of the cultural and educational work of the peoples government shall be raising of the cultural level of the people, training of personnel for national construction work, liquidating of federal, compradore, fascist idealogy, and developing of the ideology of serving the people.[20]

The Ministry of Education also adopted the same viewpoints. In December, 1949, the Ministry of Education convened the First National Educational Work Conference to formulate a new national policy of education and stressed the fact that education must meet the needs of national reconstruction, and that the doors of schools must be opened to the workers and peasants.[21]

Of the two major needs for educational expansion, the practical need became more desperate for the achievement of national construction, particularly for economic development during the FFYP period. It was

because the Chinese Communists adopted the Soviet model of economic development, which put great emphasis on industrialization, especially on heavy industry for the capital formulation in a short period of time. Heavy industry usually requires literate workers and technically competent personnel. The People's Daily also illustrated that the duty of the new China's education was to raise the people's labor productivity.[22]

B. An Inventory of Education Policies for Educational Expansion

So far, I have briefly examined the environmental stresses which generated the needs for educational expansion in China. I will here below take an inventory of education policies that the Chinese Communist government had formulated in response to the need for educational expansion in the period between 1949 and 1957.

The new government did not take any firm actions for educational expansion until late 1951. The first task in the field of education immediately after the foundation of the People's Republic of China were: (1) reopening schools after the completion of the registration of students, teachers, and schools;[23] (2) locating qualified teachers to staff schools; and (3) establishing direct administrative authority over the educational system, integrating multiple educational systems into a coherent administrative organization.[24] Ma Hsu-lun, the first Minister of Education, indicated that coping with a multiple education system was one of the major difficulties in pursuing educational progress.[25]

From late 1951, a new development in the field of education took place. On October 1, 1951, the Government Administrative Council of the central government made a decision on the reform on the educational system, modeling it largely on Soviet Union experiences. Much preference was given to the admission of children of poor peasants and workers' origins, and to elementary and technical education[26] after the Government Administration Council (GAC) perceived defects in the Chinese educational system.

According to the GAC illustration, the defects were as follows: (1) there was a lack of technical education; and (2) the division of six years of elementary school into one three-year junior elementary school and another three-year senior elementary school made it difficult to go through a complete course of elementary schooling.[27] Particularly, in order to expand educational opportunities and to raise the cultural level of the broad working class, the GAC promulgated a policy to (1) set up short course elementary and middle schools, and (2) to shorten six years of primary education to five years.[28]

Until 1952, a primary concern of the central government in the field of education was to expand elementary education. This can be evidenced by the state budget for education. In 1951, the central government appropriated almost 69 percent of its educational expenditures for elementary education, while about 17 percent was appropriated for secondary education.[29] From 1952 on, however, the central government began to place greater emphasis on secondary education to produce technical personnel for industrialization. The National Administrative Conference on Elementary and Secondary Schools, which was held on August 21, 1952, was

crucial meeting for expansion of secondary education. The conference decided to prepare for the large-scale expansion of secondary education.[30] In the process of preparing for the FFYP, government leaders perceived the importance of secondary education. Ma Hsu-lun, the Minister of Education, made an address at the conference:

> A great increase in the number of secondary schools is a key educational problem for the next few years. The three-fold reason is the demand of the country's expanding construction, the need for a tremendous number of college students and the necessity to provide increasing opportunities for further education for primary school graduates.31

In fact, the government spent about 30 percent of the total educational expenditures for secondary education in 1952, which was almost a 100 percent increase over those in 1951.[32]

In 1953, Communist China launched the First Five Year Plan (FFYP) with a great emphasis on industrial development, especially on heavy industry. Then, educational development and expansion became a task of great importance, for widespread illiteracy and a shortage of technical personnel were crucial obstacles to the attainment of economic growth. Eventually, the central government began to plan educational expansion systematically as a part of the overall plans for manpower training and utilization.[33]

As a result, the government began to expand quality education in urban areas. On November 26, 1953, the GAC came up with its "Directive Concerning the Reorganization and Improvement of Primary School Education." The directive directly aimed at improving the quality of education in urban and industrial areas. First, the directive rejected the five-year primary school education, for it was considered to be unsuccessful to

meet the manpower needs of the nation. It says:

> I has been found from the conditions of enforcement that in view of inadequate preparation made in the matter of teachers and teaching materials, it is unsuitable to press for the continued enforcement of the system of a five-year straight course for primary school. Consequently, as from the current school year, the enforcement of this system should be temporarily suspended. The primary school should continue to adopt the system of four years for junior primary school and two years for senior primary school.[34]

Second, the GAC perceived that industrialization and rapid growth of the urban population had given rise to a shortage of schools in the cities and decided that public schools should be adequately developed in industrial and mining districts and the cities, especially large cities, advocating as follows:

> Because of the unbalanced development of our economy, the development of primary school education is also off balance. We should base on the dissimilar conditions to carry out primary school education with different demands and forms, emphasis should be given to the successful operator of the primary school in the cities and industrial and minig districts as well as the full-scale and central primary schools in the villages.[35]

However, when the government gave priority to the quality of education in the urban and industrial districts, the government encountered another problem, that is, a problem of educational supply and demand in the rural areas. Accordingly, the government encouraged the people to develop the min-pan (people-run) schools to solve such problems. The GAC issued a directive on November 23, 1953:

> In the rural villages, in order to suitably solve the question of schooling for the children of peasants, the principle of voluntariness and need should be the basis . . .[36]

The basic characteristics of the min-pan school are: (1) it is funded by student tuition, self-generated funds and local support; (2) it is managed by street committees, industrial plants, or rural cooperative organizations; and (3) it is inferior to regular schools in terms of quality.[37]

In regard to secondary education, Vice Chairman Hsi Chung-hsun and the Secretary of Culture and Educational Affairs, gave instructions at the National Secondary Education Conference which was held in Peking, February 1, 1954:

> Schools should continue to serve the socialist construction enterprises and to keep the nation supplied with a regular flow of construction personnel. The future programs for secondary . . . In order to cope with the demand for Socialist industrialization of the nation, the greater importance should be in principle attached to the development of senior middle schools and those in the big cities and industrial and mining districts than those in the ordinary districts.38

In the period between 1953 and 1955, in fact, the government emphasized educational expansion in the industrial and urban areas. The prominence of urban areas in the educational sector was evident in the enrollment statistics. In 1955, students from urban households accounted for about 50 percent of middle school students and 25 percent of primary school students, despite the fact that urban population made up only 13 percent of the total national population.[39]

During the first half of the FFYP period, Chinese Communist leaders concentrated on the development of heavy industry and squeezed the rural sector to supply a surplus for industrial development. By mid-1955, however, Chinese leaders began to worry that over-emphasis on industry without much attention to increasing agricultural production would lead

to an economic standstill. Mao Tse-tung also argued that centralization of agricultural producing units was essential to meet the increasing demand for marketable grain and industrial raw materials necessary to support rapid industrialization.[40] Mao's policy position on the cooperativization of agricultural units was formally accepted at the Central Committee meeting in October, 1955. As a result, 1955 and 1956 saw the rapid spread of semi-socialist agricultural cooperatives, as Table 6 presents.

In order to implement a massive Socialist transformation of the Chinese economy, particularly to reorganize agrarian society, the government needed a great number of low-level cadres in the village. Consequently, along with the search for new direction in the economy, efforts to develop a new policy came in the educational realm in 1955. The *min-pan* schools became a strong alternative.

Table 6. Percentage of Peasant Households in Mutual Aid Teams and Agricultural Production Cooperatives

Year	1950-1956 Mutual Aid Teams (MAT)	Lower APC	Higher APCS	Total Percent in MAT & APCS
1950	10.7	--	--	10.7
1951	19.2	--	--	19.2
1952	39.9	0.1	--	40.0
1953	39.3	0.2	--	39.5
1954	58.3	2.0	--	60.3
1955	50.7	14.2	--	64.9
1956	--	8.5	87.8	96.3

Source: *Ten Great Years*, (Peking: Foreign Language Press, 1960), p. 35.

From December 12 to December 30, 1955, the Ministry of Education convened a planning symposium for the heads of the education departments, and bureaux of the different provinces and municipalities. The decisions taken at the conference were a clear departure from gradual expansion policy of proceeding years, The emphasis was basically on the universalization of compulsory education by the use of potent capacity of the masses.[41] One of the interesting aspects of the decision was that different sectors of the society were to be expected to achieve different levels of universalized education within seven years. Large and industrialized cities were expected to accomplish compulsory schooling up to junior middle school level. Ordinary cities and towns and more favorably located villages were expected to reach the level of lower primary education.[42]

Another major education policy in 1956 was Mao Tse-tung's 12-year plan for agriculture, which was submitted by Mao to the Supreme State Conference on January 25, 1956. This plan advocated educational development at the village level, permitting diverse forms of educational institutions. On education, the plan points out the following:

> Beginning in 1956, local government shall take steps to basically eliminate, within the next twelve years, illiteracy among youth and middle-aged population, and to make primary school education more available than before, depending upon local conditions. The goal is to see to it that every village has an agricultural high school in order to raise the educational level of cadres engaged in agricultural work and of peasants as a whole. Education in villages should be provided in many ways; in addition to schools supported by the state, local governments should vigorously encourage the people to start schools with their own resources. Local government should promote work-study programs.43

In the meantime, Li Ping-chieh, Deputy Director of the Department of Primary Education in the Ministry of Education, reinterpreted Mao's long-range education plan. Li held the same point of view as Mao in the sense that schools run by the masses were the most appropriate and immediate solution to China's educational needs. However, Li argued that the primary responsiblity for their development would rest with the leadership. In reviewing the result of the min-pan schools, he stated that these schools were of extremely poor quality and that the principal cause lay in the negligence of the leadership. Then he contended that the key to this problem was to strengthen the leadership and to hold the educational administration responsible for providing the min-pan schools with qualified teachers.[44] In this regard, Li's interpretation of Mao's long-range education policy was somewhat different from the Maoists'.

Many cadres and teachers, who had vested interests in the operation of the established educational system, also did not favor seeing changes made. They thought the establishment of schools run by the masses would lead to a reduction in education quality. Also, they wanted to protect their own interests. Consequently, their obstructive behavior blocking the people-run school projects was often reported. For example, an editorial in Kuang-ming Jih-pao on January 25, 1956, argued that although the masses had been successfully running schools on their own for many years, the education's administrative organs had failed to give them much aid and support and were even guilty of obstructing these efforts. It went on to argue that the problem resided in the "backward thinking" of the education cadres who found that the establishment of schools

run by the masses would lead to reduction in education quality.[45] For another example, a report from Shansi tells us:

> At present in our province . . . they /some leading cadres/ fear that the masses cannot accept them and they do not dare explain to the masses the policy of letting the masses run schools by themselves. Moreover, many primary school teachers are concerned that after the schools are turned over to the cooperatives, or the masses to be managed, whether they will still be considered a state cadres, whether the masses will still want them to teach, whether they can be promoted, and so on.46

As has been discussed, one of the educational issues in 1956 was the education quality versus expansion of min-pan schools. By 1957, however, the Maoists had a political initiatvie and min-pan schools registered very impressive growth. They contributed to rapid increases in school enrollments in 1956; for example, Hupeh reported 12 percent increase in primary school enrollment,[47] while Fukien Province reported 11 percent increase.[48] In regard to secondary school enrollments, there was a sharp increase in 1957. According to Leo Orleans, the expansion of min-pan schools comprised almost 70 percent of the total increase in student enrollments over those in 1956.[49] For another example, at the end of 1957, there were 147,825 students in min-pan schools and 138,760 students in government-operated schools in the province of Honan. Min-pan schools accounted for more than 50 percent of the total secondary school students in the province.[50]

The year 1956 was a boom year for education. But when the economy could not absorb educational expansion, imbalance between the economy and educational expansion eventually resulted in an educational retrenchment policy in 1957. Around the mid-1956 period, many areas suffered

severely from floods, water-logging, typhoons, and drought. It has been estimated that the area damaged by floods was 164.8 million mou.[51]

These figures were the highest since the Communists took over in 1949. At that time, agricultural collectivization did not provide the agricultural surpluses to make an industrial breakthrough possible. As a result, the country was faced with an oversupply of educated youth for the limited number of new jobs in the urban areas and with a shortage of trained persons in the rural areas. Accordingly, the Party cut admission to secondary education on the one hand and advocated a policy of sending youths down to the countryside to participate in agricultural production. A strong statement in favor of a retrenchment on admission also came from the Minister of Education, Chang Hsi-jo. Before the third Session of the Second Chinese People's Consultative Conference on March 16, 1957, he said:

> 1956 was a boom year for education because there was a high tide of Socialist construction and because all the enterprises at that time were expanded by leaps and bounds. It became possible for our schools at all levels to enroll more students. But this brought numerous difficulties to our work last year. It is unthinkable that our schools can in the future expand in such a way as was the case last year.52

C. Performance of Education Policy

The central government had concentrated on expansion of primary education until 1951. Then, priority given to primary education began to decrease while secondary education gradually gained priority. From

1953 on, the central government started to place a great deal of emphasis on secondary education. One way we can tell about the priority given to each level of education is to look at the budget shared by each level of education.

In 1951, primary education took 68.8 percent of the total budget for education. Then, it decreased to 20 percent by 1956. But the decrease in the total amount of budget shared by primary education does not necessarily mean a decrease in per-student educational budget of primary school. In fact, per-student educational budget of primary school decreased, as Table 7 presents.

Table 7. Communist China's Budget for Education Per Student and Percent of State Budget

	1951	1952	1953	1954	1955	1956
Budget for Education Percent of State Budget	6.8	6.7	8.5	7.6	6.5	6.8
Secondary Education Percent of Budget for Education	17.2	35.1	39.4	39.4	39.2	50.3
Yuan Per Student	71	125	201	175	177	201
Primary Education Percent of Budget for Education	68.8	44.5	34.6	34.5	36.9	20.8
Yuan Per Student	13	10	12	13	12	8

Source: Leo A. Orleans, Professional Manpower and Education in Communist China. (Washington, D.C.: National Science Foundation, 1961), p. 16.

These budget data tell us at least the following points: (1) It is obvious that the central government intended to expand primary education first in 1951. But it could not keep up the same level of effort for expansion of primary education during the FFYP period. In fact, after 1953, the state took over the majority of the primary schools operated by private interests and by industrial and mining enterprises. This resulted in restriction on the development of primary school because of the limitation of funds. Consequently, the rate of annual increase in primary schools for the next three years was only between one and two percent.[53] This effort to consolidate and improve the quality of the regular educational system combined with its intention not to divert additional resources into education seemed to have serious restriction on the growth of the primary education system. (2) The central government started to develop secondary education from 1952 and expanded it rapidly in 1953. But the government could not make further efforts to develop secondary education beyond the 1953 level. One thing was obvious, however; the central government attempted to develop secondary education more than any other level of education during the FFYP period.

In regard to the relationship between budget for education and enrollment levels, there is an intriguing fact that an aggregate number of students enrolled for primary and secondary schools increased, although the central government could not increase the relative size of per-student budget for education in the FFYP period. The budget for primary education in 1952 decreased by 23 percent, as compared with that of 1951. Again, the budget for primary education in 1956 decreased by 38 percent,

as compared with that of 1951, while the enrollment level increased 38 percent over that of 1951.

As to secondary education, the level of student enrollment in 1954 and 1955 respectively registered a 20 percent and 25 percent increase over that of 1953, while the budget for secondary education decreased 13 percent in 1954 and 12 percent in 1955 respectively, as compared with that of 1953. As Table 7 and 8 show, 1953 was a peak year for secondary education in the FFYP period. 1953 marked a 500 percent increase in the number of secondary school enrollments and a 200 percent increase in that of primary school enrollments. However, student enrollments in 1956 increased 64 percent over that of 1953, while the budget remained at the 1953 level.

With Table 8, we can find at least two things. First, we can identify a certain growth pattern of student enrollments in the 1950s. Secondary education grew rather steadily and rapidly. On the other hand, primary education did not grow so steadily as secondary education, particularly between 1953 and 1955. Second, we can identify a substantial gap between the government's intended policy and actual performance. The central government's budget for primary education was eight yuan per student in 1956, which was 3.38 percent less than that of 1951. The level of student enrollments increased, however, 32 percent over that in 1951. The year 1956 was indeed a good year for education, but such unexpected educational expansion resulted in a oversupply of educated youth and eventually a retrenchment policy in 1957.

Table 8. Number and Percent of Students Enrolled for Primary and General Middle Schools Per 1,000 Population, 1949-1957

Year	Number of Primary School Students Per 1,000 Population	Percentage Increased Over 1949	Number of GM School Students Per 1,000 Population	Percentage Increased Over 1949
1949	45.0	100%	1.9	100%
1950	52.4	116%	2.4	126%
1951	76.7	170%	2.8	147%
1952	88.9	198%	4.3	226%
1953	87.9	195%	5.0	263%
1954	85.1	189%	6.0	315%
1955	86.0	192%	6.3	332%
1956	101.0	225%	8.2	432%
1957	100.0	222%	9.8	516%

Source: Population data from Ten Great Years (Peking: Foreign Language Press, 1960), p. 170. For enrollment data, see Table 43 in Appendix A.

D. Educational Expansion and the Effects of Environmental Variables

According to Almond and Powell, a gap between a government policy action and the performance of the political system is called a gap between policy intentions and policy consequences. In regard to factors resulting in such a gap, they discuss two things: (1) policies pass through the implementation processes and are changed in those processes; and, (2) in the process of interaction between the performance of the political system and the environments the government wishes to shape, the environments change, sometimes somewhat unpredictably and result in a substantial gap between policy intention and policy consequences.[54]

In other words, to bring about various social consequences, decision makers use authoritative actions of compelling, taking, giving and communicating between the political system and its environmental factors.

1. Economic Development

The literature on political science contains a great number of suggestions on the influence of socio-economic factors. The variable which has been most commonly related to the political process and policies is economic development. The indices of economic development usually include wealth, industrialization, urbanization, and education. These indices are expected to have a fairly close relationship to each other. As a landmark study, Lipset examined a relationship between economic development and stable democratic governments in Western Europe and Latin America using the above four indeces.[55]

By the same token, in relation to educational expansion in China, I will examine the effect of industrialization, national wealth (income), and urbanization. As Tables 9, 10, and 11 present below, it is evident that major indices of economic development have fairly close relationships to each other.

Table 9. Rank-Order Correlations Between Three Indices of Economic Development

	Industrialization	Urbanization	National Income
Industrialization	--	0.98	1.00
Urbanization	0.98	--	0.94
National Income	1.00	0.94	--

* Data on national income are available for only six years from 1952 to 1957, while other data area available for nine years from 1949 to 1957. Thus, the correlation coefficient between industrialization and urbanization is for the years 1949 to 1957, while the correlation coefficients between industrialization, national income, and urbanization are for the six year period, 1952-1957.

Source: Table 45 in Appendix B.

One thing we have to be cautious about is that data on all the variables are not available for the same period. As an alternative, I correlated the three variables against the same period of time from 1952 to 1957. As Tables 10 and 11 present, the three variables have still a fairly siginficant relationship to each other.[56]

Table 10. Rank-Order Correlations Between Three Indices of Economic Development in China, 1952-1957

	Industrialization	Urbanization	National Income
Industrialization	--	0.94	1.00
Urbanization	0.94	--	0.94
National Income	1.00	0.94	--

Table 11. Product-moment Correlation Coefficient Between the Three Indices of Economic Development in China, 1952-1957

	Industrialization	Urbanization	National Income
Industrialization	--	0.82	1.00
Urbanization	0.82	--	0.84
National Income	1.00	0.84	--

Among the three indices of the Chinese economic developments, industrialization seems to have a closer relationship with national income than with urbanization although industrialization usually has a close relationship with urbanization. It may be due to the indicator of industrialization adopted in this study. In most cases, scholars measure the percentage of inhabitants engaged in occupations other than agriculture, forestry, and fishing in order to indicate idustrialization.

But in the case of China, such data are not available for Chinese provinces yet, while aggregate national data on the indicator are available for the 1950s. Philip Emerson extracted statistics of

non-agricultural workers and employees from Chinese sources.[57] Emerson's statistics of non-agricultural workers and employees, however, include workers of fishing and salt extraction, which account for about three to four percent of the total non-agricultural workers and employees and which are supposed to be excluded in the process of calculating the industrialization rate, that is, the percentage of non-agricultural workers to the total population. After I exclude this agricultural category of workers, I adopt Emerson's non-agricultural workers statistics as an alternative indicator of industrialization. But the total number of non-agricultural workers, which consists of both the traditional sector and the modern sector,[58] has significant relationships with neither urbanization nor with national income. I believe that it is mainly due to the traditional sector of non-agricultural workers, which accounts for more than half of the total non-agricultural workers.[59] The traditional sector has little to do with industrialization of the modern Chinese society. The Communist Chinese government omitted it from the investment provision of the FFYP.[60]

Table 12. Percentage of the Traditional and Modern Sectors of Non-Agricultural Workers and Employees

Year	1949	1950	1951	1952	1953	1954	1955	1956	1957
Modern	30	34	37	43	43	47	49	61	61
Traditional	70	66	63	57	53	53	51	39	39
Total	100	100	100	100	100	100	100	100	100

Source: John Philip Emerson, "Employment in Mainland China: Problems and Prospects," in Economic Profile of Mainland China, Joint Economic Committee, Congress of the U.S., 1967, pp. 460-64.

But when I examined the relationship between the modern sector of non-agricultural employees and urbanization and national income, I found significant correlations between them. Particularly, non-agricultural workers has a closer relationship with urbanization than with national income.

Table 13. Product-Moment Correlation Between Non-Agricultural Workers and Urbanization and National Income

	Urbanization	National Income
Modern Sector of Non-Agricultural Workers	0.99	0.75

*Correlation between urbanization and the modern sector of non-agricultural workers are against nine years (1949-1952), while the correlation between national income and the modern sector of non-agricultural workers are against six years (1952-1957).

Consequently, I adopt non-agricultural workers of the modern sector of Chinese economy as another indicator of industrialization, in addition to per capita gross value of industrial output.

The three indices of the economic development have significant correlation with the levels of student enrollments, although each index of economic development has a somewhat different correlation with each level of education. First, industrialization and national income do not have a strong relationship with changes in primary school enrollment levels, while urbanization has a stronger relationship with the primary school enrollment levels than the other indices.

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a. Industrialization.

(1) Industrialization and Primary School Enrollments. As Table 14 presents, neither indicators of industrialization indicates that industrialization has a strong relationship with primary school enrollments. First, primary school enrollments did not grow in accordance with the growth of industrial output. Primary schools saw a sudden growth of enrollments in 1951 and 1952. Then, it remained stagnant for the first three years of the FFYP period, while industrial output grew continuously in 1949 and 1956. The levels of primary school enrollments increased 16 percent, 70 percent, and 98 percent respectively in 1950, 1951, and 1952 over that in 1949. Then, it decreased a little bit in the following three years until 1956.[61]

In the meantime, per capita industrial output continuously grew every year almost an average of 47 percent, as compared with that in 1949.[62] Second, the modern sector of non-agricultural workers also did

Table 14. Product-Moment Correlation Between the Indices of the Economic Development and Student Enrollment

	Industrialization (1)			
Student Enrollment	Economic Development in the Modern Sector of Non-Agricultural Workers	Per Capita GVIO	Urbanization[a]	National Income[b]
General Middle School	0.94	0.98	0.92	0.96
Primary School	0.67	0.79	0.93	0.78

[a]Covers nine years from 1949 to 1957.

