

A STUDY OF SUSTAINABLE BUSINESS MODELS FOR SMALL AND  
MEDIUM ENTERPRISES IN CHINA

A Thesis  
by  
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## **Abstract**

### **A STUDY OF SUSTAINABLE BUSINESS MODELS FOR SMALL AND MEDIUM ENTERPRISES IN CHINA**

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Although studies of sustainability business models are increasingly popular in the literature, most businesses in China seldom include sustainability elements or the triple bottom line concept in their business model design. Given the fact that China has developed and become a stronger player in the global economy, sustainable practices and triple-bottom-line, business models (social, economic and environmental sustainability), should be better represented. This paper illustrates the Triple Bottom Line (TBL) concept of business models for Small and Medium Enterprises (SMEs) in China. It also examines Chinese SMEs' perception of their own corporate development in reference to sustainability and their understanding of the TBL concept. A Pyramid of Chinese SMEs' Sustainability Values and a Chinese SMEs' Sustainability Credit Score (SCS) are designed and informed by the literature review; a SWOT analysis from the TBL perspective and a survey that focuses on Chinese SMEs' perceptions of sustainability are developed. Sustainable business models for Chinese SMEs can be customized by using the two tools, SWOT analysis and SCS.

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# A STUDY OF SUSTAINABLE BUSINESS MODELS FOR SMALL AND MEDIUM ENTERPRISES IN CHINA

## **Introduction**

Sustainable business is a relatively new trend in today's business world. This is illustrated by a survey conducted by PricewaterhouseCoopers, which found that among 900 global corporations, 80% of CEOs said they believe "sustainability" is or soon will be vital to the profitability of their company, and 71% said they would consider sacrificing short-term profit to move their company toward sustainability (Savitz & Weber, 2006). Sustainability is the ability to maintain or improve the societal, ecological and economic spectrum (TrendsActive, 2012). This is a new trend that has a tremendous impact on people's lives and more sustainable activity from business is demanded by consumers, which motivates more companies to conduct sustainable business in order to be more competitive. For example, Whole Foods created a niche market for consumers who pursued lives focused on health and sustainability (LOHAS).

Sustainability reporting is increasing; this mainly is driven by government, companies' desire to improve their performance and increasing attention on sustainability issues. In 2006, for the first time, investors asked the S&P 500 to start using the reporting framework, GRI (Global Report Initiatives), but fewer than 100 companies participated (GreenBiz, 2006). However, that number has grown to more than 1,000 as of 2010 and is climbing. In 2011, the Governance & Accountability Institute (G & A Institute) stated that 53% of 500 companies indexed by Standard and Poor's issued sustainability reports (Record Number of U.S.

Companies Issuing Sustainability Reports). In China, however, sustainability reporting is not as prevalent. While there was only one company in China, State Grid, that filed a CSR report in 2006, there were 1,722 companies that issued CSR reports in 2012, which was still only a quarter of all state-owned companies (Larson, 2013). This contrast makes clear that China as an emerging nation must move more quickly to catch this sustainability train. As China develops and becomes a stronger player in the global economy, its role in sustainability efforts must also evolve.

Due to the integration of supply chains, small-medium enterprises (SMEs) are affected by the current sustainability trend also, especially since a majority of companies in China are SMEs, and the probability of SMEs participating in the supply chain for a sustainable project is very high. In 2010, Zheng Xin, deputy director of the SMEs division of the Ministry of Industry and Information Technology (MIIT) said “the number of SMEs has exceeded 10 million, accounting for 99% of the total enterprises. Of that number, those with fewer than 300 employees account for nearly 96%. The SMEs contribute 60% of China's GDP, 50% of tax revenue and 80% of urban employment (Liang, 2010)”. He also mentioned that SMEs have become an important force in the Chinese national economy. However, statistics showed that the average life of Chinese SMEs is only 11.1 years; half of them cannot survive more than 10 years (1000plan, 2013).

With such a high turnover rate among SMEs in China, the question is whether SMEs in China need a more sustainable business model to join the business mainstream, especially since the top 500 companies are already making strategic plans around sustainability. Since SMEs in China play an important role in China's economy and China is the second largest



nation in the world (economic), this question must be taken seriously and SMEs' sustainability progress must be monitored constantly.

The research questions posed here are:

- 1) How can SMEs in China become more sustainable?
- 2) What would a sustainable business model for Chinese SMEs look like?

In order to improve the acceptance and feasibility of sustainable business models for SMEs in China, this paper will answer the research questions posed above by integrating a literature review, and by conducting surveys with Chinese SMEs' managers about their perception of sustainable business. The objective of this paper is to quantify the Triple Bottom Line concept in order to make an effective decision about whether SMEs in China need sustainable business models and what specific sustainable business models would be successful in China. Overall, the intended outcome of this paper is to design a feasible sustainable business model that can help SMEs in China succeed and develop as more prosperous firms.

Research methodology of this paper includes a review of the literature that addresses:

- Existing studies of how current business managers in China perceive sustainable business models.
- The efficacy of other existing studies related to sustainable business models in the world.
- Current SMEs' business models in China.
- Existing sustainable business models in China.
- China's ongoing studies of sustainable initiatives

Interviews will be conducted to explore the current sustainability status of Chinese SMEs and what managers of SMEs think about sustainable business. A SWOT study of SMEs based on the understanding of the Chinese business model and on interviews with Chinese SMEs' managers will be done from the perspective of the Triple Bottom Line (considering this is one of main metrics of sustainability). Furthermore, a diagnostic tool will be designed in order to determine whether SMEs in China should have sustainable business models by assessing their status from a Triple Bottom Line perspective. If the answer is yes, what should sustainable business models look like?

## **Literature Review**

This literature review will be organized as follow: first, the concept of sustainability will be defined and explored; second, a review of SMEs in China will profile several business examples; third, the literature on diagnostic tools for sustainability assessment will follow. Finally, Chinese business models are examined in the light of their historical characteristics.

## **Sustainable Business Development**

Sustainable development is commonly defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 41). The World Commission on Environment and Development (WCED) also conceptualized sustainable development as a process of change rather than a fixed state of harmony. WCED explained that the “exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs” (WCED, 1987, p. 17). Moreover, sustainable business can be defined as concentrating on integrating the social, economic, environmental success and having minimal impact globally and locally (Cooney, 2009); these three elements bring us the concept of the “Triple Bottom Line (TBL).”

John Elkington, the founder of a British consultancy called SustainAbility, first introduced this concept in 1994. He argued that companies should prepare three different

bottom lines (also called the “three Ps”); one is what most companies often keep in mind – profit, measuring their financial performance, return on investment, shareholder value and the broader economic posture. The second bottom line measures the “people account”; to some extent, companies should have a sense of what impact they have on the society in which they operate. The third bottom line is the “planet account,” which measures companies’ environmental responsibility. Companies with a positive Triple Bottom Line should have a positive impact on the 3Ps (profit, people, planet), which should reflect an increase in companies’ values, especially social, environmental, and shareholders’ benefits from the companies’ operations (see Table 1) (Savitz & Weber, 2006).

**Table 1.** Typical measures for Triple Bottom Line

|                  | <i>Economic</i>     | <i>Environmental</i> | <i>Social</i>          |
|------------------|---------------------|----------------------|------------------------|
| Typical Measures | Sales, profits, ROI | Air quality          | Labor practices        |
|                  | Taxes paid          | Water quality        | Community impacts      |
|                  | Monetary flows      | Energy usage         | Human rights           |
|                  | Jobs created        | Waste produced       | Product responsibility |
|                  | TOTAL               | TOTAL                | TOTAL                  |

*Source: Savitz, A. (2013). Triple Bottom Line : How Today's Best-Run Companies Are Achieving Economic, Social and Environmental Success - and How You Can Too. Somerset, NJ, USA: John Wiley & Sons. Retrieved from www.ebrary.com.wncln.wncln.org*

John Prestbo, president of the Dow Jones Index said, “Companies pursuing growth in the triple bottom line tend to display superior stock market performance with favorable risk-return profiles” (Prestbo, 2000). Indeed, companies practice triple bottom line performance and accounting (goals and reporting) in their operations not only for moral and ethical reasons, but also because it is profitable. Given the fact that companies are assessed by

stakeholders (employees, customers, business partners, the communities in which they operate, and shareholders), the TBL brings all three elements together to manage companies' performances. A growing majority of corporations (68% of the top 250 global companies on the Fortune 500) have embraced TBL public reporting, alternately termed "corporate responsibility" or "sustainability reporting" (Colbert & Kurucz, 2007).

