

ON THE RELATION BETWEEN MANAGEMENT AND ECONOMICS FROM THE PERSPECTIVE OF INSTITUTIONAL STATISTICS

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ABSTRACT

Every country's economic development affects all levels of its society and thus the results of its social science research. To make social science research better serve their economic development, many countries have established social science research institutes, among which are management research institutes more related to economic research institutes. Through comparative research of the locations and founding dates of the institutes in different countries, this article analyses the development trends and the relationship between economics and management research, providing us with the relevant experience and background for planning purposes.

Keywords: Journal, CODATA, Management research, Economic research, Comparative research, Research institute, World

1 INTRODUCTION

Every country's economic development affects all levels of society and thus the results of its social science research. To make social science research better serve their economic development, many countries have established social science research institutes, among which are management research institutes more related to economic research institutes. This article uses the data contained in the Chinese Academy of Social Science's *Humanities and Social Science Organization Manual of the World* database as its primary foundation. Through a comparative research of the location and founding dates of social science institutes in different countries, this article analyses the development trends and the relationship between economics and management research.

2 THE SUBJECT DISTRIBUTION AND RANK OF INSTITUTES ABROAD

In the *Manual of Humanities and Social Science Institutes Abroad* database, there are a total of 4850 institutes. By analyzing the subject distribution and understanding the research conditions in such institutes abroad, we can analyze the importance of management in these institutes. The subject distribution and rank in institutes abroad are shown in Table 1:

Subject	Number of Institutions	% of Institutes as a Whole (%)
Economics	809	16.68
Sociology	630	12.99

Region research	553	11.39
Politics	345	7.11
Management	342	7.05
Education	295	6.08
Law	272	5.60
Other	270	5.57
History	235	4.85
Linguistics	195	4.02
Cultural Studies	190	3.92
Religion	126	2.60
Literature	108	2.23
Ethnology	99	2.04
Philosophy	96	1.98
Archeology	78	1.61
Art	50	1.03
Journalism and Communication	41	0.85
Library, Information, and Bibliography	36	0.74
Statistics	28	0.58
Integration	15	0.31
Military Science	13	0.27
Information Science	10	0.21
Ecology	10	0.21
Eastern Study	2	0.04
Marxism	1	0.02
Sports	1	0.02

Table 1. Subject distribution and rank in institutes abroad

2.1 Data analysis

From Table 1, the top ten subjects studied in institutes abroad are: economics, sociology, regional research, politics, management, education, law, history, linguistics, and cultural studies. The number of institutes whose subject ranks in the top 10 is 69% of the total number of institutes. Among these institutes, those studying economics have the greatest number, 18% of the total, while management institutes are 7% of the total, ranking fifth. The figures above illustrate that the world pays attention to the study of economics and management. Therefore this research has great relevancy.

3 THE TIMESPACE DISTRIBUTION OF ECONOMICS RESEARCH INSTITUTES ABROAD

3.1 National distribution of economics research institutes

In a statistical analysis of the data of the economics research institutes in all countries in the database, we can

see the status of economics research in different countries, and provide the data foundation for the management and economics research. (Note: For convenience, South Korea is used for the Korean empire in 1945; Germany is used for the Federal Republic of Germany and Democratic Germany after 1990; Russia is used for the Soviet Union after 1922, and the Russian Federation after 1991) The 10 countries with the largest number of economics research institutes are shown in Table 2.

Country	Number of Economics Institutes
USA	119
Russia	79
Japan	63
Korea	46
Canada	46
Germany	45
Britain	43
Netherlands	22
Bangladesh	21
Austra.	21
Brazil	17
France	15

Table 2. Countries with largest number of economics research institutes

3.1.1 Data analysis

The countries with the most economics research institutes, from most to least, are: USA, Russia, Japan, Korea, Canada, Germany, Britain, Bangladesh, Australia, Brazil, and France. Economically developed countries occupy the great majority of these countries. From this, we can theorize that the greater a country's economic development, the more it emphasizes the importance of economics and sets up institutes for its study.

3.2 Time distribution of economics institutes

3.2.1 The distribution of institutes of economics in different years

We can predict the development trends of world economics research. The time distribution of world economics institutes is shown in Table 3:

Date	Number of Economics Institutes	Date	Number of Economics Institutes
Before1900	2	1960	83
1900	3	1970	85
1910	3	1980	120
1920	20	1990	172
1930	15	2000	55

1940	34	No year	157
1950	60	Total	809

Table 3. The time distribution of world economics institutes

3.2.1.1 Statistical data

Economics research institutes abroad were founded as follows: 1990(172), 1980 (120), 1970 (85), 1960 (83), 1950 (60), 1940 (34), 1920 (20), 1930 (15), 1910 (3), 1900 (3), and before 1900 (3).

