The impact of regional soft environment on SME performance in China:

Considering the moderating effect of firm life cycle

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Abstract—**Research on the affect of regional soft environment (RSE) influencing and accelerating Small and Medium Enterprises' (SME) performance has been paid great attention to by scholars recently. Based on literature review of relationship between external environment and SMEs, some propositions about RSE, SME performance and FLC are derived. On the ground of a survey data from 262 CEO-owners in Chinese SMEs, the paper tests the direct effect of RSE on SMEs performance and the moderating effect of FLC by regression analysis, and several important conclusions can be drawn. First, RSE does have a significantly positive impact on SME performance, whether for short-term or long-term one. Second, the six key components of RSE only have significantly positive influences on SME long-term performance, insignificant on the short-term performance. It means that RSE development in China is a long-term program, and its effect has a time lag. Third, FLC plays a negatively moderating role in the association between RSE and SME performance, which means there is a stronger linkage between RSE and SME performance when SMEs are in earlier stage of organizational life cycle. And finally, the effect and components of RSE on SME performance vary with organizational life cycle.**

Keywords—regional soft environment; SME performance; firm life cycle

I. INTRODUCTION

As the number of Chinese small- and medium-sized enterprises (SMEs) has been rapidly increasing over the past two decades, Chinese SMEs have contributed significantly to the national economy, employment and innovation. Nowadays, 99.8% of firms in China belong to SMEs, and 60% of national GDP and 70% of employment were contributed by SMEs in China. In order to facilitate the development of SMEs, Chinese government has issued a series of laws and policies, such as Law on Promoting Medium and Small Enterprises of the People's Republic of China (2003), the Guidelines of the State Council on Encouraging and Guiding the Development of Individual and Private and Other Non-public Economics (2005) and the Sound Development of Nongovernmental Investment (2010). Meanwhile, Wen Jiabao pointed, on government work report, that it should create a more supportive legal environment, political environment and

marketing environment for non-public economies in China. All of these efforts can be taken as regional soft environment (RSE) construction for SMEs [1]. Soft environment refers to the summation of all the systematic and spiritual situations created from the particular process of people's social practices and interactive activities [2]. RSE includes six key components, such as institutional environment (IE), government service environment (GSE), social culture environment (SCE), marketing environment (ME), educational and technological environment (ETE) and financial service environment (FSE) [3]. As it is more mature for developed countries on economic, political and legal systems, the issue of RSE construction is with Chinese characteristics.

Nevertheless, it's not significant for the practical performance of RSE on SMEs development, and there are still many problems Chinese SMEs are facing. Report on development of private enterprises in China showed that, 100,000 private enterprises died in every year while 150,000 enterprises were set up in the same year; 60% of SMEs would go into bankruptcy in next five years, and 85% of them would die in next 10 years. The average life of Chinese SMEs was only 4.5 years [4]. Nowadays Chinese SMEs are facing a more terrible condition than that in 2008 owing to the depression of international market and the high cost of domestic market. SMEs went to close down in groups even in more developed provinces in China (such as Zhejiang, Jiangsu and Guangdong). So, did the efforts of RSE construction play any role on SMEs?

In the literature, many scholars have done a lot of work to explain the phenomenon of short life of Chinese SMEs (e. g., Wei, 2005; Luo and Tang, 2009; Yu and Duan, 2012), and proposed several viewpoints such as entrepreneurs-based view, macro-control view and external environment view [5]. However, many of them are criticized for lacking of empirical support [6]. Even in a few of empirical research, they almost pay more focus on the moderating role of environmental uncertainty (see Lam and Yeung, 2010), or the direct effect of a single environmental element on performance of a listed company in Zhejiang or Jiangsu province based on official statistics (such as Luo and Tang, 2009; Fan and Yu, 2006). Yet to date, there is little empirical research on the direct

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effect of all RSE key components on SME performance, and little literature consider the moderating role of FLC between the relationships based on a survey data in Western China [7].

To better understand the actual effect of RSE on SME performance in western China, several questions need to be answered, especially as to whether and how RSE affects SME performance in western China with considering the moderating role of FLC. In this paper, firstly RSE and its key components are assumed to have direct significant and positive effects on SME performance, so examining the practical impact of RSE construction recently; secondly, a proposition about the moderating role of FLC on relationship between RSE and SME performance is derived based on theory of organizational life cycle, and its empirical result can give an important practical implication for local government to decide on and implement appropriate regional development strategies on SMEs; finally, this paper takes SMEs CEO-owners in Yunnan province as respondents, and tests the propositions based on a survey data. Our paper can not only provide a better understanding of the actual performance of RSE construction, but also can add to the literature of SMEs by addressing the theory behind the external environment of firms from transitional economies.