Also, in the editorial, "Business sustainability: It is about time" (Bansal & DesJardine, 2014), argued that sustainable businesses are about managing the inter-temporal trade-off in strategic decision making, which means that sustainable business should put time (organizational and societal long-term and short-term goals) at the center of the decision-making process, instead of only short-term financial benefits which compromise the companies' ability to meet future needs. Similarly, Savitz and Weber's (2006) studies show that sustainable organizations and societies in the business world often outlive the ones that deplete their capital (natural resources, such as water, air, sources of energy, and foodstuffs).

In China's business literature, the concept of sustainable business and TBL is relatively new to companies. This lack of awareness of the need for sustainability is a result of poor environmental performance, even though China has witnessed tremendous economic growth since economic reform in the 1980s. Industry in China has consumed a great deal of the world's resources (7.4% oil, 30% coal, 31% iron-ore, 27% steel, 25% alumina and 20% cement) during the period since the sixth 5-year plan for national economic development (1980-1985); however, the GDP as measured conventionally averaged just 4% over the same time period (1985-2004) (Ma, 2004). Nevertheless, manufacturing waste has caused many serious pollution problems, such as the industrial waste leakage into the Songhua River which polluted 5 km of drinking-water access in 2005; as a result, the citizens in the city of

Haerbin did not have clean water access for several days, which caused a panic both in the city and in the nation. Chan, in his book of China's compliance in global environmental affairs, examines China's industrial pollution as follows (Chan, 2006):

1. A third of the country suffers from severe soil erosion;
2. 75 % of its lakes and about half of its rivers have been polluted;
3. 75% of its wastewater is discharged untreated;
4. 60% of its people are drinking water that does not meet the World Health Organization's minimum acceptable standard;
5. One in four people die of respiratory diseases;
6. China is also one of the world's largest contributors to global climate change and
7. An international survey on the environmental sustainability of 24 selected countries in 2001 puts China near the bottom of a ranking of environmentally clean countries.

Chinese industrial, large-resource consumption and waste pollution might benefit companies economically in the short term, but that short-term prosperity might not continue in the long-term, considering that the profit is at the cost of stakeholders (community, customers, employees).

### **Small and Medium Enterprises in China**

The World Trade Organization (WTO) defined small and medium enterprises (SMEs) or small and medium-sized businesses (SMBs) as companies whose personnel numbers fall below certain limits. The abbreviation "SME" is used in the European Union and by international organizations such as the World Bank, the United Nations and the World Trade Organization (WTO). The European Commission defined SMEs in 2003 as enterprises

which employ fewer than 250 people and which have an annual turnover not exceeding 50 million euros, and/or an annual balance sheet total not exceeding 43 million euros (European Commission, 2005). SMEs in China are also defined by these three measures, but the Central People's government of PR China details SMEs in different industries with different measurements. For example, manufacturing industry SMEs are enterprises which employ fewer than 2,000 and have an annual turnover not exceeding \$48.4 million and/or an annual balance sheet total not exceeding \$64.5 million. For the retail industry, compared to the manufacturing industry, the numbers are much smaller. In this paper, I will mainly target manufacturing SMEs in China, since China plays such an important role as a "world factory" and the manufacturing industries have a relatively greater impact globally than other Chinese businesses (Ministry of Industry and Information Technology, 2011).

Small enterprises outnumber large companies by a wide margin, employ many more people and are becoming a more important economic force in most nations, according to the WCED, but small medium-sized industries are always in a vulnerable position when it comes to damaging the environment because they simply cannot afford the changes necessary to meet environmental regulations. Since SMEs, in many countries, are the largest segment of industry, WCED has suggested that the government must be the main driver to provide financial support and information if necessary. For example, governments can encourage SMEs research and encourage and support the use of pollution-control and waste-treatment facilities. China's state-owned companies are more involved in terms of the triple bottom line than SMEs, mainly because of government funding.

In contrast to Small Medium Size enterprises, state-owned companies have more funding when it comes to making changes; so, to some extent, they have a greater ability to

adopt sustainable policies that will cause some adjustment in operations. An interview with Jinben Lin, who is a president of Fujian Energy Group Co. LTD, a state-owned company, illustrates the company's strategic plan and policy based on China's macro-economic plan. After presenting Agenda 21, a voluntary action plan on sustainable development, to the United Nations (UN), the Chinese government required state-owned companies to make some changes in order to meet the outline of this agenda. In the interview, Mr. Lin said, "we will not only bring people economic growth, but will maintain a good living environment and ecosystem" (Lin, 2014). Specifically, they want to create safe, clean energy production including mining and power generation (61.5% green energy). Based on a conversation with an employee in the production department of Fujian Energy Group, the company has organized a safety training program for employees who work on the production line in order to strengthen employees' knowledge and awareness of safety issues at a cost of 10,000 RMB (USD\$1,500) per person (Lin, 2014).

In other words, state-owned enterprises have the ability to define the idea of sustainability as follows: "creates profit for its shareholders while protecting the environment and improving the lives of those with whom it interacts" (Savitz & Weber, 2006, p. 5).

### **Diagnostic Tools for Sustainable Assessment**

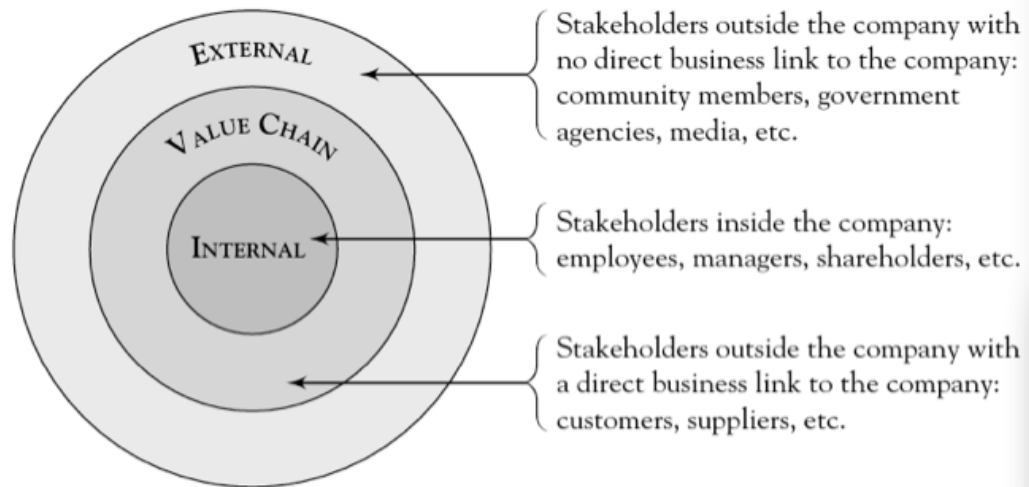
In order to measure or determine sustainability status, some metrics have been used to manage firms' sustainability performance (Savitz & Weber, 2006),

- Life cycle analysis is a sophisticated tool that evaluates the environmental impact of a product throughout its history, and some companies use it to measure their social and economic impact also.



- Full-cost pricing is known as an idea that incorporates all the external cost of goods or service into the price paid. Savitz and Weber illustrated that if everyone agrees to full-cost pricing, the damage cost from environment pollution would be paid off by charging a higher price; carbon tax might be a good example of full-cost pricing.
- KPI (key performance indicators) is a tool that can help companies measure their progress and achieve their goals. Savitz and Weber suggest that using KPI leading indicators (measuring companies' progress) and lagging indicators (tell companies what has already happened) helps companies make adjustments to their policies in order to meet their goals.
- Stakeholder mapping, “a technique for identifying and prioritizing your stakeholders, is a powerful diagnostic tool” (Savitz & Weber, 2006, p. 179). This tool begins by dividing the stakeholders into three categories (see Figure1)-“the company (internal), those with whom you do business (value chain), and those outside the company (external)” (Savitz & Weber, 2006, p. 180), and prioritizing each category; it is known as target analysis.