3.2.1.2 Data analysis

The above ranking illustrates that the number of economics institutes established in 1990s is the highest, the number established in the 1920s is greater than in 1930s, the trend is that the number of institutes increases year by year. Because the statistical data ends at the first half year of 2005, we can see that in less than 5 years, 55 economics research institutes have been established throughout the world. From the above figures, in the first ten years of the 21st century, establishment of economics research institutes should be close to the level in the 1980s.

These results indicate that the trend in establishing economics research institutes is increasing and also that for all countries economics research is being emphasized along with economic development.

3.2.2 Country by country distribution of economics institutes in different years

The top ten countries with economics research institutes are ranked by year. We can analyze their position in different years.

Country by country distribution of economics institutes in different years is as follows:

Country	Before 1900 Num	Country	1900 Num	Country	1910 Num	Country	1920 Num	Country	1930 Num	Country	1940 Num
Russia	1	Germany	1	Germany	2	Russia	5	Russia	4	Japan	7
USA	0	Britain	1	USA	0	Germany	3	Japan	4	USA	5
Japan	0	USA	0	Russia	0	USA	2	Holland	2	Germany	5
Korea	0	Russia	0	Japan	0	Japan	2	USA	1	Brazil	4
Canada	0	Japan	0	Korea	0	Holland	1	Korea	0	Russia	1
Germany	0	Korea	0	Canada	0	Korea	0	Canada	0	France	1
Britain	0	Canada	0	Britain	0	Canada	0	Germany	0	Korea	0
Holland	0	Holland	0	Holland	0	Britain	0	Britain	0	Canada	0
Bangla.	0	Bangla.	0	Bangla.	0	Bangla.	0	Bangla.	0	Britain	0
Austra.	0	Austra.	0	Austra.	0	Austra.	0	Austra.	0	Holland	0
Brazil	0	Brazil	0	Brazil	0	Brazil	0	Brazil	0	Bangla.	0
France	0	France	0	France	0	France	0	France	0	Austra.	0

Country	1950 Num	Country	1960 Num	Country	1970 Num	Country	1980 Num	Country	1990 Num	Country	2000 Num
Germany	7	Japan	18	USA	9	USA	23	USA	30	Russia	11
Russia	6	Korea	9	Japan	8	Korea	15	Russia	26	USA	9
Japan	6	USA	5	Korea	7	Japan	11	Korea	12	Britain	8
Bangla.	4	Russia	4	Britain	7	Canada	8	Germany	12	France	5
USA	1	Canada	4	Russia	5	Holland	7	Britain	12	Canada	4
Korea	1	Germany	3	France	4	Britain	6	Austra.	11	Japan	3
Britain	1	Bangla.	3	Canada	2	Russia	5	Canada	7	Holland	2
Brazil	1	Britain	2	Germany	2	Germany	5	Bangla.	6	Korea	1
Canada	0	Brazil	2	Bangla.	2	Austra.	4	Holland	5	Germany	1
Holland	0	Holland	1	Austra.	2	Bangla.	3	Japan	4	Austra.	1
Austra.	0	France	1	Brazil	2	Brazil	1	Brazil	4	Brazil	1
France	0	Austra.	0	Holland	1	France	1	France	2	Bangla.	0

Table 4. Country by country distribution of economics institutes in different years

3.2.2.1 Statistical data

The data above illustrates that before 1900 there were few economics institutes abroad, only Russia had one. In the period 1900-1909, only Britain and Germany had such an institute. In 1910-1919, there were again only two institutes, both in Germany. In 1920-1929, the United States and Japan established economics research institutes. In both 1930-1939 and 1940-1949 Japan ranked first in number of institutes, and the USA and Germany ranked second. In 1950-1959, the number of German economics institutes ranked first, and Russia and Japan ranked second. In 1960-1969, the number of Japanese economics institutes ranked first, Korea ranked second, and the United States ranked third. In 1970-1979, the number of economics institutes in the United States ranked first, Japan ranked second and Korea and Britain ranked third. In 1980 –1989, the United States ranked first, and the quantity increased quickly. Korea also increased quickly, ranking second, and Japan ranked third. In 1990-1999, besides in the United States, the number of economics research institutes in other countries, such as Russia, Germany, Britain, and Australia also increased quickly. Countries are ranked: The United States the first, Russia second, and Korea and Germany third. In 2000- the first six months of 2005 also can see the number of Russia’s economics research institutes ranked first, and France’s institutes increased quickly.

3.2.2.2 Data analysis

(a) Countries that established economics research institutes early on are economically powerful. These countries are Russia, Germany and Japan; Germany ranked first 3 times before the 1960s In 1950-1969, the number of economics research institutes in Russia was growing rapidly.