[b]Covers six years from 1952 to 1957.

not show a significant correlation with the primary school enrollments. But non-agricultural workers of modern material production branches show a relatively strong correlation with primary school enrollments.[63]

Table 15. Product-Moment Correlation Between Enrollment Levels in Primary and Secondary Schools and Non-Agricultural Workers by Branches of the Economy

	Total Non-Agricultural Workers of Modern Sector	Production Branches of Non-agricultural Workers	Non-Productive Branches of Non-Agricultural Workers
Primary School Enrollments	0.67	0.94	0.82
Secondary School Enrollments	0.94	1.00	0.85

With both the indicators of industrialization, I could not find any significant relationship between industrialization and student enrollments. But employment of the non-agricultural workers of the modern production branches shows a significant correlation with primary school enrollment levels. If such is the case, some conscientious scholars will raise a question, "How would you explain the fact that both the indicators of industrialization do not agree?" and "Where does industrialization fit in explaining expansion of primary education?"

I believe that expansion of primary education was rather strongly affected by the manpower needs of the society than by the growth of industrial output. Also, changes in the manpower need of the society was affected not only by industrial expansion, but also by reconstruction and

reorganization of the society in a close coordination with economic oplicy of the new government. Expansion of primary education does not seem to directly correlate with industrialization, but industrialization still has some significant relationship with primary school enrollments, since the enrollment level has some significant correlation with non-agricultural workers of the modern production branches.

The first three years (1949-1952) of Communist rule were basically a period of consolidation of political power and piecemeal economic rehabilitation of selected portions of the economy, namely industry, transportation and communications. These branches of the economy constitute the material production branches of the economy. By 1952, the Communist estimate of the net domestic product reached 68.6 billion yuan, 15 percent higher than the 1933 level of 59.5 billion yuan (1952 price); and per capita product in 1952 (121 yuan) was slightly higher than that of 1933 which was one of the peak years in the pre-1949 period. By 1952, in fact, there was a little growth in the net value of per capita domestic product. However, there were some changes in terms of inter-sectoral composition of national product, as Table 16 presents.

Table 16. Inter-Sectoral Composition of National Product in Mainland China, 1933 and 1952 (in percentages)

Sector	1933 (1933 Prices)	1952 (1952 Prices)
Agriculture	65.0	48.0
Modern Sector	14.3	30.9
Industry Mining/Utility	3.4	11.5
Transport	1.4	2.9
Trade	6.0	10.2
Finance	0.7	1.8
Government Administration	2.8	4.5
Construction	1.1	2.5
Traditional Sector	14.4	13.1
Handcraft	7.0	6.6
Transport	4.1	3.7
Trade	3.3	2.8
Other	5.2	5.5

Source: Quoted in Alexander Eckstein, China's Economic Revolution (Cambridge: Cambridge University Press, 1957), p. 13; T.C. Liu and K.C. Yeh, The Economy of the Chinese Mainland: National Income and Economic Development, 1933-1955 (Princeton, N.J.: Princeton University Press, 1965)

This rapid rehabilitation of the modern sector of material production branches of the economy created a great deal of demand for non-agricultural workers of the modern sector. Between 1949 and 1952, non-agricultural employment grew from 26.3 million to 36.8 million. The total increase was 10.5 million, of which material production branches accounted for 7.7 million and non-production branches accounted for 2.8 million.[65] Of

material production branches, state-sector employment grew at an annual average rate of 35 percent, while private sector employment grew at an annual average rate of 4.7 percent.[66] State sector employment mostly consisted of modern sector occupations. Of material production branches, modern sector employment grew at an annual rate of 25.8 percent, while traditional sector employment grew at an annual rate of 4.8 percent.[67] With the evidence presented above, we can argue that non-agricultural employment of modern material production branches accounted for the majority of increases in non-agricultural employment as a whole in the 1949-1952 period.

In the meantime, the consolidation of political power accompanied by land reform and political campaigns (e.g.,"three anti" and"five anti" campaigns) also created a great demand of non-specialized bureaucrats. Under the great pressure of urgent demands for non-agricultural workers of the modern sector and non-specialized bureaucrats, a sudden expansion of primary education was inevitable. In addition, under the circumstances that the illiteracy rate was as high as 85 to 90 percent of the population,[68] it was natural that the first priority of education policy should be given to educational expansion in the period between 1949 and 1952. Training of specialized personnel and expansion of secondary education was of secondary consideration. In fact, until 1951, primary school enrollments grew faster than secondary school enrollments.[69]

In the period of 1949-1952, a rapid expansion of primary education was affected by manpower demands of the country in response to the need for national reconstruction as a whole than by industrial expansion alone.

According to Robert Field's index, there was, in fact, little or no growth in the net value of fixed capital assets in the 1949-1952 period, although industrial products still grew at an annual average rate of 27 percent.[70] Even though industrial expansion did not have any net value to capital assets and simply returned to the previously achieved level, we cannot overlook the impact of rapid growth of industrial output on educational expansion. The growth of industrial output accounted for more than one-third of the increase in national domestic products in the same period[71] and resulted in increases of 2.2 million industrial workers, which were equivalent to a little less than one-third of all increases in non-agricultural employment of the material production brahcnes.[72]

Great popular demand for expansion of primary education resulted in a rapid educational growth in the 1949-1952 period. But when the FFYP started in 1953, the rapid growth of primary education[73] was arrested about three years, although domestic production, including industrial output was still growing. This implies that primary school enrollments did not covary with changes in the size of the industrial output during the FFYP period. However, employment in the material branches of the modern sector of the economy covaried with the levels of primary school enrollments. The number of non-agricultural workers of the modern material production branches of the economy per 1,000 population reached to 21.02 in 1953; 21.48 in 1954; and 21.26 in 1955. Then, it increased to 27.83 in 1956 and 27.83 in 1957.

Table 17. Non-Agricultural Employment in the Modern Sector of Material Production Branches of the Economy (per 1,000 Persons)

1949	1950	1951	1952	1953	1954	1955	1956	1957
9.61	11.30	14.52	18.17	21.02	21.48	21.26	27.87	27.83

*Excluding workers of fishing and salt extraction.

Source: Number of non-agricultural workers of the modern material production branches of the economy are from John Philip Emerson, "Employment in Mainland China: Problems and Prospects," An Economic Profile of Mainland China, Joint Economic Committee, Congress of the Population Data in the U.S., 1967, p. 402; Ten Great Years (Peking: Foreign Language Press, 1960), p. 170.

By the same token, the levels of primary school enrollments did not change very much in the first three years of the FFYP. The number of primary students per 1,000 population was 87.9 in 1953, 85.1 in 1954, and 86.4 in 1955. Then, it increased to 101.1 in 1956 and 100.1 in 1957. The major factors that affected such growth patterns of employment in non-agricultural occupations were the truce of the Korean War, unexpected agricultural failures and rapid socialization of the economy. These factors resulted in a serious reduction in employment in the private, traditional production branches of the economy for 1954 and after. Such reductions offset the increases in employment in the modern production branches. Consequently, employment in the production branches did not grow during the FFYP period, although the modern production branches grew continuously from 1953 and after.

First, China's entry into the Korean War resulted in a great increase in the number of workers and employees of the material production branches of the economy because it increased demands for military supplies and stimulated production of consumer goods.[74] When the Chinese Communists suddenly withdrew from the Korean War in 1953, it caused decreases in demands for manufactured goods and military supplies and decreases in production of private factories, which, in turn, decreased employment of production workers. In 1954, two-thirds of the 134,000 private factories were very small ones with fewer than ten workers and employees. Since they were very small, they were vulnerable to sudden changes in demand for their products.[75] With cancellation of munitions and other military supply orders after the end of the Korean War, private industrial production fell off sharply.[76] As a result, employment in production

branches fell off in 1954.

Second, the dependence of China's economy on agricultural production was another influencing factor which arrested growth of employment in material production occupations. In 1950, agricultural raw materials supplied one-third of the industrial gross output and one-fourth of the products of consumer goods industries.[77] Almost 80 percent of light industry's raw materials stemmed from agricultural production.[78] Under these circumstances, agricultural production of a certain year generally had a great impact on industrial output of the next year, furthermore on employment of non-agricultural workers. There has been normally a one-year lag between the growth rate of agriculture and changes in industrial output.[79]

For instance, poor harvest in 1953 caused the gross value of industrial output in 1954 to fall below the 1953 level by 21.4 percent and serious decline in private industry. As a result, workers and employees in private industry decreased by 19.5 percent and the private industrial establishment, which included 2,000 large-scale and about 14,000 small-scale private industrial establishment, decreased by 10.0 percent in 1954 below the 1953 level.[80] Another agriculture failure in 1954 due to severe floods caused more acute decline in private industry, which resulted in serious reduction in employment in the production branches of the economy in 1955.[81]

Third, Chinese leaders made a commitment to rapid development of China as a major industrial and military power with equitable distribution of social status and economic wealth, launching the FFYP which adopted an economic planning of the Soviet model in 1953.

Alexander Eckstein described the characteristics of the Soviet economic model as follows:[82] (1) the high rate of economic growth concentrating on industrial progress; (2) heavy industry-oriented industrialization; (3) industrialization at the expense of agriculture; (4) a high rate of saving and investment; (5) bias towards capital intensive methods in the choice of industrial production technology; and (6) institutional transformation in agriculture and other sectors of the economy.

In the recovery period of 1949-1952, China had some success in controlling inflation by conventional fiscal and monetary means.[83] The regime did little to socialize the private sector of the economy, except for confiscation of foreign-owned facilities and public utilities and nationalizing financial organizations.[84] But once the government set a goal of rapid industrialization, it needed a high rate of savings and investment. Thus, the government no longer relied on conventional budget controlling methods but began to resort to collectivization of the economy to facilitate the imposition of a high rate of savings in the society.[85] During the 1953 and 1954 period, the Party pursued a policy of moderation in socializing the economy. But it could not succeed. Thus, in the Fall of 1955 and the first part of 1956, the Party suddently hardened its socialization plan. When the owners of private factories and business, who had very small assets, faced the almost certain prospect of socialization, they had no incentives to expand their enterprises. In addition, they were very vulnerable to sudden changes in demand for their products and shortages of raw materials during the 1954 and 1955 period.[86] Consequently, a great deal of private industry and business enterprises were dislocated and employment in those sectors of the economy seriously declined

during the FFYP period.[87]

In the meantime, the government adopted the investment strategy that involved concentration of state capital in the sectors and projects where capital intensity was high and where gestation periods were relatively long. For instance, state investment in industry accounted for an average of 45.5 percent of the total state investment during the FFYP period;[88] 85 percent of the total investment in industry was allotted to heavy industry.[89] Such investment strategy could not increase employment in the modern material branches of the economy because heavy industry relied not on the labor-intensive methods but on the capital intensive techniques. In fact, it appears that allocations of investment during the FFYP period were not designed to maximize the growth of non-agricultural employment. In 1956, however, the government made a revision of the intersectoral investment allocation in favor of the light industry which had favorable implications for employment absorption because of its lower capital intensive and short gestation periods. In 1957, the government also put a new emphasis on diverting of resources to small-scall local enterprises which required labor-intensive techniques.[90] After then, the absolute size of employment in the modern material production branches also began to increase in 1956 for the first time in the FFYP period.

As has been discussed above, the growth of employment in the material production branches was arrested for three years (1953-1955) on account of various factors such as the sudden end of the Korean War, agricultural failures, state investment strategies, the collectivization of the economy, etc. In this economic situation, it was not possible to expand education, which had been greatly stimulated by the upturn in economic recovery

and by the vast programmes of propaganda and indoctrination with which the Chinese Communists tried to reach the entire population in the 1949-1952 period. In 1953, the government realized that it could not possibly provide enough schools, teachers, for further expansion of primary education and that it could not put education growth above industrialization. Therefore, in 1953, the government decided to suspend the implementation of the original policy that the length of primary education schooling should be shortened from six years to five years and that was suggested by Soviet advisors.[91]

At the same time, the government attempted to slow down popular demands for education by intensifying propaganda that national production and industrialization were basic to national life and that to put educational growth above the industrial growth was unwise.[92] The Central Committee of the Communist Party also issued a propaganda as follows:

> The Soviet Union had no plan for universal elementary education till after 1930, when a great advance had already been made in industrial and agricultural production. Even then, effort was confined to the four-year elementary school. The seven-year school and ten-year school were later developments.93

After the government intensified propaganda, many parents and students changed their attitude and withdrew from primary school. An investigation in one area revealed that before the campaign, 90 percent of the pupils were set on further study, but after the campaign, 80 to 90 percent had been brought to see the "correct viewpoint." Another report from other localities revealed that the campaign changed people's attitude from a nine percent favorable to labor to a 93 percent favorable attitude.[94] In 1954, in fact, the number of primary school students withdrawing or taking leave from schools was 2.9 million, representing 8.9 percent of

the total primary school students.[95] It was more than five million in 1955.[96]

At the same time, when the government slowed down educational expansion, the government emphasized quality education in urban cities and in industrial districts in order to supply manpower necessary for the industrial development. Then, the government encountered another problem of educational supply and demand in the rural areas by 1956, when the government speeded up establishment of semi-socialist agricultural cooperatives and the development of small-scale industries. In other words, when the Central Committee of the Chinese Communist Party decided to accelerate collectivization of the Chinese economy in 1955, the country needed a great number of low-level cadres in the rural areas in order to reorganize agrarian society. This, in turn, necessitated expansion of primary education again. The elimination of illiteracy among 80 percent of the population in coordination with the development of socialist industrialization and of agricultural cooperativization was one of the most essential tasks. Thus, the Central Committee of the CCP and the State Council decided to expand mass education in March, 1956.[97]

As to practical means, Chinese leaders encouraged expansion of min-pan (people-run) schools and permitted diverse forms of educational institutions. For instance, Vice Premier Li Fu-ch'un recommended a policy that since the state could not continue to expand school systems, the people themselves should take a hand and organize certain cultural and educational services such as primary schools, peasant spare-time schools, etc.[98]

From the above discussion concerning the impact of industrialization on educational expansion, we find that industrialization had a significant

relationship with expansion of primary education when we adopted employment in the modern material production branches as an indicator of industrialization. But when we adopt industrial output as an indicator of industrialization, industrialization did not show a significant relationship with expansion of primary education. In this respect, it is advisable for further study of Chinese politics that we should be cautious of rejecting or accepting the industrialization variable simply without extensive background study.

(2) Industrialization and General Middle School Enrollments. As Table 14 presents, the level of general middle school enrollments has a significant relationship with both the indicators of industrialization, industrial output, and employment in the modern material production branches of the economy.

Secondary school in China has generally two principal functions. One is to prepare students for advanced studies in higher educational institutions. The other is to educate and train students in order to supply skilled and educated personnel necessary for industrial development. General middle schools consist of junior middle schools and senior middle schools. A major function of junior middle school is to prepare students for the senior secondary school and vocational school. On the other hand, a major function of senior middle school is to prepare students for higher education and to supply skilled personnel for the industrialization of the country. The functions of general middle school are also confirmed by Vice Chairman Hsi Chung-hsun and Secretary General of the GAC Committee of Cultural and Educational Affairs Chien Chun-jui.

According to them, secondary school students should continue to serve the Socialist construction enterprise and to keep the nation supplied with a regular flow of construction personnel for Socialist industrialization of the nation.[99] Because of such function, general middle schools were very sensitive to the demand and supply of skilled personnel, which was, in turn, affected by China's economic policy oriented toward the development of heavy industry.

When the government adopted heavy industry-oriented policy, it geared other economic policies to the industrial policy. First, the government channeled its resources primarily into modern, capital-intensive heavy industry. The government concentrated its investment in human capital (education); the government emphasized the development of a scientific and technical skills.[100]

Table 18. Investment in Heavy and Light Industry, 1953-1957 (Percentage Distribution)

Year	Industry Total	Light Industry	Heavy Industry	Ratio of Light to Heavy
1953	100	17.6	82.4	1: 4.7
1954	100	17.6	82.4	1: 4.7
1955	100	12.3	81.7	1: 7.1
1956	100	13.5	86.2	1: 6.2
1957	100	13.2	84.8	1: 5.6

Source: Ten Great Years (Peking: Foreign Language Press, 1960), p. 61

The government also geared tax policy to heavy industry. Since 1950, the Chinese Communists had implemented the tax policy that taxes should be lighter on industry than on commerce and lighter on heavy industry and daily necessities, as opposed to light industry and luxuries.[101] As a result, the tax and profit income which the government derived from heavy industry in 1957 were composed of 30 percent tax and 70 percent profit and for light industry 60 percent tax and 40 percent profit.[102] As a result of the government's heavy industry-oriented economic policy, industrial employment rose from 5.26 million to 7.9 million between 1952 and 1957; that is a gain of 2.65 million. Of that gain, almost 77 percent, or 2.06 million, were added to employment in heavy industry.[103]

In the meantime, expansion of general middle school was not sufficient enough to match the expansion of employment in non-agricultural occupations, although the level of general middle school enrollments grew continuously in the 1949-1957 period,[104] and although the ratio of general middle school enrollments to the total of non-agricultural workers grew, as Table 19 presents.

In June, 1956, the Minister of Education reported serious shortages of secondary school students,[105] especially junior middle school students which accounted for about 84 percent of the total general middle school students and 72 percent of the total secondary school students.[106] He said:

> One of the most outstanding problems with respect to ordinary education was the shortage of secondary school students, which seriously affects national construction needs. The shortage problem was serious in the Summer and Fall of 1954 and 1955 and at the beginning of 1956. All quarters noticed the shortage of junior secondary school graduates was expected to reach 787,037. Even if all had chosen to attend to school, they would not have been able to meet the full requirements of the senior secondary schools. It was also impossible to meet the demand of various productive agencies in industry and agriculture.107

Since the supply of general middle school students still could not meet the demand of the country, it was natural that the level of general middle school enrollments should increase as far as the country could manage. But once the number of students increased beyond the accomodation capacity of general middle schools, its enrollments should be restrained. In fact, about four million school children leaving primary schools (or 32.5 percent of the graduating class) were unable to get into junior middle schools because schools were overcrowded.[108]

Table 19. The Ratio of General Middle School Students to the Total of Non-Agricultural Workers

	1949	1950	1951	1952	1953	1954	1955	1956	1957
Percentage of General Middle School Students	13%	13%	12%	16%	16%	19%	20%	21%	26%

*Rounded to the whole point.

Source: Non-Agricultural Workers from John Philip Emerson, "Employment in Mainland China: Problems and Prospects," in An Economic Profile of Mainland China, Joint Economic Committee, Congress of the U.S., 1967, p. 462; General Middle School Students from John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population Reports, Series P-95, No. 72, U.S. Department of Commerce, 1873, p. 95.

b. Urbanization

The levels of enrollments in both primary and general middle schools in China had a strong relationship with urbanization in the 1950s. It may be because most of the existing education facilities were concentrated in the urban areas in the 1950s. Second, most of the industrial facilities were also concentrated in the urban areas. In addition, rapid industrialization was accompanied by rapid urbanization as the industrial demand for labor grew and industrial expansion provided employment opportunities. Rapid industrial expansion in the cities attracted the more or less depressed people in the countryside. A great number of people migrated into the cities. Consequently, it resulted in shortages of schools in the urban areas. Since the economic resources were very limited for educational expansion, the government paid more attention to educational expansion in the urban areas.

Throughout Chinese history, the cities have had very important functions as administrative and economic and educational centers. In relation to education, educational institutions were concentrated in the cities and urban areas.[109] So were they even in the 1950s. In the first three years of Communist rule (1949-1952), major government efforts in the field of education were to consolidate and standardize the education system, utilizing existing school facilities on account of insufficient funds and pressing time for the reconstruction of the economy.[110] As Table 20 presents, new construction of school buildings were very limited; it was almost negligible for primary schools, very limited for secondary schools. New construction of secondary school buildings per student was 0.15 square meters in 1950 and 0.5 square meters in 1952.

Since the government could not construct new school buildings as fast as enrollments increased and allowed dissimilar educational development between the urban and rural areas and since all the general middle schools and the overwhelming proportion of specialized middle schools were still located in the urban areas,[111] it seemed to be natural that student enrollments correlated more closely with urbanization.

Chinese modern industries have been concentrated in the urban areas. The larger a city has been, the bigger its industrial capacities have been. For instance, in the 1930s, main industrial concentration was to be found in Shanghai and Manchuria. Shanghai produced more than 50 percent of the whole country's modern industrial output and Manchuria another 12 percent.[112] At the end of World War II, Shanghai alone had 57.7 percent of China's total industrial motive power and 60.9 percent of employment and 60.4 percent of factories.[113] When the eight largest cities were put together, which were Shanghai, Tientsin, Tsingtao, Peking, Nanking, Wuhan, Chungking, and Canton, they accounted for 96.9 percent of motive power and 92.4 percent of employment and 93 percent of factories.[114]

Such concentration of modern industries in the large cities had not been drastically changed even during the FFYP period, when the development of inland industrial centers was called for to avoid irrational concentration of industrial centers in the coastal provinces.[115] As of 1960, the large industrial centers, which included the eight largest cities, such as Shanghai, Tientsin, Wuhan, An-shan, Chungking, Nanking, Peking, Paotao, and Canton, accounted for about 60 percent of China's total industrial capacity. The medium city groups, which included 57 of the net large industrial centers, accounted for 31 percent

Table 20. New Construction of School Building Space Per Student (Square Meter)

Year	Higher Education	Secondary School	Primary School
1950	1.37	0.15	--
1951	3.33	0.32	--
1952	5.26	0.50	--
1953	6.99	0.69	--
1954	5.93	0.59	0.01
1955	4.55	0.36	0.01
1956	4.04	0.42	0.01
1957	3.72	0.42	0.01

Source: school building space data from Ten Great Years (Peking: Foreign Language Press, 1960), p. 192; Leo A. Orleans, Professional Manpower and Education in Communist China (Washington, D.C.: National Science Foundation, 1961), p. 85. Student enrollment data from John Philip Emerson, Administrative and Technical Manpower in People's Republic of China, International Population Reports, Series P-95, No. 72, U.S. Department of Commerce, 1973, p. 95.

of industrial capacity. The small city group, which included 252 cities, accounted for about nine percent of industrial capacity.[116]

Under the circumstances that industrial capacity was still concentrated in large and medium cities and the government emphasized rapid industrialization, rural-to-urban migration became a major component of the urban population growth. According to an official estimate, urban population between 1952 and 1957 increased by 30 percent, while rural population increased by nine percent only.[117] Particularly, urban population grew faster in the 1953-1957 period than in the 1949-1952 period. Rural-to-urban was a major contributory factor to the fast growth of urban population in the 1953-1957 period. Annual average growth rate of urban population in the 1953-1957 period was seven percent, as compared with 6.4 percent in the 1949-1957 period.[118] Of the seven percent, natural increase rate extended about three percent and rural-to-urban migration accounted for about four percent.[119] When the rapid growth of urban population was triggered by rural-to-urban migration and could not be absorbed completely by industrial expansion, it resulted in various problems; it increased urban unemployment by 400,000 persons annually.[120] It also brought about shortages of primary and secondary schools in the cities and industrial districts.

In recognition of this problem, first, the central government issued a directive concerning the organization and improvement of primary education in November, 1953, as follows:

> Because of the industrialization of the country and the rapid growth of urban population, the ratio of increase in the number of schools is generally lower in the cities than the villages in the past several years. Consequently, public schools should be adequately developed in industrial and mining districts and in the cities, especially large cities.121

The same directive also indicated that unbalanced development of primary schools between the cities and rural areas was due to the unbalanced development of the national economy and that urban-centered development of primary schools was inevitable in order to use scarce resources more effectively.[122]

Second, in regard to general middle schools, the central government also made a decision to concentrate learning facilities in the more densely populated areas. Vice Chairman Hsi Chung-hsun and Secretary General of the GAC Committee of Cultural and Educational Affairs Chien Chun-jui said that in order to cope with the demand for Socialist industrialization of the nation, the greater the importance should be in principle attached to the development of senior middle schools and those in the big cities and industrial and mining districts than in the ordinary districts.[123]

In addition, the impact of urbanization on the student enrollment level can be confirmed by the fact that as of 1955, 50 percent of middle school students and 15 percent of primary school students came from urban households, although urban population constituted 13 percent of the total population of Communist China.[124]

c. National Income.