**Figure 1. Stakeholder Mapping**



*Source: Savitz, A. (2013). Triple Bottom Line: How Today's Best-Run Companies Are Achieving Economic, Social and Environmental Success - and How You Can Too. Somerset, NJ, USA: John Wiley & Sons. Retrieved from <http://0-www.ebrary.com.wncln.wncln.org>*

- GRI (Global Reporting Initiative) indicators are, so far, one of the most advanced diagnostic tools in the sustainability field. There are 146 indicators in the GRI framework; these indicators are grouped in categories by relevance to reflect the Triple Bottom Line—environmental, social, and economic. Almost half the GRI indicators can be quantified with numbers; the other half is qualitative. Although GRI indicators are a relatively more accurate tool, developing one report that follows GRI guidelines sometimes can be challenging, especially for companies that are new to the process.

### **Historical Business Models**

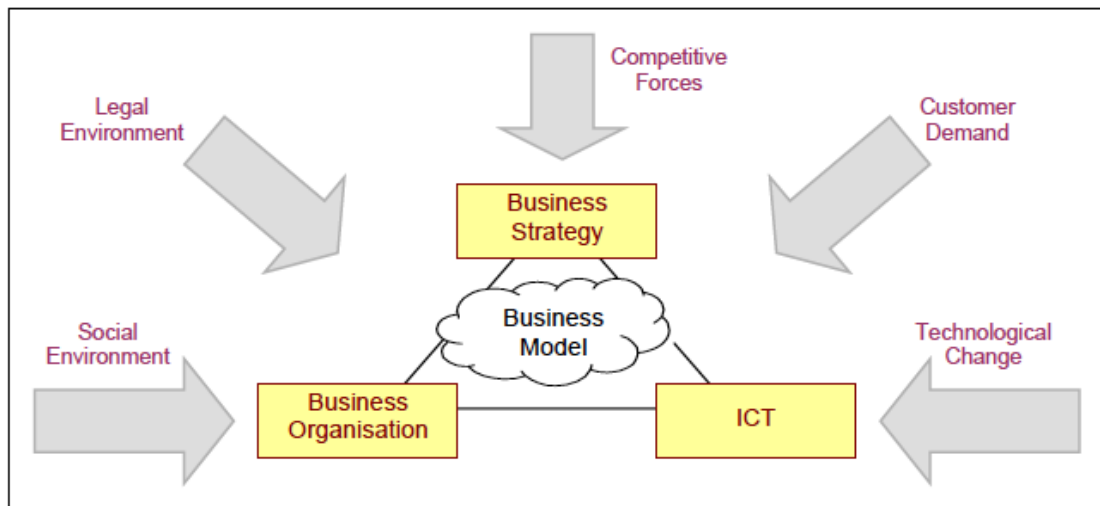
“Business model” tends to be a popular term in business literature, but it comes from different definitions and points of view, as illustrated by one survey which was done in the

article “Clarifying Business Models: Origins, Present, and Future of the Concept” In a study with 62 participants, 54 different definitions of business models were generated (Osterwalder, Pigneur, & Tucci, 2005). These definitions were divided into two main groups – first, a more value/customer-oriented approach (55%), similar to the understanding of a business model outlined or strategic plan (template/ framework), and second, a more activity/role-related approach, which is similar to the more established field of enterprise models (45%) (Osterwalder, Pigneur, & Tucci, 2005).

Osterwalder and Pigneur offer an inclusive definition of business model in their 2010 work, *Business Model Generation* as “fundamental structures for how companies create, deliver and capture value” (Clinton & Whisnant , 2014). They also mentioned that understanding how to implement business models is a prerequisite to designing a business model. The implanting process includes the “translations” of business models that respond to the current market and assessment of feasibility in terms of financial structure; in the end, business models can be implemented into business only if they are appropriately designed.

At the corporate level, Osterwalder and Pigneur called the business model a business triangle (see Figure 2) that is “constantly subject to external pressures like competitive forces, social change, technological change, customer opinion and legal environment” (Osterwalder, Pigneur, & Tucci, 2005). In the following illustration they show the relationship between business strategy, business organization and ICT.

**Figure 2.** Business Triangle Model



Source: Osterwalder, A., Pigneur, Y., & Tucci, C. (2005). *CLARIFYING BUSINESS MODELS: ORIGINS, PRESENT, AND FUTURE OF THE CONCEPT*. *Communications of the Association for Information Systems*, 15, 1-25.

In the contemporary business world, most business and production cycles reflect a linear take-make-waste approach, basically a cradle to grave product design and business model. One documentary, “Blood, Sweat and Luxuries,” filmed by the BBC, showed us that many E-waste products are exported to Africa from western nations and create serious environmental problem and health issues there. Given the fact that these problems happen in most nations, especially in industrialized countries, and in so-called emerging nations such as China, many firms that start focusing on sustainable business model design begin to realize that sustainable business models can create profits and goodwill for those companies. Based on a survey conducted by the Boston Consulting Group and MIT in 2013, nearly half of the companies surveyed in the United States said they had “changed their business models as a result of sustainability opportunities” (Clinton & Whisnant , 2014, p. 16).

The sustainable business model is a business process that designs products from the cradle to cradle instead of the cradle to the grave. China's government has integrated this concept into the domestic economy by adopting the circular economy (CE) in 2008. The circular economic approach to resource-use efficiency integrates cleaner production and industrial ecology in a broader system, encompassing industrial firms, networks or chains of firms, eco-industrial parks, and regional infrastructure to support resource optimization. Different initiatives were undertaken in other countries such as the USA and Canada (Lowe, 2009).

However, even with the government's encouragement, most SMEs in China still base their business model on a linear take-make-waste approach. Research conducted by Tsinghua University illustrates why SMEs in China don't participate in the CE model (Tsinghua University Leadership Training, 2014),

- SMEs don't have enough awareness to realize the necessity of the CE business model or sustainable business model. Most of them only focus on short-term profit.
- SMEs in China aren't capable of innovating their own CE business models due to their economic scale and lack of resources.
- SMEs in China lack design talent. Two-thirds of R&D ability comes from outside firms, mainly because SMEs' owners are uneducated and running businesses within families; under this circumstance, most talented employees have difficulty maintaining long-term employment.

- SMEs in China lack funding; they simply cannot afford the CE innovations costs, and the government and banks don't provide enough financial support for SMEs.

## **SWOT Analysis from the TBL Perspective**

SWOT (strengths, weaknesses, opportunities, threats) analysis is a common business tool for companies, which includes small businesses, in order to understand where they stand in the business environment, to assess their strengths and weaknesses and to help them seize opportunities and rule out threats. Given that most Chinese SMEs are running business on a day-by-day basis and that criticisms about China's destructive production is growing, business TBL SWOT analysis is necessary, especially since Chinese SMEs are one of the major outsource choices for many western nations (the impact of the manufacturing industry is too undeniably large to ignore). A sustainable business model for Chinese SMEs can be well-designed with an understanding of their strengths, weaknesses, opportunities and threats. This Chinese SMEs' SWOT analysis will be based on the measures of TBL that are mentioned in the literature review.

### **Chinese SMEs' TBL Strength**

Strength from the standpoint of business practices is often defined as characteristic of the business that gives one company an advantage over others (Grant, 2007). In this paper, the strength of Chinese SMEs will be illustrated based on economic, environmental and social measurements (Table 1) which are discussed earlier, and by comparing the SMEs internally with larger, private-owned companies, state-owned enterprises (SOEs) and joint-ventures with foreign companies.

From the economic perspective, there are three primary strengths. First, Chinese SMEs contribute a large proportion of taxes to China's economy (contributing 50% of tax revenue in 2010). Second, Chinese SMEs increase the employment rate because a large number of firms are SMEs which employed 80% of urban workers in 2010. Third, 60% of China's GDP is from Chinese SMEs that contribute to a positive money flow.

Environmentally, Chinese SMEs help consumers save energy, to some extent, by producing most of the energy-saving products in China. According to the Committee of China Energy Conservation Association (EMCA), by the end of 2013, a total of 4,852 enterprises engaged in the national energy conservation service business with an output value over 200 billion CNY. But from the point of economic scale, a total of more than 100 companies' output value is more than 100 million CNY. That is to say, most of the energy conservation service enterprises are small and medium-sized enterprises (Zhang, 2014).

Socially, a large number of Chinese SMEs hire students who have graduated from middle school, high school or the university; also, to some extent, they provide community security by lowering the unemployment rate which contributes to lowering the crime rate. According to the Chinese University Students' Employment Report in 2013, 45% of graduates were hired by SMEs (Industry information, 2014).