This paper is organized as follows. Section 2 discusses the literature on the theoretical foundations of external environment on SMEs. This allows us to derive a number of propositions which will be examined later. In section 3, we present our methodology and describe the data. Section 4 presents our findings based on a survey data from SMEs 262 CEO-owners. In the final section, we discuss our findings and conclude the paper by pointing out both the implications of our work and possible future research on the external environment of Chinese SMEs.

II. THEORETICAL BACKGROUND AND HYPOTHESES

A. Influence of RSE on SME performance

RSE refers to the sum of factors that can influence SMEs survival and development intangibly in certain administrative region and can be intervened artificially in the short term. According to Fan and Yu's research result in 2006, RSE includes six key factors-institutional environment (IE), government service environment(GSE), social cultural environment (SCE), marketing environment (ME), educational and technological environment (ETE) and financial service environment (FSE). With the development of some emerging economies (such as China, Poland, Russia), institutional change has emerged as a central topic by organizational researchers. Owing to the different extent of market, institutional transitions in emerging economies are qualitatively different from those in the west, and it is lack of understanding on how firms in emerging economies respond to such changes. Based on existing literature, Peng confirmed that external institutional environment plays a strong role in regulating economic exchanges in emerging economies, and has a significant influence over the behaviors of managers and their firms [6]. Based on such theoretical view, relationship between external environment and enterprises' competitive advantage or performance has become a hot topic in the field

of strategic management, and agreement exists about relationship between external environment and organizational performance [8]. Based on data of Chinese private listed enterprises during 2002-2005, Luo and Tang studied the performance of institutional environment, and found that the less protection on regional property right, the more powerful for government to intervene and the slower the financial development is, the more motivation will private enterprises have to build up relationship with government in China [9]. SMEs should take the external factors into account and integrate them with their internal resources positively [10]. Our reasoning leads to the following hypothesis:

H1. RSE is positively associated with SME performance.

Institutional environment (IE) refers to the policies and legal environment constructed by the state and regional government for supporting the start-up, survival and development of SMEs. It mainly includes the adaptability, completeness, stability, transparency and implementation efficiency of the supporting policies and laws. Owing to the weak self-regulation of market in the transition economies, it needs government take more effective measures to create a favorable environment to support the generation and development of SMEs. The successful experiences of SMEs in Central and Eastern Europe suggest that, the laws and policies issued by government have an important influence on local organizations. For example, Intellectual Property Law can provide various channels for managers to realize the value of intellectual property, which in turn determines the competitiveness of organizations; Trademark Law is used to protect the brand and reputation of firms, which will influence their financial performances indirectly [11]. In a sample of 297 SMEs from 19 countries, Delerue & Lejeunefound that the attributes of institutional environment can explain managerial use of secrecy [12]. Compared with large companies, it is more important for SMEs to have supporting legal and institutional rules [13]. Canovas & Kant examined the association between creditor protection (measured by the nature of legal rules and the quality of law enforcement) and multiple bank relationships using a unique survey sample of SMEs from 19 European countries, and its empirical result showed that SMEs in countries with a lower legal efficiency are more likely to establish multiple bank relationships [14]. Nguyen et al. examined the evolving relationships between market factors (such as business services, training and professional development, technological and information support services) and SMEs development in Vietnam [15]. The findings suggested that the state should take some commitment for supporting the growth of SMEs, such as developing an attracting environment, improving the tangible and intangible infrastructure, and so on. On the basis of such logic, we make the following prediction:

H1a. IE is positively associated with SME performance.

Government service environment (GSE) refers to the efficiency, degree of honesty, attitudes of government departments when servicing SMEs. Issues of government corruption and its negative effect are widely discussed in literature. The U.S. Agency for International Development (USAID) carried an investigation on corruption among 49

countries, and pointed that the more serious the corruption of a country was, the higher its capital cost was. International Monetary Fund (IMF) also points out that for countries with a higher degree of corruption, their return on investment are usually 5% lower than others in the world. Based on analyzing the data of 89 countries, Habib & Zurawicki found that whether in the host or home country, corruption had both the negative impacts on foreign direct investment (FDI) [16]. Since corruption has a negative effect on the country-level economy, it could also affect the firm-level performance. Exploiting a unique data set containing information on the estimated bribe payments of Ugandan firms, Fisman & Svensson studied the relationship between bribery payments and firm growth, and the regression result showed that bribery was negatively correlated with firm growth [17]. And it will reduce three percentage points of firm growth when increasing one-percentage point of the bribery rate. Based on a simple of 741 private firms in Vietnam, Nguyen & van Dijk found that corruption adversely affected the development of private firms [18]. The serious bureaucracy is one of the main challenges Malaysian SMEs face. It's so complex for SMEs to obtain support from government that they have to ask for help from private sectors[19]. This discussion leads us to state the following hypothesis:

H1b. GSE is positively associated with SME performance.