As Table 14 presents, the national income seems to have a strong relationship with the level of general middle school enrollments and a weak relationship with primary school enrollments. But I suspect any strong relationship between the national income and general middle school enrollments, if there is any, is due to the effect of

industrialization.

The major components of the national income in the 1950s were agriculture and industry. They constituted about 75 percent of the total national income in the 1952-1956 period. Particularly agricultural output accounted for almost half of the national income until 1956. The other components of the national income did not change much. In other words, most changes took place between agriculture and industry. In this respect, changes in the national income can be explained by changes in both agriculture and industry.

First, in regard to the effect of industrial output on the student enrollment levels, we have already discussed the effects of this problem. Industrial output had a weak relationship with primary school enrollments but a strong relationship with general middle school enrollments. Second, as to the effect of agricultural output, I found also that it did not have a strong relationship with primary school enrollments.

However, there is no special reason for us to believe that there is any strong relationship between agricultural output and general middle school enrollment levels. First of all, most general middle schools were located in the urban areas and its enrollment levels had a strong relationship with urbanization and industrial output. Concerning the effect of agricultural output, I will discuss more in detail Then, I will also discuss the effect of the national income by combining the findings relative to both industrial and agricultural output.

We cannot deny that agricultural output had important impact on changes in the national income and industrial output in the 1950s. In

1952, agricultural output provided roughly 80 percent of light industry's raw materials, 70 percent of total exports, and 50 percent of gross domestic products stemmed from agriculture.[125] In addition, according to Kenneth Walker, food provided half the country's retail sales and two-thirds of rural consumption. Agricultural raw materials supplied one-third of the gross industrial output and one-fourth of the consumer goods industries. Agricultural products contributed nearly two-thirds of earnings of foreign exchanges in the 1950s.[126]

Despite that, we recognize the importance of agriculture relative to other industries and national income; agricultural output could not be a crucial factor to rapid expansion of general middle school enrollments. First, during the FFYP period, agricultural performance was rather poor. For instance, grain production was barely enough to keep up with the population growth. Until 1952, annual growth rate of grain production was 7.4 percent. It was remarkably high, but it was just due to a recovery from the level of agricultural output abnormally depressed by wars.[127] Since then, during the FFYP period, the annual average growth rate of grain production dropped to as low as 2.3 percent when we took 1952 for the base year. This growth rate was just enough to match the annual population growth rate of two percent.[128]

Second, during the FFYP period, the central government's education policy was rather geared to the rapid industrialization than to agricultural development.

Third, during the same period, agricultural production still relied on labor-intensive techniques. This means, in turn, that agriculture

Table 21. National Income at 1952 Prices, By Materially Productive Sectors, 1952-1956 (Percentage Distribution)

Indicator	1952	1953	1954	1955	1956
Agriculture	59.2	N.A.	N.A.	N.A.	48.1
Industry	18.0	21.0	23.4	23.6	26.4
Construction	3.0	3.8	4.1	4.3	5.6
Transportation and Communications	4.0	4.2	4.5	4.4	4.4
Trade	15.8	N.A.	N.A.	N.A.	15.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Company, 1967), p. 142.

still did not require rapid expansion of general middle schools on the one hand and constrained the income of the peasant family, the size of which was decided by the number of working members of each household. Based on 200 work days, the annual income of a farmer should be 200 to 300 yuan in the mid-1950s. Under these circumstances, if a family had a few working members, it should have been diffcult to pay 120 yuan per secondary school student.[129] With all this evidence, I suspect that agricultural output had some significant relatioship with rapid expansion of general middle school.

At this point, a conscientious scholar might raise a question as to what explanation I can give concerning the statement that agricultural performance has a weak relationship with primary school enrollment but a strong relationship with general middle school enrollments. For the answer, I believe that general middle school enrollments did not have a direct relationship with agricultural output but with the industrial output which has a strong relationship with agricultural output. In other words, agricultural output seems to have a strong relationship with general middle school enrollments because of the impact of the strong relationship between agricultural and light industrial output. Most students of Chinese economics generally agree that agricultural output has a strong relationship with industrial output with a one-year lag.[130] When I correlated agricultural output with industrial output with a one-year lag, I also found a strong product-moment correlation coefficient of 0.98.

However, I do not mean that agricultural output exerted no important impact on the levels of student enrollments. Since agriculture

performance still depended on labor intensive techniques and totally on weather in the 1950s agricultural performance often had a seriously negative impact upon the levels of student enrollments. In the case of agricultural failure due to natural calamities or during the busy farming seasons, farmers often withdrew their children from schools to earn more income by obtaining extra work points or because their financial burdens were too heavy to keep their children in school. This argument can be confirmed in a speech by the Minister of Education before the National People's Congress in 1956. He said that ten percent of the students in primary and secondary schools withdrew from schools or suspended their studies between the Winter of 1955 and the Spring of 1956. In certain areas, the number of these students amounted to more than 50 percent.[131] In regard to its major reason, he indicated that following the creation of agricultural cooperatives, farmers developed their production and requested the young students to return to productive labor in the villages to make more income.[132] An extra worker meant more income. He also pointed out financial burdens associated with school attendance were another important reason for the high withdrawal in the rural areas.

When I combine the findings concerning both the major components of the national income, I reach the following conclusions. The national income and both of its major components have no siginficant relationship with the primary school enrollment levels. As to the levels of general

middle school enrollments, the national income seems to have a strong relationship with it. But it may be due to the effect of industrial output which has a strong relationship with the other major component of the national income, that is, agricultural output. As diagrams 1 and 2 show, when industrial output has a strong relationship with student enrollments, agricultural output and the national income seems to have a strong relationship with student enrollments. But when it has not, neither do they.

Before this section is concluded, I will make a reservation on the adoption of the national income variable for the studies of the Chinese political system. It is undesirable to employ the national income variable simply without adequate studies on the relationship between major components of the national income and the variables of concern. Ta-chung Liu also made a similar argument. He said that the national output is the best available indicator of the total productivity of an economy or total capacity to produce of a country, but that it is quite inadequate as a measure of the capability to achieve a specific aim in a totalitarian state where expansion in national output is often achieved through regimentation and coercive measures and where the authority is free to use any amount of resources to their preferred goals.[133]

2. Resources for Educational Expansion (Budget, School Building Space, and Teachers)

As Table 22 presents, enrollments in both primary and secondary schools do not have significant positive relationship with educational resources in the 1950s. Among the three indices of educational resources,

Diagram 1. Product-Moment Correlation Coefficient Between National Income, Industrial Output, Agricultural Output, and Primary School Enrollment Levels

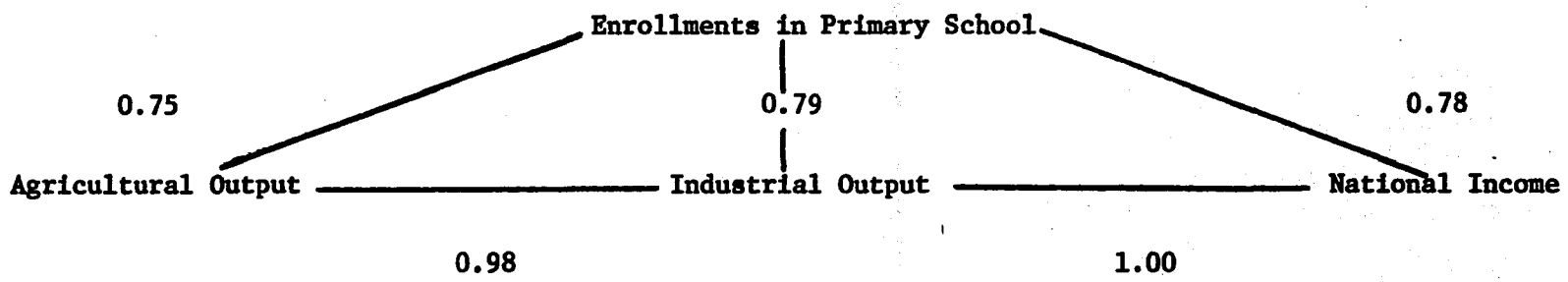
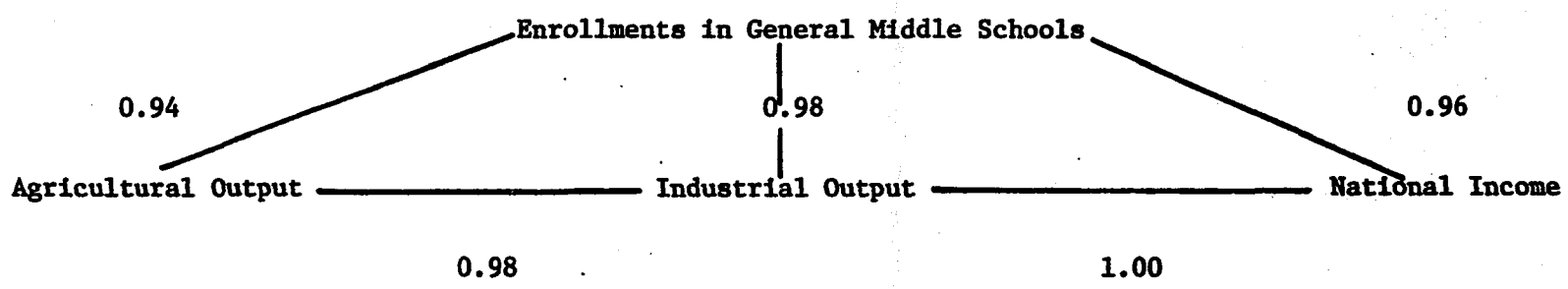


Diagram 2. Product-Moment Correlation Coefficient Between National Income, Industrial Output, Agricultural Output, and General Middle School Enrollments



the ratio of teachers to the student enrollments seems to have a fairly strong negative correlation with the student enrollment levels. While the number of teachers per 1,000 students in both primary and secondary schools decreased, student enrollments increased. But this can be interpreted that student enrollment increased in spite of serious shortages of teachers. The Chinese Communists somehow managed educational expansion with various sorts of alternative measures and resources, overcoming the constraints on educational resources.

Table 22. Product-Moment Correlation Between Educational Resources and Student Enrollments

	Educational Budget (a)	New Building Space Per Student (b)	Number of Teachers Per 1,000 Students (c)
Primary School	0.41	0	-0.8
General Middle School	0.38	0.31	-1.0

a. Budget data from Leo A. Orleans, Professional Manpower and Education in Communist China (Washington, D.C.: National Science Foundation, 1961), p. 16.

b. New construction of school buildings from Ten Great Years, (Peking: Foreign Language Press, 1960), p. 192.

c. Number of teachers from John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population Reports, Series P-95, No. 72, April, 1973, p. 93.

a. Budget for Education.

The budget for education did not have a significant relationship with student enrollments. Because of great demands for education, the Chinese Communists were never in the position to fully satisfy the needs of the people for education through the 1950s.[134] Thus, in spite of limited resources, the Chinese Communists allocated an average of seven percent of its national budget to education in the 1951 and 1956 period.[135] During the period, there was no sharp change in the proportion of the state budget for education in the internal distribution of educational funds among the different levels of schools.[136]

Educational expenditures per primary school student had not been much changed between 1951 and 1955. Then, in 1956, it drastically dropped. The educational budget per student in secondary schools sharply increased in 1952 and 1953. Then, it decreased in 1954 and 1955. In 1956, it backed up to the level of 1953. Along with the decreases in educational budget, school subsidies were also reduced. For example, the junior secondary school subsidy was reduced by 18 percent in 1955, and the sum granted in 1955 was scheduled for reduction by 14 percent in 1956 and ten percent in 1957. The senior secondary school subsidy was reduced by 28 percent in 1955, and the sum granted in 1955 was scheduled for reduction by 24 percent in 1956 and 20 percent in 1957.[137]

In spite of shortages of educational funds and curtailed subsidies, student enrollments increased. First, general middle school enrollments continuously increased, although educational expenditures per student fluctuated.[138] Second, enrollments in primary school also increased from

86 per 1,000 population in 1955 to 101 in 1956, while educational funds per student decreased from 12 yuan per student in 1955 to eight yuan in 1956.

At this point, someone may raise the question of how the Chinese Communists made progress on student enrollments in spite of shortages of educational funds. First, the Chinese Communists overcame constraints on educational capacity with the min-pan school system. The operation of the min-pan schools saved a great deal of the budget for education.[139] For instance, educational expenditures per student in agricultural middle schools amounted to only one-sixth of those of ordinary junior middle schools. To train a student in an ordinary junior school, the government spent 180 yuan a year, while in agricultural middle schools, it cost less than 20 yuan a year.

Likewise, the financial burden on the student's family was reduced from more than 100 yuan to around 30 yuan a year.[140] These figures were also confirmed by another source. In April, 1960, Kiangsu delegates reported that to train a student in an ordinary junior school cost the government 187 yuan a year, while agricultural school cost the government 13 yuan. Likewise, the financial burden on the student's family was respectively 107 yuan and 37 yuan.[141]

In terms of teachers, agricultural middle schools required fewer teachers than ordinary junior middle schools.[142] The min-pan school also expanded educational opportunities. For instance, a sharp increase in secondary school enrollments between 1957 and 1958 was mainly ascribed to the creation of so-called agricultural middle schools, which constituted, in fact, almost 70 percent of the total increases in

secondary school enrollments, as compared with the previous year.[143]

b. New Building Space.

Student enrollments increased without any strong positive correlation with construction of school buildings in the 1950s. The shortage of school buildings was chronic and the government could not spend much for it. For instance, schools were so crowded in 1957 that about four million children leaving primary schools (or 32.5 percent of the graduating class) were unable to go on to senior middle schools.[144] In spite of such serious shortages of school buildings, new construction for primary schools was almost negligible and new buildings for secondary schools were very limited, as Table 15 presents.

Then, someone might raise a question as to how the Chinese Communists could increase the student enrollment levels without new construction of a sizeable number of school buildings. As an alternative, they used all sorts of makeshift classrooms and facilities. Chang Hsi-jo, Minister of Education, discussed this problem in 1957 as follows:

> Because the state's finance and materials are limited, excessive expenditures for education are impossible. This contradiction can only gradually be solved, following development of national economy. As a result of the shortages of school buildings, classes are being held in all types of makeshift accomodations.145

In fact, many of the min-pan schools in the 1950s were held in private homes or in temples, in warehouses, or other public buildings. And pupils were asked to bring their own portable desks and chairs.[146] Another alternative was the double session system. The Minister of Education encouraged double session systems under which two classes

used the same classrooms, one in the morning and the other in the afternoon. Some schools allowed even three sessions.[147]

c. Teachers.

The Chinese Communists somehow managed rapid increases in student enrollments in spite of chronic shortages of teachers in the 1950s. The supply of teachers could not match with rapid increases in student enrollments. When the First National Conference on Elementary and Normal School Education was convened in 1956, it was estimated that in the next five years, over one million additional teachers would be needed for elementary schools, 200,000 full-time teachers for sparetime schools, 130,000 for secondary schools and over 10,000 for the higher educational institutions.[148] Yet, rapid growth of enrollments at all levels of schools had surpassed the growth of normal education and widened the gap between the supply and demand of teachers. In 1956 and 1957, the shortage of school teachers became a major problem to the educational development. Shortages of secondary school teachers amounted to about 90,000 persons and shortages of primary school teachers reached to 200,000.[149] Particularly, the teacher shortage problem was more acute with secondary schools. In the 1949-1959 period, the number of teachers increased about 300 percent, but student enrollment grew far more greatly than that, primary school enrollment by 303 percent, and secondary enrollment by 570 percent.[150] Secondary enrollments grew faster than primary enrollments, as compared with teacher supply. In other words, the number of teachers per 1,000 secondary school students

decreased faster than that of primary schools, as Table 18 presents.

One of the major reasons for teacher shortages was the rapid growth of education in general, which surpassed the growth of normal education. Another major reason was that normal schools at all levels did not have enough applicants for admission. In spite of officially announced quotas and the arbitrary assignment of jobs, few students chose to enter normal schools because they thought that there was no future for teachers; the work was monotonous, the status was low, and the renumeration was inadequate.[151] Consequently, the government called for 15 percent of junior middle school graduates to enter normal schools, but only five percent were willing to apply in 1956.[152] The government also explored other methods of teacher-training than regular normal education. They were short-term courses, makeshift advancement of teachers to higher levels, spare-time education for teachers, correspondence courses, and other forms of in-service training. Many people got training by such methods and became teachers. For a good evidence, according to Jen-min Jih-pao, the number of teachers increased from 930,000 in 1949 to 2,500,000 in 1958. The actual increase was 1,570,000.[153] When these figures are compared with 740,000 of secondary normal school graduates for the same ten years, almost 830,000 people became teachers without regular normal school education.[154] As a result, many teachers lacked adequate qualifications and the quality of their instruction also deteriorated. For a good evidence, the Minister of Education reported that 43 percent of

Table 23. Number of Teachers Per 1,000 Students

Year	Secondary School	Primary School
1949	64.67	34.19
1950	55.52	31.15
1954	42.16	30.36
1955	41.81	30.00
1956	39.45	27.56
1957	40.00	31.27

Source: John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population Reports, Series P-95, U.S. Department of Commerce, April, 1973, pp. 93 and 95, Tables A-4 and A-6.

primary school teachers were below the standard of the junior teacher's training school graduates and that more than half of the secondary school teachers were below the level of the teacher's training college graduate.[155] According to another source, 39 percent of primary school teachers did not have a completed junior secondary education in 1956.[156]

With the evidence presented above, we can conclude that educational resources did not necessarily affect the government's capability to expand education in Communist China. The Chinese Communists clearly were determined to raise the overall educational level of the population. But since they had only limited educational resources, they attempted to give the largest proportion of the population some semblance of an education, which required minimum expenditures, facilities, and human resources.

3. Policy Priority (Expenditures and Cadres)

Before I go on to a discussion on the effect of policy priority, I have to issue some caveats. First, we can advance a general discussion on the effect of each policy category, since each policy category includes many subcategories. For example, the category of economic construction expenditures includes industry, agriculture, transportation, communications, and food supplies. Second, we can use the most simple statistics, rank-order correlation coefficient to measure the association between the independent and dependent variables. Third, a priority of each policy category will be measured by expenditures and the number of cadres.

When the economic construction category is measured by expenditures, it has a significant association with both primary and general middle school enrollments but when it is measured by the number of cadre, it has a significant association with general middle school enrollments only. The social service category has a significant association with both primary and general middle school enrollments when it is measured by expenditures. In the meantime, neither the administrative nor defense category has a significant relationship with student enrollments.

Table 24. Rank Order Correlation Coefficient Between the Student Enrollments and the Economic Construction and Social Service Policy Categories

	Economic Construction		Social Service	
	Expenditures	Cadre	Expenditures	Cadre
Primary School Enrollments	0.81 (n=8)	0.87 (n=5)	0.86 (n=8)	-0.6 (n=5)
General Middle School Enrollments	0.95 (n=8)	0.97 (n=5)	0.74 (n=8)	-0.4 (n=5)

* At the significant level of 0.05, the Spearman correlation coefficient of 0.9 is significant for five cases, 0.64 for eight cases.

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a. Economic Construction Category.

The central government had put the first priority to economic construction in the 1950s. Between 1949 and 1957, the Central Government spent an average of 43 percent of its budget for economic construction

every year. From 1952 on, economic construction expenditures exceeded all other government expenditures.[157] Growing economic construction budget was the primary source of financing Communist Chinese industrial growth. Industry received more than one-half of the total economic construction expenditures.[158] Since the economic construction expenditures have strong relationships with industry, which has a significant relationship with educational expansion, it is natural that economic construction expenditures has a significant association with student enrollments.

As compared with the expenditures, economic construction cadres refer to a more specific category of personnel with specialized training and education. Thus, economic construction cadres have a different relationship with different levels of education; it has a strong positive association with general middle school enrollments but a weak relationship with primary school enrollments. When the government expanded industry with special emphasis on heavy industry, the country needed a great number of specialized economic cadres. But expansion of secondary education still could not meet the demands. For instance, the total number of specialized secondary engineering graduates was 14,000 in 1957, but it was still below the available positions of engineers and technicians.[159] For another instance, about 225,000 of agricultural specialist and technician positions increased between 1949 and 1957, but the actual number of graduates of agricultural college and secondary schools met only half of the real demand during the same period.[160] In this respect, we can say general middle school enrollments naturally have a significant association with changes in the number of economic construction cadres.

In the meantime, the primary school enrollment levels have not a significant association with the number of economic construction cadres, but with changes in the number of non-agricultural workers.

Since "cadre" does not include all agricultural workers, primary school enrollment, which has a significant association with non-agricultural workers, did not have a significant association with changes in the number of cadres. However, since primary school enrollments have a significant association with economic construction expenditure, which was a more inclusive and exhaustive indicator, I can say that economic construction category has a significant relationship with both the primary and general middle school enrollment levels.

b. Social Service Category.

The category of social service, education, and culture seems to have a significant association with educational expansion by expenditures but not by cadre. I believe that the social service category does not have a decisively independent impact upon educational expansion but plays a supplementary role in expanding education by helping industrialization of the country. An understanding of the components of the expenditures for social service, education, and culture will help our discussion.

The major components of the expenditures are the expenditures for education and culture, which account for an annual average of 63 percent of the total social relief and welfare expenditures,which account for an annual average of 16 percent of the total social service expenditures. These components make up almost 80 percent of the total social service

expenditures. These components can determine the relationship between the whole social service expenditures and educational expansion.[161]

First, expenditures for education and culture do not have a strong impact upon educational expansion, as we discussed earlier in this chapter, but the expenditures have some impact upon educational expansion by serving the objectives of economic policy, contributing to manpower training. According to Emerson's argument, China's education policy has been subordinated to the goals of manpower policy and shaped by domestic political and economic objectives of the government.[162]

Second, Martin Wolins argues that a function of social welfare is to reinforce the values of a society.[163] So was the essence of China's social welfare program. The Chinese Communists designed their social welfare program to reinforce the value of productivity and to support the political activism. Thus, social relief funds were to reward to those who were hurt in the course of productive labor.[164] The individuals who involved in the industrial process received priority treatment under most welfare programs. On the other hand, the more remote ones contribution to industrialization is--whether because of skill or age--the lower ones benefits are.[165]

As we have seen, the main objectives of the social service expenditures are essentially to increase the people's productivity and to help industrial expansion. The social service expenditures do not have a decisively strong impact upon them by contributing to manpower training and by patching social problems which are by-products of industrialization and urbanization.

c. Administrative Category.

The administrative category has no significant association with student enrollments. It had decreasing priority in terms of allocation of the government budget and cadres every year during the 1949-1957 period. While primary school enrollment stayed stable and general middle school enrollments grew rapidly in the same period.

The shortage of administration cadres was a major obstacle to the establishment of a civil administrative system in 1949. Then, the number of administrative cadres in the rehabilitation period (1949-1952) grew larger than in any other period. It grew 84 percent in the same period.[166] Such expansion of bureaucracy was justifiable by the socio-economic need in the 1949-1952 period, but an excessively high rate of recruitment was no longer justifiable by expansion of state functions as well as the nation's economic growth from 1954.[167] The State Council proclaimed that an excessively fast expansion of personnel and structure of state organs and enterprises should be checked.[168] Data on economic growth and cadre expansion support the decision reached by the State Council. In the 1952-1958 period, China's national product, the increase of which was estimated to be 46.4 percent (from 75.6 to 110.7 billion yuan), was lower than an increase in the number of cadres, which was estimated to be 139 percent.[169]

Consequently, in December, 1955, the State Council ordered all government organs to put their retrenchment immediately into effect and stipulated government organs at the national level to simplify and reduce by January of 1956.[170] As a result, by February of 1957, all government

organs and state enterprises were reported to have retrenched from 30 to 50 percent of their personnel.[171] In other words, administrative cadres accounted for 27 percent of the total cadres including technical cadres in 1952, but they were reduced to 20 percent in 1957. As compared with the total government budget, the relative size of administrative expenditures was also curtailed from 19.2 percent in 1950 to 7.8 percent in 1957.[172] As has been discussed thus far, there was retrenchment in administrative expenditures and the number of cadres during the FFYP plan period, while student enrollments stayed stable or increased rapidly. This evidences that there is no significant positive association between the priority of the administrative category and student enrollments.