### **Chinese SMEs' TBL Weakness**

Weakness from the standpoint of business practices is often defined as characteristics that place the business at a disadvantage relative to others. The same comparisons (compare to SOEs and joint venture) with strength analysis will be applied when it comes to SMEs' weakness analysis.



From the standpoint of economic sustainability, Chinese SMEs have relatively low sales and profit margins, mainly because of the smaller economic scale which creates disadvantages (cost, distribution, price) when competing with large companies such as SOEs that have stronger government support. They also have limited investing ability to increase their economic scale, which is result of the fact that banks are unwilling to loan to SMEs in China. A survey has been done by the Development and Research Center of the State Council showing that 67% of SMEs have difficulties in qualifying for loans. Given this situation, some SMEs have no choice but to find a funding solution through private financial institutions that live in the shadows, with high interest rates. This creates even more competitive disadvantages for Chinese SMEs (Kang & Hao, 2011). Table 2 shows the different interest rates among financial institutions:

**Table 2.** Annual Interest Rate from Various Financial Institutions

| Name of Institution   | Annual Interest Rate |
|---|----------------------|
| Local bank (microfinance loans)                                   | 9%                   |
| Relationship-based lending (friends, families, business partners) | 12%~15%              |
| Official microfinance company                                     | 18%                  |
| Guarantee company   | 18%~24%              |
| Pawnbrokers   | 36.5%~182.5%         |
| Unofficial microfinance companies or individual lending           | 146%~182.5%          |

*Source: Kang, B., & Hao, H. (2011). Small and medium-sized enterprise's development. Beijing: China Economic Net.*

With respect to environmental sustainability, the destructive manufacturing process of take-make-waste linear production is well-known in China. The large material footprint creates a tremendous burden on the planet. A recent report from BBC indicated the amount of concrete production for last 3 years in China are more than the last 300 years of American production. Chinese SMEs are incapable of updating their facilities like SOEs, so some of them have to continue using outdated equipment, which causes even more industrial pollution.

An issue related to social sustainability involves working conditions. Several sweatshops in China were exposed in recent years; however, this is still not unusual among SMEs' factories. Leslie Chan, a *Wall-Street Journal* reporter, described China's difficult working conditions and factory employee lives in her book, *Factory Girl*. While working six or seven days a week in very challenging conditions, many internal migrant workers earn only 1/8 of the American minimum wage. Even worse, workers see very little potential for self-development. Employees don't receive training, especially those who have little education. Statistics show that ¾ of SMEs in China provide less than 10% of training to their workers (Song, 2013).

### **Chinese SMEs' TBL Opportunities**

Opportunities from the standpoint of business practices are often defined as elements that a project can exploit to its advantage. The opportunities for Chinese SMEs will be analyzed by comparing specific external opportunities that come from overseas, especially from Europe and United States.

Economically, innovative business models regularly adapt to changing market environments in order to provide the opportunities for Chinese SMEs. Alibaba Group, a major e-commerce company, is a typical example of a business model inventor in China. Alibaba was a SME which began with 18 founders in the 1990s; it developed its potential, found the right angle for the market, and seized the growing e-commerce opportunity in China before the internet became widespread.

Environmentally, Chinese SMEs have better opportunities to reduce industrial pollution and ease their material footprint by seeking partnerships with large firms which have solid environmental management. For example, many Chinese SMEs received an ISO14000 certificate by acquiring know-how from European partners or clients. Another opportunity for Chinese SMEs is learning strategies from foreign investors with strong environmental capital. In 2011, Interface, a sustainable carpet manufacturer, opened its facility in Taicang, China. CEO Dan Hendrix said at the opening ceremony, “We are pleased to share our world-class manufacturing facility in China. Interface will make a unique contribution in China in terms of business culture and environment” (QQ Finance, 2011).

Socially, opportunities for Chinese SMEs come from recovering domestic Chinese consumer confidence and employees’ loyalty. With a population of 1.3 billion in China, SMEs in China should have a location advantage to gain a large domestic market share, but their products are not always consumers’ first choice. If Chinese SMEs focused less on short-term economic benefits and more on responsibility to clients and employees, they not only will win overseas customers but also domestic ones. A study by Liu and Fong in Jiangsu province showed that the SMEs’ CSR-oriented activity that registered a statistically

significant positive impact on financial performance was products' quality assurance (Liu & Fong, 2010).

### **Chinese SMEs' TBL Threats**

Threats from the standpoint of business practices are often defined as elements in the operating environment that could cause trouble for the business. The same rule of external perspective (overseas effect) with opportunities that were discussed above will apply to this threat analysis.

Economically, Chinese SMEs' threats come from a low survival rate which was previously discussed. With low sales and profits, the average life of Chinese SMEs is only 11.1 years. The majority of SMEs' clients are overseas, and some of those clients have changed their off-shore sourcing partners to other countries such as India, Brazil, and other emerging nations. These clients' churn is mainly due to their increasing cost of sourcing in China. The main factors of increasing cost are:

- 1) Chinese currency: the Rinyinbi (RMB) has appreciated over 20% against the USD since 2005. I remember when I was working with an exporting company in China doing international sales, we experienced serious complaints from clients when we sent out an adjustment of contract due to the exchange rate; some clients even canceled future orders.
- 2) Labor cost has been increasing at a rate of about 10% each year. Since many reports show how difficult the situation is for Chinese workers, the government has increased the minimum wages each year.
- 3) The oil price has hit historical highs, which increases the freight cost.

4) Exporters, value-add tax rebates have been reduced for thousands of labor-intensive products. Thus, a portion of profit that came from rebates has been reduced and these costs must now be shifted to clients by increasing prices (Huang, Zhang, & Lin, 2013).

For instance, 71.5% of textiles that were produced by SMEs were exported in 2011 (MINISTRY of COMMERCE of China, 2014), but a report from Business Line indicated that a preferential trade pact in textiles between U.S. and other Pacific nations will hurt China as a result of increased competitive threat (Singh, 2013).

Environmentally, the threat to Chinese SMEs is related to the tremendous damage that is created by industrial pollution. This threat might cause China to be perceived as an unlivable nation in which no one is willing to invest, and which may be seen as a threat to the global environment. A report from Greenpeace documents the vast deforestation driven by the large demands of China's enormous timber trade - the world's largest - as the country's headlong economic development sucks in ever-greater amounts of the earth's natural resources (McCarthy, 2005). This unhealthy environmental effect might cause a severe reaction in the future because of stricter global regulation, which would punish Chinese SMEs.

Socially, Chinese SMEs are facing the threat that overseas clients' investing interests might decline due to perceived social liabilities. Growing social media might dictate a situation in which simple missteps can turn into major crises resulting in reputational damage to companies invested with Chinese SMEs, totaling tens or even hundreds of millions of dollars (Schiavone, 2013). SMEs no longer can live in denial, ignoring the social risk and imagining that their denial won't affect them because of their small scale.

## **Assessing Chinese SMES' Sustainability Status**

As part of the research methodology for this study, a survey was conducted using participants from SMEs mainly in Fujian Province of the People's Republic of China. The purpose of this survey was to gather evidence and data on the TBL awareness and performance of Chinese SMEs with a view to identifying trends in their emerging business models.

The following sections discuss the survey research process undertaken, starting by justification and selection of the sample under study, explanation of the research methods and data-analysis approaches adopted, results obtained, and an assessment of the limitations of the study.

### **The Sample**

Two of the greatest difficulties in conducting this form of research are the identification and selection of suitable companies. The concept of conducting research of this nature for academic purposes is a concept which most Chinese SMEs find difficult to comprehend. There was therefore an understandable degree of reluctance to fully engage in the research process that arose out of this difference of comprehension. Indeed, some of the companies indicated that they thought that their participation might attract potentially adverse attention from the authorities. The other concern expressed was that if too much was said, the risk of business secrets would be spread, which might undermine their performance.

As a result, the research had to be conducted with a great deal of sensitivity and discretion in order to secure cooperation and to allay fears (Birkin, Cashman, Koh, & Liu, 2009).