Social cultural environment (SCE) refers to the cognitive notion and social environment in a region for supporting the start-up, survival and development of SMEs. It mainly includes openness, inclusiveness, innovation, competition of local culture. Although the present legal system tries its best to ensure the competitive environment between public organizations and private enterprises fair, it still has prejudice against SMEs in China. Unjust and distrust social recognition has a significantly negative impact on SMEs performance[20]. In a survey carried out by Majumdar et al., respondents had been asked to indicate to what extent they considered that thirteen factors were important to their business development, and the findings indicated that SMEs placed more emphasis on the need for "policy to create social awareness about the importance of SMEs in Vietnam" [21]. And culturally-based values have significant influence on new ventures[22]. This leads us to depict our hypothesis regarding the expected relationship between SCE and SME performance as follows.

H1c. SCE is positively associated with SME performance.

Marketing environment (ME) is the overall level of integrity, ethics, social responsibility and marketing consciousness enterprises shown in the competition. Meanwhile, scholars have paid more attention on relationship research between Corporate Social Responsibility (CSR) and financial performance. From the long-term perspective, CSR can promote the competitiveness of companies. Fraudulent financial reporting has had a strong negative effect on the capital markets [23]. As a kind of corporate social irresponsibility, corporate crime has not only an impact on the reputation of companies, but also causes the loss of financial performance and the incontinence of investors [24]. Based on a meta-analysis integrating 30 years of research, Orlitzky et al. found that there was a positive association between corporate

social performance (CSP) and corporate financial performance (CFP) across industries and across study contexts [25]. Sweeney exanimate the relationship between CSR and financial performance based on structural equation modeling (SEM), and the result showed that CSR had a significantly positive impact on corporate reputation, employee commitment and customer loyalty [26]. Longo et al. found that 63% of samples adopted a "socially responsible" behavior for ethical motivation and other motives, such as to increase market share, to improve company image, to improve relationships with employees, and to improve relations with the community [27]. Based on a sample of 122 Slovenian SMEs, the result of OLS regression revealed that trust did have a strong impact on performance [28]. The result of a large-scale survey among three European countries (i.e., Austria, Slovenia and the Czech Republic) revealed an important conclusion: although cooperation experience contributes to business performance, it is significantly higher for the contribution of maxim-based trust to success. The discussion above leads us to state the following hypothesis:

H1d. ME is positively associated with SME performance.

Educational and technological environment (ETE) refers to external intellective and technological environment that gives support for the start-up, survival and development of SMEs. It mainly includes the quality and quantity of local research institutions or universities, the convenience and effect of local professional training, the degree of combination of "production, teaching and research". Issue about innovation and how to improve its ability is a hot topic in the field of strategic management. Along with the increasingly competitive pressure, SMEs almost have no spare time or resources to create new knowledge for improving their competitive advantages. Now it is prevalent for SMEs to propel technological innovation and product development through external relations. Research on the linkage between universities and industries has been growing over time. And both the theories and practices about innovation show that, cooperative linkage with universities has a positive effect on industrial innovation. Approximately 10% of product and process innovations could not have been developed without supports of academic research [29]. Valle et al. pointed the importance of training on performance in service companies [30]. Considering the importance of high human capital, investment on training and its implement will be able to promote SMEs performance. On the basis of such logic, we make the following prediction:

H1e. ETE is positively associated with SME performance.

Financial service environment (FSE) refers to external financial service and assistance environment that gives financial support for the start-up, survival and development of SMEs. It mainly includes the convenience, availability, and reliability for local SMEs to get financial service, and the degree of transparency of local financial organizations. Financing is always the key obstacle for SMEs to develop. Compared with the unsound financial system by government in transition economies, the informal financial measures are more important for SMEs to use. Based on a survey data from over 4,000 firms in 54 countries, Beck et al. identified the

obstacles of firm performance and growth around the world [31]. The empirical result showed that in the large majority of countries, financing was the most important obstacle for firms to grow. Based on a survey data of 253 SMEs in India, Banerjee and Duflo found that there was a large acceleration in growth rate of sales and profits for firms with a direct credit [32]. And it is heterogeneous for the impact of subsidized credit among different types of firms. Exports of privately owned firms are highly affected by the subsidy exclusion, while those of large, publicly listed firms are unaffected. This leads us to depict our hypothesis regarding the expected relationship between FSE and SME performance as follows.

H1f. FSE is positively associated with SME performance.