E. Conclusion

The major findings of this chapter are as follows: (1) Each level of education in the 1950s was sensitive to specific factors. Expansion of primary education was geared to more or less fundamental needs of the society, such as increases in literacy rates of the people, which affect the productivity of laborers, political socialization,political communication, etc. Primary school enrollments were more responsive to the demand for industrial laborers than to the demand for technical cadres. On the other hand, expansion of general middle school enrollments was more responsive to economic construction and to a demand for skilled and educated workers. (2) Urbanization has a strong correlation with both primary and secondary school enrollment levels, but the other economic

attributes of the country, such as per capita industrial output and national income, have a strong correlation with expansion of secondary education but not with that of primary education. (3) Among the prerequisities to educational development, educational expenditures were one of the critical obstacles to the expansion of primary education, while shortages of teachers had a more adverse impact upon secondary school expansion. The shortage of school buildings had a negative impact upon the expansion of both primary and secondary education alike. However, these resource variables did not determine China's capacity to expand education. They increased student enrollments in spite of very limited educational resources. (4) According to its relation to the urgent needs of the society, each level of education was affected by different policy categories, but by those of high priority relative to the demand for each level of education. The economic construction category of government policy has a stronger association with secondary school enrollments than with primary enrollments. On the other hand, the social service, culture, and education category of government policy has a stronger association with primary school enrollments than with those of secondary schools. (5) Agricultural output seems to have a significant association with secondary school enrollments. But it did not, in fact, have any direct association with changes in secondary school enrollments. It had, however, a strong relationship with industrial output which has a strong correlation with secondary school enrollments. This fact might make agricultural output seem to have a significant association with secondary school enrollments. But it is still undeniable that agricultural output had some relationship with

student enrollments. For instance, agricultural failures and busy farming seasons often had a negative impact upon the level of student enrollments with a year time lag.

CHAPTER II

FOOTNOTES

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160. Ibid., p. 53.

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162. Emerson, op. cit.(1965), pp. 70-73, 77-78, and 128.

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166. Emerson, op. cit. (1973), p. 36.

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168. Yuan-li Wu, op. cit., p. 91.

169. Ying-mao Kau, loc. cit., p. 110.

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171. Ying-mao Kau, loc. cit., p. 116.

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CHAPTER III

INTERPROVINCIAL INEQUALITY IN THE DISTRIBUTION OF ENROLLMENTS AND ITS DETERMINANTS IN THE MID-1950S, AS COMPARED WITH THE PRE-1949 PERIOD

The primary objective of this chapter is to answer the following questions: (1) How equally have provinces performed in the provision of educational opportunities in the 1950s? (2) What are the determinants of interprovincial inequality? The first question will be answered by measuring interprovincial inequality, using the Gini coefficient and Lorenz curves. In addition, a simple comparison of the pre- and post 1949 patterns of interprovincial inequality will be made. The second question will be answered by examining the correlation between the socio-economic variables and the interprovincial variations in the provision of student enrollments and by examining major contributing provinces to the improvement of interprovincial inequality in the distribution of enrollments between 1922 and the mid-1950s.

A. Interprovincial Inequality in the Distribution of Enrollments in 1922 and the Mid-1950s

1. A Summary of Aggregate Growth in the Number of Student Enrollments in the Pre- and Post-1949 Period

Once the Chinese made a decision to develop a modern education system in the early 20th Century, the Chinese started making continuous

efforts to expand education. As both Table 25 and 26 indicate, primary and general middle school ecucation have expanded considerably since 1912, when the systematic plans for the introduction of compulsory education began to take place either on a province-wide or on a national level. Especially, after the Chinese Communists gained power in 1949, both primary and secondary schools grew faster than the pre-1949 era.[1] The average annual growth rate of national aggregate primary school enrollments grew from 13 percent in the 1922-1947 period to 50 percent in the 1949-1958 period, while that of general middle school grew from 40 percent in the 1922-1947 period to 91 percent in the 1949-1958 period.

Table 25. Primary School Enrollments, 1921-1958

Year	Number Enrolled	Year	Number Enrolled	Year	Number Enrolled
1912	2,835,422	1932	12,176,994	1946	23,683,492
1913	2,793,633	1933	12,335,987	1948	24,000,000
1914	3,485,807	1934	13,128,635	1949	24,391,000
1915	3,921,727	1935	15,041,541	1950	28,924,000
1916	4,140,066	1936	18,285,125	1951	43,154,000
1917	3,843,455	1937	11,684,300	1952	51,100,000
1919	4,842,638	1940	13,517,320	1953	51,661,000
1922	6,601,802	1941	14,999,712	1954	51,218,000
1928	8,839,000	1942	17,669,354	1955	53,126,000
1929	8,882,077	1943	18,556,037	1956	63,464,000
1930	10,943,978	1944	17,171,323	1957	64,279,000
1931	11,683,826	1945	21,725,650	1958	86,400,000

Source: Enrollment data for the 1912-1949 period are from Joel M. Glassman, The Implementation of Education Policy in Communist China (University of Michigan, Ph.D. Dissertation, 1974), p. 23. Enrollment data for the 1949-1958 period are from John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population Reports, Series P-95, No. 72, U.S. Department of Commerce, April, 1973, p. 95.

TABLE 26. General Middle School Enrollments, 1912-1958

Year	Number Enrolled	Year	Number Enrolled	Year	Number Enrolled
1912	59,971	1933	415,948	1945	1,262,199
1913	72,251	1934	401,449	1946	1,495,874
1914	82,778	1935	438,113	1949	1,039,000
1915	87,929	1936	482,522	1950	1,305,000
1916	75,595	1937	309,563	1951	1,568,000
1922	118,658	1938	389,009	1952	2,491,000
1925	129,978	1939	524,395	1953	2,933,000
1928	188,700	1940	642,688	1954	3,587,000
1929	248,668	1941	703,756	1955	3,900,000
1930	396,948	1942	831,716	1956	5,165,000
1931	401,772	1943	902,163	1957	6,281,000
1932	409,586	1944	929,297	1958	8,520,000

Source: Enrollment data for the 1912-1947 period are from Leo A. Orleans, Professional Manpower and Education in Communist China (Washington, D.C.: National Science Foundation, 1961), p. 1970. Enrollment data for the period 1949-1958 are from John Philip Emerson, op. cit., p. 95.

As compared with the pre-1949 period, the Chinese Communists achieved very rapid educational expansion in both primary and general middle schools. But general middle schools grew more steadily and faster than primary schools. Primary school enrollments grew rapidly for the first three years until 1952 and then slowed down.[2] This growth pattern is similar to that in the pre-1949 period. Primary school enrollments grew more rapidly than those of general middle school until 1922. Since then, general middle school enrollments had increased more rapidly until 1949. However, one thing that is different between the pre- and post-1949 period is that student enrollments in the post-1949 period grew faster than before.

After the Chinese Communists took over China, they had distributed more educational opportunities among people than did the Nationalist government. For instance, when we compare 1945, which was the best year in terms of educational expansion in the pre-1949 period and 1951 and 1952 when primary and general middle schools respectively began to grow faster under the Communist government, we can find that primary and general middle school enrollments in 1951 and 1952 respectively grew almost 60 percent more over those of 1945. In other words, primary school enrollments per 1,000 population grew from 48 in 1945 to 77 in 1951 and 89 in 1952, while general middle school enrollments per 1,000 population grew from 2.8 in 1945 to 4.3 in 1952.[3] According to the above data it is evident that the Chinese Communists have been more successful in creating educational opportunities than the Nationalist government in an aggregate aspect. But this does not necessarily mean that the Chinese Communists distributed educational opportunities more equally among the

different segments of the society or different regions than ever before. Thus, in order to make a better assessment of distributive performance of the Chinese political system in the post-1949 period, I examine interprovincial inequality in the distribution of student enrollments in comparison with that of the pre-1949 period.

2. Evidence Pertaining to Unequal Distribution of Educational Opportunities, at the Grass-Roots Level in the 1950s and the 1960s

Egalitarianism is one of the most important values to which Mao Tse-tung's regime was committed. In fact, it was one of the core elements of Mao's revolutionary ideology, whether it pertained to the distribution of income, social goods and services, or social status.[4] In regard to the distribution of educational opportunities, Mao Tse-tung strongly advocated the equal distribution of educational opportunities and decentralization of educational administration for political and ideological reasons in the late 1950s and early 1960s.[5] However, the Chinese Communists could not fully pursue the realization of equality in distributing educational opportunities as well as income and social status, although they made remarkable progress in the mid-1950s.[6] As in many developing nations at their early stage, rapid industrialization of Chinese society was not possible without some degree of sacrifice on the side of egalitarianism.

Until recently, many development economists and social scientists have believed that the process of industrialization has a linear relationship with egalitarianism.[7] But another group of scholars are

challenging this hypothesis, contending that in developing countries where changes usually come in surge with short period of adjustment and consolidation, benefits of economic development are not necessarily distributed equally within the society.[8] China is a case to be explained better by the recent challenging hypothesis of the development economists and social scientists. China was beset by capital shortages and population pressures, while Chinese leaders committed to rapid transformation of the economy from an agriculture-predominant society to a modern economy. Consequently, the government had to sacrifice some degree of egalitarianism in relation to the distribution of income and other social goods and services in order to utilize scarce resources more effectively.

The population pressure and capital shortages were crucial factors that affected equal distribution of goods, services and income. Political economist Ansley J. Coale argues that the crucial determinant of the age composition of a closed population is fertility and that persistently high fertility tends to give rise to a broad-based and sharply tapering age-structure with the age of 15, that is, under-productive age.[9] This sort of age-structure implies a high dependence burden, namely a high ratio of dependent persons to productive persons at productive age. In fact, as of 1953, almost 35 to 40 percent of China's population was under 15 years of age.[10] This age structure is also likely to continue in China until 1985.[11] This means that the government had to allocate a relatively large proportion of the national income to consumption, social welfare and educational programs because of high dependence burden. However, on the contrary, the government made a high rate of savings for

heavy investment in industrialization, constraining consumption and concentrating resources on the districts and projects of high priority. As a result, the government had to sacrifice egalitarianism to some degree.

Under the given situation, unequal distribution of educational opportunities between the urban and rural areas and between the poor and rich became a reality in the 1950s. For instance, in 1953 when the government acknowledged that rapid industrialization and urbanization had given rise to a shortage of schools in the cities, the government decided to concentrate the best human and material resources in central locations.[12] This resulted in concentration of learning facilities in the more densely populated, industrial areas. Thus children from rural households, particularly from remote areas, were less accessible to schools. In fact, 50 percent of middle school students and 25 percent of primary school students came from urban households, although urban population accounted for 13 percent of the total population of Communist China.[13]

In addition to the location of schools, personal income was another factor affecting the distribution disparity. Many children of the poor and lower-middle peasant class were kept out of regular primary schools, even as late as 1964. For instance, 45 percent of the school-age children in the Sung-shu production brigade of the Chien-yi, commune of Yang-kow in Liaoning Province, could not attend primary school.[14] A major cause of such a low attendance rate of the children of the poor peasant families was low income and heavy financial burdens from various kinds of school expenses, including tuition.[15] Similarly, the situation

in the Sungshukon production brigade in Heilungkiang Province was reported as follows:

> Of the twelve sons of landlords and rich peasants remaining in the village, six are middle school students and not one is illiterate. On the other hand, the fifty-four families of poor and lower-middle peasants in the brigade do not have a single college student, and only one entered a secondary technical school. In the eighteen to twenty-eight year old age group of poor and lower middle peasants, there is not a single junior middle school graduate and more than thirty are illiterate or semi-illiterate. Forty-four sons and daughters of the poor and lower-middle peasants discontinued their studies because of economic difficulties. Only four sons and daughters of the fifty-one families of poor and lower-middle peasants in the second production team of Wai-san-tao-kou entered junior middle school after 1956, but all of them dropped out because they could not afford the school fees. However, three of the five sons and daughters of the rich peasant Kuan Tung Shih completed middle school, another is studying in senior middle school, and yet another is a college graduate.16

3. Systematic Measurement of Interprovincial Inequality in the Distribution of Student Enrollments, 1922 and the Mid-1950s

Thus far, I have presented only anecdotal evidence concerning the unequal distribution of educational opportunities at the grass-roots level. In fact, data on the distribution pattern of educational opportunities between the poor and the rich and between the urban and rural areas are rarely available to Western scholars. Thus, it is not possible to provide a systematic explanation concerning the distribution pattern of educational opportunities at the grass-roots level for now. However, it is feasible to study the distribution pattern at the macro level, that is, the interprovincial distribution patterns of educational opportunities.

There is already a good study on the interprovincial variations in the provision of educational opportunities. David Lampton studied interprovincial variations in the provision of education and health services and its determinants for the post-liberation period.[17] In the study, he identified interprovincial variation patterns in the provision of educational opportunities. Then, he found that one of the important factors affecting interprovincial variations was economic attributes of each province. His study on interprovincial variations provides information on the range of inequality among provinces and on its determinants. A range of inequality between the highest and the lowest provinces is a basic element in the measurement of interprovincial inequality. First, the highest-lowest ratio does not necessarily represent the majority of provinces in the middle range. Second, the highest-lowest ratio can tell nothing about the shape of the distribution. Sometimes, a steeply unequal pyramid-shaped distribution can have the same highest-lowest ratio as more equal diamond-shaped ones, as long as their height is the same. In this respect, we need more sophisticated means to discuss interprovincial inequality. The Gini index and Lorenz curve are useful in this circumstance. Thus, this chapter adopts them to measure interprovincial inequality.

Concerning the Gini coefficient and Lorenz curve, I explained these measures at the end of Chapter I. By the Gini coefficient, which ranges from 1, indicating perfect inequality, to 0, indicating perfect equality, we can tell what degree of equaltiy exists among all the case provinces in the distribution of student enrollments in each year. But the Gini coefficient cannot tell us about how much equality exists between the

case provinces. Such equality, however, can be told by the decile or quintile distribution pattern, which constitutes the Lorez curve. Accordingly, if we can get both the Gini coefficient and Lorenz curve for each year and for the same combination of the case provinces, we can assess how much interprovincial equality has improved over the years. Then, we can also infer whether different political systems before and after 1949 affected the level of interprovincial equality. If there is a big difference in the level of interprovincial equality between the pre- and post-1949 era, we can at least assume that different political systems affected the level of interprovincial equality. Before I proceed with my analysis, I will discuss the following two questions: (1) whether the case provinces have had the same provincial boundaries over the years which this study covers; and, (2) whether I have a base year with which I can infer the impact of a different political system on the levels of student enrollment.

First, in the period between 1922 and 1958, the Chinese governments of different political eras had changed the boundaries of their provincial-level admimistrative units several times. However, all the case provinces of this study have remained without any boundary changes over the same period. Consequently, I do not have any comparability problems in terms of provincial boundaries in the comparison of interprovincial equality between pre- and post-1949. In 1922, China had 25 provinces, excluding the special district Peking. As of 1949, China had 35 provinces. Under the Kuomintang regime, the Nationalist government devided mostly Northeast China, including Manchuria, into many provinces.[18] The provinces which were added under the KMT regime were ten in number. They

as follows: Tibet, Sikiang, Ninghsia, Tsinghai, Antung, Liaopei, Sungkiang, Hokian, Nunking, and Hsingan.[19] Most of these provinces were abolished in the 1949-1958 period. In this period, considerable reorganization of the provincial structure occurred, involving mainly the abolition of provinces principally in the Northeast and incorporation of their territory into adjacent provinces.[20] Specifically, during 1954 and 1955, Chahar, Suiyuan, Jehol and Ninghsia were abolished with most of their territory transferred to Inner Mongolia and the rest of Ninghsia merged with Kansu.[21] Likewise, Hopeh annexed Chahar and the southern part of Jehol in 1956.[22] Besides, there were several other minor changes in provincial boundaries between provinces.

Second, 1949 was the year which destinguished two different political systems in China, namely, the Nationalist and the Communist political system. Accordingly, 1949 must be the best year, centered on which we can examine the impact of different political systems on the level of interprovincial inequality in the distribution of student enrollments. Unfortunately, however, I could get the 1949 enrollment data for only three provinces--Shansi, Shantung, and Kwangtung--for primary school enrollments and Shansi, Shantung, and Kwangsi for general middle school enrollments. Since the number of the case provinces for 1949 is too small, I believe that it is meaningless to proceed with my analysis, using 1949 as a base year, let alone the reliability problem of the 1949 data. It is the same with other years in the early 1950s. Then, a question arises as to whether I can proceed with my analysis meaningfully without a base year. In regard to interprovincial inequality in the distribution of general middle school enrollments between pre-1949 and the mid-1950s, we can do

without a base year because there was no big change at all in interprovincial inequality under the two different political systems. On the other hand, with respect to that of primary school enrollments, a base year is required to make a better comparison of interprovincial inequality under the two different political systems, since there was a considerable improvement in interprovincial equality in the mid-1950s, as compared with 1922. If we do not have a base year, we would not be able to say whether the big improvement in the 1950s began to come after 1949 or sometime between 1922 and 1949. Thus, as an alternative to the 1949 primary school enrollment data, I will use the 1945 enrollment data as base year data. In fact, 1945 was the best year in educational expansion before 1949. And any further improvement could not be expected until 1949 because of civil wars. However, I will use the 1945 data not to make direct comparisons of interprovincial inequality between 1945 and 1922 or the mid-1950s, but to have some idea on interprovincial inequality among the case provinces around 1949, for the 1945 data have some problems. First, the reliability of the 1945 data is in doubt because they were collected during the political turmoil and civil wars against Japan. Second, the compatibility of the 1945 data is also in doubt because the 1945 enrollment data included not only six grade primary schools but also four grade primary schools. In fact, four grade primary schools accounted for two-thirds of the total primary school enrollments.[23]

a. The Interprovincial Distribution of Primary School Enrollments.

According to my analysis, the post-1949 Chinese Communist government achieved considerably more equality among provinces in the mid-1950s than

was the case before 1949. But such change did not come only after 1949; interprovincial equality already started to increase under the Nationalist government. This finding, however, requires some reservation, since it was supported by a very limited number of case provinces and length of time. First, for my analysis, I could use only ten provinces, for which primary school enrollment data for the years that this study covers are available.[24] Second, the length of time that this study covers is a total of five years, 1922[25] and 1945 for the pre-1949 period and 1955-1957 for the post-1949 period. Although it would be desireable to include more provinces and years, it is not possible at present simply because of the lack of data.

(1) The Interprovincial Distribution of Primary School Enrollments Among the Ten Provinces in 1922. Table 27 includes primary school enrollment data of the ten provinces for 1922. The highest decile accounts for 40 percent of primary school enrollments of the entire ten case provinces. The lowest decile accounts for only three percent. The highest-lowest ratio is more than 13.3 to one. The highest quintile accounts for 54 percent. The lowest quintile accounts for only six percent. The middle three quintiles acount for 40 percent. In other words, 80 percent of the ten case provinces provide only less than half of the entire primary school enrollments of the ten provinces. Clearly, primary school enrollments in 1922 were clustered toward the top decile and quintile. The Lorenz curve is visualized in Figure 1 and its Gini coefficient is 0.46.

Table 27. The Decile Distribution of Provincial Primary School Enrollments per 1,000 Population in 1922

Provinces by Decile	Enrollment Per 1,000 Population	Percent
Shansi (highest decile)	72	40
Shantung (second decile)	26	14
Shensi (third decile)	23	13
Kwangtung (fourth decile)	11	6
Hunan (fifth decile)	11	6
Szechwan (sixth decile)	10	5
Honan (seventh decile)	9	5
Kiangsi (eighth decile)	9	5
Kweichow (ninth decile)	6	3
Anhwei (lowest decile)	5	3
Total	182	100

* Percent has been rounded to the nearest whole point.

Source: Table 47 in Appendix C.

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(2) The Interprovincial Distribution of Primary School Enrollments Among the Ten Provinces in 1955. The provinces in 1955 achieved more equality among provinces in the distribution of primary school enrollments as compared with 1922. According to Table 28, the highest decile accounts for 13 percent of primary school enrollments of the entire ten provinces. The lowest decile accounts for three percent. The highest-lowest ratio is 4.3 to one. The top quintile accounts for 25 percent. The lowest quintile accounts for ten percent, which is still lower than the highest decile. The middle three quintiles expanded considerably. It accounts for 64 percent. Although the highest-lowest ratio is 4.3 to one, each of all the other provinces between them received almost evenly ten percent.

This means that China's provinces in 1955 achieved a high degree of interprovincial equality in the distribution of primary school enrollments. The Lorenz curve is visualized in Figure 1 and its Gini coefficient is 0.12.

Table 28. The Decile Distribution of Provincial Primary School Enrollments Per 1,000 Population in 1955

Provinces by Decile	Enrollment Per 1,000 Population	Percent
Shansi (highest decile)	105	13
Honan (second decile)	97	12
Hunan (third decile)	92	12
Shensi (fourth decile)	91	11
Kwangtung (fifth decile)	88	11
Shantung (sixth decile)	83	10
Kiangsi (seventh decile)	81	10
Szechwan (eighth decile)	78	10
Anhwei (ninth decile)	65	8
Kweichow (lowest decile)	20	3
Total	799	100

* Percent was rounded to the nearest whole point.

Source: Tables 48 and 51 in Appendix C.

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(3) The Interprovincial Distribution of Primary School Enrollments Among the Ten Provinces in 1956. Interprovincial equality in 1956 remained at the same level as 1955, although the highest-lowest ratio decreased considerably. It was mainly due to the lowest decile, which received a little bit more percentage than that of 1955. A slight change in the highest or lowerst decile made a big difference to the highest-

lowest ratio, while interprovincial equality had not been affected at all.

Table 29. The Decile Distribution of Provincial Primary School Enrollments Per 1,000 Population in 1956

Provinces by Decile	Enrollment Per 1,000 Population	Percent
Shansi (highest decile)	121	13
Shensi (second decile)	112	12
Kwangtung (third decile)	110	12
Hunan (fourth decile)	109	12
Honan (fifth decile)	105	11
Shantung (sixth decile)	94	10
Szechwan (seventh decile)	89	9
Anhwei (eighth decile)	86	9
Kiangsi (ninth decile)	83	9
Kweichow (tenth decile)	38	4
Total	947	100

* Percent was rounded to the nearest whole point.

Source: Tables 48 and 51 in Appendix C.

Table 29 indicates that the highest decile accounts for 13 percent of primary school enrollments of the entire ten provinces. The same was true for 1955. In the meantime, the lowest decile in 1956 accounted for four percent, which is slightly more than that of 1955. The highest-lowest ratio is 3.25 to one in 1955. The lowest quintile accounts for 13 percent, which is the same as the highest decile. The middle three quintiles account for 63 percent, which is almost the same as that in 1955. Clearly, interprovincial distribution of primary school enrollments in

1956 was considerably equal as that of 1955. The Lorenz curve is presented in Figure 1 and its Gini coefficient is 0.14.

(4) The Interprovincial Distribution of Primary School Enrollments Among the Ten Provinces in 1957. In regard to enrollment data for 1957, I made some adjustments. In the case of Shensi, Kweichow and Shantung Provinces, I used 1956 enrollment data for 1957 because no data for those provinces were available for 1957. However, I can justify that such an adjustment would not make any significant difference to the Gini coefficient or the Lorenz curve for 1957. When we compare Tables 29 and 30, we can find that most provinces made almost negligible changes in terms of the number of enrollments per 1,000 population between 1956 and 1957. All the changes in enrollment data per 1,000 population, except those of Kiangisi, ranged from -4.0 to 5.0 per 1,000 population. Although we included Kiangsi, all changes were still not that significant because they accounted for less than one percent of the total number of enrollments per 1,000 population of the entire ten provinces. In addition, 1957 was a year of educational retrenchment after the rapid expansion of 1955 and 1956. In this respect, I believe that, although I used 1956 enrollment data for 1957 in the case of those three provinces, it would not make any significant difference to the Gini coefficient or to the Lorenz curve for 1957.