Initially, to identify SMEs, the relation-based approach (snow-ball) was adopted; specifically, the survey audience was selected through the author's former employer and colleagues, families and friends. The identification of the SMEs to be surveyed was based on the Government's definition of small and medium size enterprises in China. In total, SMEs were identified in this manner and they covered the food, logistic, construction, farming, and medical sectors. They were then contacted through Skype, web chat, QQ and email with details of the proposed research project, requesting their participation. In all but one case either no reply was received, in spite of many follow-up contacts, or those approached declined to take part, often citing no reason.

As a result, alternative methods of approaching the survey participants were adopted that were more successful. This approach relied on the survey link from Survey Monkey and did not request the identification of the participants, but the SMEs needed to have company profiles that ensured participants belonged to the specific Chinese SMEs category. Again, through the Guanxi (relationship) or snowball approach, 14 SMEs were selected.

## **Research Methods**

A total of 14 SMEs were included in the pilot study, which was conducted by way of a questionnaire survey, the form being in Chinese. Of the 14, seven were sent questionnaires via the intermediary, and were returned to the researcher automatically through Survey Monkey. The remaining 7 SMEs were interviewed and the questionnaire (shown in

Appendix A) completed jointly during interviews using WeChat, one of the most popular communication tools in China.

The research was conducted by indicating that this was an anonymous and risk-free survey. This ensured the truthfulness and quality of surveys. Eighty percent of the questions in the survey had multiple choice answers, with optional comments (shown in Appendix B); this reduced the reluctance of participants. Questions were designed in such a way that as not to ask first person (i.e., “what do you think”) but more about general attitude, which was a good way to get more truthful answers. Each question was presented with examples that were familiar from a cultural standpoint in order to improve the understanding of the participants.

### **Analysis Method**

Content analysis was conducted to identify patterns in the evidence collected from the interviews and data collected from the questionnaire survey. This was then analyzed by the grouping similar responses. Content analysis was thought to be appropriate because it provides rationalization for evidence-based qualitative data (Cassell & Symon, 2004).

This research was also conducted through descriptive and frequency analysis, which is based on fundamental questions related to awareness of TBL, willingness to engage TBL activities, and importance of each element of TBL (social, environment, economic).

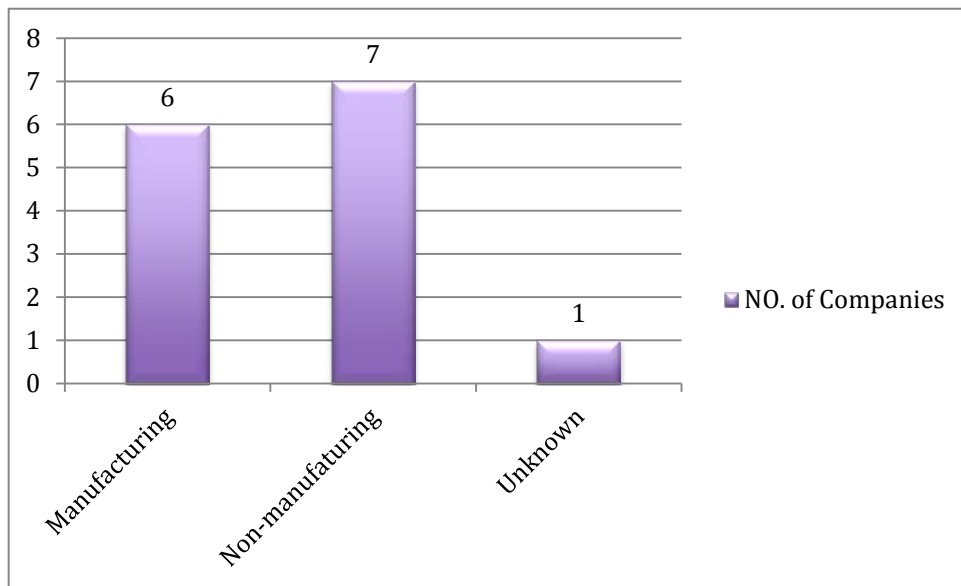
### **Result and Analysis**

The following details some of general characteristics of the participants in this pilot study. Figure 3 shows that breakdown of the companies’ industrial sectors, indicating that almost half were manufacturing companies, and the other half were non-manufacturing (retail, or trading firms).

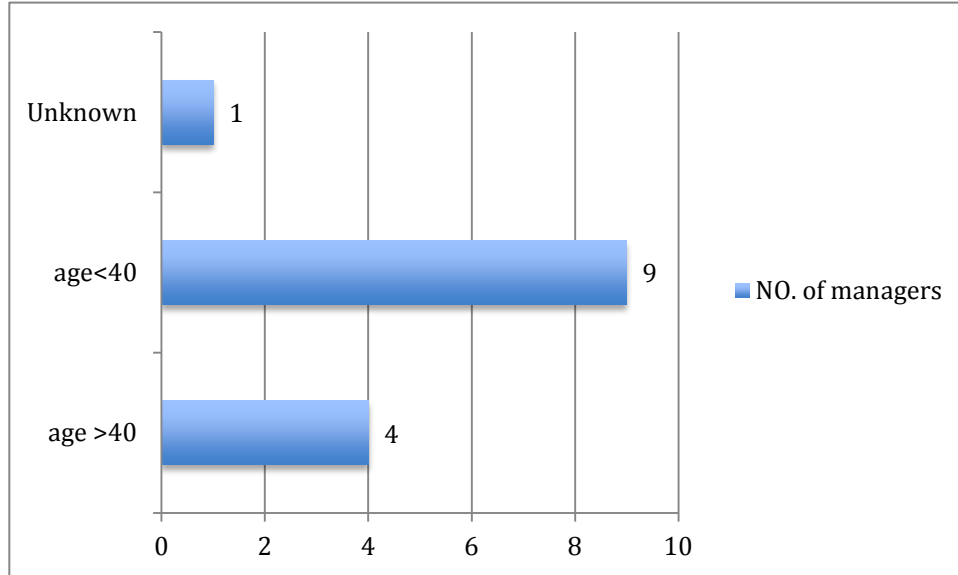


Twelve participating companies had less than 10 employees and were micro enterprises; 12 SMEs accounted for local markets, and 2 for exporting markets for a total of 14 SMEs. No participants acquired ISO 14000 certifications, that addresses various aspects of environmental management. It helps companies to monitor their environmental impact and provides to tools to improve environmental performance. Interestingly, there were three farming companies and more than half were young managers who were in charge of the companies. Figure 4 provides a description of the demographic factors.

**Figure 3.** Company Types in Terms of Nature of Industry



**Figure 4. Demographic Factors of Participants**



### ***Environmental Sustainability***

Participants were asked to rate the importance of the environment on a 5 point scale, and the average of ratings was 3.8. A majority of 6 (33%) manufacturing SMEs chose environmental importance rating of 3; 57% of non-manufacturing SMEs chose the highest rating which was 5. A majority of managers who were older than 40 (4 – 50%), chose the importance rating of 3 on the environment; of managers younger than 40, 56% chose 5. This suggests that younger entrepreneurs in these samples may have a relatively higher awareness about environmental issues as compared to the older generation in China. Also, more non-manufacturing SMEs than manufacturing may be aware and invested in improving environmental performance.

Participants who had lower ratings explained their perspectives with the following most common comments: 1) no economic incentives, 2) competitive disadvantage, and 3) cost. Sample SMEs who had high ratings explained their perspectives with the following: 1)

farming industries required a good environment, 2) being environmentally friendly attracts more customers, 3) simply need to comply with government restrictions, and 4) importance of reducing material and energy usage.

In the case of incentives to create awareness of the importance of the environment, it was evident that all companies were economic-oriented; for example, one fish trading SME claimed that low water quality had affected their fishing business because fish growth rate had declined, and they had to acquire more farmed fish to compensate for decreasing wild fish.

Participants were also asked whether they had engaged in activities that improved their companies environmental sustainability, such as recycling, waste treatment or energy saving. Eight out of 14 SMEs claimed they had used environmental protection activities. Interestingly, one construction SME asserted that the quality of the cabin they built was a way to protect the environment because rebuilding would use more material and be environmentally destructive.