B. The moderating role of FLC

The process of enterprises development is similar with the evolution of organic life. The average life expectancy of SMEs is 12.5 years old in west, while it is much shorter for Chinese SMEs, which is only 4.5 years. In order to explain the reasons of short life of SMEs in China, scholars have identified different external or internal factors with their own research views. The emergence of firm life cycle theory gives a new perspective for scholars to understand the evolution of SMEs. On the ground of 564 effective questionnaires returned, Zhang found that factors of internal environment influencing SME performance vary with organizational life cycle [33]. Specifically, in the start-up phase, marketing and technology play a very important role; in the growth stage, R & D capabilities and decision-making methods play key roles; in the diverse development stage, control systems and formalization play key roles; in the mature stage, management, brand and marketing play key roles. Based on theoretical review and practical analysis, Peng constructed an evaluation model of SMEs innovation milieu from eight factors: legal policy, government administration, marketing, financing, intermediary services, technology, human resources and social cultural milieu [34]. The empirical result showed that SMEs in mature stage were most satisfied with the innovational environment, follows by those in growth stage, and then in initial stage and revival stage. All of these studies have laid important foundations for this paper. Based on the viewpoint of institutional theory, the paper considers the moderating role of firm life cycle, and examines the effect of RSE key factors on SMEs performance during different stages. This paper can not only help a better understanding of the performance of RSE construction, but also can give some suggestions for government officers to decide on and implement appropriate regional development strategies.

Firm life cycle theory points out that, similar with an organism, any company experiences from birth to death, which is generally divided into four stages-initial, rapid, mature, and decline phase. Because it's different of the characteristics and issues of firms during different stages, it is necessary for managers to choose a specific strategy during each growth phase [7]. And the resource-based theory also suggests that, companies can get resources from external environment so to overcome the limit of internal resources. Theories about continuous development show that, firms in different organization life stages will have different issues to

deal with. Even the same factor will have different influences on a firm during different stages. Pei analyzed the issue about how to facilitate the healthy growth of high-tech SMEs from four levels-national, industrial, regional and enterprise, and the empirical result found that the growth of SMEs in Sichuan province varied with organizational life cycle [35]. However, policy makers mostly don't take the heterogeneous needs of SMEs among different phases into account, which makes the government policies work not well. Guan et al. analyzed the influences of exterior climate on SMEs growth based on a panel data of 12000 questionnaires from Chinese 11 cities, and found that the exterior climate had a prominent and positive influence on SMEs growth [36]. Based on a data of SMEs in five metropolises-Shenzhen, Guangzhou, Changsha, Zhengzhou, Chengdu during 2000-2007, Chen et al. evaluated and comparatively analyzed the relation between life cycle of SMEs and external environment, and the empirical result showed that the external environment had a significantly positive influence on SMEs' life cycle, and different external elements had different effects on FLC [37]. This leads us to depict our hypothesis regarding the expected moderating role of FLC on relationship between RSE and SME performance as follows.

H2. FLC plays a negatively moderating role in the relationship between RSE and SME performance, that is, the association between RSE and SME performance is more significant when organizational life stage is earlier.

III. METHODOLOGY

A. Sample

Given the hypotheses and the desire to have a better understanding of the studied phenomenon, we employed the empirical approach to test the hypotheses based on a survey data from SMEs CEO-owners in Yunnan province. The reason for using empirical approach is that in the literature, lots of studies on the phenomenon of short-lived SMEs in China were criticized for lacking of empirical support [6] and it has been widely recognized by scholars for the availability and applicability of the empirical approach to test the association among variables. Questionnaire was used as the primary tool for data collection in this study because it has been widely used as a cost-effective, time-saved way to study SMEs issues. Meanwhile, the usage of questionnaires can better understand the issues of SMEs from the perception of managers, not from the official statistics. A questionnaire was developed and translated into Chinese by the research team and back translated by a professional in a government department who works with SMEs.

In particular, a random selection of 1600 SMEs was made based on a roster of SMEs given by local government department in Yunnan province. The survey questionnaire contained three parts and consisted of 2 pages of survey items. In addition to the survey items, there is a space in the back inner page for the respondents to express their opinions about the development of regional soft environment in Yunnan province. A pre-paid return envelope was also enclosed in each questionnaire booklet. In total, 585 completed questionnaires were received, and the response rate was

36.56%. Apart from 323 invalid questionnaires, there were in total 262 useful data which formed our research sample. This response rate is not high but should be considered acceptable, because the response rate to random mail is frequently in the order of 10% to 33% in western contexts and 6.8% to 11.6% in Hong Kong.

