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11 Changing Business Environment in China:

A Regional Context and Policy Implications

Xiaolu Wang, Jingwen Yu and Fan Gang¹

Introduction

China's business environment is constantly changing in response to developments in markets, external conditions and government policies that have resulted from China's move towards a market-oriented economy. Improving the business environment is a key policy objective, as changes in that environment affect the behaviour and operations of firms, especially those private firms that are subject to policy and institutional constraints. A much improved business environment in terms of the market and legal environment, fair competition, access to finance, supply of human resources, taxation and infrastructure development will, therefore, not only facilitate business activities, but also, in an important way, nurture much needed entrepreneurship in China. It remains an important task for different levels of government, through their policy changes, to improve the business environment. This chapter reports changes and regional differentials in the business environment in China's provinces in recent years, and discusses some of the policy implications. The study is based on four enterprise surveys that were conducted in 2006, 2008, 2010 and 2012 respectively; each survey covers more than 4,000 enterprises located in 29 provinces (including several ethnic autonomy regions and administrative municipalities at the provincial level).

Classification of the total 4,020 sample enterprises in the 2012 survey, according to their ownership is as follows: 418 state-owned enterprises (SOEs) (including shareholding companies with controlling shares that are held by the state), which account for 10.4 per cent of the total samples; 3,082 private enterprises, stock companies and limited liability companies without controlling shares held by the state (76.7 per cent), 257 foreign-funded enterprises and enterprises with funds from Hong Kong, Macao and Taiwan (6.4 per cent); and, 263 collective-owned enterprises, shareholding cooperatives, and other non-state enterprises (6.5 per cent).

¹ This chapter results from the Business Environment Project that is run by the National Economic Research Institute and the Entrepreneur Survey System, and is a continuation of our earlier reports (Wang, Fan, and Liu 2008; Wang, Fan, and Li 2012). Our surveys were supported by many enterprises, government and non-government organisations as well as individuals. We thank all those who, in many different ways, contributed to this study.

Sample enterprises, classified according to scales, are as follows: 365 large enterprises (9.1 per cent), 1,415 medium enterprises (35.2 per cent), 2,035 small enterprises (50.6 per cent), 190 micro enterprises (4.7 per cent), and 15 unclassified enterprises (0.4 per cent).

Enterprises classified by sectors include: 2,808 manufacturing (69.8 per cent), 350 agriculture, mining, power generation, gas, water supply (8.7 per cent), 516 transport, storage and post, information transmission, computer services and software, wholesale and retail trade, hotels and catering services (12.8 per cent), and 346 other services (8.7 per cent).

Compared with statistical data (see, The State Council Office and National Statistical Bureau 2009 and National Statistical Bureau 2012), the sample distribution in terms of ownership type and scale of enterprise is balanced and generally consistent with the nationwide distribution, only micro enterprises are much fewer, the proportion of manufacturing enterprises is higher, and service enterprises are lower, but this is not problematic in reviewing the business environment in different provinces/regions.

The sample enterprises are located in 29 out of a total of 31 provinces in mainland China. Tibet and Qinghai are excluded in this study, due to insufficient samples. Hong Kong, Macao and Taiwan are also excluded.

On the basis of the surveys, we constructed a Business Environment Index for China's Provinces (BEIFCP). The index assesses the business environment that exists in eight areas: government administration, legal environment, tax and non-tax burdens, financial services, supply of human resources, infrastructure conditions, market intermediaries and technical/export services, and ethical business environment. We evaluate the business environment using a score of 1–5, with 5 indicating 'very good', 3 indicating 'average', and 1 indicating 'poor'. Thus, an index above 3 is a positive score, and below 3 is a negative score.

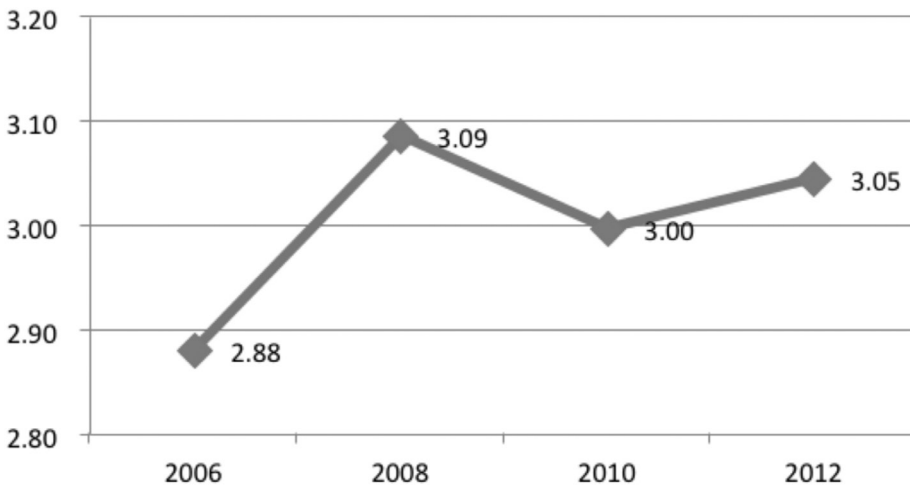
In the first section of this chapter, we report the general situation, changes, and rankings of Chinese provinces in terms of the business environment, measured by BEIFCP. The second section reports on China's business environment divided into eight areas. The third section analyses differentials of BEIFCP for both SOEs and private enterprises, differently scaled enterprises, enterprises in different sectors, and in different regions, including the east, north-east, centre, and west. The detailed structure of the BEIFCP, and the method of calculation, is explained in the Appendix.

General Situation and Provincial Ranking in BEIFCP

The Changing Business Environment in China

Indicated by our surveys, there was a general improvement in China's business environment over the period 2006–2012 period (Figure 11.1). The overall score of BEIFCP, as a provincial average, was 3.05 in 2012, which increased by 0.17 from 2.88 in 2006. The score deteriorated in the 2009–2010 period, however, and improvement in the 2011–2012 period did not fully offset that deterioration. Significantly, the score of 3.05 in 2012 is only slightly above the neutral score of 3, and this should not be regarded with great optimism.

Figure 11.1 Changes in the overall BEIFCP: 2006–2012



Source: Plotted using the data from the survey.

In the 2011–2012 period, the overall index increased in 19 provinces, and decreased in ten provinces. This indicates a general improvement in the business environment during these two years, although the trend is not persuasive. On the contrary, as is explained below, it decreased in 27 out of the total 29 provinces during the 2009–2010 period.

Loose monetary policy, including government policy on bank credit, and expansionary fiscal policy, which developed in response to the global financial crisis (GFC) are at least partially responsible for deterioration of the business environment during the 2009–2010 period. Total bank credit increased dramatically, by 32 per cent in 2009, and then by 20 per cent in 2010. Credit is used predominantly for large government investment projects and has the

effect of crowding out market forces. Medium- and long-term loans increased by 86 per cent in these two years, whereas short-term loans increased only by 33 per cent, of which, those extended to firms increased only by 17.6 per cent (People's Bank of China, <http://www.pbc.gov.cn>).

This had a contradictory effect on some enterprises, especially those small private enterprises that were affected by increasing input costs. In these two years, nominal GDP increased by 27.9 per cent, and the nominal wage rate increased by 26.4 per cent. This resulted in an adverse situation, particularly for small enterprises, as the banking sector in China is dominated by a few large, state-owned, commercial banks, which favour large enterprises over smaller ones in extending credit and providing bank loans. In this period, the area index for 'financial services' decreased from 2.90 to 2.82.

The situation improved in 2011 and 2012 when the number of short-term loans increased and medium- and long-term loans decreased. The financial service index indicates that the cost of obtaining loans from formal banks remained the same, but firms were obliged to pay less in extra charges besides the formal interest. In addition, over this two-year period, it was easier to access external finance from informal channels.

The indexes indicate that both government administration and the legal environment for business deteriorated during the 2009–2010 period, as the scores of the two area indexes dropped by 0.04 and 0.14, respectively. This was also related to the government's expansionary macro policy, which saw expansionary investments and credits strengthen the role of government in resource allocation, and weaken the role of the market in allocating resources.

During the 2011–2012 period, scores of the two area indexes, government administration and the legal environment, increased by 0.05 and 0.11, respectively, showing some improvement in these areas.