### ***Social Sustainability***

Social sustainability matters covered how important perspectives such as customer, supplier and employee relationships were, and what actions the SMEs had undertaken to improve those relationships. Sample SMEs also used a point system to rate importance on social sustainability. The majority of manufacturing SMEs (67%) rated this as 4; 43% of non-manufacturing chose 5, where 44.4% of younger entrepreneurs rated the importance as 4, and 75% of older businessmen rated it at 5. Interestingly, regarding social matters, younger entrepreneurs and non-manufacturing SMEs again had a higher rating. 71.43% of all sample

SMEs felt that social factors were very important (rating higher than 3) for their businesses. Those SMEs explained that the high turnover rate of employees was not good for their business, because some jobs require special skills that involve much time in training. Also their employees' productivity and responsibilities are very important for their business development. For example, one SME manager complained that it is hard for them to recruit due to their business scale and location with scarce labor resource. It is interesting to note that most of the comments were more focused on employment, and only two cases mentioned that they related the success of their customers as a reflection of their own success.

Ten out of 14 sample SMEs (71.43%) claimed that they have taken actions to improve their performance on social sustainability. Specifically, one SME spent a large amount of resources such as training, improving employees' working environment and benefits for its workers. This SME explained that its employees' progress is one of the major forces allowing the company to aggressively move forward. Another SME mentioned that they celebrate employees' birthdays together to reduce their homesickness and to improve their sense of belonging and loyalty; again, many workers were migrants from other cities.

### ***Economic Sustainability***

Regarding the importance of economic factors such as economic growth, market share and profit margin to the sample SMEs' business, it is common sense that all the SMEs rate it above 3 on a 5-point scale. It is interesting to note that 5 out of 6 manufacturing SMEs rate it 5 (extremely important), while a majority of non-manufacturing SMEs, 4 out of 7(57%), rate it 4. This suggests that non-manufacturing SMEs may feel less stress about their business in reference to economic performance than manufacturing ones. Both a majority of

younger entrepreneurs and older ones agreed that it is the most important element in their business. They explained that market share is one of the solutions used to keep companies alive; without a solid financial foundation, small companies cannot sustain their business. These are also the drivers that encourage these SMEs to improve their economic performance.

Economic matters in the sample companies covered SMEs' concerns about their financial performance, drivers and barriers and what actions they have taken to improve them. Two cases of sample SMEs indicated that the market environment in China is getting worse, especially for small-scale businesses. According to the sample SMEs, the main barriers to improving business performance are:

1. There is a more competitive market environment between small businesses; as a result, price per unit is declining in order to gain more market share.
2. Wages are increasing and as a result, so are social security payments from companies; as a result, labor costs are no longer a competitive advantage.
3. Material cost is also increasing, mainly due to inflation.
4. Inventory cost is increasing, mainly due to conflicts between excess capacity and decreasing orders.
5. Organizational structure is not stable because of high turnover rates of employees. Especially in the case of small business, one employee usually has multiple responsibilities, so the effect of having to replace employees is greater than with large companies.
6. Some traditional businesses, especially small businesses, do not receive much support from government; many small businesses (especially one

lumber company) were eliminated by other solutions; for example, new business innovation and technology.

After the sample SMEs expressed their concerns, the actions they took to cope with those barriers were also examined during the interview and the online survey. Business model innovations were mentioned in the two cases of lumber and construction SMEs, to cope with an unfavorable market environment in their traditional business. For example, one changed their business model from simply trading lumber and cheap labor for construction to creating a value-added landscape gardening and art center. Also, improving customer service to develop the market was mentioned to cope with the competitive environment. In the case of one high-tech agriculture and animal husbandry enterprise, seeking help from government, such as tax reduction, was mentioned. This same SME pointed out that government encourages industries to integrate technology and innovation with the use of financial incentives. Working with government to improve infrastructure was mentioned in the case of one petrochemical dock warehousing, a logistics SME, which was located in a hostile environment with low population density and less developed infrastructure. With government cooperation, the labor market in that area could be improved. So, that company actively applied to qualify as an enterprise which receives financial support from the government. . Only a small number of SMEs shared countermeasures; they seemed to be reluctant and afraid of being copied.

### ***Sustainability Assessment***

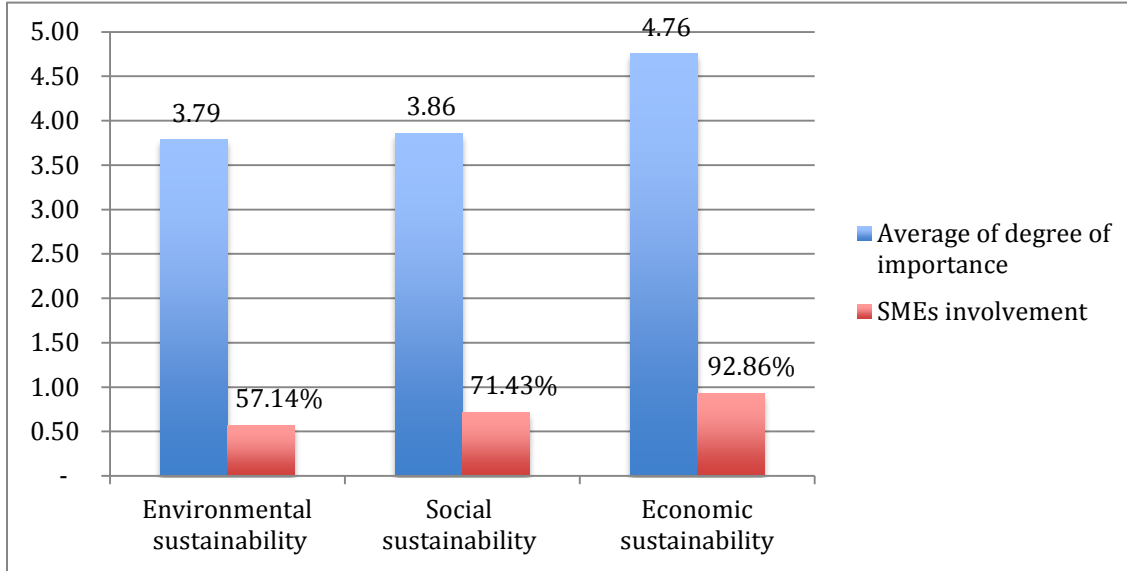
Based on the surveys and interviews, the concept of sustainable development among SMEs may be difficult to grasp and to relate to business. Some examples were provided in

the survey to improve clarity for SMEs, but the examples could not capture and illustrate the full concept.

In the end, SMEs were asked whether they would consider adopting TBL measures to operate their business in the future. This also seemed to be a difficult concept; 3 out of 4 SMEs did not respond to this question because they simply did not understand. In an effort at clarity, the question was changed to some understandable examples, such as environmental sustainability (material usage reduction), social (improvement to employees' well-being), and economic (company's economic growth, annual income and market share). With this explanation, 13 out of 14 sample SMEs were willing to consider adopting TBL's sustainability measurement. One SME that rejected this proposal explained that the current domestic market environment did not give him enough confidence to make a long-term plan; he is more comfortable for the younger entrepreneurs to develop a future, business blue print.

Generally, the sample SMEs were aware of the importance of the TBL, but economics still outweighed the other two factors. The average rating on the question of the importance of economic sustainability was 4.3, but only 3.79 and 3.86 on environmental and social sustainability, respectively. When the questions of what relevant activities they had done or were working on to address sustainability goals, 92.86% of SMEs claimed they have taken actions to improve their economic bottom line, but only 57.14% and 71.43% of SMEs engaged in activities related to environmental and social sustainability, respectively. Figure 5 indicates that economic factors, again, were the main focus for sample SMEs; they devote most of their resources, energy and time to ensuring economic stability over other concerns.