Table 30. The Decile Distribution of Provincial Primary School Enrollments Per 1,000 Population in 1957

Provinces by Decile	Enrollment Per 1,000 Population	Percent
Shansi (highest decile)	120	13
Shensi (second decile)	112	12
Hunan (third decile)	108	11
Kwangtung (fourth decile)	106	11
Honan (fifth decile)	104	11
Kiangsi (sixth decile)	94	10
Shantung (seventh decile)	94	10
Szechwan (eighth decile)	90	9
Anhwei (ninth decile)	84	9
Kweichow (lowest decile)	38	4
Total	950	100

* Percent was rounded to the nearest whole point.

Source: Tables 48 and 51 in Appendix C.

The interprovincial distribution of enrollments for 1957 is as equal as 1956. As Table 30 presents, the highest decile accounts for 13 percent of primary school enrollments of the entire ten provinces. The lowest decile accounts for four percent. The highest-lowest ratio is 3.25 to one. The lowest quintile accountes for 13 percent. The middle three quintiles account for 62 percent. The highest quintile receives 25 percent. This means that primary school enrollments are very equally distributed among the ten provinces. The Lorenz curve is visualized in Figure 1 and its Gini coefficient is 0.14.

Thus far, we have examined interprovincial inequality in the distribution of primary school enrollments for the four years 1922, 1955, 1956,

and 1957. It is visualized in Figure 1 and summarized in Table 31. According to Figure 1, we can easily see that interprovincial equality in the distribution of primary school enrollments had been improved considerably in the mid-1950s, as compared with 1922. But there was almost no change in the 1955-1957 period. This is also proved by the Gini coefficients.

Figure 1. Lorenz Curves of Primary School Enrollments Per 1,000 Population, 1922 and 1955-1957

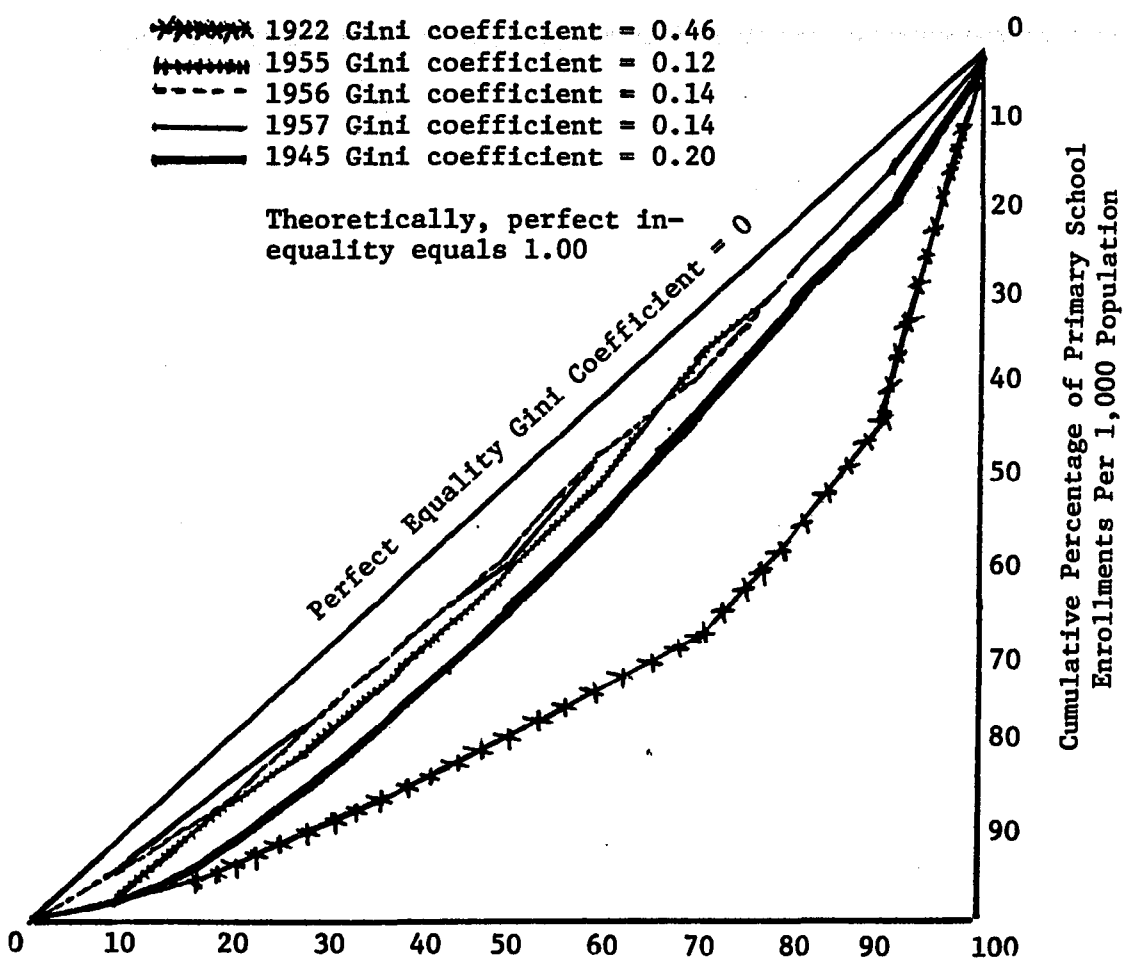

Table 31. Summary of Measures of the Interprovincial Distribution of Primary School Enrollments Per 1,000 Populations, 1922, 1945, and 1955-1957

Indicator	1922	1945	1955	1956	1957
Highest Decile	40%	15%	13%	13%	13%
Lowest Decile	3%	2%	3%	4%	4%
Ratio of Highest and Lowest Deciles	13.3:1	7.5:1	4.3:1	3.25:1	3.25:1
Lowest Quintile	6%	7%	11%	13%	13%
Middle Three Quintiles	40%	64%	64%	63%	62%
Highest Quintile	54%	29%	25%	25%	25%
Gini Coefficient	0.46	0.2	0.12	0.14	0.14

The Gini coefficient of each year represents it precisely. When the Gini coefficient is zero, it represents perfect equality. The Gini coefficnet for 1922 is 0.46, which is far from zero, while the Gini coefficients for 1955, 1956, and 1957 are 0.12, 0.14, and 0.14, respectively, which are comparatively close to zero.

There is almost no change among those three years. This finding is also confirmed by other measures in Table 31. Generally speaking, primary school enrollments were very equally distributed in the 1955-1957 period. The highest decile received 40 percent in 1922 but 13 percent in the 1955-1957 period. The middle three quintiles greatly increased in the mid-1950s. They increased from 40 percent in 1922 to 62, 63, or 64 percent in the mid-1950s. In other words, each decile of the middle three quintiles received an average of about 6.7 percent in 1922 but about 10.3 percent in the 1955-1957 period. The highest quintile also

confirmed interprovincial equality. Each decile of the highest quintile received an average of 27 percent in 1922 but 13.5 percent in the 1955-1957 period. There are very small differences between all deciles in the 1950s. This means that there was a high level of interprovincial equality in the 1950s. I believe that this interprovincial equality is mostly due to the equality in the high and low deciles. In fact, there is no big improvement in the low deciles between 1922 and the mid-1950s.

From the above analysis, it seems evident that the Communist government achieved considerably more interprovincial equality in the mid-1950s than in 1922. However, such considerable improvement did not, in fact, take place all of sudden after 1949. It had already improved under the Nationalist government before 1949. According to Table 31 and 32, the Nationalist government already achieved such high interprovincial equality as did the Communist government in the mid-1950s. The Gini coefficient for my ten case provinces of 1945 was 0.2, which is very close to that of the mid-1950s. Other measures for 1945 were also very close to those of the mid-1950s. The middle three quintiles of the 1945 case provinces received 64 percent of the total primary school enrollments of the ten case provinces, which is compared with 62 to 64 percent for the mid-1950s. The highest decile for 1945 received 15 percent, which is compared with 13 percent for the mid-1950s. However, since the reliability of the 1945 data is in doubt, it will be safer to simply say that interprovincial equality had been improved from the time of the Nationalist government. As a matter of fact, the Nationalist government had shown its determination to enforce compulsory education, although its efforts to carry out compulsory education had been thwarted by the Sino-Japanese

War and the incessant civil wars. I will present evidence later.

Table 32. The Decile Distribution of the People's School[a] (Elementary School) Enrollments Per 1,000 Population in 1945[b]

Provinces by Decile	Enrollment Per 1,000 Population	Percent
Kiangsi (highest decile)	97	15
Shensi (second decile)	93	14
Hunan (third decile)	85	13
Szechwan (fourth decile)	74	11
Kwangtung (fifth decile)	72	11
Honan (sixth decile)	67	10
Chekiang (seventh decile)	65	10
Kweichow (eighth decile)	61	9
Anhwei (ninth decile)	37	5
Shantung (lowest decile)	15	2
Total	666	100

Source: Table 53 in Appendix C.

[a]The People's Schools include all the six grade and four grade regular primary schools. In 1940, the Nationalist government decreed to set up different grade schools at different levels of local government districts in order to enhance education, taking into account the financial difficulty of the country; one four grade school in Pao, which consisted of 100 families and one six grade primary school in Hsiang-chen, which consisted of ten Pao. See Fundamental Education in China (Nanking: Ministry of Education, 1947), p. 10.

[b]1945 enrollments per 1,000 population were calculated on the basis of the 1945 enrollment data and 1948 population data. Since, according to Ping-ti Ho, the average annual growth rate of the Chinese population between 1850 and 1953 was 0.3 percent, I believe that the 1948 population figure would not be greatly different from that of 1945. See Ping-ti Ho, Studies on the Population of China, 1368-1953 (Cambridge: Harvard University Press, 1959), pp. 256-67.

In 1932, when the Nationalist government did not start to enforce compulsory education in China, about 24 percent of school-age children

between the ages of six and 12 enrolled for primary schools.[26] But since the Nationalist government enforced compulsory education in 1935, this rate had been increased over the years, as Table 33 shows. In 1935, the Ministry of Education decreed, in its "Provisional General Regulation Governing Compulsory Education" and "Working Program," that all children of school age should enter the four-year primary school of the lower grade or the six-year primary school of the higher grade. In 1940, again the Nationalist government decreed that each Hsiang-chen, which consisted of ten Pao, or 1,000 families, should have one six-grade primary school to be called the "Central People's School" and that each Pao, which consisted of ten Chia, or 100 families, should have one four-grade primary school to be called the "People's School."[27] Likewise, we can see that the Nationalist government had shown its determination from the mid-1930s. Although such determination of the Nationalist government to enforce compulsory education and its outcomes over the years, as Table 33 shows, might not directly indicate the improvement of interprovincial equality, they might be good evidences to support the fact that the 1945 decile distribution of primary enrollments are not meaningless at all.

Table 33. Children of School-Age and School Children in 1936-1945

School Year	Number of School-Age Children Between the Ages of six and 12[a]	Number of School Children	Percentage of School Children to Children of School Age[b]
1936-1937	67,815,000	21,038,830	31%
1942-1943	59,200,000	20,186,255	34.1%
1943-1944	59,200,000	21,409,547	36.2%
1944-1945	59,200,000	21,897,468	37%
1945-1946	21,800,000	24,201,911	39.2%

Source: Fundamental Education in China (Nanking: Ministry of Education, September, 1947), p. 93.

[a]The number of children of school age is estimated from the census data obtained in Lanshi District in Chekiang where children between the ages of six and 12 form 15.07 percent of the entire population.

[b]The number of school children in 1936-1937 is based on statistics for the whole country. Those for 1942-1943, 1943-1944, and 1944-1945 are based on statistics furnished by 24 provinces and municipalities, and those for 1945-1946 are based on statistics furnished by 31 provinces and municipalities.

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b. The Interprovincial Distribution of General Middle School Enrollments 1922 and the Mid-1950s.

Interprovincial inequality in the distribution of general middle school enrollments in the 1950s improved considerably, as compared with 1922, but not so much as that of primary school enrollments, although general middle school enrollments per 1,000 population grew more rapidly than primary school enrollments in the 1950s.

In order to measure interprovincial inequality in the distribution of primary school enrollments, I have used the same set of case provinces for all the four years, which are 1922, 1955, 1956, and 1957. But in the case of general middle school enrollments, the same set of case provinces is not available for all the years. Therefore, I compare each of the years of the mid-1950s with 1922, using a different set of case provinces each time. In other words, the combination of case provinces for the comparison between 1922 and 1955 is a little different from that for the 1922 and 1956 comparison or the 1922 and 1957 comparison. For all cases of comparison, most provinces remain on but only one or two provinces are replaced in each case of comparison. However, the combination of case provinces is always the same for both years in each comparison.

(1) Comparison of the Interprovincial Distribution of General Middle School Enrollments Between 1922 and 1955. All the case provinces which I use in comparing the interprovincial inequality between 1922 and 1955 are exactly the same ones as I used in measuring interprovincial inequality in the distribution of primary school enrollments, except one. That is Peking, which was a provincial-level municipality and was replaced by Szechwan in measuring interprovincial inequality in the distribution of primary school enrollments. In the 1922 and 1955 comparison, I found that the interprovincial distribution of general middle school enrollments in both the years was unequal and that Peking was a very crucial factor in this. Peking received 35 percent of general middle school enrollments of the entire case provinces in 1922 and 40 percent in 1955.

However, 1955 achieved just slightly more interprovincial equality than 1922. In Figure 2, Lorenz curves for both the years almost agreed each other. Gini coefficients for both the years were also almost the same; that for 1922 was 0.48 and that for 1955 was 0.42.

In the meantime, as Table 34 shows, the highest-lowest ratio shows a big difference between 1922 and 1955. It is simply due to the function of the highest and lowest deciles. The highest-lowest ratio for 1922 is 11.7 to one, while the one for 1955 is 40 to one. According to the highest-lowest ratio, therefore, the interprovincial distribution of enrollments in 1955 seems to be very unequal, as compared with 1922. But all other measures in addition to the Lorenz curve and the Gini coefficient evidence the fact that there is a slight difference only between those two years. For instance, three middle quintiles received 39 percent in 1922 and 43 percent in 1955. According to the middle three quintiles, 1955 is better than 1922. However, with all other measures, except the highest-lowest ratio, we cannot still tell about the real magnitude of interprovincial inequality, since all the case provinces for the 1922 and 1955 comparison represent less than half of the national population. They represent 49 percent of the national population in 1922 and 44 percent in 1955.[28]

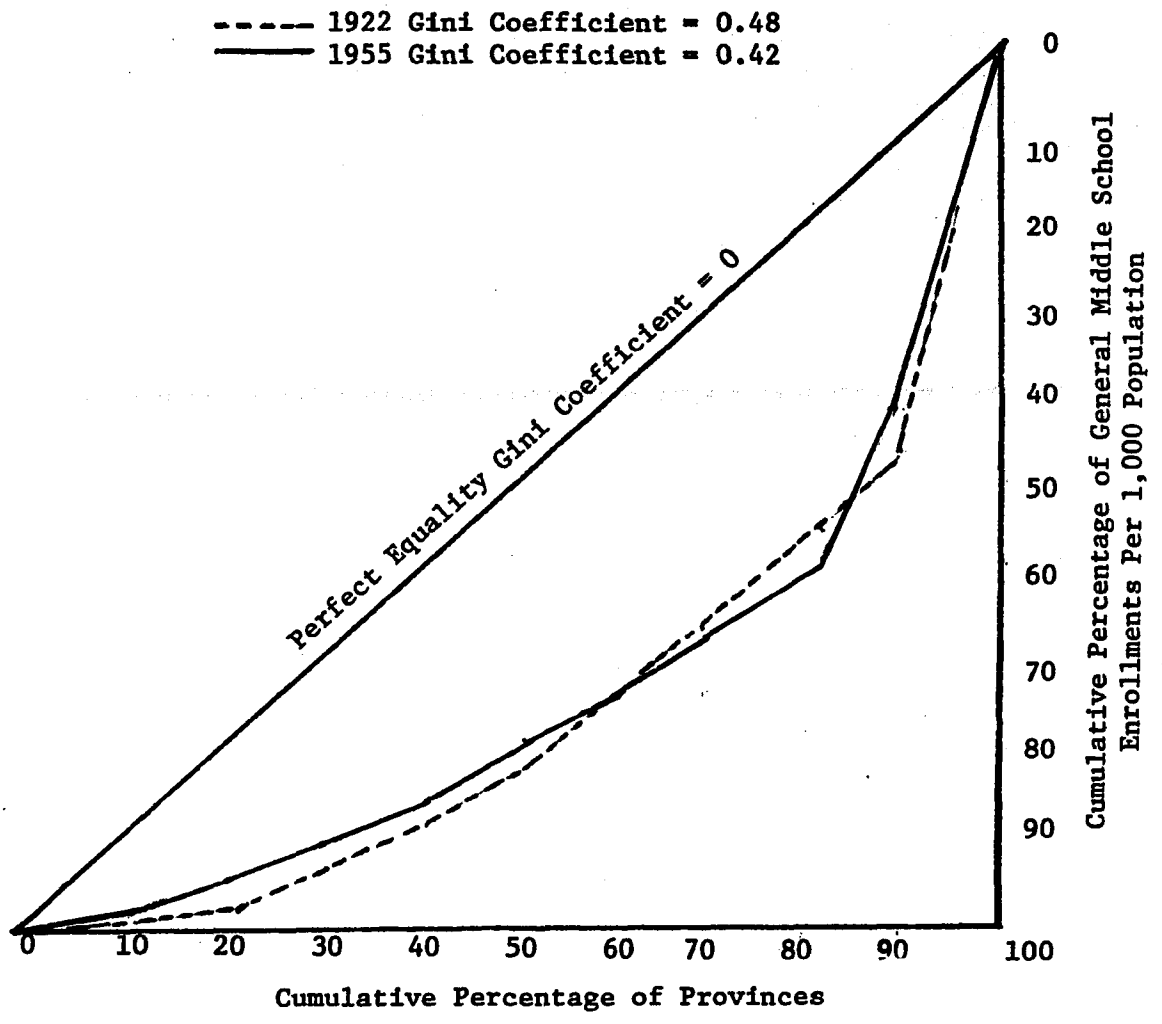
Table 34. The Decile Distribution of General Middle School Enrollments Per 1,000 Population in 1922 and 1955

1922			1955		
Provinces by Decile	Enrollments Per 1,000 Population	%	Provinces By Decile	Enrollments Per 1,000 Population	%
Peking (highest)	1.34	35	Peking	29.1	40
Kwangtung (second)	0.75	20	Kwangtung	8.2	11
Shansi (third)	0.63	16	Shensi	6.9	10
Shantung (fourth)	0.20	5	Shansi	5.8	8
Shensi (fifth)	0.20	5	Honan	5.2	7
Hunan (sixth)	0.19	5	Kiangsi	5.1	7
Kiangsi (seventh)	0.17	4	Hunan	4.5	6
Kweichow (eighth)	0.15	4	Shantung	3.4	5
Anhwei (ninth)	0.10	3	Anhwei	3.2	4
Honan (lowest)	0.09	3	Kweichow	0.9	1
Total	3.82	100		72.3	99

* Percent was rounded to the nearest point. Thus, the sum of all deciles may not add up to 100 percent.

Source: Tables 47, 48, and 52 in the Appendix C.

Figure 2. Lorenz Curves of General Middle School Enrollments Per 1,000 Population for 1922 and 1955



(2) Comparison of the Interprovincial Distribution of General Middle School Enrollments Between 1922 and 1956. In the comparison of the interprovincial inequality between 1922 and 1956, I found that 1956 achieved somewhat more equality than 1922. The Gini coefficient confirms

it. The Gini coefficient for 1922 is 0.32, while that for 1956 is 0.24. On the other hand, when we compare the Gini coefficient for 1956 with that for 1955 (that is, 0.42), we can be easily misled to believe that 1956 achieved a remarkable improvement in interprovincial equality, as compared with 1955. But it is mainly due to the substitution of Chekiang Province for Peking in 1956. In fact, I do not believe that there was that much change in a single year between 1955 and 1956. According to Tables 34 and 35, Peking belongs to the highest decile, while Chekiang Province belongs to the top of the middle three quintiles in 1922 and 1955 alike. As a matter of fact, the number of general middle school enrollments per 1,000 population of Peking was six times larger than that of Chekiang in 1922 and four times larger in 1956. This fact made a big difference to the measures of interprovincial inequality. For instance, when I included Peking in the comparison between 1922 and 1955, the Gini coefficient for 1922 was 0.48. But when I substituted Chekiang Province for Peking in the comparison between 1922 and 1956, the Gini coefficient for the same year had a big change from 0.48 to 0.32. By the same token, the Gini coefficient changed from 0.42 for 1955 to 0.24 for 1956.