In terms of infrastructure conditions and the supply of human capital, the scores decreased in 2009–2010, and increased in 2011–2012. This is related to large-scale investment in the first period, which caused a heavy increase in the demand for railway transport and power generation, as well as an increasing demand for labour. As an indicator to measure the strength of the economy, in 2010, the nationwide demand for electricity reached its highest peak since 2004, and fell moderately in the second period.

This analysis does not deny the need for, and rationality of, the expansionary macroeconomic policy that was applied during the GFC. When China's export industry was hit by the crisis, the expansionary policy got the economy moving at a relatively high speed. In retrospect, however, some lessons may be drawn in terms of the extent, measure and implementation of the macro policies. It is

possible that the expansionary fiscal policy adopted in that period over-relied on government investments, and did not manage to sufficiently utilise measures that could mitigate the negative effect of this on the market, such as tax reductions for medium-sized enterprises (SMEs), public expenditure on education and social security, and protection of the environment. The government-led credit expansion was extensively bound to government investment projects. This had the effect of squeezing out normal business demand for credit and, therefore, had a negative affect on the non-state sector.

In addition, when the government became powerful in resource allocation, it compromised its transparency, discipline, and public monitoring, which led to increased abuse of power, corruption, and misallocation of resources, and thus badly damaged the business environment.

Provincial Ranking and Scores of BEIFCP

Based on the four enterprise surveys, provincial ranking of the overall index in 2006, 2008, 2010 and 2012 is provided in Table 11.1. The province with the best business environment is ranked at the top.

Table 11.1 Provincial ranking by business environment (2006–2012)

Rank/Year	2006	2008	2010	2012
1	Shanghai	Shanghai	Shanghai	Tianjin
2	Zhejiang	Jiangsu	Jiangsu	Shanghai
3	Jiangsu	Zhejiang	Tianjin	Beijing
4	Tianjin	Beijing	Zhejiang	Zhejiang
5	Shandong	Tianjin	Beijing	Jiangsu
6	Guangdong	Fujian	Anhui	Chongqing
7	Fujian	Anhui	Henan	Heilongjiang
8	Beijing	Liaoning	Guangdong	Jilin
9	Liaoning	Shandong	Fujian	Guangxi
10	Anhui	Guangdong	Shandong	Shandong
11	Hebei	Hebei	Chongqing	Guangdong
12	Sichuan	Jilin	Liaoning	Fujian
13	Jilin	Heilongjiang	Sichuan	Liaoning
14	Henan	Henan	Hubei	Henan
15	Heilongjiang	Guangxi	Yunnan	Sichuan
16	Xinjiang	Sichuan	Jiangxi	Anhui
17	Inner Mongolia	Chongqing	Shanxi	Inner Mongolia
18	Yunnan	Hubei	Hebei	Hainan
19	Hubei	Inner Mongolia	Jilin	Hubei
20	Chongqing	Ningxia	Heilongjiang	Shaanxi
21	Shanxi	Shaanxi	Hunan	Guizhou
22	Hainan	Guizhou	Inner Mongolia	Hunan
23	Qinghai	Jiangxi	Hainan	Ningxia

Rank/Year	2006	2008	2010	2012
24	Guangxi	Yunnan	Gansu	Hebei
25	Jiangxi	Gansu	Guangxi	Jiangxi
26	Shaanxi	Xinjiang	Ningxia	Shanxi
27	Guizhou	Hunan	Shaanxi	Yunnan
28	Hunan	Hainan	Guizhou	Gansu
29	Ningxia	Qinghai	Xinjiang	Xinjiang
30	Gansu	Shanxi		

Source: Ranked using the data from the survey.

As shown in Table 11.1, Tianjin, Shanghai, Beijing, Zhejiang and Jiangsu were ranked in the top five provinces in 2008, 2010 and 2012, according to the overall BEIFCP. Their relative ranks did, however, change. Shanghai was number one in 2006, 2008 and 2010, but was replaced by Tianjin in 2012. Zhejiang and Jiangsu both dropped in rank. After 2006, Shandong dropped out of the top five and was replaced by Beijing.

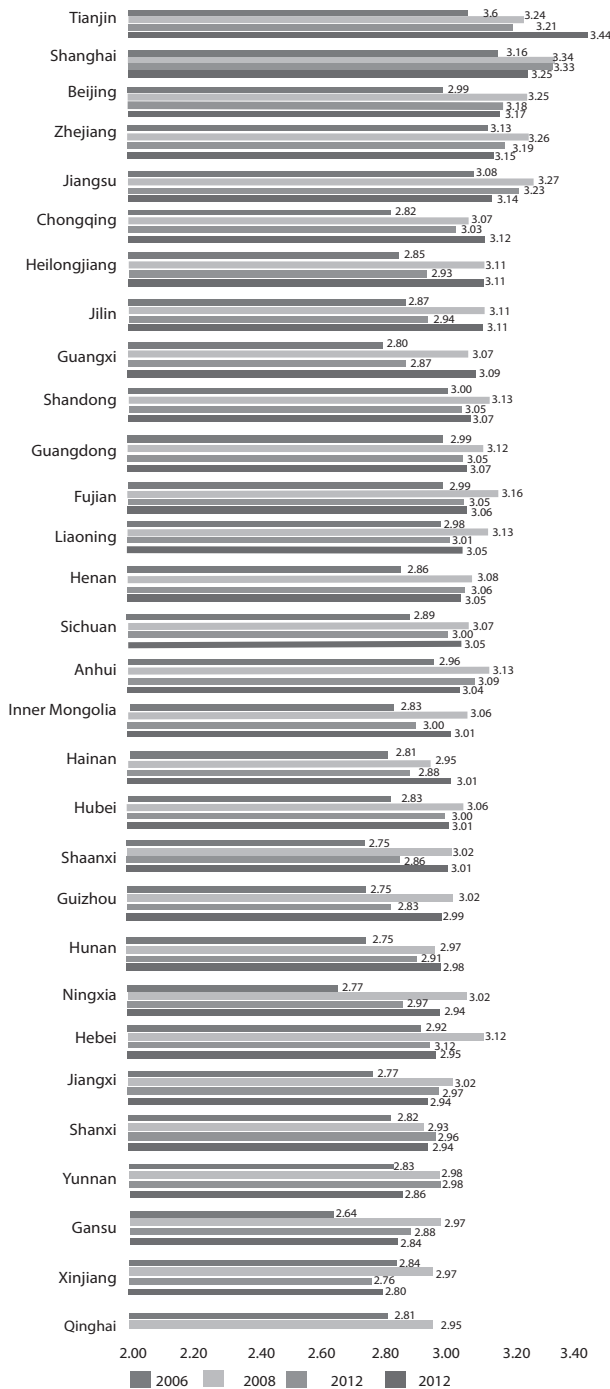
Table 11.1 shows that provinces with a higher ranking are mainly situated in the east, and they have greater economic development. Their positions are relatively stable, with limited change over the years. There does not, however, exist a linear correlation between the business environment and the level of economic development. For instance, both Guangdong and Fujian have a much higher GDP per capita than Chongqing and Heilongjiang, but they are ranked significantly lower than the latter (11th and 12th versus 6th and 7th).

Low-ranking provinces are mainly those from the western and central regions, with relatively lower economic achievement. Their ranking is, however, unstable, with large fluctuations over years. In 2012, the last five provinces, according to the overall BEIFCP ranking, are Jiangxi, Shanxi, Yunnan, Gansu and Xinjiang, but only one of them (Gansu) was in the bottom five in 2006. The other four with the lowest ranks (26th–29th) in 2006 were Shaanxi, Guizhou, Hunan and Ningxia, but they jumped to 20th–24th in 2012.

It is important to acknowledge that the dramatic change in the rank of some provinces does not necessarily mean dramatic changes in their business environment. Because index scores for some provinces are quite close, their rankings are sensitive to small changes of scores. Improvement in one province that is slightly more or less than others may result in a change in rank, which affects a number of provinces.

In fact, changes in business environment at the provincial level are reflected more accurately by provincial scores rather than ranking. Figure 11.2 illustrates ranking and the overall scores for all the 29 provinces in 2006, 2008, 2010 and 2012 (30 provinces in earlier years) respectively. Their overall scores can be seen more clearly in Table 11.2.