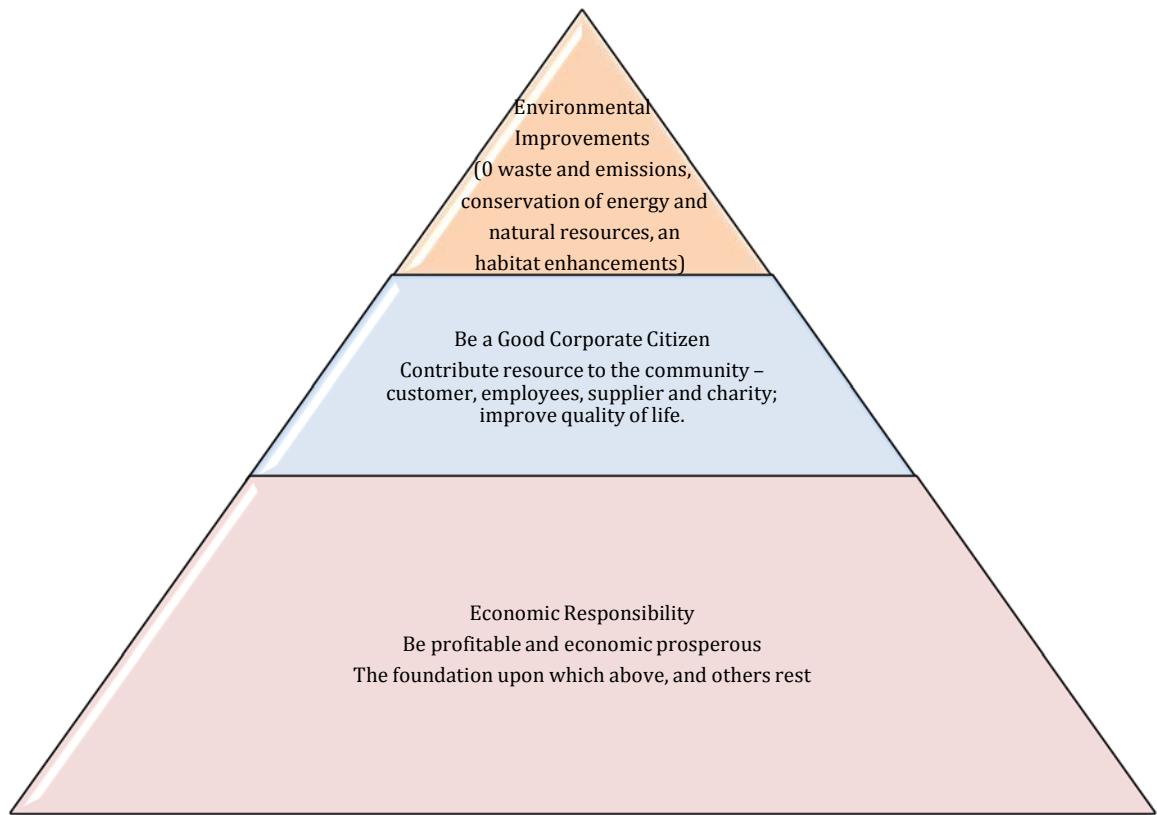
**Figure 5. Sustainability Assessment**



The sample SMEs were still in the foundation stage in which they could only concentrate on economic responsibility; i.e., be profitable. As Carroll demonstrated in the article, "The Pyramid of Corporate Social Responsibility," a corporation must first meet its economic needs (Carroll, 1991). Without this foundation, it is unlikely to move up and be socially and environmentally responsible. According to the sample SMEs' response, the process of the sustainable business model begins with basic economic performance. At the same time, economic incentives will encourage SMEs to work on their social and environmental sustainability. For example economic incentives can increase productivity through improving social sustainability performance; specifically, by creating a positive impact on SME's employee welfare and customer satisfaction. They will then become obligated to pursue a path toward improving environmental quality. A number of contributors to each factor decline at this level with SMEs in this "business as usual" stage, the normal, profit-oriented execution of operations (see Figure 6).



**Figure 6.** The Pyramid of Chinese SMEs' Sustainability Values



By understanding this process and contributing behavior patterns, sustainable business model implications should follow, in order to develop and apply to minimize SMEs' reluctance or rejections.

### ***Limitations***

The small sample size of 14 involved in this study means that researchers cannot make decisive pronouncements, and the results are not generalizable to other situations. Having a large sample, however, may not make a difference (Cassell & Symon, 2004). More importantly, the nature of this research makes it necessary to critically analyze the qualitative evidence collected (Birkin, Cashman, Koh, & Liu, 2009).

Examination of the 7 returned surveys revealed that only 5 had completed them to a degree useful for the research. It was clear that there was little incentive to include the level of specific detail, which might be remedied by follow-up questions. All the interviews were carried out through online communication tools; this posed restrictions on interviews because of time zone differences. The limitations identified suggest that doing primary company-based research in China appears to be not a straightforward task.

### **A Diagnostic tool on SMEs' Sustainability Credit**

Regarding Figure 6 (The Pyramid of Chinese SMEs' Sustainability Values) that is based on the sample SMEs and general Chinese SMEs' short life cycle and high turnover rate, the sustainability credit score (SCS) might concentrate more on economic performance. This means that we cannot use the same standard that is used in the S&P 500 or most western nations, because the bottom line is that it is unrealistic to require Chinese SMEs to meet the same requirements as western companies which have had industrial development for several centuries while China has just opened its economy for four decades. It is like requiring a baby to work using an adult's standards and processes. The progress on sustainability improvements require a process; it is more realistic that Chinese SMEs first meet their economic needs and then consider their improvements in areas related to social and environmental sustainability.

This paper proposes that the diagnostic tool that assesses Chinese SMEs' sustainability credit scores should be quantified. It will be eventually similar to the FICO score which includes the following components: 35% is payment history, 30% is credit utilization, 15% is credit history span, 10% is types of credit, 10% is recent inquiries

(Davenport & Kim, 2013). In the case of Chinese SMEs' Sustainability credit scores, it might include the following components, 41.9% as economic factors 32.3% as social factors, and 25.8% as environmental factors. The numbers above were based on the Chinese SMEs' involvements in sustainable management in the sample survey (see Table 3). Each factor might be subject to each perspective KPI that depends on the industry Chinese SMEs are in. The rating scale can be like FICO, a three-digit number between 300 and 850. Again, the economic needs must be fulfilled first, otherwise, the acceptance of sustainability proposals might be low.

**Table 3.** Proportion Allocated in the Sustainability Credit Score

|  | Environmental Engagements | Social Engagements | Economic Engagements |
|--|---------------------------|--------------------|----------------------|
| Sample SMEs' claim (%)                         | 57.14%                    | 71.43%             | 92.86%               |
| Proportional TBL elements from Sample SMEs (%) | 25.8%                     | 32.3%              | 41.9%                |

### **Chinese SMEs' Sustainable Business Model**

With an understanding of each Chinese SMEs' sustainability credit score, the sustainable business model can be customized. This idea aims to increase the sustainable business model's feasibility and acceptance (willingness to act on).

In this spirit, this paper proposes that the characteristics of sustainable business models for Chinese SMEs be based on their sustainability credit report. In the case of those Chinese SMEs that are below a median score, the recommendations should focus on their

weaknesses and suggesting strategies that the businesses can use to make adjustments to improve the score, based on their own SWOT analysis. In this sense, the sustainability business model should focus on improving the Chinese measurement first; they then will have directions and plans that they can implement in a measurable and quantitative process that will value their own situation and still hold out a yardstick for improvement.

The sample survey also illustrated one productive approach to developing a sustainable business model, and suggested that areas such as social and environmental improvements might be improved more easily by working with younger entrepreneurs first. These young entrepreneurs had a relatively higher acceptance of the TBL concepts; it seems that the best plan is to let them drive the sustainability train and encourage more sustainable business model innovation.

Again, the sustainable business models should be geared more toward economic sustainability first. Only when this foundation is stable will the Chinese SMEs have the motivation and capability to work toward social and environmental sustainability. This means, the old day-by-day business model that Chinese SMEs had must be adjusted to a quality and service-first, long-term, economically sustainable business model. In the end, the new sustainable business models for Chinese SMEs have the potential to synthesize economic, social and environmental aspects at practical levels, in the way in which Chinese culture has historically embraced and synthesized diverse religions and political philosophies (Birkin, Cashman, Koh, & Liu, 2009).

Finally, the sustainable business models for Chinese SMEs must be reinforced and re-innovated constantly. The business environment is changing and Chinese SMEs are relatively more fragile due to their economic scale, so they need to pursue an open-minded embrace of

new ideas and work with new technology and talents; if this can be accomplished, the famous family-based Chinese SMEs might change their business models which are currently based on Guanxi.