B. Measures

Measurement of RSE was basically taken from Fan's (2010) study on relationship between RSE and competitive advantage of SMEs. Specifically, we measured RSE from six factors, which were institutional environment (five-item scale, α =0.914), government service environment(four-item measures, α =0.878), social cultural environment (four-item scale, α =0.739), marketing environment (six-item scale, α =0.902), educational and technological environment (five-item scale, α =0.908) and financial service environment (three-item scale, α =0.872) on a 7-point Likert scale ranging from "1=very untrue" to "7=very true" on the item statements describing the practice of external soft environment construction in Yunnan province.

As many authors have discussed different aspects of organizational life cycle (e.g., Boeker and Wiltbank, 2005; Dibrell et al., 2011), we adapted a life cycle model measure from Cao et al. (2009) to form a 4-item variable. All of these four items (i.e., staff growth, total asset growth, revenue growth, and profit and loss situation) were anchored on a 5-point scale from "1=with very slow growth" to "5=with very fast growth".

To measure SME performance, the use of scales is a better alternative than to use actual figures due to the unwillingness of the SME owners/managers to disclose these sensitive figures. Measurements for the two factors of SME performance, that is short-term performance and long-term performance, can be taken from Keh et al.'s scale. The measure takes the form of 10-item 7-point rating. The first five items with α =0.920 were adopted for short-term performance including sales growth, growth in market share, growth in profit, return on investment, and growth in employees. And long-term performance was measured by the following five items with α =0.860 including new product development, market development, customer satisfaction, social image, and the quality of staff. Respondents were asked to give their rating from "1=somewhat lower" to "7=a greater deal higher" on their companies' performance indicators as compared with their competitors.

To control for the potential confounds of age, gender and educational degree of CEO-owners, we collected the necessary demographic data from the respondents. Gender was measured with two categories that were 1= male and 2=female. For the age of respondents, we utilized four discrete categories (i.e., 1= less than 30 years old, 2=30-39 years old, 3=40-50 years old, and 4=over 50 years old). Respondents were asked to categorize their highest educational degree with the anchors ranging from 1=below Bachelor's degree, 2=Bachelor's degree, 3=Master's degree, and 4=PhD and above.

IV. RESULTS

The hypotheses about RSE, FLC and SME performance were evaluated using the ordinary least square (OLS) regression analysis with the enter method. Different from backward and stepwise methods, in the enter method, all independent variables are entered in a single step, and then the significance of the coefficients is calculated. Please note that, in the following content, total performance is the sum of factors of SME performance, and the value of RSE is the sum of its six key components. The hypotheses are supported if the coefficients of models whose dependent variable is total performance are significant ($p<0.1$). The significance of coefficients in models whose dependent variables are short-term or long-term performance only shows the specific path among variables.

A. Testing the relationship between RSE and SME performance

In testing H1, the principal component factors of RSE, were used instead of using the original composite variables so to avoid the potential problems of multicollinearity aroused from the high level of correlations between these environment factors, and the same handle for SME performance. This hypothesis was tested through OLS regression analysis with the total, short-term and long-term performance as the dependent variable respectively. The control variables of gender, age and educational degree were first entered in the regression equation, followed by RSE and its six key components. The results were shown in table 1and table 2.

As seen in table1, when controlling for gender, age and educational degree, a significantly positive effect was found between RSE and SME performance. Based on this evidence, H1 is supported. However, when taking the six key components of RSE as independent variables, the result of OLS regression showed that only four factors of RSE had significantly positive impacts on total performance, three significant on long-term performance, and non-significance on short-term performance (shown in table Ⅱ). These evidences showed that H1a, H1b, H1c and H1f are supported; H1d and H1e are not supported. A possible explanation is that the construction of regional soft environment is a long-term program and its effort has a time lag [3].

TABLE I. RESULTS OF OLS REGRESSION FOR H1 (ENTER METHOD)

variables	dependent variables					
	total performance		short-term performance		long-term performance	
	Step1	Step2	Step1	Step2	Step1	Step2
	β^a	β^a	β^a	β^a	β^a	β^a
Controls						
gender	0.014	0.024	0.024	0.018	-0.004	-0.018
age	0.134*	0.161**	0.161**	0.150**	0.029	0.004
educational degree	-0.002	0.114*	0.114*	0.103	-0.117	-0.142**
Independent variables						
RSE		**0.286*****		**0.122****		**0.283*****
R^2	0.022	0.101	0.041	0.055	0.018	0.095
Adjusted R^2	0.003	0.079	0.022	0.033	0.000	0.074
F value	1.143	**4.757*****	**2.195***	**2.485****	0.949	**4.469*****

Note: β^a is the standardized regression coefficient; *p<0.1; ** p<0.05; *** p<0.001