(b) After the 1960s countries that were rapidly developing economics research institutes were also countries with rapidly developing economies. After the 1960s, the number of the USA’s economic research institutes ranked first. The number of the USA's institutes ranked first three times, reaching the highest point in the 1990s.

At the beginning of the 21st century, the number of Russian economics research institutes ranks the first, illustrating that Russia has strengthened its research on economics over the years. Although Korea did not rank first, it has ranked third from the 1960s to the 1990s. This shows that economics research in Korea is growing continuously. This data provides a positive correlation between economic development and the foundation of economics research institutes.

(c) As Bangladesh has occupies the top ten in some years, it is a country to pay attention to. Economics research institutes develop rapidly is a country whose economy is developing quickly. Because of the positive correlation between economic development and the foundation of economics research institutes, we must pay more attention to the economic development in Bangladesh.

4 THE TIMESPACE DISTRIBUTION OF MANAGEMENT RESEARCH INSTITUTES ABROAD

4.1 Country by country distribution of management research institutes

We compare the country-by-country distribution of management research institutes in all countries in the database and compare these numbers with the distribution of the economics institutes in the different countries to find the commonality.

The top ten countries with management research institutes are given in Table 5:

Country	Number of Management Institutes
USA	66
Korea	31
Britain	22
Canada	17
Bangladesh	16
Japan	14
France	12
Germany	11
Russia	11
Pakistan	10
Malaysia	9

Table 5. The top ten countries with management research institutes

4.1.1 Statistical data

The order of the top ten countries with management research institutes is as follows: USA, Korea, Britain, Canada, Bangladesh, Japan, France, Germany/ Russia, Pakistan, and Malaysia.

4.1.2 Data analysis

Economically developed countries occupy the great majority of the top 10 countries in number of management research institutes. This result shows that the higher the level of economic development in a country, the more it emphasizes the importance of management research.

4.2 Time distribution of management institutes

We can predict the development trends in world management research by looking at those trends in economics.

The time distribution of management institutes abroad is given in Table 6:

Date	Number of Management Institutes	Date	Number of Management Institutes
Before 1900	0	1960	44
1900	0	1970	38
1910	1	1980	57
1920	1	1990	100
1930	3	2000	39
1940	4	No year	43
1950	12	Total	342

Table 6. Time distribution of management institutes abroad

4.2.1 Statistical data

The establishment of management research institutes abroad ranked by year is as follows: 1990(100), 1980 (57), 1960 (44), 2000 (39), 1970 (38), 1950 (12), 1940 (4), 1930 (3), 1920 (1), 1910 (0), and before 1900 (0).

4.2.2 Data analysis

The above rankings illustrate that the number of management institutes established in 1990s is the highest. The 1960s had more than the 1970s, and the number of institutes increased year by year. As for the 21st century, there have been 39 management research institutes established up to the first half of 2005. If we double this number, the number of management research institutes in the first 10 years of the 21 century should lie between the numbers in the 1980s and 1990s. This result is similar to that of economics institutes in the 1980s.

The results indicated that with the progress of society, the number of management research institutes has increased year by year. That the number increased quickly in the 1960s shows that this was a time of increased development in management research all over the world.

4.3 The top ten countries abroad with management institutes in different years

We can compare the development of management research institutes with that of economics institutes to show

the correlation between them.

The top ten countries abroad with management institutes for different years are given in Table 7.

Country	Before 1900	Country	1900	Country	1910	Country	1920	Country	1930	Country	1940
	Num		Num		Num		Num		Num		Num
USA	0	USA	0	USA	1	Japan	1	Canada	1	USA	2
Korea	0	Korea	0	Korea	0	USA	0	Japan	1	Canada	1
Britain	0	Britain	0	Britain	0	Korea	0	USA	0	Germany	1
Canada	0	Canada	0	Canada	0	Britain	0	Korea	0	Korea	0
Bangla.	0	Bangla.	0	Bangla.	0	Canada	0	Britain	0	Britain	0
Japan	0	Japan	0	Japan	0	Bangla.	0	Bangla.	0	Bangla.	0
France	0	France	0	France	0	France	0	France	0	Japan	0
Germany	0	Germany	0	Germany	0	Germany	0	Germany	0	France	0
Russia	0	Russia	0	Russia	0	Russia	0	Russia	0	Russia	0
Pakistan	0	Pakistan	0	Pakistan	0	Pakistan	0	Pakistan	0	Pakistan	0
Malaysia	0	Malaysia	0	Malaysia	0	Malaysia	0	Malaysia	0	Malaysia	0