The application of a Sustainability credit score and business model must be based on the individual SME's situation; this includes its industrial KPI and its internal resources. Let's take one SME in the survey as an example to illustrate the situation. The manager of one of the SMEs surveyed, claimed that their factory has more capacity than others, so one of the most important elements of their KPI is marketing and sales such as targeting and acquisition of new customers and maintaining a positive status with existing customers. The KPI for this SME mainly relates to customer relationship management, turnover and profit. If the median value of new customer acquisition is 6 among similar, economic-scale firms, and this SME falls to 3, and if the median value of the profit is 5 million RMB, and if this SME's profit are 6 million RMB, and if the SMEs starts with a 100 point scale; the same rule can be applied to the environmental credit as to social credit calculation; then the formula will be as follows:

$$\text{Economic Credit} = 100 * (3/6) * (6/5)$$

$$\text{SCS} = \text{Economic Credit} * 41.9\% + \text{Environmental Credit} * 25.8\% + \text{Social Credit} * 32.3\% \text{ (refer to Table 3)}$$

This final score still needs to compare to the same economic-scale firms within the same industry. Based on the survey results, Chinese SMEs might tend to consider their economic score first and assess their performance in this sense. This formula therefore can be divided into 3 sections, similar to TBL sections, then SMEs can utilize their resources to decide their individual goals for improving each category of the TBL.

The sustainable business model could be adjusted according to their SCS. For example, if their economic score is low, the elements of their low KPI must be identified and they then their strategy should change to improve this KPI. Benchmarking strategy, a process of comparing their model company, might be the first step. Again, it is not necessary for sustainable business models to be the same as they have to be constantly revised based on their assessment, SCS, in order to better adapt to changing business environment. Small businesses have innate advantages of agility, which must be fully utilized. This kind of advantage is one of the reasons that General Electric (GE), one of the world's largest corporations, wants to act like a startup to improve its ability to grow and take risks (Clough, 2014).

## Conclusion

This paper proposes that sustainable business models should be based on an individual Chinese SME's situation, SWOT analysis, and sustainability "credit score", to customize their individual sustainable business model. This reality-based, sustainable business model might have a better chance for acceptance and might be embraced by Chinese SMEs.

In this sense, Information and technology (IT) SMEs might be a good model. In fact, *Forbes* just published a list of the top 20 SMEs in China 2014, and 15 of them are IT companies (ForbesChina, 2014). These companies constantly innovate new business models and reposition to adapt to the changing business environment; thereby, using their SME's agility to be relatively more competitive than the businesses that practice a "business as usual" style of management. Historically, IT companies in China such as medical and software development firms have the most attractive growth rates, and that drives the Chinese economy to a more competitive position.

The SMEs' value Pyramid (figure 6) shows that SMEs in China must have a solid economic foundation so that the environmental and social efforts can build on it; this upward movement can be improved by introducing economic incentives. In this sense, SMEs can achieve their overall sustainability goals.

SMEs in China represent the future of the Chinese economy (Kang, 2014). More SMEs in China are emerging into the domestic and global market; the key to survival in the

current business world is sustainable business models that push them forward. Their contribution to solving TBL issues in China should sustain their business and not compromise future generation's ability to meet their own needs.

The "business as usual" model needs to be constantly challenged among Chinese SMEs, with the understanding that re-innovation promotes corporate growth, and that realization should provide Chinese SMEs with the motivation to change



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## Appendix A. Interview questions on sustainability perceptions

中小企业可持续性发展的商业模式研究课题的调查问题

**采访目的：**了解中小型企业对可持续发展的认识以及是否具有自身商业模式；了解对于在实施西方可持续性发展的模式所面临的挑战与机遇。

**Survey objective:** understanding SME's perceptions in terms of sustainable business, and whether they have business model awareness and understand the opportunities and challenges to apply TBL to their business.

**采访对象：** \_\_\_\_\_

**Interviewee:** \_\_\_\_\_

**日期：** \_\_\_\_\_

**Date:** \_\_\_\_\_

1. 企业基本情况核对（产品，公司发展历史，规模等）

Please provide your company's company profile (e.g. products, history, and economic scale)

2. 贵企业发展多年，贵公司在管理上（企业文化，员工机制）有什么好经验和方法吗？为什么？

What are your corporate competencies in terms of management (e.g. culture, human capital)? Why do you think so?

3. 近来，市场变动（劳动力，原材料上涨，政策变化等），对贵公司的

经营有什么影响，贵公司是怎样应对变化的（措施）？

How does the market environment (e.g. increasing labor and material cost, changing government policy) affect the company decisions? How does your company cope with this?

4. 对您来说，贵公司实现了哪些目标就等于可持续性的发展呢？（员工，市场，周边社区的影响力，和谐的供应关系等）

What are your company's sustainable business goals (e.g. positive impact on your stakeholders such as employees, customers, and suppliers)?

5. 在同行业中，有哪家企业算是您认为的可持续性发展的楷模呢？

What is the sustainable model in your industry?

6. 对于根据西方的三重底线法则形成的企业可持续性发展的报告，您有多少的了解呢？

How much you know about triple-bottomed-line, based sustainability reporting?

7. 您觉得对于长期规划来说，贵公司会考虑把以上报告中的一些因素（环境，社会，经济）与企业管理联系起来吗？为什么？

Would you consider using the metrics on environment, society & economics in your company's long-term business plan? Why or why not?

## Appendix B. Survey on sustainability perceptions

1. 请简单介绍公司情况（产品, 公司发展历史, 规模等）

Please provide your company's company profile (e.g. products, history, and economic scale).

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2. 周边环境的可持续发展（如环境保护, 资源的可持续循环）对您企业来说多大程度的重要性呢？

How important is environmental sustainability (recycling, environment protection) to your company? (Please circle one answer using the scale from 0 to 5.)

|                     |                |                  |       |           |               |
|---------------------|----------------|------------------|-------|-----------|---------------|
| 非常重要                | 很重要            | 一般重要             | 还行    | 没考虑       | 不重要           |
| Extremely important | Very important | Fairly important | So-so | Undecided | not important |
| 5                   | 4              | 3                | 2     | 1         | 0             |

Why?

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3. 员工, 周边社区的影响力, 和谐的供应关系等的社会因素的可持续发展对您企业的重要程度（0-5分）



How important is social sustainability (e.g. maintain positive impact on stakeholders) to your company? (Please circle one answer using the scale from 0 to 5.)

|                     |                |                  |       |           |               |
|---------------------|----------------|------------------|-------|-----------|---------------|
| 非常重要                | 很重要            | 一般重要             | 还行    | 没考虑       | 不重要           |
| Extremely important | Very important | Fairly important | So-so | Undecided | not important |
| 5                   | 4              | 3                | 2     | 1         | 0             |

Why?

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4. 市场份额， 企业规模， 利润最大化等的经济上的可持续发展对您企业的重要程度 (0-5 分)

How important is economic sustainability (e.g. profit, make share, economic scale maximization) to your company? (Please circle one answer using the scale from 0 to 5.)

|                     |                |                  |       |           |               |
|---------------------|----------------|------------------|-------|-----------|---------------|
| 非常重要                | 很重要            | 一般重要             | 还行    | 没考虑       | 不重要           |
| Extremely important | Very important | Fairly important | So-so | Undecided | not important |
| 5                   | 4              | 3                | 2     | 1         | 0             |

Why?

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5. 公司已经把以上可持续发展的因素（环境，社会，经济）与企业管理系统起来有哪些？（可多项）

Which TBL elements has your company included in your business management? (Can be more than one answer.) Please provide some examples of your company's effort.

- A. 环境（循环利用原材料，使用可再生能源，节约水电，排污处理等）

Environmental sustainability (e.g. recycling, environment protection, waste processes, using green energy, energy saving)

- B. 社会（提高员工幸福感，周边社区和供应关系和谐等）

Social sustainability (e.g. employee welfare, positive impact on community and suppliers)

- C. 经济（实现企业经济增长一年收入，市场占有率，利润率等）

Economic sustainability (e.g. profit, market share, economic scale maximization)

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6. 您得益于规划来，公司会考虑把以上广告中的一些因素（环境，社会，经济）与企业管理系统起来吗？为什么

Would you consider including triple bottom line in your company's long-term plan? Why or why not?

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## **Vita**

Jianfen Xu was born in Zhangping, China, to Shugui Chen and Rirui Xu. She Graduated from No.1 High School in Zhangping in June 2006. The following autumn, she entered Yangen University to study International Economic and Trade, and in June 2010 she was awarded the Bachelor of Arts degree. In the spring of 2013, she began study toward a Master of Business Administration degree at Appalachian State University.

Ms. Xu is active in spreading Chinese Culture and studying immigration and sustainability issues. She is also in love with outdoor activities.