TABLE II.   RESULTS OF OLS REGRESSION FOR H1A-H1F (ENTER METHOD)

variables	dependent variables					
	total performance		short-term performance		long-term performance	
	Step1	Step2	Step1	Step2	Step1	Step2
	β^a	β^a	β^a	β^a	β^a	β^a
Controls						
gender	0.014	-0.006	0.024	0.013	-0.004	-0.021
age	.0134*	0.113	0.161**	0.159**	0.029	0.001
educational degree	-0.002	-0.008	0.114*	0.125*	-0.117	-0.137**
Independent variables						
IE		**0.204***		0.069		**0.220***
GSE		**0.152**		-0.007		**0.222***
SCE		**0.111*		0.063		**0.094*
ME		0.060		0.066		0.019
ETE		0.057		0.016		0.064
FSE		**0.111*		0.087		0.070
R^2	0.022	0.116	0.041	0.061	0.018	0.132
Adjusted R^2	0.003	0.077	0.022	0.020	0.000	0.093
F value	1.143	**2.984***	**2.195*	1.485	0.949	**3.446***

Note: β a is the standardized regression coefficient; *p<0.1; ** p<0.05; *** p<0.001

B. Testing the moderating role of FLC

When the moderator variable is categorical, it can be used as a grouping variable without further refinement. Once the observations are grouped, the model with the direct effects is estimated separately for each group of observations. Differences in the model parameters among different data groups are interpreted as moderating effects. Because the moderator variable in this paper is FLC which includes four discrete categories, we divided the total sample into four subsamples in term of life cycle stage SMEs are in. And the group result showed that 27 SMEs were in the initial growth stage which named as subsample 1, subsample 2 contained 140 SMEs that were in rapid growth stage, subsample 3 contained 83 SMEs that were in mature stage, and subsample 4 contained 12 SMEs that were in decline stage. Owing to such few samples in subsample 4, we only tested the moderating role of FLC within subsample 1, 2 and 3.

For H2, we hypothesized a moderating effect through FLC for RSE to SMEs performance relationship. Specifically, we articulated that the association between RSE and SME performance (1) would be most positive and significant when organizational life cycle is early and (2) would be least positive and significant when organizational life cycle is in the later stages. To test this relationship, we created three models where the independent variable was RSE, and the dependent variables were total, short-term and long-term performance respectively. Table Ⅲ and Ⅳ showed the regression results.

As seen in table Ⅲ, in the regression models where the dependent variable was total performance, the coefficients of three subgroup regression models were all significant (Sig. F change <0.05), which showed FLC did have a moderating role on the association of RSE and SME performance. Meanwhile, RSE explained 21.8%, 17.2% and 3.2% of the variance of SME total performance, which meant RSE had a less explanation for SMEs in a later life cycle stage. Table Ⅳ showed the coefficients and their significances. As shown in table Ⅳ, RSE had a significantly positive effect on total

performance of SME during initial, rapid growth and mature stage respectively (P<0.05). Besides, compared the standardized coefficient of RSE in each regression model (i.e., 0.498, 0.437, and 0.196), RSE had the most significantly positive effect on total performance of SMEs in initial growth stage, followed by in rapid growth stage, and the last is in mature phase. The above evidence indicated support for H2.

In order to examine the specific effects of RSE factors on SME performance in initial stage, we created regression models where RSE six elements were taken as independent variables and total, short-term and long-term performance were taken as dependent variables respectively. The control variables of gender, age and educational degree were first entered in the regression equation followed by RSE six factors. The regression result was shown in table Ⅴ.

TABLE III.   THE SUMMARY RESULTS OF GROUP REGRESSION MODELS

Dependent variables	Life stage	R^2	Adjusted R^2	Estimated standard deviation	Change statistics		
					R^2 change	F change	Sig. F change
total performance	1	0.248	**0.218**	0.669	0.248	8.228	**0.008**
	2	0.182	**0.172**	0.642	0.182	18.076	**0.000**
	3	0.039	**0.032**	0.653	0.039	5.536	**0.020**
short-term performance	1	0.309	**0.281**	0.969	0.309	11.177	**0.003**
	2	0.055	**0.044**	0.927	0.055	4.759	**0.032**
	3	0.002	-0.005	0.953	0.002	0.344	0.559
long-term performance	1	0.011	-0.029	1.155	0.011	0.270	0.608
	2	0.144	**0.133**	0.932	0.144	13.623	**0.000**
	3	0.051	**0.044**	0.920	0.051	7.470	**0.007**

Note: * <0.1; ** <0.05; *** <0.001

Apart form table 3，we can see something from table 4,it includes coefficients and their significance.