Likewise, all these changes in Gini coefficients support my argument that the 1956 improvement in interprovincial equality could not be, in fact, as great as that of 1955 and that such spurious improvement in 1956 was mainly due to the substitution of the case provinces with the different level of educational expansion. This argument also can be proved by the following facts: (1) the actual difference in the Gini coefficient between 1955 and 1956 in comparison with 1922; and, (2) the fact that, according to the Lorenz curve in Figure 3 and other measures,

interprovincial equality in 1956 came from the upper deciles and that Peking and Chekiang, which resulted in big changes in Gini coefficients for 1955 and 1956, also belong to the upper deciles. First, the difference in the Gini coefficient between 1922 and 1955 was 0.06, while the difference in the Gini coefficient between 1922 and 1956 was 0.08. Therefore, the actual difference between 1955 and 1956 was only 0.02. This means that there was almost no change between 1955 and 1956 in terms of interprovincial inequality. Second, the Lorenz curves in Figure 3 indicate that the 1956 improvement mainly came from the upper deciles. There is a big gap between upper parts of the Lorenz curves in Figure 3. On the other hand, the middle and lower parts of the Lorenz curves exactly agreed with each other. Other measures also support the same conclusion. As table 35 shows, the highest decile for 1922 received 29 percent, while that for 1956 received 17 percent. Therefore, the actual difference between the highest deciles of 1922 and 1956 is 12. In the meantime, the difference between the middle three quintiles of these two years is only seven percent. The middle three quintiles for 1922 received 52 percent while that for 1956 received 59 percent. In other words, each decile of 1956 in the middle range had a little bit more than one percent increase over that of 1955, while the highest decile of 1956 had a 12 percent decrease in a single year. This proves that the 1956 improvement came from the upper decile, that is, Chekiang Province. With this evidence, I can conclude that 1956, in fact, achieved just slightly more interprovincial equality than 1955. However, we cannot still tell whether it reflects a real difference in interprovincial equality, since all the case provinces for the 1922 and 1956 comparison represent less than 50 percent in 1922

and 47 percent in 1956.[29]

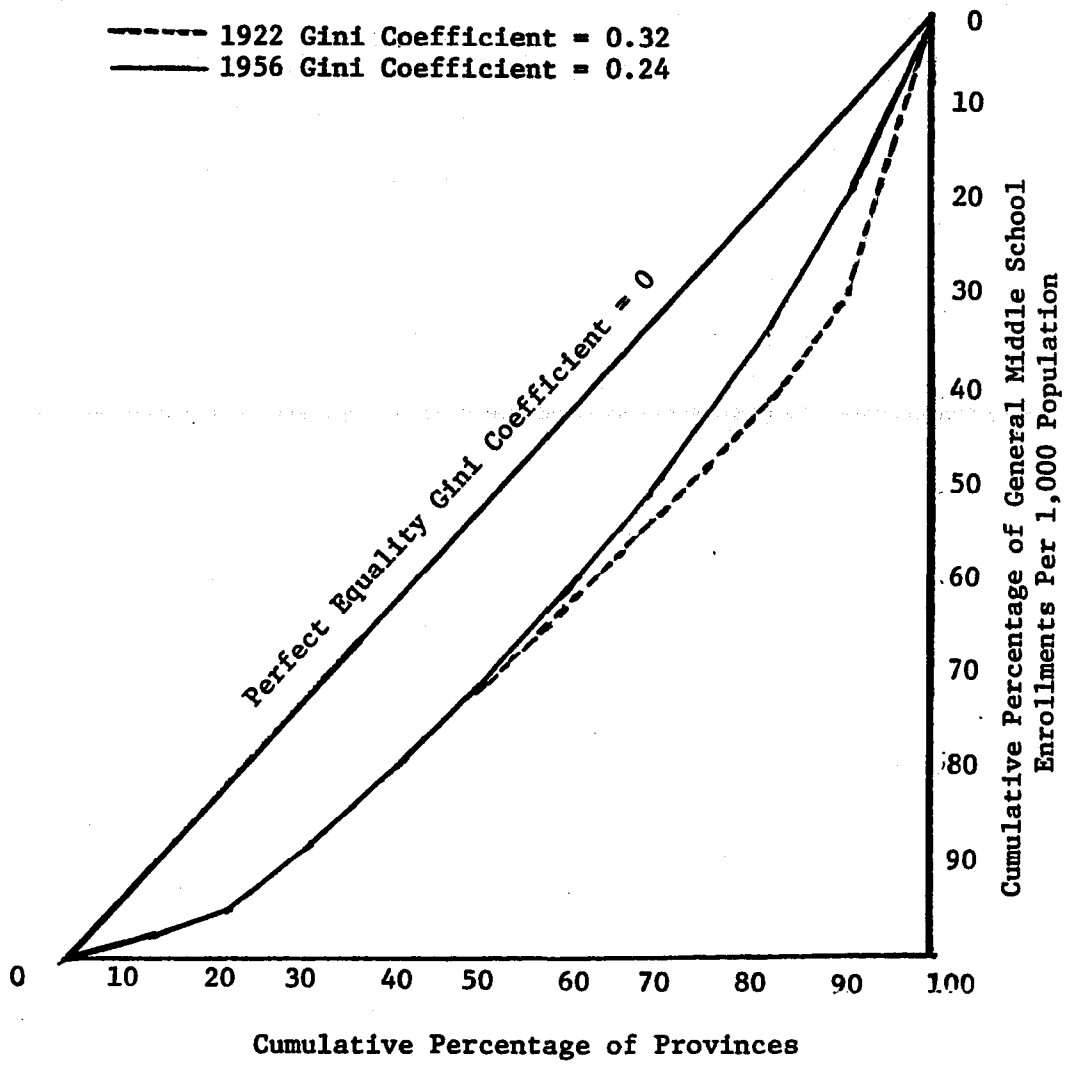
Table 35. The Decile Distribution of General Middle School Enrollments Per 1,000 Population in 1922 and 1956

1922			1956		
Provinces by Decile	Enrollments Per 1,000 Population	%	By Decile	Enrollments Per 1,000 Population	%
Shansi (highest)	0.63	29	Kwangtung	11.2	17
Kwangtung (second)	0.26	12	Shansi	8.6	13
Chekiang (third)	0.22	10	Chekiang	7.8	12
Shantung (fourth)	0.20	9	Shensi	7.4	11
Shensi (fifth)	0.20	9	Honan	6.7	10
Hunan (sixth)	0.19	9	Kiangsi	6.7	10
Kiangsi (seventh)	0.17	8	Hunan	5.8	9
Kweichow (eighth)	0.15	7	Shantung	4.3	7
Anhwei (ninth)	0.10	5	Anhwei	4.0	6
Honan (lowest)	0.09	4	Kweichow	2.4	4
Total	2.21	102		64.9	99

* Percent is rounded to the nearest whole point. Thus, the sum of all the deciles may not necessarily be 100 percent.

Source: Tables 47, 48, and 52 in Appendix C.

Figure 3. Lorenz Curves of General Middle School Enrollments Per 1,000 Population in 1922 and 1956



(3) Comparison of the Interprovincial Distribution of General Middle School Enrollments Between 1922 and 1957. As Table 36 and Figure 4 present, 1957 achieved considerably more interprovincial equality than

1922. Lorenz curves in Figure 4 visualize it well. The Gini coefficient also confirms it. The Gini coefficient decreased from 0.32 for 1922 to 0.16 for 1957. Such improvements mainly came from the highest and the lowest deciles. As Table 36 presents, the difference between 1922 and 1957 in the share which the highest deciles receive is 11 percent, while that of the middle three quintiles is only four percent and that of the lowest deciles is four percent.

In comparison with 1956, 1957 achieved more interprovincial equality by 0.08 of the Gini coefficient. But in comparing 1955 and 1956, we could not firmly say about the relative size of the difference between those two years, let alone the real size of the difference, because the same set of case provinces was not used for both the years. In fact, the Gini coefficient for 1922, which was the base year in the case of comparisons between 1922 and 1955 and between 1922 and 1956, changed in each case. In the case of the 1922 and 1955 comparison, the Gini coefficient for 1922 was 0.48, but it changed to 0.32 in the case of the 1922 and 1956 comparison. However, in comparing 1956 and 1957, we can have more confidence in measuring the difference between those two years, although the combination of the case provinces for both the years is not exactly the same. The 1957 set of provinces replaced Szechwan Province for Kweichow Province, which was included in the 1956 set. First, Szechwan and Kweichow Provinces are interchangeable in terms of their enrollment levels, per 1,000 population. Szechwan's enrollment level per 1,000 population was 0.16 in 1922, while that of Kweichow was 0.15 in the same year. Second, I believe that 1956 Shensi data, which are used for 1957, would not make any noticeable difference in the Gini coefficient or the

Lorenz curve for the following reason. When I compared Tables 35 and 36, I found that each agriculture-dominant province showed less than a ten percent increase in enrollments in 1957 over 1956. Anhwei was an exception. Since Shensi is an agriculture-dominant province in terms of its provincial income as of 1957, we can assume that its increase in the number of enrollments per 1,000 population would be ten percent or so. But this increase will account for only one percent or so of the total enrollments of the ten case provinces. In this respect, I believe that the above adjustments should not make any significant changes to the Lorenz curve or the Gini coefficient. In fact, the Gini coefficient proved this. The Gini coefficient for 1922 has remained unchanged in the case of both the comparisons between 1922 and 1956 and between 1922 and 1957. It was 0.32.

Table 36. The Decile Distribution of General Middle School Enrollments Per 1,000 Population in 1922 and 1957

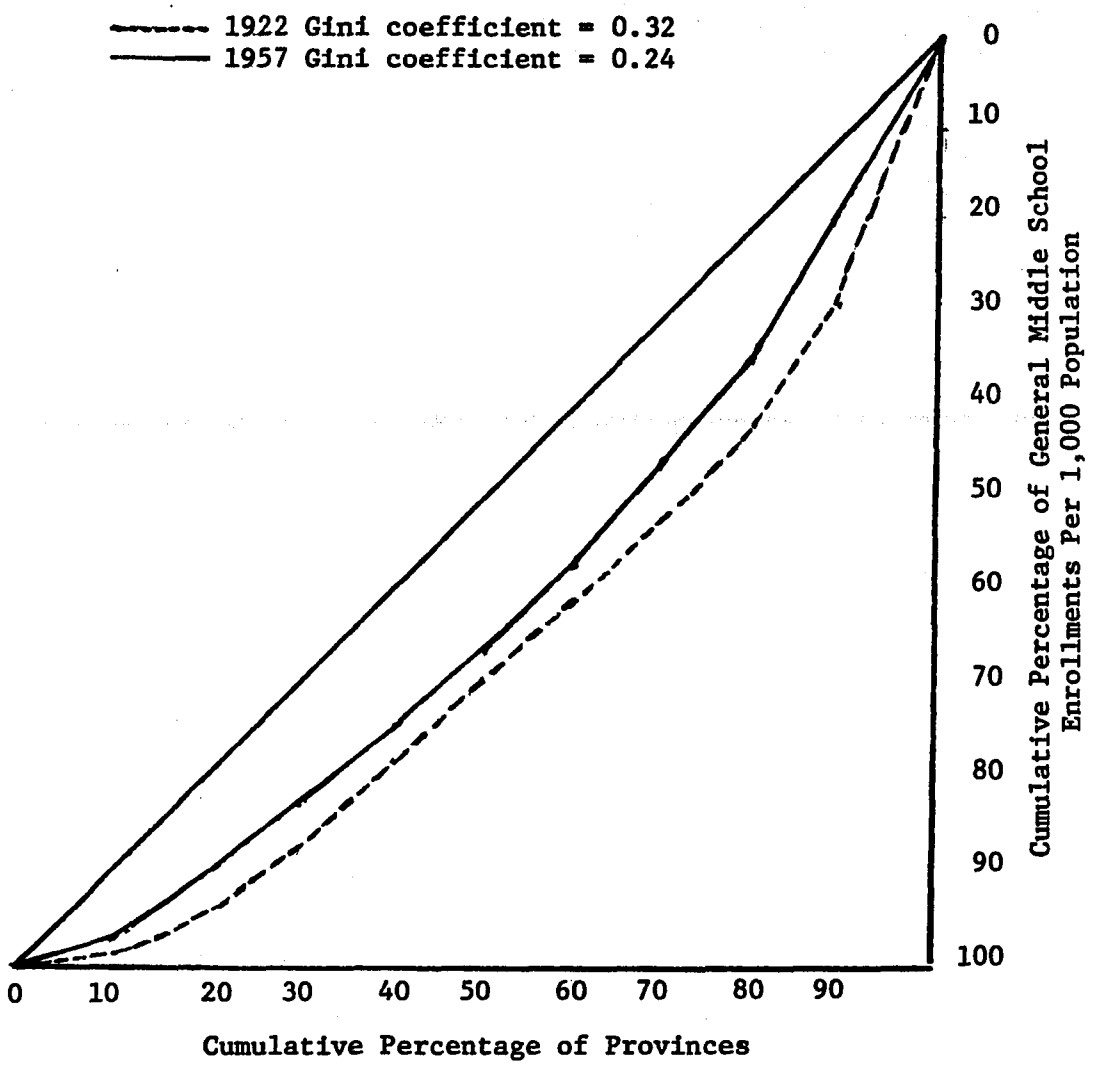
1922			1955		
Provinces by Decile	Enrollments Per 1,000 Population	%	By Decile	Enrollments Per 1,000 Population	%
Shansi (highest)	0.63	28	Kwangtung	13.4	17
Kwangtung (second)	0.26	12	Shansi	9.8	13
Chekiang (third)	0.22	10	Chekiang	8.5	11
Shantung (fourth)	0.20	9	Shensi	7.4	10
Shensi (fifth)	0.20	9	Honan	7.3	10
Hunan (sixth)	0.19	9	Szechwan	6.7	9
Kiangsi (seventh)	0.17	8	Kiangsi	6.5	8
Szechwan (eighth)	0.16	7	Anhwei	6.3	8
Anhwei (ninth)	0.10	5	Hunan	5.7	7
Honan (lowest)	0.09	4	Shantung	5.1	7
Total	2.22	101		76.7	100

* Percent is rounded to the nearest whole point. Thus, the sum of all the deciles may not necessarily add up to 100 percent.

[a]The 1957 Shensi figure is not an actual figure but is from the 1956 figure.

Source: Tables 47, 48, and 52 in Appendix C.

Figure 4. Lorenz Curves of General Middle School Enrollments Per 1,000 Population, for 1922 and 1957



Thus far, I have examined the interprovincial inequality in the distribution of general middle school enrollments, comparing 1922 and each one of the three years (1955-1957). As a result, I found that interprovincial equality improved gradually over the three years but more

considerably in 1957. Lorenz curves and Gini coefficients confirm that. In Figures 2 and 3, the Lorenz curves for 1955 and 1956 almost agree with that of 1922, but in Figure 4, there is a big gap between the Lorenz curves. In terms of the Gini coefficient, the difference between 1922 and 1955 is 0.06 and that for 1922 and 1956 is 0.08. The difference between 1922 and 1957 is 0.16, which is bigger than the other two.

If someone, however, examines Table 37, he might say that interprovincial inequality began to improve from 1956 rather than from 1957. But it may be because Peking was exlcuded in category 2 of Table 37 and affected the measures of interprovincial inequality. When Peking was included in category 1, the Gini coefficient for 1922 was 0.48, but when Peking was excluded, that for the same year decreased to 0.32. By the same token, there was a difference of 0.18 in the Gini coefficient between 1955 and 1956. However, if the Gini coefficient for 1922 is the same for all the categories of Table 37, let's say 0.32, then the Gini coefficient for 1955 will become 0.26 instead of 0.42. Consequently, the difference in the Gini coefficient between 1955 and 1956 will become only 0.02.

Table 37. Summary of Measures of the Interprovincial Distribution of Primary School Enrollments per 1,000 Population, 1922 and 1955-1957

Indicator	1922[a]	1955	1922[b]	1956	1922[c]	1957
Highest Decile	35%	40%	29%	17%	28%	17%
Lowest Decile	3%	1%	4%	4%	4%	7%
Highest-Lowest Ratio	11.7:1	40:1	7.25:1	4.25:1	7:1	2.4:1
Lowest Quintile	6%	5%	9%	10%	9%	14%
Middle Three Quintiles	39%	43%	52%	59%	52%	56%
Highest Quintile	55%	51%	41%	30%	40%	30%
Gini Coefficient	0.48	0.42	0.32	0.24	0.32	0.16

[a]This category includes Peking, Shansi, Kwangtung, Shantung, Hunan, Kiangsi, Kweichow, Anhwei, and Honan. These provinces account for 49 percent of the national population in 1922 and 44 percent in 1955.

[b]This category includes Chekiang, Shansi, Kwangtung, Shantung, Shensi, Hunan Kiangsi, Kweichow, Anhwei, and Honan. These provinces account for 50 percent of the national population in 1922 and 47 percent in 1956.

[c]This category includes Shansi, Kwangtung, Shantung, Hunan, Kiangsi, Szechwan, Anhwei, Honan, Shensi, and Chekiang. These provinces account for 61 percent of the national population in 1922 and 54 percent in 1957.

Before I draw any conclusions, I have to issue some caveats. The measurement of interprovincial inequality is not a sampling survey. Therefore, I need to have data on the majority of provinces. However, the case provinces of this study account for about 50 to 55 percent of the entire national population and less than half of the total provincial-level administrative units. Consequently, my conclusions will be confined to identifying a trend of the improvement in interprovincial equality in the distribution of enrollments in the 1950s, which is, however, still useful to generating hypotheses for the further studies in the future.

First, as I have already discussed earlier, variations in the number of and the combination of case provinces would result in large shifts in the Gini coefficient, especially when the provincial-level units, like Peking and Shanghai, are included or excluded. Second, when I added five more provinces to the original ten provinces,[30] the Gini coefficient for 1922 decreased from 0.46 to 0.36. Despite these limitations, I can still draw several tentative conclusions. First, interprovincial inequality in the distribution of general middle school enrollments had not been much improved in the mid-1950s, as compared with 1922. Second, on the other hand, that of primary school enrollments had been improved more rapidly over the years than that of general middle school enrollments. However, this change in the distribution of primary school enrollments did not develop suddenly after 1949 but had developed over the years from the Nationalist government era.

B. Determinants of Interprovincial Inequality in the Distribution of Enrollments

As I have already discussed, national aggregate enrollment levels of both primary and general middle school grew rapidly in the 1950s, as compared with 1922. However, interprovincial inequality in the distribution of general middle school enrollments did not improve as much as that of primary school. This raises a question. What are the determinants of interprovincial inequality in the distribution of both primary and general middle school enrollments and why the disparity?

Examining the ten case provinces, I found that the Chinese Communists maintained a high level of interprovincial equality in the distribution of primary enrollments in the mid-1950s and that the middle three quintiles were the most crucial contributing factors to such interprovincial equality. According to Tables 27, 28, 29, and 30, all the provinces achieved considerable increases in the number of enrollments per 1,000 population in the mid-1950s. But the provinces of the top and the lowest quintiles did not grow so fast as the provinces of the middle three quintiles. In other words, provinces such as Shansi, Shantung, Shensi and Kweichow could not expand their primary enrollments as fast as Kwangtung, Hunan, Szechwan, Kiangsi, Honan, and Anhwei. In fact, each of these six provinces achieved only three to six percent of the total enrollments of the ten case provinces in 1922, but each of them received ten or so percent in the 1950s. Likewise, interprovincial equality among the ten provinces was considerably higher in the 1950s.

On the other hand, according to Tables 34, 35, and 36, interprovincial inequality in the distribution of general middle school enrollments was not so much improved in the 1950s, as compared with 1922. The interprovincial distribution pattern did not change much between 1922 and the mid-1950s. But there was a slight improvement, which was mainly affected by Honan and Anhwei. They were the poor-performing provinces in 1922 but achieved remarkable enrollment expansion in the 1950s. Except these two provinces, all other case provinces achieved almost no or very slight increases in the ratio of their enrollments to the total enrollments of the entire case provinces. Shansi, Shensi, Chekiang, Hunan, and Kiangsi made a small progress or remained unchanged in 1956 and 1957. On the

other hand, Shantung, Kweichow, and Szechwan lagged a little bit behind the other provinces.

Then, the next question is, "what were the factors which produced such an interprovincial distribution pattern?" Since the distributive performance of each province is the most crucial component of growth in the national aggregate enrollment levels and of the interprovincial distribution patterns, the above question can be addressed by considering the following questions. First, what are the determinants of interprovincial variations in the provision of enrollments? Second, what are the factors which resulted in the more rapid expansion of enrollments in the major contributing provinces to the improvement of interprovincial inequality in the distribution of enrollments? The major contributing provinces are Honan, Anhwei, Hunan, Kiangsi, Kwangtung, and Szechwan.

1. Determinants of Interprovincial Variations in the Provision of Enrollments

Since the aggregation of each province's enrollment levels over the years become the national aggregate enrollment levels over the years, determinants of enrollment levels of most provinces are very likely to agree with determinants of changes in the national aggregate enrollment levels. In this respect, in order to explain the interprovincial variations, I adopted the same variables which I chose to explain changes in the national aggregate enrollment levels. Then, I encountered at least two problems. First, owing to the lack of data, I cannot examine the effect of the provincial expenditures and educational resource variables.

Consequently, the only available variables at present are socio-economic attributes of each province. Second, not enough data even on these variables are available for years other than 1957. Thus, some conscientious scholars might raise a question as to whether it is possible to draw any firm conclusions on the basis of these socio-economic variables. It is very true that to reject or accept any hypothesis with a small number of provinces and data for a single year is dangerous because a few deviant cases are likely to change the results dramatically.[31] Accordingly, in order to make any generalizations, further research will be required when more data are secured. At the present time, however, I will be satisfied with just generating hypotheses on the relationship between the socio-economic variables and the interprovincial variations. For this purpose, findings on the determinants of the national aggregate enrollment levels can reinforce the findings concerning the interprovincial variations.

Table 38 summarizes the relationship between the socio-economic variables and interprovincial variations in the provision of general middle school enrollments had quite a strong correlation with its per capita gross value of industrial output (GVIO), per capita provincial income, and urbanization, and fair correlation with per capita gross value of agricultural output (GVAO). However, on the effect of per capita GVAO, I do not believe that it had really significant correlation with general middle school enrollments because of the same reasons I discussed in Chapter II of this dissertation.[32] Second, primary school enrollments had a fair correlation with per capita GVIO and a weak correlation with GVAO and provincial income. But they had a very strong correlation with urbanization. Interestingly enough, these findings almost perfectly agree

with the findings concerning the relationship between the national aggregate enrollments and its determinants.[33] There are, however, some deviant cases.

Table 38. Product-Moment Correlation Coefficients Between Interprovincial Variations in the Provision of Enrollments and the Socio-Economic Variables, 1957

Socio-Economic variables / Levels of Enrollments	Per Capita GVIO	Per Capita GVAO	Per Capita Provincial Income (GVIO + GVAO)	Urbanization
Primary School (n=10)	0.70	0.57	0.50	0.99
General Middle School (n=11)	0.91	0.81	0.92	0.95

* When the level of significance is 0.05, the critical value of the Pearson correlation coefficient for ten cases is 0.497 and that for 11 cases is 0.476.

First, in the case of general middle school enrollments, Honan and Shantung are deviant cases. According to Table 39, Honan performed well in the provision of enrollments in spite of its low levels of per capita provincial GVIO, and urbanization. On the contrary, Shantung Province performed rather poorly, in spite of its high levels of per capita GVIO and provincial income. But in terms of the provision of enrollments per 1,000 population, Honan performed better than Shantung Province.[34] An alternative explanation to these two deviant cases might be that policy priority given by each provincial government to its social, culture,

Table 39. Socio-Economic Attributes of the Case Provinces and Its Interprovincial Variations in the Provision of Primary and General Middle School Enrollments in 1957 and Their Ranking

Province	Primary Enrollment Per 1,000 Population[a]		GM Enrollments Per 1,000 Population[b]		Per Capita GVIO in Yuan[c]		Per Capita GVAO in Yuan[d]		Per Capita Provincial Income[e]		Urbanization Percent[f]		Population in Million[g]	
Anhwei	84	rank 10	6.2	rank 9	45	rank 10	83	rank 9	127	rank 10	7.1	rank 10	33.56	rank 7
Chekiang	91	8	8.5	5	90	4	96	4	186	4	9.4	5	25.28	8
Honan	104	6	7.2	6	36	11	88	7	124	11	7.9	9	48.67	3
Hopeh	115	3	9.0	4	68	6	107	2	175	5	13.3	4	41.50	4
Hunan	108	4	5.6	10	49	9	96	4	145	9	7.1	10	36.22	6
Kiangsi	93	7	6.5	8	67	8	104	3	171	6	8.3	8	18.61	10
Kwangtung	106	5	13.4	2	100	3	95	6	196	3	13.4	3	37.96	5
Liaoning	126	1	21.4	1	488	1	123	1	611	1	42.4	1	24.09	9
Shansi	120	2	9.8	3	115	2	84	8	198	2	14.3	2	15.96	11
Szechwan	90	9	6.7	7	68	6	79	10	146	8	9.1	7	72.16	1
Shantung	--	--	5.1	11	75	5	77	11	152	7	9.3	6	54.03	2

[a]See Appendix C, Table 51 about primary school enrollments.

[b]See Appendix C, Table 53 about general middle school enrollments.

[c]Robert Michael Field, Nicholas R. Lardy, and John Philip Emerson, A Reconstruction of the Gross Value of Industrial Output by Province in the People's Republic of China: 1953-1973, Foreign Economic Report No. 7 (Washington, D.C.: Department of Commerce, 1975), p. 9.

[d]Appendix C, Table 49.

[e]Per capita provincial income was calculated from the sum of gross value of industrial and agricultural outputs.

[f]Appendix C, Table 50.

[g]These population figures are 1957 registration data in John S. Aird, Population Estimates for the Provinces of the People's Republic of China: 1953 to 1974, International Population Reports, Series P-95, No. 73 (U.S. Department of Commerce, 1974), p. 9.

education, and economic affairs affected its performance in the provision of enrollments. According to Table 40, the Honan provincial government definitely spent more per capita expenditure on economic construction and social, culture, and educational affairs than the Shantung provincial government in the 1955-1957 period. Honan Province was more likely to have a chance to increase enrollments than Shantung Province, although Honan Province was poorer than Shantung.

Second, in the case of primary school enrollments, Chekiang, Honan, and Hunan were deviant cases. Chekiang Province did not perform well in the provision of enrollments for its moderately high urganization rate in 1957. On the contrary, Honan Province performed well, in spite of its low urbanization rate, compared with that of Chekiang Province. So did Hunan Province.