Figure 11.2 Overall scores and ranking of provinces (2006–2012)



Note: Provincial ranking is according to their 2012 scores. Bars for each province are arranged from high to low in the order of years 2006, 2008, 2010 and 2012. Qinghai is placed at the low end in the figure because of missing values in 2010 and 2012, which does not mean lowest ranking.

Source: Using the data from the survey.

As shown in Table 11.2, the 2012 scores of all the provinces, except Xinjiang, are higher than their 2006 scores, indicating improvement in the business environment of most of the provinces, although the scores of many of them are still lower than their score from 2008. Data in the table also indicates that some central and western provinces, which originally ranked low, improved more than most higher-ranking east coast provinces; thus, a general trend of convergence in the business environment, although not strong, may be observed.

Table 11.2 Overall scores and changes in ranking by provinces (2006–2012)

	2006	2008	2010	2012	Changes (2006–2008)	Changes (2008–2010)	Changes (2010–2012)
Beijing	2.99	3.25	3.18	3.17	0.27	–0.08	–0.01
Tianjin	3.06	3.24	3.21	3.44	0.18	–0.03	0.23
Hebei	2.92	3.12	2.95	2.97	0.20	–0.17	0.02
Shanxi	2.82	2.93	2.96	2.94	0.11	0.03	–0.03
Inner Mongolia	2.83	3.06	2.91	3.01	0.23	–0.15	0.11
Liaoning	2.98	3.13	3.01	3.05	0.15	–0.11	0.04
Jilin	2.87	3.11	2.94	3.11	0.25	–0.17	0.17
Heilongjiang	2.85	3.11	2.93	3.11	0.26	–0.18	0.18
Shanghai	3.16	3.34	3.33	3.25	0.18	–0.01	–0.08
Jiangsu	3.08	3.27	3.23	3.14	0.19	–0.04	–0.08
Zhejiang	3.13	3.26	3.19	3.15	0.13	–0.07	–0.04
Anhui	2.96	3.13	3.09	3.04	0.17	–0.04	–0.05
Fujian	2.99	3.16	3.05	3.06	0.17	–0.11	0.01
Jiangxi	2.77	3.02	2.97	2.94	0.24	–0.04	–0.04
Shandong	3.00	3.13	3.05	3.07	0.13	–0.08	0.03
Henan	2.86	3.08	3.06	3.05	0.22	–0.02	–0.01
Hubei	2.83	3.06	3.00	3.01	0.23	–0.06	0.01
Hunan	2.75	2.97	2.91	2.98	0.22	–0.06	0.08
Guangdong	2.99	3.12	3.05	3.07	0.13	–0.07	0.01
Guangxi	2.80	3.07	2.87	3.09	0.27	–0.20	0.22
Hainan	2.81	2.95	2.88	3.01	0.14	–0.07	0.13
Chongq.	2.82	3.07	3.03	3.12	0.24	–0.04	0.09
Sichuan	2.89	3.07	3.00	3.05	0.18	–0.07	0.04
Guizhou	2.75	3.02	2.83	2.99	0.27	–0.19	0.16
Yunnan	2.83	2.98	2.98	2.86	0.15	0.00	–0.12
Shaanxi	2.75	3.02	2.86	3.01	0.27	–0.17	0.15
Gansu	2.64	2.97	2.88	2.84	0.33	–0.09	–0.04
Ningxia	2.66	3.06	2.86	2.98	0.40	–0.19	0.12
Qinghai	2.81	2.95			0.14		
Xinjiang	2.84	2.97	2.76	2.80	0.13	–0.21	0.04
Average	2.88	3.09	3.00	3.05	0.21	–0.09	0.05

Note: The overall scores in the table are valued between one and five. Greater scores indicate better business environment. Numbers in the last three columns are changes in the scores between 2008 and 2006, 2010 and 2008, and 2012 and 2010, respectively. Positive value indicates improvement, and vice versa.

Source: Calculated using the data from the survey.

The Changing Business Environment in Eight Areas

Major Obstacles in Business Environment

In the 2012 survey, information was collected from enterprise owners or general managers about their views on the major obstacles that they encountered in their business environment. They were asked to indicate, from 28 external factors, the major obstacles for their business.

A total of 3,285 firm owners or general managers responded to the question regarding the major obstacles to their business. Their selection was grouped into seven areas, which correspond to the seven area indexes, i.e., government administration, legal environment for business, tax and non-tax burdens, financial services, supply of human resources, market intermediaries and technical services, and ethical business environment. Infrastructure conditions were not included, but this is not problematic because it has the highest score among the eight area indexes.

Perceptions of the primary obstacle to the conduct of business were as follows:

- A. Government administration. A total of 33.7 per cent of the respondents treat factors in this area as the primary obstacle. Of them, most complaints concentrated on the aspect of 'openness, fairness, and equity' of policies and government administration. These problems include non-transparency of policies and government administration, unfair enforcement of regulations, and unequal treatment for different enterprises. There are also problems with the 'inefficiency of government administration', 'unnecessary government intervention' and 'cleanness of government officials'.
- B. Tax and non-tax burden. Of the total effective samples, 30.3 per cent of those interviewed treat factors in this area as the primary obstacle. Most complaints relate to the tax burden, which possibly arises from efforts by local taxation bureaus to fulfill tax targets set by higher-level governments, and this may result in firms being over-taxed. Abuse of power by taxation officials may also be a problem.
- C. Shortage of human resources. A total of 16.1 per cent of firms see this as the primary obstacle to their business. Respondents ranked the shortage of technicians as the most significant issue, followed by shortages of skilled workers and managers.

- D. Financial services. This is treated as the primary obstacle by 14.3 per cent of the firms, with most complaining of difficulties in obtaining bank loans; but high interest, extra charges and the difficulties of obtaining informal sector finance were also noted.
- E. Legal environment. This problem is regarded as a primary obstacle by 3.7 per cent of the firms.

Table 11.3 ranks the distribution of complaints from the 2008 and 2012 surveys for comparison. According to the 2008 survey, the primary obstacle was access to financial services (which accounts for 35 per cent of the sample firms, this ratio is reduced to 14.3 per cent). The second was government administration (29.3 per cent), and the third, shortage of human resources (21.3 per cent). This survey did not include the tax and non-tax burden, but included infrastructure conditions. In 2012, the first, second, third and fourth rankings became government administration, tax and non-tax burden, shortage of human resources, and financial services.

This result indicates the necessity of government-sector reform, especially in terms of transparency, policy equity, self-discipline, and public monitoring in order to further improve the business environment. Tax policy, the supply of human resources and financial services are also key areas in the improvement of the business environment.

Table 11.3 Major obstacles to businesses by the sample firms: 2008 and 2012

	2008	Rank	2012	Rank
Government administration	29.3%	2	33.7%	1
Openness, fairness, equity	11.4%		20.9%	
Government efficiency	7.3%		5.6%	
Government over-intervention	6.8%		5.8%	
Government official cleanness	3.7%		1.4%	
Tax and non-tax burden			30.3%	2
Tax burden			29.9%	
Non-tax collection	0.6%		0.4%	
Shortage in human resources	21.3%	3	16.1%	3
Technicians	6.2%		8.6%	
Managers	6.7%		2.5%	
Skilled workers	8.3%		5.1%	
Financial services	35.0%	1	14.3%	4
Formal financial services	34.1%		13.2%	
Informal sector finance	0.9%		1.1%	
Legal environment	6.0%	4	3.7%	5
Enforcing law: fairness& efficiency	1.7%		0.9%	
Legal right protection	4.3%		2.8%	

	2008	Rank	2012	Rank
Infrastructure conditions	3.3%	5		
Ethical business environment	3.1%	6	1.5%	6
Market intermediary & services	1.4%	7	0.4%	7
Market intermediaries	0.4%		0.4%	
Technical & export services	1.0%		0.1%	
	100.0%		100.0%	

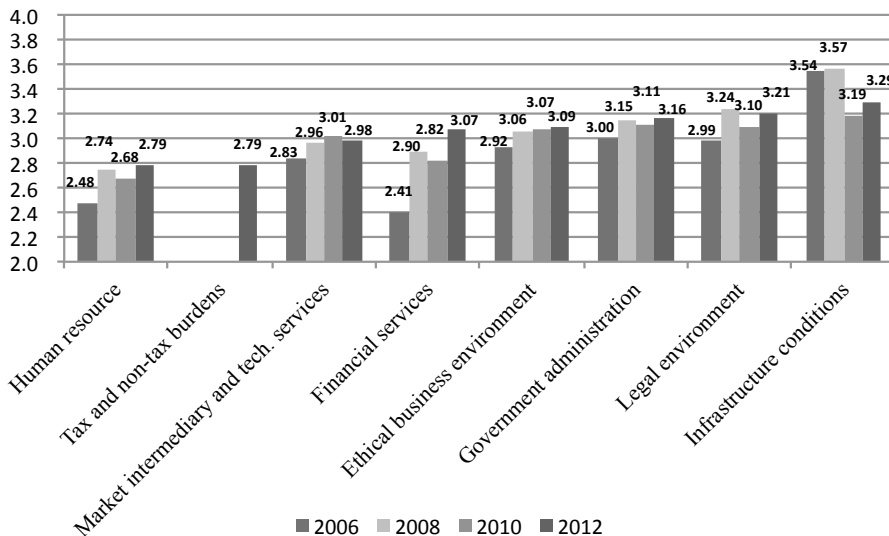
Source: Calculated using the data from the survey.