TABLE IV.   COEFFICIENTS AND THEIR SIGNIFICANCE

Dependent variables	Life stage		Unstandardized coefficients		standardized coefficients
			B	Std. Error	Beta
total performance	1	(constant)	-0.200	0.133	
		RSE	1.078	0.376	**0.498**
	2	(constant)	-0.042	0.071	
		RSE	0.754	0.177	**0.427***
	3	(constant)	0.085	0.055	
		RSE	0.307	0.131	**0.196**
short-term performance	1	(constant)	-0.403	0.192	
		RSE	1.820	0.544	**0.556**
	2	(constant)	-0.057	0.102	
		RSE	0.558	0.256	**0.236**
	3	(constant)	0.134	0.081	
		RSE	0.112	0.191	0.050
long-term performance	1	(constant)	0.004	0.229	
		RSE	0.337	0.649	0.103
	2	(constant)	-0.028	0.103	
		RSE	0.950	0.257	**0.379***
	3	(constant)	0.036	0.078	
		RSE	0.503	0.184	**0.227**

TABLE V. THE EFFECT OF RSE ELEMENTS ON SME IN INITIAL STAGE

variables	dependent variables					
	total performance		short-term performance		long-term performance	
	Step1	Step2	Step1	Step2	Step1	Step2
	β^a	β^a	β^a	β^a	β^a	β^a
Controls						
gender	0.014	-0.165	0.024	-0.119	-0.004	-0.101
age	0.134*	-0.006	0.161**	0.355*	0.029	-0.364
educational degree	-0.002	-0.331	0.114*	0.245	-0.117	0.685*
Independent variables						
IE		**0.254***		**0.235***		0.340
GSE		**0.419***		0.075		**0.514****
SCE		0.035		0.124		-0.078
ME		0.213		0.171		0.111
ETE		**0.434***		**0.327***		0.219
FSE		**0.463****		**0.396****		0.248
R^2	0.022	0.474	0.041	0.673	0.018	0.360
Adjusted R^2	0.003	0.288	0.022	0.433	0.000	0.110
F value	1.143	**2.228****	2.195*	**2.806****	0.949	0.766

Note: β^a is the standardized regression coefficient; *p<0.1; ** p<0.05; *** p<0.001

As seen in table Ⅴ, when we only entered the control variables, it was obvious that these variables had little explanation for SME performance (whether for total performance, or for short-term or long-term performance). However, when the factors of RSE were entered followed by, it then indicated two significant models with F value from 2.228 to 2.806 and R2 from 0.474 to 0.673. Specifically, IE, GSE, ETE and FSE had significantly positive effects on start-up SMEs total performance (P<0.1). Meanwhile, compared the standardized coefficient of each RSE component (i.e., 0.254, 0.419, 0.434, and 0.463) in this regression model, FSE had the most significantly positive effect on total performance of SMEs in initial stage, followed by ETE, then is GSE and the last is IE.

We tested the effects of RSE factors on SMEs performance in rapid growth stage and mature stage through the same method above, and the final regression results were shown in table Ⅳ and table Ⅶ. As shown in table Ⅳ, when we only entered the control variables, it was obvious that these variables had very low explanation for SMEs performance (whether for total performance, or for short-term or long-term performance). However, when the factors of RSE were entered then, it was indicated that all of the models were significant, with F value from 2.075 to 3.385 and R2 from 0.251 to 0.344. Specifically, IE, GSE, SCE and ETE had significantly positive effects on total performance of SMEs in rapid growth stage (P<0.1). Meanwhile, it was known that GSE had the most significantly positive effect, followed by IE, then is ETE and the last is SCE through comparing the standardized coefficients of these RSE elements in regression model (i.e., 0.313, 0.327, 0.188, and 0.215). The regression results in table Ⅶ showed that among six key components of RSE, only IE had a significantly positive linkage with total performance of SMEs in mature life cycle stage.

TABLE VI. THE EFFECT OF RSE ELEMENTS ON SME IN RAPID GROWTH STAGE

variables	dependent variables					
	total performance		short-term performance		long-term performance	
	Step1	Step2	Step1	Step2	Step1	Step2
	β^a	β^a	β^a	β^a	β^a	β^a
Controls						
gender	0.014	0.228*	0.024	0.225*	-0.004	0.109
age	0.134*	0.045	0.161**	0.077	0.029	-0.010
educational degree	-0.002	0.046	0.114*	0.086	-0.117	-0.017
Independent variables						
IE		**0.313****		0.121		**0.326****
GSE		**0.327****		0.182		**0.289****
SCE		**0.188***		0.064		**0.212***
ME		-0.083		-0.104		-0.019
ETE		**0.215****		**0.316****		0.005
FSE		0.121		0.074		0.101
R^2	0.022	0.344	0.041	0.243	0.018	0.251
Adjusted R^2	0.003	0.242	0.022	0.126	0.000	0.135
F value	1.143	**3.385****	2.195*	**2.075****	0.949	**2.163****