In fact, Chekiang Province was wealthier and more industrialized and urbanized than Honan and Hunan. But its performance in the provision of primary enrollments was poorer than the other two provinces in 1957. I believe that Chekiang's primary school enrollments were affected by agricultural failure which was caused by natural calamities in 1956. As a matter of fact, over 80 percent of the industry in Chekiang Province derived its raw materials from agricultural products. Thus, agricultural products had a serious impact upon the development of industrial output.[35] Consequently, when agricultural production was hampered by natural calamities in 1956, students went home to help out in the farm season. Then, they failed to return to schools. As a result, total enrollments in 1957 decreased to 99.1 percent of the 1956 enrollment level. The Chekiang provincial government also confessed that it failed to mobilize and

organize primary school enrollments in 1957.[36]

Table 40. Per-Capita Expenditures of Honan and Shantung Provincial Governments in the 1955-1957 Period (in Yuan)[a]

	Honan[b]		Shantung[c]	
Year	Economic Construction	Social, Culture, Education	Economic Construction	Social, Culture, Education
1955	1.7	2.9	1.3	2.6
1956	3.3	3.7	2.7	3.5
1957	2.5	4.4	2.2	3.8

[a]All the per capita figures in Table 40 were rounded to one-tenth of one point. Population data are from Table 48 in Appendix C.

[b]Expenditure data for 1955 are from Li Yu-shan, "Report on the Final Account for 1955 and the Implementation of the Budget for 1956 in Honan Province," Honan Jih-Pao, November 29, 1956. Expenditure data for 1956 and 1957 are from Chi wen-chien, "Report on the Final Accounts for 1956 and a Draft of the Budget for 1957 in Honan Province, " Honan Jih-Pao, August 25, 1957.

[c]Expenditure data for 1955-1957 are from Yuan Tzu-yang, "Report on the 1956 Final Accounts and the 1957 Draft Budget for Shantung Province," Ta-Chung Jih-Pao, August 17, 1957.

2. The Factors That Affected the Enrollment Levels of the Major Contributing Provinces to the Improvement of Interprovincial Inequality

a. The Major Contributing Provinces to the Improvement of Interprovincial Inequality in the Provision of Primary School Enrollments.

As I have already mentioned, Anhwei, Honan, Hunan, Kiangsi, Kwangtung and Szechwan were the major provinces contributing to the

improvement of interprovincial inequality in the provision of primary school enrollments in the mid-1950s. I believe that the major contributing factors to such development are its rapid urbanization and industrialization in the 1950s.

Of these six provinces, Kwangtung is a coastal province. In China, most coastal provinces, except Chekiang, have been the most developed provinces in terms of industrialization and urbanization.[37] Kwangtung was also one of the industrially active provinces and had one of the largest industrial cities, that is, Canton.[38] However, Kwangtung Province did not perform better than the other five provinces in the provision of primary school enrollments in 1922. It could be due to the low urbanization rate. Kwangtung was the second largest province in China by the size of the population but did not have many cities.[39] According to Yuan-li Wu's study, Kwangtung's ranking by the number of large and medium cities was lower than Szechwan, Kiangsi, Honan, and Hunan.[40] As a matter of fact, he argues that increases in the number of these large and medium cities can represent increases in urban population in the 1949-1958 period; small cities decreased in number.[41] In addition, Kwangtung had even decreased in the number of city population between 1949 and 1952; therefore, I believe that Kwangtung's urbanization in 1953 was no better than before 1949.[42] Second, Szechwan did not perform well in the provision of primary enrollments in 1922, although Szechwan's urbanization rate was high in the 1920s. Szechwan was the third most urbanized province.[43] Szechwan was the largest province by its population and not highly industrialized or wealthy.[44] As Table 39 shows, Szechwan's per capita income was not higher than that of Hunan. Third, Anhwei, Honan, Hunan, and

Kiangsi were agriculturally developed but industrially underdeveloped inland provinces before 1949.[45] Hunan was so called China's rice bowl. Kiangsi was a chief rice producer.[46] Anhwei produced 60 percent of China's tea.[47] Honan's main crops were wheat and soybeans.[48] As Table 39 shows, per capita agricultural output of each of these provinces accounted for three-fifths to two-thirds of the combined per capita industrial and agricultural output in 1957. These provinces were not only industrially underdeveloped and agriculture-oriented but also not very urbanized. According to Table 39 and Table 40, urbanization rates of these provinces, except Kwantung, were not higher than that of the other case provinces in 1958. However, its urbanization speed was rapid in the 1949-1958 period. From this fact, we can infer that urbanization rates of these provinces were not high before 1949. Likewise, its performance in the provision of primary school enrollments was not good in 1922. Accordingly, we can infer that urbanization and industrial development were very crucial variables affecting expansion of primary school enrollments in 1922.

On the other hand, during the FFYP period when rapid urbanization took place in most of these six provinces and when its urbanization reached almost the same level, its performance also reached almost the same level. The rapid urbanization of these provinces was accompanied by industrial development, which resulted in the government's industrial policy of the FFYP. The Communist government planned to locate major industrial construction projects in the inland provinces.[49] At the second session of the First National People's Congress on July 5-6, 1955, Li Fu-chun reported that on the basis of 1952 statistics, original distribution

of industrial complexes was unequal and irrational. Industrial output of the coastal provinces accounted for over 70 percent of the total industrial output of the country. Thus, the government decided to locate new industries in different parts of the country so that industrial production would be closer to sources of raw materials and fuel, as well as consumer markets.[50] Such industrial policy has at least three objectives: (1) strengthening of national security, (2) gradual improvement of the irrational and unequal locational pattern, and (3) elevation of the economic level of the backward areas.[51] In fact, the government planned to locate 472 of the 694 important industrial construction projects in the inland provinces during the FFYP period.[52] Honan and Szechwan Provinces were two of the six inland provinces in which the majority of large new industrial projects of the FFYP were located.[53] Particularly, Honan Province was the one which achieved remarkably rapid industrial development and urbanization during the FFYP period, although it was industrially underdeveloped until 1949.[54] Table 41 also indicates that Honan's large and medium sized population, which can reflect generally changes in the total urban population, grew most rapidly in the 1950s. Anhwei and Hunan were also considerably industrialized and urbanized during the FFYP period.[55] For instance, the annual industrial output of Anhwei in 1952 was only 18.84 percent of the combined agricultural and industrial output in 1957, that is, about 16 percent of an increase. Likewise, its urbanization increased almost 16 percent in the same period. And Anhwei's performance in the provision of primary school enrollments improved more rapidly than that of the other provinces. As we have discussed, urbanization and industrial development were the very crucial

variables affecting provincial performance in the provision of primary school enrollments in the 1950s.

Table 41. The Ratio of the Large and Medium Sized City Population Increased During the Period Between 1949 and 1958 to the Total Urban Population in 1958

Province	1958 Urban Population in 1,000[a]	Increased Large and Medium Sized City Population Between 1949 and 1958 in 1,000 [b]	Ratio of the Large and Medium Sized City Population Increased Between 1949 and 1958 to Total Urban Population
Anhwei	2,417	385	15.9%
Honan	3,879	1,493	38.5%
Hunan	2,614	730	27.9%
Kiangsi	1,566	483	30.0%
Kwangtung	5,138	782	15.2%
Szechwan	6,783	2,017	29.7%

[a]Ernest Ni, Distribution of the Urban and Rural Population of Mainland China, International Population Reports, Series P-95, No. 56, October, 1969, Foreign Manpower Research Office, U.S. Bureau of the Census, p. 11.

[b]Yuan-li Wu, The Spatial Economy of Communist China (New York: Frederick A. Praeger Publishers, 1967), pp. 209-15.

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b. The Major Contributing Provinces to the Improvement of Interprovincial Inequality in the Provision of General Middle School Enrollments.

Honan and Anhwei were the most contributing provinces to the improvement of interprovincial equality in the distribution of general middle school enrollments. Since I have discussed their socio-economic attributes, I will not discuss them any further. However, it was obvious that

their performance relative to the provision of general middle school enrollments was affected by their rapid idustrialization and urbanization in the 1950s.

Thus far, I have discussed the importance of the urbanization and industrialization variables in explaining interprovincial inequality in the distribution of enrollments. Here, however, someone might raise a question of why provinces performed more equally in the provision of primary school enrollments than that of general middle school enrollments. In order to answer this question, we need more data from intensive case studies and statistical analysis. Thus, at present, I can draw only two tentative conclusions about the above question, on the basis of the findings from this study. First, primary education is a prerequisite to a variety of basic needs of any society, whether it is a nation or a province; therefore, it was more likely that all provinces were expected to make tremendous efforts in expansion of primary education in spite of shortages of their resources and that as a result, they could perform more equally to each other in the provision of primary school enrollments. In fact, interprovincial equality in the distribution of primary school enrollments in China had increased continuously over the years, regardles of different political systems, whether they be Capitalist or Communist political system and in spite of fluctuations of the economy. Second, general middle school enrollments in China were more closely correlated with socio-economic attributes of each province than those of primary schools. It had been more responsive to industrialization and economic development of each province. Therefore, it was more likely that different levels of economic development among provinces resulted in different

levels of general middle school enrollments. In fact, the pattern of economic development among provinces had not been changed much in the mid-1950s as compared with that of the pre-1949 period. Likewise, interprovincial inequality in the distribution of general middle school had not also been changed much over the years, regardless of different political systems.

Besides, we should not overlook other important factors, such as each province's idiosyncratic historical attributes, extra-budgetary funds, etc. in explaining iterprovincial variations in performance. For instance, Shansi Province was an economically backward province in the early 20th Century, but it became the first model province of compulsory elementary education in 1918.[57] Shansi Province was still one of the best performing provinces in the provision of student enrollments in the 1950s. In addition, Shansi Province has had a special educational heritage from the early 20th Century. As early as 1907, Dr. H.H.Kung founded Oberlin in Shansi, which was the largest and best high school in all of China.[58] Furthermore, Yen Hsi-shan, the Shansi Governor, made a very persistent effort to carry out compulsory education through fourth grade in early 1920s. As a result, 60 out of 1,000 school-age children enrolled in primary school in 1920 and 72 in 1922.[59] Shansi's uniqueness in the field of education was also noticeable in the 1950s. In 1959-60, the normal situation in education policy was that each province adhered closely to the national policy line. For a good example, Liaoning and Kiangsu Provinces were pushing min-pan and agricultural middle schools. But Shansi was still emphasizing quality education.[60]

Another important variable would be extra-budgetary funds.[61] In the

central government's final account for 1956, it was stated that the central and provincial governments made an agreement to extract half of the current costs of primary schools out of local agricultural taxes.[62] At present, however, we cannot discuss specifically the effect of extra-budgetary funds to interprovincial variations in the provision of enrollments. First of all, as Audrey Donnithorne indicated, any attempt to assess the size of extra-budgetary funds, whether nationally or locally, is hampered by the fact that their nature is difficult to ascertain.[63] Extra-budgetary funds are revenues at the disposal of local authorities of different grades or enterprises and of their controlling ministries, which are not entered in the normal budget and which might be used without higher authorization.[64] Sources of these funds are profits retained by enterprises and their controlling ministries, which are the largest single item of extra-budgetary funds. Other items include local surtaxes to industrial, commercial, and agricultural taxes and to urban utility charges, and so on.[65] Second, we do not know yet how much extra-budgetary funds were devoted to primary education of each province in the 1949-1957 period and from what sources they came. Third, extra-budgetary funds were yet insignificant until 1958 and 1959. For an evidence, in the case of Taiyuan in Shansi Province, capital investment, which was widely mentioned as the largest single object of extra-budgetary funds, accounted for 46 percent of the total extra budgetary funds.[66] Even this capital investment came to an equivalent of nearly four percent of the normal budgetary capital investment in 1957. But it became 23 percent in 1958, 19 percent in 1959, and 18 percent in 1960.[67] On account of these reasons, I believe that it is not yet the right time to reject or accept extra-budgetary funds as a significant variable.

CHAPTER III

FOOTNOTES

1. 1922 was a golden year in terms of educational development in the 1920s before Chiang Kai-shek established the Nanking government.

2. See Table 43 in Appendix A and Table 8.

3. Enrollment data were from Tables 25 and 26. The 1951 and 1952 national population data are from Table 42 in Appendix A. Since 1945, population data were not available; I use 1944 population data for 1945. I believe it should not make any noticeable difference to the outcome, for the average annual growth rate of population between 1850 and 1949 was about 0.3 percent. Chinese population in 1944 was 455,000,000, while that of 1951 and 1952 were 563,000,000 and 574,820,000, respectively. The 1951 and 1952 population figures are from Morris B. Ulman, Cities of Maniland China: 1953 and 1958, International Population Reports, Series P-95, No. 59, August, 1961, p. 7. The 1944 population data are from China Handbook, 1937-1945, compiled by Chinese Ministry of Information (New York: The Mcmillan Co., 1947), p. 2; Ho Ping-ti, Studies on the Population of China, 1368-1953 (Cambridge, N.J.: Harvard University Press, 1959), pp. 277-78.

4. Donald J. Munro, "Egalitarian Ideal and Educational Fact in Communist China," in John M. H. Lindbeck, ed., China: Management of A Revolutionary Society (Seattle, Wash.: University of Washington Press, 1971), pp. 256-57.

5. Ibid., pp. 262-72.

6. Martin King Whyte, "Inequality and Stratification in China," The China Quarterly, No. 64 (December, 1975), pp. 684-711.

7. Simon Kuznets, "Quantitative Aspect of the European Growth of Nations: The Distribution of Income by Size," Economic Development and Cultural Change, vol. 11 (January, 1963), p. 68; Clark Kerr, John T. Dunlop, Frederick Harbinson, and Charles A. Meyers, Industrialization and Industrial Man (New York: Oxford University Press, 1964), pp. 221-39; Gerhard Lenski, Power and Privilege: A Theory of Social Stratification (New York: McGraw-Hill Book Company, Inc., 1966), p. 437; Phillips Curtright, "Equality: A Cross-National Analysis," American Sociological Review, vol. 32 (August, 1967), pp. 564-65.

8. Irma Adelman and Cynthia Taft Morris, Economic Growth and Social Equality in Developing Countries (Stanford, Calif.: Stanford University Press, 1973), pp. 188-89; John H. Goldthorpe, "Social Stratification in Industrial Society," in Celia S. Heller, ed., Structured Social Change (Toronoto: University of Toronto Press, 1962); Richard M. Titmuss, Income Distribution and Social Change (Toronto: University of Toronto Press, 1962); Gabriel Kolko, Wealth and Power in America (New York: Praeger Publishers, Inc., 1962); Robert Lampson, The Share of Top Wealth Holders in National Wealth (Princeton, N.J.: Princeton University Press, 1962); Gunnar Myrdal, Challenge to Affluence (New York: Vintage Books, 1963); Gunnar Myrdal, Asian Drama, vol. 11 (New York: Pantheon, 1968); Edward C. Budd, "Postwar Change in the Size Distribution of Income in the United States, American Economic Review, vol. 60 (May, 1970), pp. 247-60.

9. Ansley J. Coale, The Effects of Changes in Mortality and Fertility on Age Composition," in Milbank Memorial Fund Quarterly, 1 (January, 1956), pp. 79-114.

10. John Aird, The Size Composition and Growth of the Population of Mainland China, International Population Reports, Series, P-90, No. 15 (Washington, D.C.: U.S. Government Printing Office, 1961), p. 72.

11. R. F. Price, Education in Communist China (New York: Praeger Puslibhers, 1970), p. 70.

12. "Government Administrative Council Directive Concerning the Reorganization and Improvement of Primary School Education," (NCNA, Peking, December 14, 1953), in SCMP, No. 726 (January 13, 1954), p. 23. In regard to middle school, see "National Secondary Conference Closed," (NCNA, Peking, February 1, 1954); also in SCMP, No. 747 (February 13-15, 1954), p. 29.

13. Feng Chi-shi, "The Growth of the National Economy as Viewed From the State Budget," TKCT, 12 (June 25, 1957) in ECMM, No. 96, p. 30.

14. "A Primary School Run By the People Under the Control of the Poor and Lower-Middle Peasant," Hung Ch'i, No. 5 (November 24, 1968).

15. Ibid.

16. "School Management by Poor and Lower-Middle Peasants As Shown by the Practice of Three Production Brigades in the Educational Revolution," Heilungkiang Province Investigation Report, Jen-min Jih-pao, October 28, 1968.

17. David M. Lampton, "The Roots of Interprovincial Inequality in Education and Health Services in China," The American Political Science Review, vol. 73, No. 2, June, 1979, pp. 459-77.

18. People's Republic of China Atlas, Central Intelligence Agency, November 2, 1971, p. 32; People's Republic of China Administrative Atlas, Central Intelligence Agency, March, 1975, pp. 6-7.

19. Ibid.

20. People's Republic of China, op. cit. (1971), p. 32.

21. People's Republic of China Adminstrative Atlas, p. cit., p.6.

22. Theodore Shabad, China's Changing Map (New York: Praeger, 1956), p. 101.

23. Fundamental Education in China (Nanking: Ministry of Education, September, 1947), pp. 34-35.

24. These ten provinces cover about 60 percent of the total population in 1922, 50 percent in 1955, 54 percent in 1956, and 55 percent in 1957.

25. Primary school enrollment data for 1922 included only regular school enrollments. Thus, they are compatible with those for the 1955-1957 period. Concerning the 1922 data, see Statistical Summaries of Chinese Education, Bulletin 16, vol. II (Peking: Chinese National Assocation for the Advancement of Education, 1923), pp. 1, 27, and 35.

26. Fundamental Education, op. cit., p. 9.

27. Ibid., pp. 9-11.

28. See Table 48 in Appendix C.

29. Ibid.

30. The 15 provinces are Peking, Shansi, Kiangsi, Kiangsu, Kwangtung, Chekiang, Fukien, Shantung, Shensi, Hupeh, Hunan, Szechwan, Kweichow, Anhwei, and Honan.

31. Erwin K. Scheuch, "Cross-National Comparisons Using Aggregate Data: Some Substantial Methodological Problems," in Richard Merritt and Stein Rokhan, eds., Comparing Nations: The Use of Quantitative Data in Cross-National Research (New Haven, Conn.: Yale University Press, 1966), p. 147.

32. Cf. Chapter II of this dissertation.

33. Compare Table 38, Table 14, and Table 15 in Chapter II.

34. See Tables 27 through 30 and 33 through 35.

35. JPRS 536-D, p. 5.

36. Ibid., p. 3.

37. Yuan-li Wu, The Spatial Economy of Communist China (New York: Frederick A. Praeger Publishers, 1967), p. 11.

38. See Arthur N. Young, China's Nation Building Effort, 1927-1937 (Stanford, Calif.: Hoover Institution Press, 1971), p. 295; Albert Feuerwerker, The Chinese Economy, 1870-1911, Michigan Papers in Chinese Studies, No. 5 (Ann Arbor, Mich.: The University of Michigan, 1969), p. 39.

39. Statistical Summaries, op. cit. p. 35.

40. Yuan li-Wu, op. cit., p. 35.

41. Ibid., pp. 33-39.

42. Ibid., p. 215

43. Mark Elvin and G. William Skinner, eds., The City Between Two Worlds (Stanford, Calif.: Stanford University Press, 1974), p. 7.

44. Concerning Szechwan's population for 1922, see Table 47 in Appendix C.

45. Yuan-li Wu, op. cit., p. 203.

46. Chinese Handbook (New York: Rockport Press, Inc., 1950),pp. 47 and 50.

47. Ibid., p. 39.

48. Ibid., p. 45.

49. Yuan-li Wu, op. cit., p. 16.

50. Jen-min Shou-Ts'e, 1956 (Shanghai: Ta-kung Pao-she, 1956), pp. 59-60.

51. Ibid.

52. Ibid.

53. Audrey Donnithorne, China's Economic System (New York: Frederick A. Praeger Publishers, 1967), p. 144.

54. Yuan-li Wu, op. cit., p. 203.

55. Ibid.

56. "Most of Anhwei's Five Year Plan Targets Have Been Fulfilled Ahead of Time," Anhwei Jih-pao, October 1, 1957.

57. George Ransom Twiss, Science and Education in China (Shanghai: The Commercial Press, Ltd., 1925), p. 85.

58. Hubert Freyn, Chinese Education in the War (Shanghai: Kelly and Walsh, Ltd., 1940), p. 59.

59. Twiss, op. cit., p. 85.

60. Frederick Teiwes, "Provincial Politics in China: Themes and Variations," in Lindbeck, ed., China: Management of A Revolutionary Society (Seattle, Wash.: University of Washington Press, 1971), p. 145.

61. Lampton, op. cit. (1979), p. 465.

62. Donnithorne, op. cit., p. 393.

63. Ibid., p. 390.

64. Ibid., p. 398.

65. Ibid.

66. Ibid., p. 390.

67. Ibid., p. 391.

CONCLUSION

The subfield of comparative policy study is on its way to becoming part of the field of comparative politics. One of the major questions it addresses is "Which type of government or political system is more effective in providing for national and social security or in distributing social goods and services to its people?"[1] Among the developmental theorists, there is also an emerging trend to study political development in policy perspectives. For instance, Gabriel Almond and Bingham G. Powell discuss political development in terms of the capability of the political system to respond to its environmental stress or the needs and demands of the society.[2] Since this research addresses the same questions as noted above, its findings will contribute not only to the study of how the Communist Chinese political system functions, but also to the reinforcement of existing theories and findings of public policy and political development.

Public policy is the end product of a process involving many factors, including the ideological and cultural traditions of a nation, the needs and resources of the society, the personality of the decision-makers, the interests, strategies, and power of the actors involved in the policy process, the way in which the policy process operates, international environments, to name but a few. The determinants of public policy, however, vary according to the policy area. According to

Howard M. Leichter's study, the educational policy of a nation is more influenced by its demographic and economic structures.[3] In other words, he found that the level of education was strongly correlated with the literacy rate, urbanization, economic wealth, industrialization and age structure of the society.[4] He also argued that differences in political ideology among the nations did not have an important impact upon their public policy when the same general cultural values prevail among them.[5] The determinants of public policy also vary from time to time. Guy Peters argues that socio-economic factors have a great impact on public policy during the early stages of political development.[6]

Findings from my research agree with those of Leichter. It was evident that the levels of student enrollments in Communist China were closely correlated with her demographic and economic structures.[7] Political ideology did not seem to have an important impact on the distribution of enrollments, at least in the 1950s. The pattern of inter-provincial distribution of student enrollments had not been changed much under the Communist regime, as compared to the pattern under the Kuomintang regime. However, policy priority given to particular provinces and sectors of the economy evidently had an important impact on the aggregate growth of student enrollments under Communist rule.

Since its adoption of a modern educational system in the early 20th Century, China has experienced a continual expansion in its education over the years. Education in China grew more rapidly in the 1950s than in the pre-1949 period. I found that each level of education showed a somewhat different pattern of growth in the 1950s, being influenced by different variables. Between 1949 and 1952, primary school grew faster

than general middle school. However, during the First Five Year Plan period (1953-57), the growth of primary school enrollments was restrained. On the other hand, middle school grew gradually in the 1949-52 period. Then, it grew rather rapidly and steadily during the FFYP period. Urbanization and industrialization are both significant variables in accounting for such a growth pattern in enrollments. However, primary education was not as strongly correlated with industrialization as was the general middle school, although primary education had a stronger correlation with urbanization than did the general middle school. This appears to be a somewhat unusual finding because industrialization usually has a very strong correlation with urbanization. One possible explanation is that industrialization usually results in urbanization but the opposite is not always true. Particularly in China, urban cities had been administrative and cultural centers, as well as commercial centers, before they became industrial centers. Therefore, most educational facilities had been concentrated in the cities until the 1950s. In addition, Chinese Communists were constrained by a shortage of resources and so had to use existing urban facilities to full capacity. Second, expansion of primary education was more highly influenced by the demand for industrial laborers and general administrative cadres in association with the process of national rehabilitation, whereas that of the general middle school was affected more by the demand for skilled and educated workers and cadres in association with the process of economic construction and progress. As a result, in the 1949-52 period, when the country sought administrative stability and economic rehabilitation and when the

literacy rate of the population was so low, primary education expanded very rapidly. Then, during the FFYP period, when the government placed a higher priority on the development of heavy industry and when the fall of private and light industry resulted in by the termination of Korean War, agricultural failures and a rapid collectivization policy, the decrease in the demand for industrial workers restrained expansion of education. On the other hand, the general middle school grew rapidly and steadily during the same period. As one might have noticed, policy priority given to different sectors of the economy and policy areas had an important impact on the different levels of education. When the government emphasized the development of heavy industry, the result was the expansion of the general middle school instead of primary education.