Business Environment in Eight Areas

Figure 11.3 shows an improvement in the business environment over eight area indexes areas from 2006 to 2012 (data is collated in Table 11.4). Area rankings from low to high, according to the average scores are: supply of human resources, tax and non-tax burdens, market intermediaries and technical/export services, financial services, ethical business environment for business, government administration, legal environment for business, and infrastructure conditions.

These areas all showed some improvement from 2006 to 2012, except infrastructure conditions. Three of the scores remain, however, in a negative interval in 2012.

Figure 11.3 Eight areas of business environment: an improvement (2006–2012)



Source: Calculated using the data from the survey.

Table 11.4 indicates that financial services made the biggest improvement during this period. The supply of human resources also improved, but still in a negative interval. Infrastructure condition is the only area since 2006 in which the score dropped.

Table 11.4 Eight areas of business environment: changes in scores

	2006	2008	2010	2012	2006–2012 changes
Human resource	2.48	2.74	2.68	2.79	0.31
Tax and non-tax burdens				2.79	
Market intermediary and technicalservices	2.83	2.96	3.01	2.98	0.15
Financial services	2.41	2.90	2.82	3.07	0.66
Ethical business environment	2.92	3.06	3.07	3.09	0.17
Government administration	3.00	3.15	3.11	3.16	0.16
Legal environment	2.99	3.24	3.10	3.21	0.22
Infrastructure conditions	3.54	3.57	3.19	3.29	–0.25
Overall	2.88	3.09	3.00	3.05	0.17

Source: Calculated using the data from the surveys.

One may notice the difference between indexing of the business environment here and the assessment of obstacles to business provided in last section. A major difference relates to government administration. In last section, it is assessed as the primary obstacle to business, although the score of this area index in Table 11.4 is not so disappointing, as it is above the neutral value of three. Its ranking among the eight area indexes is also not very low. The puzzle is that both categories of information come from the same sample enterprises.

The difference is partially due to the outcomes from different emphases in assessment. The obstacle assessment focuses on the seriousness of problems, whereas the scores of indexes mainly reflect the extent of influences by factors.

Moreover, because of many influencing factors, the area index of government administration consists of four sub-indexes and more basic indexes. The average of a few basic indexes constitutes a sub-index, and the average of the four sub-indexes forms the area index. Because each basic index only concerns a particular factor in the area, the probability that a firm will encounter problems relating to a single factor is usually low, whereas other firms, without experiencing this kind of problem, may give an average, or even above average, assessment for the relevant factor. This can result, to some extent, in a converging assessment towards the average.² The situation is different in the obstacle assessment. Because problems relating to each factor may act as a major obstacle to a firm, it

2 The same thing may occur when lower-level indexes are averaged for a sub-index or area index. This is to be a shortcoming of subjective assessment method in indexing. We have not yet found a solution for solving this problem.

is necessary to calculate the rate at which each obstacle occurs so as to assess its impact in the same area, instead of taking the average. The sum of these rates in the area, 33.7 per cent, becomes a considerably high proportion.

This suggests that the obstacle assessment on government administration provides more direct information and has higher creditability, whereas indexing for this area may provide a more or less over-evaluation. In spite of this shortcoming, the indexing method provides a useful and indispensable means of measuring the differences in the business environment among regions/provinces, between different categories of enterprises, and over time.

Environment Differentials by Type of Enterprises

Business Environment for SOEs and Non-State Enterprises

In this section we compare business environment for SOEs (including shareholding companies with controlling shares that are owned by the state) and non-state enterprises (NSEs) (including mainly private enterprises, stock companies and limited liability companies that are not controlled by the state, and all other non-state enterprises).

Of the total 418 SOEs in our 2012 survey, large, medium, and small enterprises account for 30.7, 43.6, and 24.0 per cent, respectively. Micro enterprises account for only 1.7 per cent.

Of the total 3,602 NSEs, only 6.6 per cent are large enterprises, medium and small enterprises account for 34.4 and 53.9 per cent, respectively. Micro enterprises account for 5.1 per cent. Obviously, there are more large and medium enterprises in SOEs, and more small and micro enterprises in NSEs. This reflects the differentials in firm size between the two categories, but the proportion of micro enterprises in NSE samples is much less than in reality.

In 2012, the average score of overall index for SOEs is 3.13, greater than the average of NSEs (3.08) by 0.05. The difference is significant at the five per cent level ($t=2.25$). This indicates a better business environment for SOEs than NSEs. This is abnormal since, when both SOEs and NSEs are operating in the same competitive market, their business environment should be equal. The unequal environment suggests that SOEs may enjoy favourable treatment by the government.

Table 11.5 reports the overall index, area indexes and sub-indexes for both SOEs and NSEs, and the statistical significance of their differences. All differences that are significant at five per cent or higher are scaled out in bold. The environment scores in six out of the eight areas are greater for SOEs

than NSEs. Two of them are significant, and more are significant at the sub-index level. For instance, 'openness, fairness, and equity' has a positive and significant difference (indicating SOEs experience more fairness than NSEs), but 'unnecessary intervention' has a negative difference (SOEs encounter more intervention than NSEs). The differences in two sub-indexes cancel out each other, so that the difference in area index becomes insignificant.

This reveals that there are discriminatory treatments that favour SOEs against NSEs, which, in general, has a negative effect on NSEs. It is, therefore, necessary to adjust relevant government policies to standardise the treatment of SOEs and NSEs.

Table 11.5 Differences in business environment between SOEs and NSEs

	SOE	NSE	Difference	t-statistics	P-value
Government administration	3.20	3.25	-0.05	-1.44	0.15
Openness, fairness, equity	3.09	3.00	0.09	2.53	0.01
Government efficiency	2.88	2.96	-0.08	-1.62	0.11
Non-necessary intervention	3.34	3.57	-0.23	-5.48	0.00
Government cleanness	3.51	3.47	0.04	0.64	0.52
Legal environment	3.27	3.24	0.03	0.90	0.34
Fairness & efficiency	3.04	3.01	0.03	0.64	0.52
Legal right protection	3.50	3.46	0.04	1.22	0.22
Tax and non-tax burden	2.88	2.75	0.13	3.29	0.00
Tax burden	3.59	3.43	0.16	2.90	0.00
Non-tax collection	2.17	2.07	0.10	2.47	0.01
Financial services	3.15	3.10	0.05	0.74	0.33
Formal financial services	3.26	3.04	0.22	5.52	0.00
Informal sector finance	3.03	3.17	-0.14	-2.45	0.01
Shortage in human resource	2.98	2.77	0.21	4.46	0.00
Technicians	2.94	2.71	0.23	4.49	0.00
Managers	3.05	2.78	0.27	4.99	0.00
Skilled workers	2.94	2.82	0.12	2.42	0.02
Infrastructure conditions	3.32	3.33	-0.01	-0.27	0.79
Power supply	3.95	3.89	0.06	1.29	0.20
Railway service	3.11	3.15	-0.04	-0.88	0.38
Other infrastructure	2.91	2.96	-0.05	-1.13	0.26
Market intermediaries & service	3.06	3.02	0.04	1.09	0.28
Market intermediaries	3.12	3.04	0.08	2.11	0.04
Technical & export service	3.01	3.00	0.01	0.16	0.88
Ethical business environment	3.18	3.16	0.02	0.63	0.53
Overall	3.13	3.08	0.05	2.25	0.03

Source: Calculated using the data from the surveys.