Country	1950	Country	1960	Country	1970	Country	1980	Country	1990	Country	2000
	Num		Num		Num		Num		Num		Num
USA	3	USA	7	USA	9	USA	17	USA	18	USA	10
Bangla.	2	Germany	4	Korea	7	Korea	10	Britain	10	France	5
Russia	2	Korea	3	Japan	2	Britain	4	Korea	8	Britain	4
Korea	1	Britain	3	France	2	Canada	3	Bangla.	8	Canada	3
Britain	0	Bangla.	3	Pakistan	2	Pakistan	3	Canada	7	Japan	3
Canada	0	Japan	2	Malaysia	2	Bangla.	2	Malaysia	6	Russia	3
Japan	0	Canada	1	Britain	1	Japan	2	Russia	5	Korea	2
France	0	Russia	1	Canada	1	Germany	2	Pakistan	5	Germany	2
Germany	0	Malaysia	1	Bangla.	1	France	1	France	4	Bangla.	0
Pakistan	0	France	0	Germany	1	Russia	0	Japan	3	Pakistan	0
Malaysia	0	Pakistan	0	Russia	0	Malaysia	0	Germany	1	Malaysia	0

Table 7. The top 10 countries abroad with management institutes for different years

4.3.1 Statistical data

Before 1909, there were no management research institutes abroad. In 1910-1919, there was only one management institute - in the USA. In 1920-1929, there was one management institute - in Japan. In 1930-1939, both Canada and USA had one management institute each. In 1940-1949, there were two management institutes in the USA, while both Canada and Germany each had one. In 1950-1959, there were two management institutes in the top ranking USA, Russia and Bangladesh were second, and Korea was third. In 1960-1969, the number of management institutes abroad increased quickly. The USA was first, Germany was second, and Korea was third. In 1970-1979, the number of management institutes abroad kept increasing. The United States ranked

first. However, the number of management institutes in Korea increased quickly. In 1980-1989, the number of management institutes in the USA was still first and increased quickly. Korea ranked second. In 1990-1999, the United States still ranked first, Britain was second, and Korea ranked third. In the period 2000 to the first half of 2005, the number has gone down a little. The United States still ranks the first, but the number of management institutes in France is increasing quickly.

4.3.2 Data analysis

The data above shows that:

a) The countries that established management research institutes early on are economically powerful. For example in 1960s, there were few management research institutes besides those in the United States, Japan, Canada and Germany, all economically powerful countries.

b) The scale of development of world management research increases after the 1960s. The number of management institutes increased quickly in all countries after the 1960s, illustrating that countries started establishing management research after the 1960s.

c) After the 1960s countries with rapid development of management research institutes were countries with rapidly developing economies. In the 20th century, the countries whose numbers of management research institutes always were top ranked are the United States, Korea, Britain, and France. In the 12 different time frames, there were seven in which the United States ranked first in the world. This shows that the United States emphasized management research most highly in the international community. Since the 1970s, management research has developed rapidly in Korea, a country with a rapidly developing economy. From the results of the data analysis in Table 4, the United States and Korea have a large number of economics research institutes, proving that the more a country emphasizes economics research, the more it emphasizes management research. Table 7 and Table 4, thus, fit together.

d) Some countries demand attention. Bangladesh has ranked in the top ten throughout the years. Because economics research institutes develop rapidly is a country whose economy is developing quickly and there is a positive correlation between economic development and the establishment of economics research institutes, we must pay more attention to the economic development of Bangladesh. The number of management research institutes in Bangladesh and Pakistan has consistently occupied the top 10. Though they are not entirely flourishing country, we must pay more attention to the growth of their management institutes. These results mirror those of Table 4.

5 ANALYSIS OF THE RELATIVITY OF ECONOMICS AND MANAGEMENT

5.1 A subject analysis on the relativity of economics and management

We can relate management and economics by comparing the number of institutes on different subjects, which relate to economics.

Institutes in different subjects, which are related to economics are shown in Table 8.

Subject	Number of	Related to
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	Institutes	Economics
Sociology	630	77.87%
Regional Studies	553	68.36%
Politics	345	42.65%
Management	342	42.27%
Education	295	36.46%
Law	272	33.62%
Other	270	33.37%
History	235	29.05%
Linguistics	195	24.10%
Cultural Studies	190	23.49%
Religion	126	15.57%

Table 8. Different types of institutes and their relation to economics

5.1.1 Data analysis

5.1.1.1 Discovering the relativity of management and economics from subject distribution

Table 8 shows that sociology has the greatest relationship with economics; next is regional research, and then comes politics. Management ranks fourth with a relationship of 42%. Therefore, management and economics are highly related.

5.1.1.2 The relativity of management and economics by the rank of management and institute of economics in all countries

According to Table 2, the top ten countries in economics are as follows: the USA, Russia, Japan, Korea, Canada, Germany, Britain, France, Holland, Bangladesh, Australia, and Brazil. According to Table 5, the top ten countries in management are as follows: the USA, Russia, Japan, Korea, Canada, Germany, Britain, France, Bangladesh, Pakistan, and Malaysia. This shows that there are eight countries in which the institutes of management and economics both rank first in the world, thus proving that countries that emphasize economics research also emphasize management research.