In regard to the interprovincial distribution pattern of both primary and general middle school enrollments, I found only a slight change in the 1950s, as compared with the pre-1949 period. This finding confirms a challenging hypothesis of development theory concerning the relationship between economic development and equality in the distribution of social goods and services. The conventional developmental theorists argue that there is a linear relationship between the two variables while a group of challenging scholars argues that a linear relationship between them does not necessarily exist, particularly in a developing country with rapid social and economic changes and a scarcity of economic resources.[8] In fact, the Soviet model of economic development which the Chinese leaders adopted during the FFYP period and limited economic resources did not allow the Chinese leaders to pursue equal distribution of enrollments in full scale, although equality was

essential value to which Mao's regime was committed.

Second, I found that each level of education showed a different pattern of interprovincial distribution of enrollments. The interprovincial distribution of primary school enrollments was more equal than that of the general middle school under both the Communist and the Nationalist governments. Interprovincial equality in the distribution of primary school enrollments had grown gradually over the years during the Kuomintang regime period, while that of the general middle school had not changed much in the 1950s as compared with the pre-1949 period. Such a distribution pattern is attributed to the fact that each level of education was affected by different needs of the society. First, the level of primary school enrollments was influenced more by the basic needs of each province, such as a high literacy rate, a sufficient number of industrial workers and general administrative cadres, etc. Since these factors were all a social, economic and political necessity of each province, the provision of primary education responding to such needs was more likely to be equal among provinces. On the other hand, the level of general middle school enrollments was affected more by the demographic and economic structures of each province, which can be measured by the ratio between the industrial and agricultural sectors and the urban and rural population. Since the demographic and economic structures of most provinces did not change much in the 1950s, interprovincial equality in the distribution of general middle school enrollments improved only slightly. However, even such a slight improvement was a result of the government's spatial economic policy. For example, Anhwei, Honan, and Hunan were major provinces which had

contributed to the improvement of interprovincial equality in the distribution of both primary and general middle school enrollments in the 1950s. These provinces were originally agriculture-oriented, economically backward, and poor-performers in the provision of student enrollments in the pre-1949 period. But when the Communist government promulgated economic development in these provinces during the FFYP period, student enrollments in these provinces expanded more rapidly than in previously wealthier and better-performing provinces. For instance, Honan and Hunan Provinces performed better in the provision of primary school enrollments than Chekiang Province, although Chekiang Province was more highly urbanized and wealthier than the other two provinces. Likewise, in the provision of general middle school enrollments, Honan Province performed better than Shantung Province, although Shantung Province was wealthier than Honan Province. A possible explanation of such a distribution pattern is that the Honan and Hunan governments placed a high priority on the economic construction and social, educational, and cultural programs, which might have created demands for educational expansion and affected the level of enrollments. In fact, Honan and Hunan spent more expenditures per capita on those policy areas in the 1950s than did the other two provinces.

The next logical question to ask might be how we can explain the the pattern of aggregate growth and interprovincial distribution of student enrollments in the 1960s and 1970s. Due to the paucity of enrollment data for this period, we are unable to determine the exact course of educational expansion in the period. However, based on the findings derived from this research and given the data on economic

trends and policy, as well as the education policy, we can predict the performance of China's education policy in the 1960s and 1970s.

Due to the failure of the Great Leap Forward (1958-59) and the Great Depression (1959-61), the Chinese economy declined by 1961 below the 1957 level. But from 1962 to 1964, the Chinese economy gradually improved to the level attained at the end of the FFYP period. In the meantime, the education policy in the 1960-65 period was characterized by an emphasis on quality education in order to provide the Chinese economy with expertise. Judging from the economic situation and the education policy, it was less possible that there was any big change in the pattern of aggregate growth and interprovincial equality in the distribution of student enrollments in the early 1960s as compared with the 1950s. It could be even worse in the late 1960s because political turmoil due to the Cultural Revolution disturbed the educational system. In the early 1970s, the Chinese economy reawoke after ten years of isolation and struggled to recover from the Great Leap and other economic disasters. The Chinese leaders like Chou En-lai proposed a "four modernization" policy--modernization in science, defense, economy and technology. Such policy called for the reimposition of a quality education policy. However, the existing education policy at the time was still characterized by the popularization of primary and secondary education in the countryside, a shortening of the period of schooling, and the decentralization of educational administration. As a result, it was possible that the level of primary and secondary enrollments, as well as interprovincial equality in the distribution of primary school enrollments, gradually grew in the early 1970s. It was, however,

less likely that interprovincial equality in the distribution of general middle school enrollments could improve in the same period. After 1977, when Teng Hsiao-p'ing came back into power, the government adopted a new education policy--quality education, the development of higher education, and the centralization of educational administration. Teng Hsiao-p'ing and his associates believed that education policy during the Cultural Revolution retarded China's scientific and economic modernization and that China could not experiment with educational egalitarianism because of its limited resources. Under the circumstances, it is likely that the levels of student enrollments have grown continuously in association with the process of modernization. But interprovincial equality in the distribution of student enrollments, particularly that of the general middle school, has had less chance to improve in the late 1970s and the early 1980s.

Finally, since findings derived from this resaerch have been based on limited data only, this research needs to be reinforced in the future with the combination of more intensive case studies on the performance of education policy at the provincial level and comprehensive statisticaly analyses when more reliable data are available.

CONCLUSION

FOOTNOTES

1. Howard M. Leichter, A Comparative Approach to Policy Analysis (New York: Cambridge University Press, 1979), p. 5.

2. Gabriel A. Almond and Bingham G. Powell, Comparative Politics, second edition (Boston, Mass.: Little Brown and Company, 1978).

3. Howard M. Leichter, op. cit., p. 42.

4. Ibid., p.

5. Ibid., p. 62.

6. B. Guy Peters, "The Development of Social Policy in France, Sweden, and the United Kingdom, 1850-1965," Politics in Europe, ed. Martin Heisler (New York: McKay, 1972), pp. 257-92.

7. Leichter argues that public policy can be explained by four broad categories of variables: situational, structural, cultural and environmental factors. Structural factors are the relatively unchanging elements of the society and polity. Structural factors include the more permanent and persistent features of a system such as its economic base, political institution, or demographic structures. These features can be measured by age structure, literacy rate, industrialization, GNP, type of economic system, geography, climate, resources, type of political regime, and features of policy process, etc.

8. Scholars contending the conventional hypothesis are Simon Kuznets, Clark Kerr, Phillip Cutright, Gelard Lenski, Charles A. Meyers, etc. On the other hand, scholars contending the challenging hypothesis are Irma Adelman, Cynthia Taft Morris, John H. Goldthorpe, Richard M. Titmuss, Gunnar Myrdal, Edward C. Budd, Robert Lampson, etc.

APPENDIX A

DATA RELATIVE TO CHAPTER I

Table 42. Urban and Rural Population: 1949 to 1957 (Date refer to End of the Year. Absolute Figures in Thousands)

Year	Total[a]	Urban[b]		Rural	
		Number	Percent	Number	Percent
1957	642,000	92,000	14.3	550,000	85.7
1956	627,800	89,150	14.2	558,650	85.8
1955	513,540	82,850	13.5	531,800	86.5
1954	601,720	81,550	13.6	520,170	86.4
1953	587,960	77,670	13.2	510,290	86.8
1952	574,820	71,630	12.5	503,190	87.5
1951	563,000	66,320	11.8	496,680	88.2
1950	551,960	61,690	11.1	490,270	88.9
1949	541,670	57,650	10.6	484,020	89.4

Note: This table is cited from Morris B. Ullman, Cities of Mainland China: 1953 and 1958, International Population Reports, Series P-95, No. 59 (Washington, D.C.: U.S. Department of Commerce, 1961), p. 7.

[a]As reported in the sources noted below.

[b]Includes those living in market places and towns in the suburbs of urban places, but excludes those living in villages in such suburbs.

Source: 1949-1956: "China's Population From 1949 to 1956," T'ung-chi kung-tso (Statistical Work), No. 11, June 14, 1957, translated in ECMM, No. 19, July 22, 1957, pp. 23-25; 1957: Wang Kuang-wei, "How to Organize Agricultural Labor," Chi-hua Ching-chi (Planned Economy), No. 8, 1957, pp. 6-9, translated in ECMM, No. 100, September 23, 1957, pp. 11-14.

Table 43. School Enrollments by Level and Type of School, 1949-1958 (in Thousands, as of September 1st, Generally)

Year	Secondary School			Primary School
	Total	Specialized School	General Middle School	
1949	1,268	229	1,039	24,391
1950	1,567	257	1,305	28,924
1951	1,964	383	1,568	43,154
1952	3,145	636	2,491	51,100
1953	3,629	668	2,933	51,661
1954	4,246	608	3,587	51,218
1955	4,473	537	3,900	53,126
1956	6,008	812	5,165	63,464
1957	7,081	778	6,281	64,279
1958	11,990	1,470	8,520	86,400

Source: John Philip Emerson, Administrative and Technical Manpower in the People's Republic of China, International Population Reports, Series P-95, No. 72, U.S. Department of Commerce, 1973, p. 95.

APPENDIX B

DATA RELATIVE TO CHAPTER II

Table 44. Non-Agricultural Employment by Branches of the Economy and Modern and Traditional Components, 1949-1958

Branches of the Economy and Components	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Total	26,267	30,314	34,730	36,752	39,116	39,750	38,854	39,366	39,667	56,867
Modern Total	7,977	10,166	12,705	15,656	18,069	18,588	18,861	23,909	23,921	44,223
Material Production Branches	5,176	6,163	8,066	10,298	12,172	12,701	12,852	17,203	17,280	37,470
Non-Productive Branches	2,801	4,003	4,639	5,358	5,897	5,887	6,009	6,736	6,641	6,753
Traditional Total	18,290	20,148	22,025	21,096	21,047	21,162	20,003	15,427	15,746	12,644
Material Production Branches	17,309	19,159	20,937	19,902	19,782	19,609	18,406	13,605	13,673	10,448
Non-Production Branches	981	989	1,088	1,194	1,265	1,553	1,597	1,822	2,073	2,196

* Figures are year-end and in thousands.

Source: John Philip Emerson, "Employment in Mainland China: Problems and Prospects," in An Economic Profile of Mainland China, Joint Economic Committee, Congress of the U.S., 1967, pp. 464-65.

Table 45. Gross Value of Industrial Output at 1952 Constant Prices, 1949-1957

1949	1950	1951	1952	1953	1954	1955	1956	1957
14,018	19,120	26,350	34,326	44,696	51,975	54,871	70,360	78,390

*Figures in millions of yuan.

Source: Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), p. 207.

Table 46. State Expenditures by Percentage, 1950-1957

Expenditures	1950	1951	1952	1953	1954	1955	1956	1957
1. Economic Construction	23.6	29.5	45.4	40.3	50.2	51.1	52.0	51.4
Industrialization	9.8	11.9	16.3	20.0	23.3	22.1	28.0	
Agriculture	2.9	3.7	5.4	5.5	5.6	5.6	7.5	
Transportation	5.2	5.7	6.2	5.7	7.2	7.2	9.1	
Food Suuply	5.6	4.7	8.7	4.8	7.1	12.5	3.1	
2. Social Service, Culture and Education	11.0	11.3	13.6	15.6	14.0	11.9	15.0	16.0
3. National Defense	41.6	42.5	26.0	26.0	23.6	21.2	20.0	19.0
4. Administration	19.2	14.7	10.3	9.9	8.8	8.0	8.7	7.8
5. Miscellaneous	3.6	3.5	4.7	8.2	3.4	7.8	4.3	5.8
Total	100	100	100	100	100	100	100	100

Source: Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), pp. 446-47.

APPENDIX C

DATA RELATIVE TO CHAPTER III

Table 47. The Distribution of Student Enrollments and Estimated Population, 1922 (Government, Private, Missionary School Combined)

Province	Number of Elementary Students	Number of General Middle School Students	Estimated Population
Peking	85,020	5,469	4,071,423
Chihli	555,127	7,480	23,241,250
Fengtien	326,010	3,712	--
Kirin	68,785	960	19,998,989
Heilungkiang	52,463	629	--
Shantung	777,771	6,291	30,955,309
Honan	282,589	3,035	32,547,366
Shansi	800,827	6,910	10,891,878
Kiangsu	394,037	9,216	33,678,611
Anhwei	95,979	1,936	20,002,166
Kiangsi	225,478	4,165	24,490,687
Fukien	150,817	3,773	17,067,277
Chekiang	416,202	5,131	22,909,822
Hupeh	236,789	5,524	28,574,322
Hunan	324,451	8,953	29,519,272
Shensi	217,654	1,829	9,087,288
Kansu	122,018	777	6,083,565
Sinkiang	5,757	--	1,750,000
Szechwan	575,636	9,581	61,444,699
Kwangtung	376,799	9,107	35,195,036
Kwangsi	201,526	3,921	10,872,300
Yunnan	203,172	2,940	8,824,479
Kweichow	66,855	1,664	11,470,099
Total	6,560,762	103,006	442,675,836

Source: Statistical Summaries of Chinese Education, Bulletin 16, vol. II (Peking: Chinese National Association for the Advancement of Education, 1923), pp. 1, 27, and 35.

Table 48. Estimated Population of the People's Republic of China, By Province: July 1, 1955-1957 (Figures Are in Thousands)

Province	1955	1956	1957
Anhwei	31,890	32,543	33,218
Chekiang	23,888	24,432	24,904
Honan	45,788	46,788	47,817
Hunan	34,294	35,169	35,866
Kiangsi	17,550	17,965	18,393
Kwangtung	36,087	36,788	37,512
Kweichow	15,822	16,240	16,671
Liaoning	23,934	24,821	25,737
Shansi	15,011	15,382	15,766
Shantung	52,382	53,578	54,813
Shensi	16,835	17,341	17,864
Szechwan	68,428	69,889	71,394

Source: John S. Aird, Population Estimates for the Provinces of the People's Republic of China: 1953 to 1974, International Population Reports, Series P-95, No. 73, U.S. Department of Commerce, 1974, p. 23.

Table 49. Gross Value of Agricultural Output By Province, 1957 (At 1952 Constant Price, Millions of Yuan)

Province	GVAO in Million Yuan
Anhwei	2,775[a] (3,028)
Chekiang	2,424
Honan	4,299
Hopeh	4,450
Hunan	3,481
Kiangsi	1,937
Kwangtung	3,620
Liaoning	2,958[b]
Shansi	1,334[a] (1,455)
Shantung	4,170[b]
Szechwan	5,680[b]
Shensi	2,282

[a]These figures were originally reported at 1957 constant price, while other figures were reported at 1952 constant price. Thus, I converted gross value of agricultural output for Anhwei and Shansi, which was reported at the 1957 price, into the 1952 price by using the 1956 index of

Table 49 (Continued)

retail price, as compared with that of 1952. See Christopher Howe, China's Economy (New York: Basic Books, Inc.,1979),p. 176.

[b]These data are from Nai-ruenn Chen's Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), pp. 364-66. Primarily, I used Lardy's Data on Gross Value of Agricultural Output by Province. But in the case of Liaoning, Shantung and Szechwan Provinces, Nai-ruenn Chen's data comes from more authoritative government sources or are more recent.

Source: Nicholas R. Lardy, Regional Growth and Income Distribution: The Chinese Experience, Economic Growth Center Discussion paper, No. 240, Yale University (November, 1975), p. 48; Nai-ruenn Chen, Chinese Economic Statistics (Chicago: Aldine Publishing Co., 1967), pp. 364-66.

Table 50. Urban Population By Province, 1958 (in Thousands)

Province	Urban Population
Anhwei	2,417
Chekiang	2,406
Honan	3,879
Hopeh[a]	5,437
Hunan	2,614
Kiangsi	1,566
Kwangtung	5,138
Liaoning	10,410
Shansi	2,315
Szechwan	6,783
Shantung	5,007

[a]Hopeh urban population excluded Peking and Tientsin. The original estimate of Hopeh urban population was 12,863,000, of which Peking and Tientsin account for 7,426,000. Hopeh's total population, excluding both the municipalities, is 40,987,000. Concerning Peking and Tientsin populations, see Morris B. Ullman, Cities of Mainland China: 1953 and 1958, International Population Reports, Series P-95, No. 59 (U.S. Department of Commerce), August, 1961, p. 35.

Source: Ernest Ni, Distribution of the Urban and Rural Population of Mainland China, International Population Reports, Series P-95, No. 56, October, 1960. Foreign Manpower Office, U.S. Bureau of the Census, p. 11.

Table 51. The Number of Primary School Enrollments By Province, 1955-1957 (Public and Private)

Province	1955	1956	1957
Anhwei[a]	2,084,527	2,806,191	2,810,000
Chekiang[b]	--	2,316,437	2,295,500
Honan[c]	4,428,302	4,898,274	5,068,429
Hopeh[d]	4,336,519	4,715,965	4,775,965
Hunan[e]	3,156,378	3,835,000	3,908,707
Kiangsi[f]	1,425,287	1,488,000	1,740,000*
Kwangtung[g]	3,170,000	4,037,091	4,030,000
Kweichow[h]	314,459	622,000	--
Liaoning[i]	--	--	3,037,000
Shansi[j]	1,576,004	1,860,000	1,908,137
Shantung[k]	4,331,320	5,020,000	--
Shensi[l]	1,531,675	1,938,604	--
Szechwan[m]	5,346,846	6,202,342	6,477,115

* This figure includes public school only.

[a]"Report on the Results of Implementation of Anhwei Province 1956 National Economic Plan," JPRS DC-325, p. 15. The 1955 figure was calculated from the 1956 enrollment figure: "Report on the Implementation of the People's Economic Plan in Anhwei Province, 1957)" JPRS (New York), Report No. 873, November 14, 1958, p. 12.

[b]"1957-1958 Work Report of Chekiang Provincial People's Council," Kung-Jen Pao, January 23, 1958, pp. 1, 3-6, trans. in JPRS 536-D, February, 1959; "Report on Chekiang Province's 1957 Economic Plan Implementation in the Next Ten Years," Kung-Jen Pao, January 25, 1958.

[c]"1955 Final Budget, 1956 Budget Implementation and Proposed 1957 Budget for Honan Province," Honan Jih-Pao, November 29, 1956; "1956 Final Budget and 1957 Draft Budget for Honan Province," Honan Jih-Pao, August 24, 1957. 1957 enrollment is the target figure for 1957

[d]"Report on Hopeh Province 1956 Final Budget and 1957 Draft Budget," Hopeh Jih-Pao, August 24, 1957. The 1955 figure was calculated from the 1956 figure;"Hopeh Province 1957 Final Budget and 1958 Draft Budget," Pao-ting, Hopeh Jih-Pao, April 17, 1958, trans. in Weekly Information Report on Communist China, No. 215, August, 1958.

[e]"Hunan Makes Great Advance During 1956 in People's Economy and Culture," Hsin Hunan Pao, January, 1957; "Hunan Economic Report of First Half of 1957," Hsin Hunan Pao, August 8, 1957, trans. in Weekly Information Report on Communist China, No. 184, December 31, 1957. Primary enrollment figure for 1957 was calculated by subtracting secondary and higher education enrollments from total provincial enrollments.

Table 51 (Continued)

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[f]Liang Ta-Shan, "Kiangsi Budgets for 1955 and 1956," Kiangsi Jih-Pao, November 2, 1956. The 1955 figure was calculated from the 1956 figure; "Report on Kiangsi Province 1956 Final Budget and 1958 Draft Budget," Kiangsi Jih-Pao, July 5, 1958, trans. in JPRS, 1310-N CSO-1998-N, p. 3.

[g]"Communique on the Economic Development and Execution of State Plans in Kwangtung Province in 1955," Nan Fang Jih-Pao, April 7, 1956; "Report on the 1956 Final Budget and the 1957 Draft Budget of Kwangtung Province," Nan Fang Jih-Pao, July 27, 1957. "Data on Kwangtung Output in 1958 and Proposed Output in 1959," Nan Fang Jih-Pao, March 2, 1959, pp. 102.

[h]Hsu Chien-sheng, "Kweichow Province 1956 Final Budget and 1957 Draft Budget," Kweichow Jih-Pao, August 14, 1957. The 1955 figure was calculated from the 1956 figure.

[i]Liaoning Jih-Pao, December 3, 1958; "Report on Liaoning Province 1957 Final Account," trans. in JPRS No. 2375, March 16, 1960.

[j]"Shansi Province 1956 Final Budget and 1957 Draft Budget," Shansi Jih-Pao, August 27, 1957, pp. 2-3, trans. in Weekly Information Report on Communist China, No. 210, June 30, 1958. The 1955 figure was calculated from the 1956 figure; "Report of Shansi Statistical Bureau on 1957 National Economic Plan and the Results of the FFYP," Shansi Jih-Pao, May 12, 1958, trans. in JPRS DC-438, p. 8.

[k]Shantung's 1956-1957 Economic Plans and Budget," Ta Chung Jih-Pao, August 9, 1957, trans. in JPRS, DC-196, July 1, 1958, p. 15. The 1955 figure was calculated from the 1956 enrollment figure; "Shantung Statistical Bureau's Report on Economic Development and State Plan Fulfillment in 1957," Ta Chung Jih-Pao, January 6, 1957, p. 2, trans. in JPRS 630-D, April 3, 1959, p. 8.

[l]"Shensi Statistical Report for 1955," Shensi Jih-Pao, May 4, 1956: Shensi Jih-Pao, November 2, 1956.

[m]Chang Hu-ch'en, "Report on Szechwan Province 1956 Final Budget and 1957 Draft Budget," Szechwan Jih-Pao, August 24, 1957. The 1955 enrollment figure was calculated from the 1956 enrollment figure; "Report on the Work of Szechwan Provincial People's Council," Szechwan Jih-Pao, June 24, 1959, trans. in SCMP, No. 2109, p. 39. The 1957 figure was calculated from the 1958 figure.

Table 52. The Number of General Middle School Enrollments By Province, 1955-1957 (Public and Private)

Province	1955	1956	1957
Anhwei	102,129	129,868	210,000
Chekiang	--	190,069	216,600
Honan	240,379	312,012	351,024
Hopeh	208,670	331,191	377,191
Hunan	155,997	203,000	204,299
Kiangsi	89,086	--	132,550
Kwangtung	297,000	412,236	510,000
Kweichow	14,673	38,372	--
Liaoning	--	--	516,400
Shansi	87,791	132,501	157,429*
Shantung	176,380	230,000	277,800
Shensi	116,193	128,914	--
Szechwan	--	--	--

*This figure included normal school enrollments.

Source: All the sources for each province are exactly the same as the ones for the counterpart provinces in Table 51 of Appendix C.

Table 53. People's School Enrollments of the Ten Case Provinces and Their Populations

Province	Number of Enrollments in 1945	Population in 1948
Anwei	826,757	22,462,217
Chekiang	1,288,300	19,948,715
Honan	2,000,736	29,654,095
Hunan	2,167,961	25,557,926
Kiangsi	1,210,210	12,506,012
Kwangtung	1,958,772	27,209,968
Kweichow	623,983	10,173,750
Shensi	930,579	10,011,201
Shantung	589,935	38,865,254
Szechwan	3,494,002	47,437,387

Source: Enrollment data are from Fundamental Education in China (Nanking: The Ministry of Education, September, 1947), p. 92. Population data are from China Handbook (New York: McMillan Co., 1959), p. 17.

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