Note: β^a is the standardized regression coefficient; *p<0.1; ** p<0.05; *** p<0.001

TABLE VII. THE EFFECT OF RSE ELEMENTS ON SME IN MATURE STAGE

variables	dependent variables					
	total performance		short-term performance		long-term performance	
	Step1	Step2	Step1	Step2	Step1	Step2
	β^a	β^a	β^a	β^a	β^a	β^a
Controls						
gender	0.014	-0.106	0.024	-0.021	-0.004	-0.129
age	0.134*	0.094	0.161**	0.142	0.029	-0.011
educational degree	-0.002	-0.003	0.114*	0.121	-0.117	-0.126
Independent variables						
IE		**0.233****		**0.156***		**0.171****
GSE		-0.025		**0.162***		0.129
SCE		0.074		-0.010		0.114
ME		0.084		0.085		0.032
ETE		-0.023		-0.101		0.070
FSE		0.110		0.077		0.077
R^2	0.022	0.130	0.041	0.100	0.018	0.117
Adjusted R^2	0.003	0.054	0.022	0.022	0.000	0.041
F value	1.143	**1.759***	2.195*	1.287	0.949	1.546

Note: β^a is the standardized regression coefficient; *p<0.1; ** p<0.05; *** p<0.001

V. DISCUSSION AND CONCLUSION

In order to examine the performance of regional soft environment construction in China, this paper firstly derived some propositions about RSE, SMEs performance and FLC based on literature review. And then on the ground of a survey data from 262 SMEs CEO-owners, the paper used OLS regression method to test the direct effect of RSE on SMEs performance and the moderating effect of FLC. Finally, several conclusions were drawn as follows.

Conclusion 1: RSE construction in China is a long-term program, and its effect has a time lag. For H1, we hypothesized a positive association between RSE and SMEs performance, and found a significant relationship resulting in support for H1. Meanwhile, the empirical result also showed that the six factors of RSE only had positive and significant influences on SMEs long-term performance, not the short-

term performance. That means RSE construction in China is a long-term program, and its effect has a time lag.

Conclusion 2: the effect and factors of RSE on SME performance vary with organizational life cycle, which means the keys of regional soft environment construction should vary with SMEs' life cycle. For H2, we hypothesized the moderating effect through firm life cycle for regional soft environment to SMEs performance relationship. The empirical result showed that FLC actually played a moderating role in the relationship between RSE and SMEs performance, and such linkage would be stronger when SMEs were in earlier stage of organizational life cycle. Meanwhile, it also found that the significantly influencing factors of RSE on SME performance varied with organizational life cycle. Specifically, four components of RSE (i.e. IE, GSE, ETE and FSE) had significantly positive effects on start-up SMEs total performance, and financial service environment (FSE) was the most significant component of RSE; IE, GSE, SCE and ETE had significantly positive effects on total performance of SMEs in rapid growth stage, and government service environment(GSE) was the most significant component of RSE; In the maturity stage of firm life cycle, only institutional environment (IE) had a significant impact on SMEs performance.

The findings of this study have implications for policy-makers and scholars. Since Chinese SMEs have been growing exponentially over the past two decades, their contribution to Chinese economy has increased dramatically. For Chinese government policy-makers, this paper has at least three implications. First, it confirmed the importance of regional soft environment construction through examining the direct effect of RSE on SMEs performance. So policy-makers should insist on creating favorable external environment to support SMEs, especially in transition economies. Second, policy-makers must understand the long term and time lagging of efforts on regional soft environment construction. So it's wrong for policy-makers to think that if something was worked for SMEs, then SMEs will receive something immediately. Third, through examining the moderating role of FLC on relationship between RSE and SMEs performance, this paper identified an important conclusion that the keys of regional soft environment construction should vary with SMEs' life cycle. So it's necessary for local government departments to decide on and implement different policies in term of different life cycle stages local SMEs are in.

Similar with any empirical study, our limitations are for the most part based on our use of mail questionnaires to study SMEs, such as the use of single respondents. To help limit the potential effects associated with the competency of the single respondent, we only included respondents (i.e., owners or CEOs) that we recognized to be actively familiar with the external environment of SMEs.

In addition, our work was based on a single region of China (i.e., Yunnan province) in an attempt to control for regional context to limit potential confounding effects associated with the inclusion of multiple regions in one sample. Thus, the findings of our study are only generalizable to SMEs in other regions and in nations that share common attributes associated with Yunnan province and China.

Future research could build on these findings through inclusion of additional variables such as the capability for SMEs managers to identify, assess and exploit external opportunities, because it is very important to consider the perception of SMEs top managers when evaluating the practical performance of regional soft environment construction. Similarly, future research should examine a broader range of regions to increase the overall generalizability of our findings.

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