5.2 Relative analysis of management and economics over time

5.2.1 An analysis of the relationship between economics and management in different time Periods

The relationship between economics and management in each time period is given in Table 9.

Date	Number of Economics Institutes	Number of Management Institutes	Correlation of Economics and Management in Each Time Period (%)

1800	0	2	0
1900	0	3	0
1910	1	3	33
1920	1	20	5
1930	3	15	20
1940	4	34	12
1950	12	60	20
1960	44	83	53
1970	38	85	45
1980	57	120	48
1990	100	172	58
2000	39	55	71

Table 9. The relationship between economics and management in each time period

Table 9 illustrates that the number of established management institutes has accelerated since the 1960s. The correlation between management and economics is 53% in the 1960s, 45% in the 1970s, 48% in the 1980s, and 58% in the 1990s. These numbers are more realistic than the 42% correlation from Table 8. They lower the ranking of regional research (second in Table 8), putting management above education, the fifth at 37%, and politics that ranks 3rd. The correlation is higher after 2000, but the data for this are not large. Further research needs to be done

5.2.2 A trend analysis from a line diagram

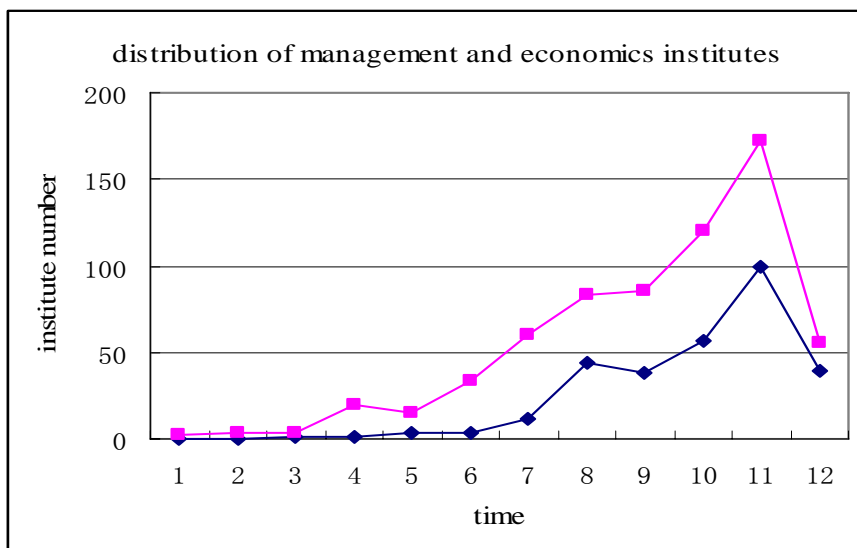


Figure 1. Line diagram of the distribution of management and economics institutes abroad in each time period. (Numbers running horizontally: 1- before1900, 2-1900, 3-1910, 4-1920, 5-1930, 6-1940, 7-1950, 8-1960, 9-1970, 10-1980, 11-1990, 12-after 2000. The rest of the figures follow the same pattern)

The trends for both management and economics rise and fall at the same time, illustrating a positive relationship between them. The trends rise continuously, showing that the institutes of management and economics increase continuously through time. This also shows the ever-increasing trend for all countries to emphasis management and economics research.

5.2.3 Analysis of the relationship between different countries' economics and management over time

In countries where the number of institutes of management and economics rank in the top ten, eight countries coincide. The following contrasts lines in the diagram of the number of institutions of management and economics.