Business Environment for Enterprises of Different Scales

This section investigates the business environment for large, medium, small and micro enterprises. In 2012, scores of the overall index were 3.20 for large enterprises, 3.09 for medium enterprises, 3.07 for small enterprises, and 2.98 for micro enterprises. These differences are statistically significant; obviously, the smaller the enterprise scale is, the less-favoured business environment it enjoys.

In Table 11.6, the overall index, area indexes and sub-indexes for enterprises of different scales are reported. Differences in significance at five per cent or higher are scaled out in bold. The t-ratios are listed in the second part of the table. Differences in five areas, out of a total of eight, are statistically significant at least between two categories of enterprises. The remaining three areas all have differences where some sub-indexes are statistically significant.

Table 11.6 Difference in business environment between enterprise scales

	Score				Difference		
	Large	Medium	Small	Micro	L-M	M-S	S-I
Government administration	3.25	3.24	3.26	3.15	0.01	-0.02	0.11
Openness, fairness, equity	3.14	3.04	2.98	2.84	0.10	0.06	0.14
Government efficiency	2.92	2.92	2.99	2.91	0.00	-0.07	0.08
Non-necessary intervention	3.42	3.51	3.59	3.48	-0.10	-0.08	0.11
Government cleanness	3.54	3.48	3.47	3.36	0.05	0.02	0.11
Legal environment	3.34	3.27	3.21	3.13	0.07	0.06	0.08
Fairness & efficiency	3.11	3.04	2.98	2.89	0.06	0.06	0.09
Legal right protection	3.58	3.50	3.43	3.37	0.08	0.06	0.07
Tax and non-tax burden	2.85	2.77	2.75	2.81	0.08	0.02	-0.06
Tax burden	3.59	3.45	3.42	3.45	0.14	0.03	-0.03
Non-tax collection	2.10	2.08	2.07	2.17	0.02	0.00	-0.09
Financial services	3.29	3.14	3.08	2.85	0.15	0.06	0.23
Formal financial services	3.39	3.11	2.99	2.77	0.28	0.12	0.22
Informal sector finance	3.20	3.16	3.16	2.94	0.03	0.01	0.22
Shortage in human resource	2.95	2.76	2.78	2.77	0.19	-0.02	0.01
Technicians	2.89	2.70	2.72	2.68	0.19	-0.02	0.04
Managers	3.01	2.78	2.79	2.77	0.22	-0.01	0.02
Skilled workers	2.94	2.79	2.82	2.87	0.15	-0.03	-0.05
Infrastructure conditions	3.36	3.33	3.33	3.29	0.03	0.01	0.04
Power supply	4.00	3.90	3.89	3.87	0.10	0.01	0.01
Railway service	3.15	3.16	3.14	3.04	-0.01	0.01	0.10
Other infrastructure	2.94	2.95	2.95	2.95	-0.01	-0.01	0.01
Market intermediaries & service	3.20	3.05	2.99	2.86	0.15	0.06	0.13
Market intermediaries	3.23	3.08	3.01	2.87	0.16	0.06	0.15
Technical & export services	3.16	3.03	2.97	2.86	0.13	0.06	0.11
Ethical business environment	3.33	3.17	3.13	3.01	0.16	0.04	0.12
Overall	3.20	3.09	3.07	2.98	0.11	0.02	0.09

Table 11.6 Difference in business environment between enterprise scales (continued)

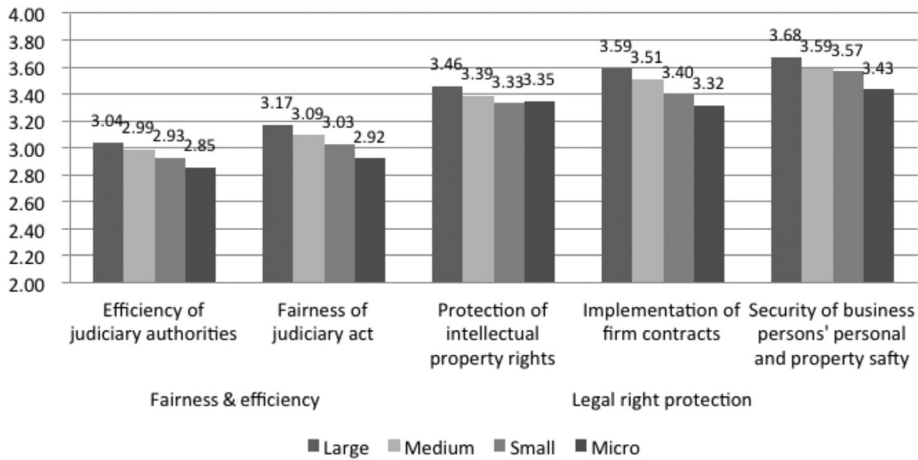
	Difference		t-ratio				
	L-I	M-I	L-M	M-S	S-I	L-I	M-I
Government administration	0.11	0.09	0.16	-0.15	1.61	1.38	1.50
Openness, fairness, equity	0.30	0.20	2.21 *	2.42 *	2.24 *	4.28 *	3.26 *
Government efficiency	0.01	0.01	-0.02	-1.97 *	1.01	0.10	0.12
Non-necessary intervention	-0.06	0.03	-1.98 *	-2.92 *	1.64	-0.92	0.34
Government cleanness	0.18	0.12	0.94	0.56	1.53	2.11 *	1.73
Legal environment	0.21	0.14	1.44	2.52 *	1.40	3.09 *	2.46 *
Fairness & efficiency	0.22	0.16	1.15	1.89	1.37	2.68 *	2.17 *
Legal right protection	0.21	0.13	1.74	2.67 *	1.27	3.23 *	2.43 *
Tax and non-tax burden	0.03	-0.05	1.88	0.63	-1.25	0.37	-0.97
Tax burden	0.14	0.00	2.30 *	0.92	-0.39	1.48	0.02
Non-tax collection	-0.07	-0.09	0.51	0.06	-1.62	-1.01	-1.51
Financial services	0.44	0.29	3.07 *	1.71	3.36 *	5.51 *	4.09 *
Formal financial services	0.62	0.34	6.00 *	4.31 *	3.31 *	8.57 *	5.28 *
Informal sector finance	0.26	0.23	0.49	0.13	2.60 *	2.58 *	2.61 *
Shortage in human resource	0.17	-0.01	3.55 *	-0.61	0.11	2.14 *	-0.16
Technicians	0.21	0.02	3.29 *	-0.59	0.48	2.31 *	0.22
Managers	0.24	0.02	3.67 *	-0.17	0.30	2.56 *	0.23
Skilled workers	0.07	-0.08	2.54 *	-0.89	-0.59	0.79	-0.98
Infrastructure conditions	0.08	0.05	0.82	0.30	0.70	1.22	0.79
Power supply	0.13	0.02	1.95 *	0.30	0.19	1.58	0.31
Railway service	0.11	0.12	-0.15	0.39	1.38	1.17	1.45
Other infrastructure	-0.01	0.00	-0.23	-0.19	0.14	-0.10	0.05
Market intermediaries & services	0.34	0.19	3.77 *	2.84 *	2.60 *	5.76 *	3.67 *
Market intermediaries	0.37	0.21	3.82 *	2.74 *	2.81 *	6.18 *	3.84 *
Technical & export service	0.30	0.17	2.95 *	2.28 *	1.78	4.17 *	2.69 *
Ethical business environment	0.32	0.16	3.34 *	1.51	1.94 *	4.12 *	2.56 *
Overall	0.22	0.11	3.21 *	2.24 *	2.58 *	4.97 *	3.47 *

Note: t-ratio with * are significant at five per cent or higher levels. L, M, S and I in the table stands for large, medium, small and micro enterprises, respectively.

Source: Calculated using the data from the surveys.