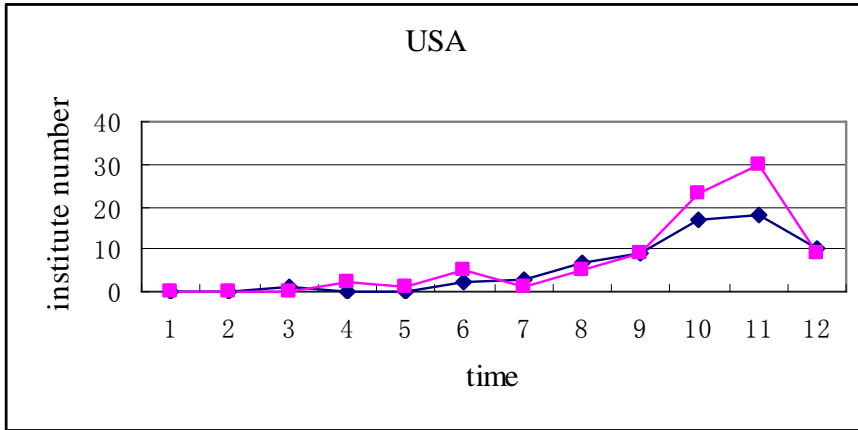


Figure 2. Distribution of management and economics institutes in the USA

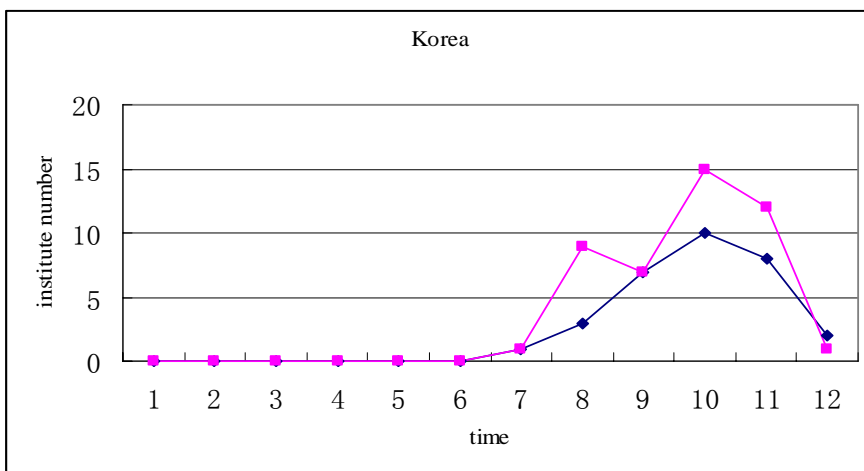


Figure 3. Distribution of management and economics institutes in Korea

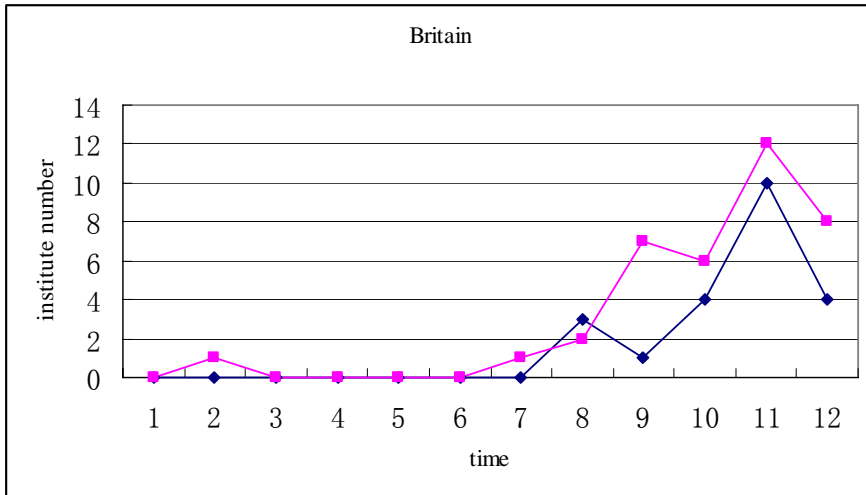


Figure 4. Distribution of management and economics institutes in Britain

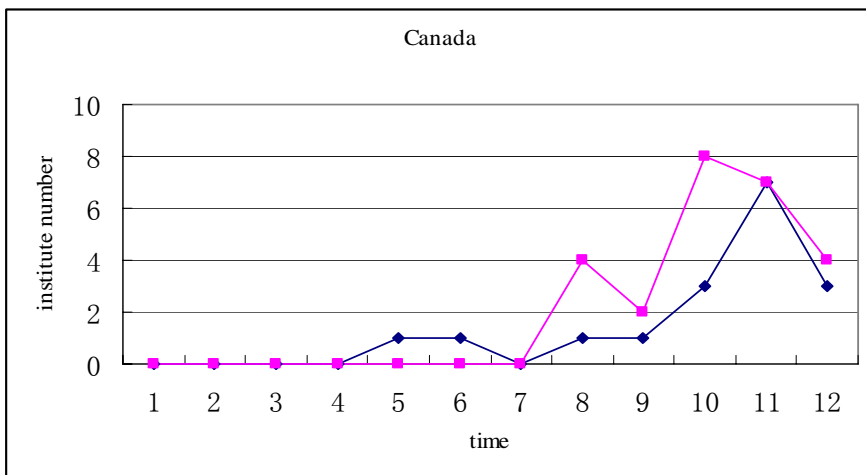


Figure 5. Distribution of management and economics institutes in Canada

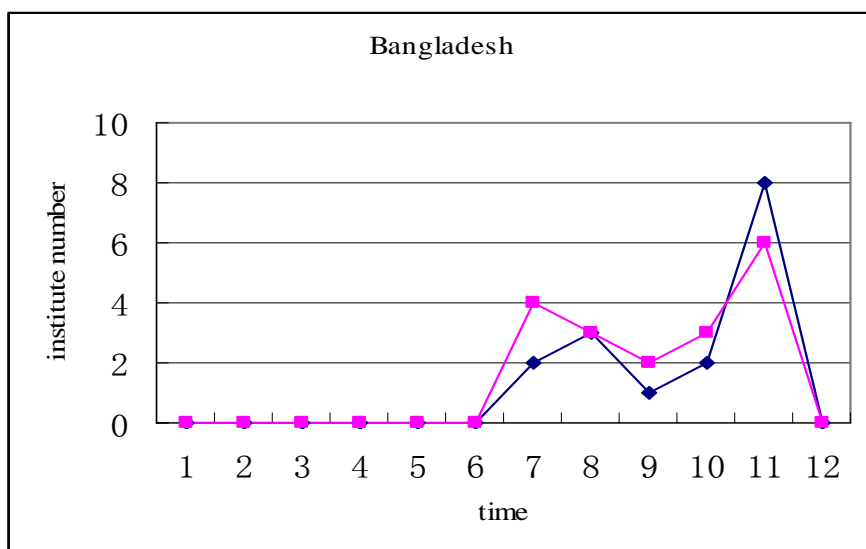


Figure 6. Distribution of management and economics institutes in Bangladesh

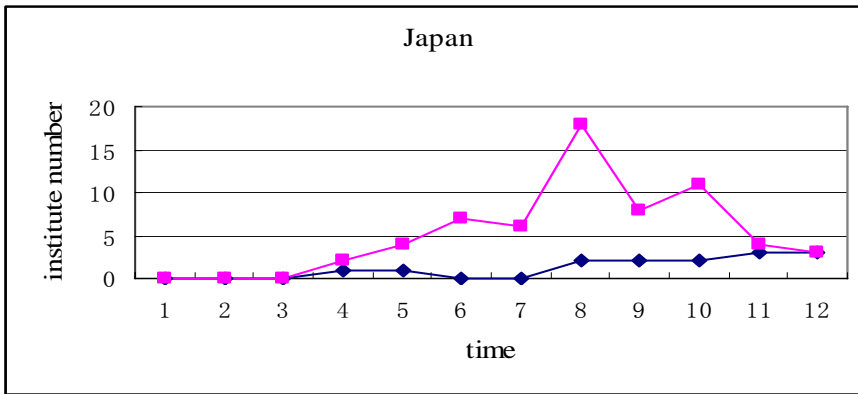


Figure 7. Distribution of management and economics institutes in Japan

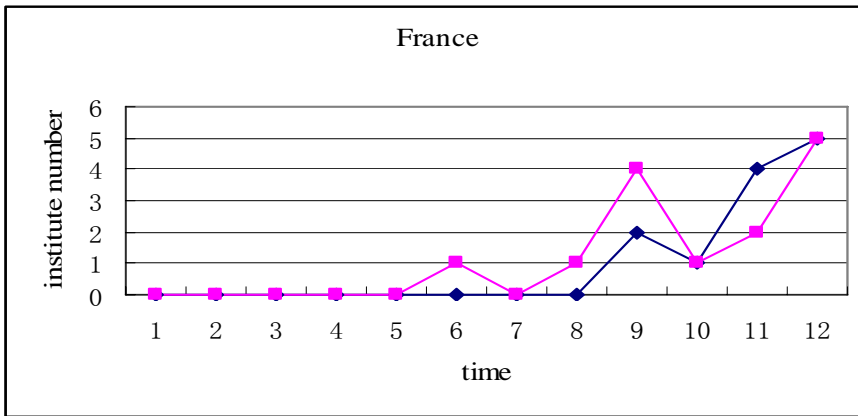


Figure 8. Distribution of management and economics institutes in France

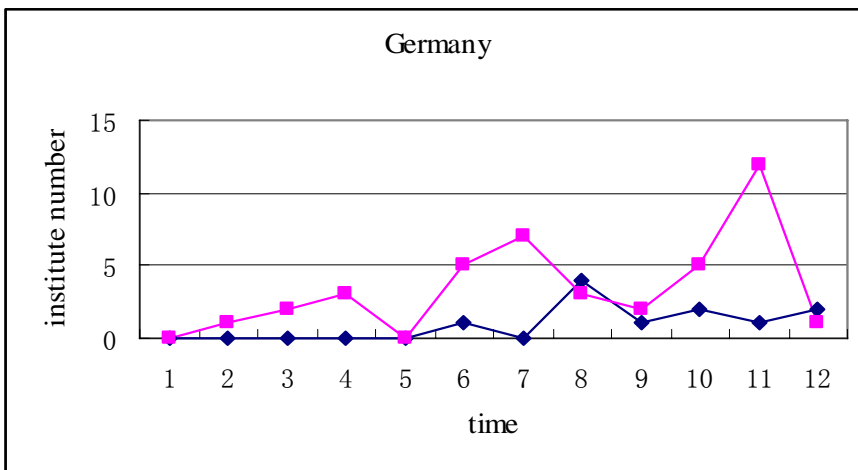


Figure 9. Distribution of management and economics institutes in Germany

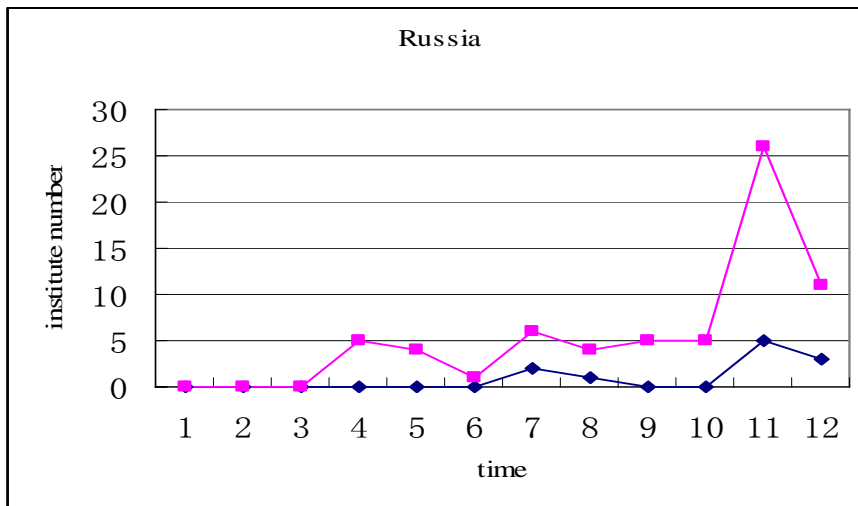


Figure 10. Distribution of management and economics institutes in Russia

The above figures (2-10) illustrate that along with Bangladesh, the number of economics and management institutes in the other seven countries have kept pace with changes. Also the number of economics institutions is consistently higher than that of management. This shows that in addition to the positive correlation between economics and management in each country, in most time periods, economics institutes outnumber management institutes. As time passes the world is paying more and more attention to management and economics research. Bangladesh is an exceptional case, which needs to be explored further.

6 CONCLUSION

The analysis of the correlation between economics and management institutes abroad leads to the following conclusions.