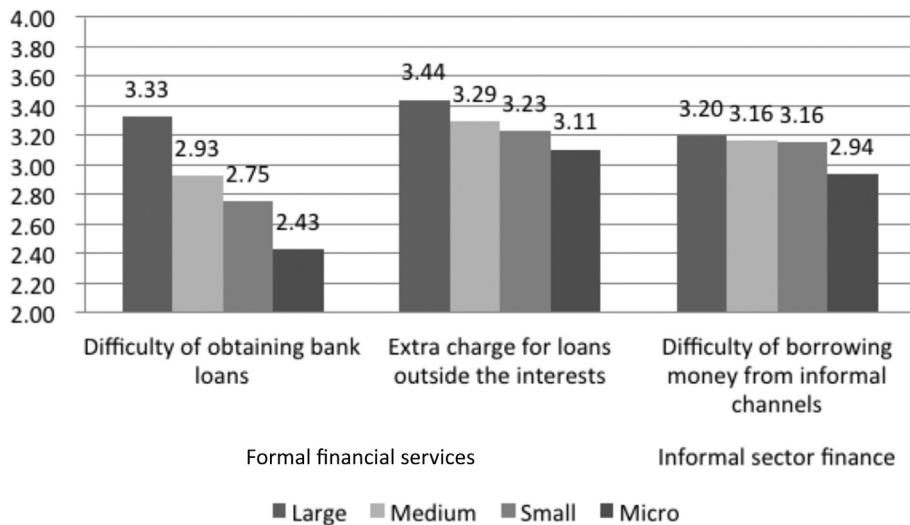
Figures 11.4 and 11.5 illustrate differences between enterprise scales in legal environment and financial services, respectively. They show clear differences among different enterprises by size.

Figure 11.4 Legal Environment Index for enterprise scales



Source: Calculated using the data from the survey.

Figure 11.5 Financial Services Index for enterprise scales



Source: Calculated using the data from the surveys.

The evidence provided in this section clearly indicates that larger enterprises enjoy favoured treatment by the government, which leaves small and micro enterprises to face discriminatory conditions. It is a priority to improve the business environment for small and micro enterprises by standardising treatment by government and implementing laws and regulations fairly.

In addition, some supportive policies may be needed; for example, promoting the development of guilds or chambers of commerce and other market intermediaries, to help small and micro enterprises in their business operations,

and improving vocational education and training programs so as to increase the numbers of technicians, managers and skilled workers that are needed by small and micro enterprises.

Business Environment in Different Sectors

In this section, the business environment in 18 different industrial sectors is examined. The 2012 survey covers enterprises in 19 sectors. Only a few enterprises are engaged in 'public management and social organisations', which are excluded in the following study.

From comparing business environment indexes in the 18 sectors, there is evidence of significant differentiation between them. They are grouped into three categories according to their overall environment scores and the eight area scores:

- The first group includes those sectors with overall scores falling below the average. This includes mining, construction, finance, real estate, education, and health, social security and social welfare. These sectors are found to have the following characteristics: dependence on natural resources that are not allocated via market, or monopolistic to certain extent (high concentration ratio), or having dual features of providing both public goods and private goods.
- The second group includes those sectors with scores or indexes around the average. They are agriculture, manufacturing, transport, wholesale and retail sales, hotels and catering services, leasing and business services, and services to households and other services. These sectors are generally subject to relatively high market competition.
- The third group includes those sectors with index scores mostly above the average. They are information transmission, computer services and software; management of water conservancy, environment and public facilities; culture, sports and entertainment; scientific research, technical services and geologic prospecting; and production and supply of electricity, gas and water. Among them, only the electricity sector (including gas and water) is a monopoly, whereas the rest can be classified as newly developed services sectors. They have developed faster because of either technical innovation and progress, or a growth in consumption.

Table 11.7 shows the overall index and area indexes of these sectors. The electricity sector is reclassified into the first group according to the nature of its production.

Table 11.7 Changing business environment in different sectors: area indexes and overall index

	Government administration	Legal environment	Tax & non-tax burden	Financial service	Human capital	Infrastructure	Market intermediaries	Ethical business environment	Overall
All	3.24	3.24	2.77	3.11	2.79	3.33	3.02	3.16	3.08
1	2.87	3.14	2.39	2.94	2.87	3.45	2.74	2.93	2.91
2	3.04	3.08	2.64	3.02	2.87	3.30	2.99	2.99	2.99
3	3.11	3.26	2.89	2.78	3.15	3.54	3.30	3.11	3.14
4	3.14	3.27	2.68	2.84	3.14	3.42	3.18	3.18	3.11
5	2.65	2.75	2.42	2.15	2.50	2.67	2.38	2.83	2.54
6	3.16	3.28	3.35	3.04	2.59	3.32	3.33	3.25	3.17
7	3.24	3.41	2.80	3.12	2.88	3.19	3.16	3.20	3.13
Ia	3.05	3.16	2.65	2.92	2.96	3.36	3.03	3.06	3.02
Ib	3.08	3.19	2.66	2.95	2.95	3.34	3.05	3.08	3.04
8	3.12	3.25	2.89	2.93	2.86	3.01	2.93	3.15	3.02
9	3.28	3.23	2.77	3.14	2.72	3.35	2.99	3.15	3.08
10	3.12	3.19	2.80	3.12	3.12	3.20	2.97	3.00	3.06
11	3.17	3.23	2.83	3.16	2.98	3.33	3.11	3.26	3.13
12	3.17	3.38	2.60	3.01	2.77	3.19	3.12	3.22	3.06
13	3.29	3.37	2.86	3.02	2.90	3.26	3.39	3.22	3.17
14	3.33	3.44	2.84	2.85	2.66	3.07	3.10	3.14	3.05
II	3.25	3.23	2.77	3.13	2.77	3.33	3.01	3.15	3.08
15	3.26	3.42	2.73	3.04	2.88	3.47	3.32	3.27	3.17
16	3.29	3.35	3.08	3.03	3.19	3.43	3.11	3.38	3.23
17	3.32	3.15	2.71	2.82	2.78	3.02	3.23	3.14	3.02
18	3.41	3.42	2.91	3.08	2.99	3.30	3.30	3.51	3.24
III	3.31	3.38	2.80	3.02	2.92	3.36	3.28	3.32	3.17

Note 1: The 18 sectors listed in the first column are: 1. Mining; 2. Construction; 3. Finance; 4. Real estate; 5. Education; 6. Health, social security and social welfare; 7. Production and supply of electricity, gas and water; 8. Agriculture; 9. Manufacturing; 10. Transport; 11. Wholesale and retail sales; 12. Hotels and catering services; 13. Leasing and business services; 14. Services to households and other services; 15. Information transmission, computer services and software; 16. Management of water conservancy, environment and public facilities; 17. Culture, sports and entertainment; and, 18. Scientific research, technical services and geologic prospecting.

2. The rows I, II and III are averages of the first, second and third groups, respectively. Ia excludes the electricity sector, and Ib includes this sector.

Source: Calculated using the data from the survey.

Five out of eight area indexes in the first group of sectors reported in Table 11.7 have significantly lower scores than the average, and the second group. They are government administration, legal environment for business, tax and non-tax burdens, financial services, and ethical business environment. Two area indexes are similar; that is, infrastructure conditions, and market intermediaries and technical services. Only one area index, supply of human resources, has a higher score than both the average and the second group. This may suggest that job seekers prefer this group of sectors over others, possibly because of the better pay and welfare that is offered in this group of sectors.

Table 11.8 shows differences in the environment scores of the three groups and their statistical significance. Regressions show that both negative and positive differences between the first and second groups in six areas are statistically significant at one per cent or five per cent respectively. Although the difference in one area index is positive and significant, that of the overall index is negative, consistent with the five areas, and significant at the ten per cent level.

Table 11.8 also indicates that the overall index, and seven out of eight area indexes of the second group, are lower than the third group, and statistically significant.

Sectors in the first group each have some characteristics which are different from others:

1. Dealing with natural resources. This includes mining and real estate (construction also relates to real estate). Mineral resources and land are allocated by government at different administrative levels, or, at least, not entirely allocated in competitive markets, therefore, they have some features of a monopoly.
2. Monopoly or oligopoly. The financial sector, for instance, has a high concentration ratio, as the market is dominated by a few large, commercial banks. Financial institutions are also subject to government regulations on interest rates, and interventions on loan extensions. There are entry barriers that act especially against small, private financial institutions. This has weakened the mechanism of market competition.
3. Dual producer. The education and health care sectors both provide public and private goods. Public institutions in these sectors normally have policy advantages as compared with private institutions, as they shoulder the responsibility for providing public services. They may also have disadvantages, as these sectors are subject to various kinds of government regulations. For example, the salary levels of doctors in public hospitals are restricted by government regulations, and are significantly lower than those in private hospitals, although they may have a better chance to obtain commissions from prescribing drugs to patients. In addition, due to information asymmetry between producers and consumers in these sectors, these sectors easily form a sellers' market, thus they have some similarities with monopolistic or oligopolistic sectors.

Table 11.8 Statistical significance of differences among three groups

	Government administration	Legal environment	Tax & non- tax burden	Financial service	Human capital	Infrastructure	Market intermediaries	Ethical business environment	Overall
I	3.05	3.16	2.65	2.92	2.96	3.36	3.03	3.06	3.02
II	3.25	3.23	2.77	3.13	2.77	3.33	3.01	3.15	3.08
III	3.31	3.38	2.80	3.02	2.92	3.36	3.28	3.32	3.17
I-II	-0.210**	-0.069	-0.140**	-0.233**	0.175**	0.037	0.020	-0.102*	-0.055'
II-III	-0.073	-0.143*	-0.017	0.123'	-0.150*	-0.050	-0.260**	-0.157*	-0.128**

Note 1: Group I in the table does not include the electricity sector;

Note 2: 'I-II' and 'II-III' show estimated differences, via regressions, between groups one and two, and groups two and three, respectively. They are not equal to the arithmetic differences, but close to them;

Note 3: The estimated differences with ', * and ** indicate significant at the ten per cent, five per cent and one per cent levels, respectively.

Source: Estimated using the data from the survey.

Although these sectors have different characteristics from each other, their common feature is that their market competition is naturally or administratively restricted. This has a negative effect on the business environment and the seriousness of this effect will depend on the extent to which government administration, particularly government transparency, policy openness, fairness and effectiveness as well as the legal framework apply, in those sectors.

Among those sectors with a certain level of monopoly or oligopoly, the electricity sector is an exceptional case. It has a high level of market concentration, and has higher scores in business environment indexes. This is related to the following situation: firms in a monopolistic or oligopolistic sector are divided into two situations, some have monopolistic status and therefore have advantages over others; other firms, usually smaller ones, do not have this status and are, therefore, in a situation of disadvantage in market competition. Normally the latter accounts for the largest proportion of firm, even in a monopolised sector. If, however, those firms with the status of a monopoly account for a large proportion in the sector, this may better explain why this sector has high scores in business environment. To separate out the sample firms in the electricity sector, we find that they have another distinctive feature. The proportion of SOEs in this sector is much higher than others, they account for 66 per cent of the total, whereas in the other sectors the highest ratio is only 37 per cent. As we have seen, the business environment assessments of SOEs are significantly higher than others, and this may explain why the difference exists between the electricity sector and others.

Table 11.9 shows that the first group of sectors have a higher proportion of large and medium enterprises than the second and third groups, and also a higher proportion of SOEs, whereas the electricity sector has even higher proportions than the first group, particularly in terms of the proportion of SOEs.

This shows that the higher scores in the electricity sector may be read negatively, especially if this occurred because the sector enjoys monopoly status or is treated favourably by the government.

Table 11.9 Scales and ownership types of the sample enterprises by sector groups

	Large	Medium	Small	Micro	Sum	SOEs	NSEs	Sum
All	9.1%	35.3%	50.8%	4.8%	100%	10.4%	89.6%	100%
Group I	11.9%	39.8%	43.9%	4.4%	100%	15.0%	85.0%	100%
Electricity	18.9%	45.3%	32.1%	3.8%	100%	66.0%	34.0%	100%
Group II	8.6%	35.2%	52.0%	4.3%	100%	8.9%	91.1%	100%
Group III	10.5%	25.0%	47.4%	17.1%	100%	13.2%	86.8%	100%

Note: Group I in the table does not include the electricity sector.

Source: Calculated using the data from the survey.

The results in Tables 11.7 and 11.8 also indicate that the third group of sectors has higher scores for the business environment than the second group. This is different from the situation of the electricity sector, as we do not see significant monopoly in the newly developed services sectors. Higher scores in the third group may be due to the following reason: product differentials that are often brought by technical progress or brand effects, may bring producers the status of a monopoly, and extra profits in certain periods; however, this kind of activity normally does not exclude market competition. Market competition can still work to push forward technical innovation and productivity growth. In addition, policy promotion in the areas of information technology, environment protection and R&D, may play positive roles.

The findings in this section show that sectors with sufficient market competition have better business environments than those monopolised sectors in general, showing the positive role of the market in allocating resources. Different kinds of monopolies have negative impacts on the business environment, however, this has different causes in different sectors. Therefore, countermeasures should accordingly be different, depending on the specific situation in a particular sector.

In those sectors that have high entry barriers and a high degree of government intervention, such as the financial sector, policy adjustment is required to limit those barriers and to promote the competitiveness of smaller private firms.

In sectors dealing with mineral and land resources, particularly petroleum, the priority is to improve the regulatory and legal framework to make the process of allocation of resources more transparent, competitive and fair, so that irregular operations and rent-seeking behaviours can be prevented or eliminated. Moreover, taxation systems that target the gains from natural resources and profits from monopolies should be improved to guarantee a balanced and fair income distribution.

In education, health care and other sectors producing both public and private goods, a double-track system with respect to both the market forces and government intervention should be well maintained to ensure that public services are effective, equitable and efficient.

Business Environment in Four Regions

The 29 provinces may be grouped into four regions, namely east, north-east, centre and west, to examine regional similarities and differences in the business environment.³ Provinces in each region have some common features in terms of their level of economic development, and cultural traditions. Table 11.10 provides both the overall index and area indexes in different years for the four regions. It is clear that the business environment in the east is better than in the north-east and centre, and that in the latter two is better than in the west.

In 2006, the scores of the overall index for the east, north-east, centre and west are 3.01, 2.90, 2.83 and 2.78, respectively. In 2012 improvement was evident in all four regions, which increased to 3.13, 3.09, 2.99 and 2.97. The north-east and west regions performed slightly better (both increased 0.19) than the centre (0.16) and east (only 0.12), and this reveals a tendency of convergence, although weak, among regions.

In terms of area indexes, all the areas, except infrastructure conditions, improved in all the four regions during the 2006–2012 period (tax and non-tax burden is excluded as it was added in 2012). Regional ranking of the area indexes is basically consistent with that of the overall index. The east had the highest ranking in most area indexes, except in the supply of human capital and infrastructure conditions across some years. The west still has the lowest scores in most area indexes, but surpassed the centre in legal environment and ethical business environment.

Table 11.10 shows that regional rankings are similar in most areas of the business environment. The relative patterns of scores in the four regions are also similar; in 2012, they all have the lowest scores for the supply of human resources, and the highest scores for infrastructure conditions. Compared with that in 2006, only financial services improved significantly faster than other area indexes, and all the rest of the area indexes achieved similar rankings in the four regions. These indicate that different regions in China face similar problems in their business environments, although their relative achievements with respect to improving their business environments differ.

3 There are ten provinces in the east region: Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. Only three provinces are in the north-east: Liaoning, Jilin and Heilongjiang. Six provinces are in the centre region: Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The west region consists of 12 provinces: Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Ningxia, Xinjiang, Qinghai and Tibet. In this study, Qinghai and Tibet are excluded due to insufficient sample firms.