- a) In the course of economic development, all the countries have attached great importance to research in the management and economics disciplines.
- b) The level of economic development and the amount of economic and management research in countries are positively correlated. Countries with a higher level of economic development pay more attention to economics and management research. It is the simultaneous development of management and economics research that makes the positive correlation.
- c) The fast development of the economy promotes the establishment of economics and management institutes. The countries that established institutes of economics and management earlier have relatively high levels of economic development. The time a country's economy is in rapid development is also the peak period of the establishment of economics and management research institutions.
- d) In the 1960s, the development of management research coincided with a rapid development of economics research.
- e) The establishment of economics and management institutes and research in the two disciplines has increased over time.
- f) Countries that pay attention to economics research also attach equal importance to management research. At the same time, however, economics outweighs management research.
- g) Bangladesh is an exceptional case that needs to be explored further.

7 IMPORTANCE OF MANAGEMENT AND ECONOMICS RESEARCH TO CHINA

Through the study of world economics and management institutes, we have shown that management plays an important role in a country's economic development. China's government management should also keep pace with its economic development.

A) We should increase economics research. Synchronization of the World Economic Development and Economic Research urged China to step up efforts to research economics in economic construction.

b) We should increase management research. We should pay more attention to the important role of management in economic development. China's current management level is not very high. This inhibits development of the economy and other aspects and has been a bottleneck for increased development. Therefore, researching management can further improve economic efficiency.

c) It is necessary to reform management. From studying the world's economics and management science research, we can see that management reform is necessary for economic development. Management reform and economic development in the world happen simultaneously. China needs to carry out required economic reforms and management reforms at the same time. By doing this China's economic development will be more scientific, effective, and sustainable.

d) The government must play the guiding role in economic development. China should step up the guiding role of government in economic development and to design practical and viable economic development policies that promote economic growth and healthy economic development.

e) Rational public policies and management can contribute to harmonious economic and social development. In economic development, the management of various public actions and the establishment of public policies relate to the sustainability of economic development. China should develop a social justice system, control inflation through policy and management, increase employment opportunities, and provide comprehensive medical protection and equal opportunities in education. As the economy develops, we should ensure the harmonious development of society.

In short, economics and management cannot be separated. In economic construction, the organic integration of these two disciplines can make economic development achieve maximum results with little effort.

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