Table 11.10 Changes in business environment in four regions

Year & region	Overall	Government administration	Legal environment	Financial service	Human capital	Infrastructure	Market intermediaries	Ethical business environment
2006								
All	2.88	3.00	2.99	2.41	2.48	3.54	2.83	2.92
East	3.01	3.14	3.10	2.55	2.51	3.68	3.01	3.10
North-east	2.90	3.05	3.02	2.36	2.54	3.61	2.85	2.88
Centre	2.83	2.92	2.92	2.41	2.51	3.45	2.76	2.85
West	2.78	2.91	2.94	2.30	2.42	3.43	2.69	2.81
2008								
All	3.09	3.15	3.24	2.90	2.74	3.57	2.96	3.06
East	3.18	3.26	3.29	3.01	2.74	3.70	3.09	3.19
North-east	3.12	3.19	3.28	2.84	2.79	3.68	2.97	3.05
Centre	3.03	3.08	3.19	2.81	2.74	3.45	2.91	3.03
West	3.02	3.09	3.20	2.86	2.71	3.48	2.85	2.96
2010								
All	3.00	3.11	3.10	2.82	2.68	3.19	3.01	3.07
East	3.11	3.22	3.17	2.93	2.70	3.39	3.15	3.21
North-east	2.96	3.06	3.05	2.69	2.82	3.09	2.98	3.05
Centre	3.00	3.13	3.11	2.83	2.73	3.14	2.99	3.05
West	2.90	3.01	3.05	2.74	2.59	3.05	2.89	2.95
2012								
All	3.05	3.16	3.21	3.07	2.79	3.29	2.98	3.09
East	3.13	3.30	3.28	3.11	2.84	3.35	3.12	3.22
North-east	3.09	3.18	3.28	3.08	2.84	3.39	3.02	3.18
Centre	2.99	3.10	3.13	3.05	2.81	3.28	2.88	2.96
West	2.97	3.06	3.15	3.04	2.70	3.20	2.88	3.00

Source: Calculated using the data from the survey.

Conclusions

Based on the four enterprise surveys conducted in 2006, 2008, 2010 and 2012, this chapter reports changes and regional differentials in the business environments of China's provinces in recent years, and discusses some of the policy implications. On the basis of the surveys, we constructed the BEIFCP, which is used to assess changes in eight areas of the business environment.

The results show, first, a general improvement in the business environment of China during the 2006–2012 period. We also identified, however, some of the developments that could negatively affect that environment. For example, the expansionary fiscal policy adopted by the government in response to the GFC over the sample period had the effect of squeezing out normal business demand for credit and, therefore, affected the non-state sector negatively. An alternative approach could be to adopt those measures that could mitigate the negative effects on the market mechanism, such as tax reduction for SMEs, public expenditure on education and social security, and protection of the environment.

Secondly, the top-ranking provinces in terms of business environment continue to be those in the eastern regions, even though the relative rankings change somewhat over the period. The survey data also show that there is a trend of convergence in the business environment across different provinces and this highlights the need, especially for those provinces in the central and western regions, to do more in improving their business environment.

Thirdly, most of the complaints that were expressed by surveyed firms concentrated on the aspect of 'openness, fairness, and equity' of policies and government administration. The problems experienced with this aspect of administration include the non-transparency of policies and government administration, unfair enforcement of regulations, and unequal treatment for different enterprises. Other issues with this area arise from 'inefficiency of government administration', 'non-necessary government intervention' and 'cleanness of government officials'. This result indicates the necessity of government sector reform, especially in terms of transparency, policy equity, self-discipline of the government, and public monitoring in order to further improve the business environment.

Fourthly, sectors with sufficient market competition are found to have a better business environment than those monopolised sectors in general, which illustrates the positive role played by the market in allocating resources. The results also show that there are some kinds of discriminatory practices that distinguish between SOEs and NSEs, which, in general, have a negative effect on the operation and performance of NSEs. It is necessary to adjust

relevant government policies to ensure both kinds of enterprises experience equal treatment. It is also a priority for the government to improve the business environment for small and micro enterprises, to standardise practices and apply fair implementation of the laws and regulations governing business activities in China.

Appendix: The Structure and Calculation Method of the Index

The BEIFCP consists of an overall index, eight area indexes, 19 sub-indexes and a total of 28 basic indexes. The overall index, area indexes and sub-indexes are available at the provincial, regional and national levels, and also for different types of enterprises and different sectors.

All the original data are from the surveys with enterprise owners or general managers who were asked to assess different aspects of the local business environment.

For developing the basic indexes, the percentage of each assessment in effective samples at the provincial level was used to derive weighted average scores. The average scores of a few basic indexes form a sub-index, and the average of a few sub-indexes constitute an area index. The overall index is an average of eight area indexes.

There are different methods for calculating an index system, including expert assessment, principal component analysis, and arithmetic averages. The expert assessment method relies on a group of experts who assess the weight of each indicator according to their relative importance, and then derive the weighted average for indexes. The principal component analysis method utilises correlations among variables to reduce the number of variables. In empirical studies it usually chooses the first-principal component that is based on certain hypotheses. Unlike the arithmetic average method, these two methods evaluate variables of different weights in different ways.

The following considerations led us to adopt the arithmetic average method in this study:

- The expert assessment method frequently exhibits arbitrary qualities, as evidenced by the same variables being given different weights by different expert groups, or the same expert group gives different weights to similar indicators on different occasions. This reduces the credibility of this method.
- The method of principal component analysis relies on hypotheses, which may not be sufficiently rational. Moreover, in time series analysis, the

- weights of variables generated by the principal component analysis method change over time and, thus, the calculation lacks comparability over years. The arithmetic average method does not have this shortcoming.
- Some international studies, and our own research experiences (e.g., Fan, Wang and Zhu 2011), indicate that when the number of variables is sufficiently large, both principal component analysis and arithmetic average method produce similar results, which show that they have a relationship of substitution.

Based on these considerations we believe that the arithmetic average method is a reasonable choice for this study.

In Table 11.A1, we provide the entire structure of the BEIFCP, including all the area indexes, sub-indexes and basic indexes.

Table 11.A1 The structure of the BEIFCP

Name of index	Category of the index
1. Government administration	Area index
1.1 Openness, fairness, and equity	Sub-index
1.1.1 Transparency of policies and regulations	Basic index
1.1.2 Fairness of regulation enforcement by administrative bodies	Basic index
1.1.3 Equal treatment of different enterprises	Basic index
1.2 Government efficiency	Sub-index
1.2.1 Convenience of obtaining administrative admissions	Basic index
1.3 Unnecessary government intervention	Sub-index
1.3.1 Over-intervention by the local government	Basic index
1.3.2 Proportion of time spent by firm managers dealing with government officials	Basic index
1.3.3 If entering a market is over restricted	Basic index
1.4 Government cleanness	Sub-index
1.4.1 Cleanness of government officials	Basic index
1.4.2 Informal payment of the form to gov. officials	Basic index
2. Legal environment for business	Area index
2.1 Fairness and efficiency in enforcement of laws	Sub-index
2.1.1 Efficiency of judiciary authorities	Basic index
2.1.2 Fairness of judiciary act	Basic index
2.2 Protection of the legal rights of business people	Sub-index
2.2.1 Implementation of firm contracts	Basic index
2.2.2 Security of the personal property of business people	Basic index
2.2.3 Protection of intellectual property rights	Basic index
3. Tax and non-tax burden of firms	Area index

Name of index	Category of the index
3.1 Tax burden of firms	Sub-index
3.1.1 Tax burden of firms	Basic index
3.2 Fees, collections and charges outside state regulation	Sub-index
3.1.2 Proportion of fees, collections and charges to total sales	Basic index
4. Financial services	Area index
4.1 Formal financial services	Sub-index
4.1.1 Difficulty of obtaining bank loans	Basic index
4.1.2 Extra charge for loans outside the interest	Basic index
4.2 Informal finance	Sub-index
4.2.1 Difficulty of borrowing money from informal channels	Basic index
5. Human resource supply	Area index
5.1 Technicians	Sub-index
5.1.1 Difficulty of finding technicians locally	Basic index
5.2 Managers	Sub-index
5.2.1 Difficult of finding managers locally	Basic index
5.3 Skilled workers	Sub-index
5.3.1 Difficulty of finding skilled workers locally	Basic index
6. Infrastructure conditions	Area index
6.1 Power supply	Sub-index
6.1.1 Power supply	Basic index
6.2 Rail transport	Sub-index
6.2.1 Rail transport	Basic index
6.3 Other infrastructure	Sub-index
6.3.2 Other infrastructure	Basic index
7. Market intermediaries and technical and export services	Area index
7.1 Market intermediaries	Sub-index
7.1.1 Local services of lawyers and accountants	Basic index
7.1.2 Development of local guilds and their helpfulness to business	Basic index
7.2 Technical and export services	Sub-index
7.2.1 Local conditions of technical and export services	Basic index
8. Ethical business environment	Area index
8.1 Local ethical business environment	Sub-index
8.1.1 Local ethical business environment	Basic index

Source: Authors' summary.

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