CEIBS

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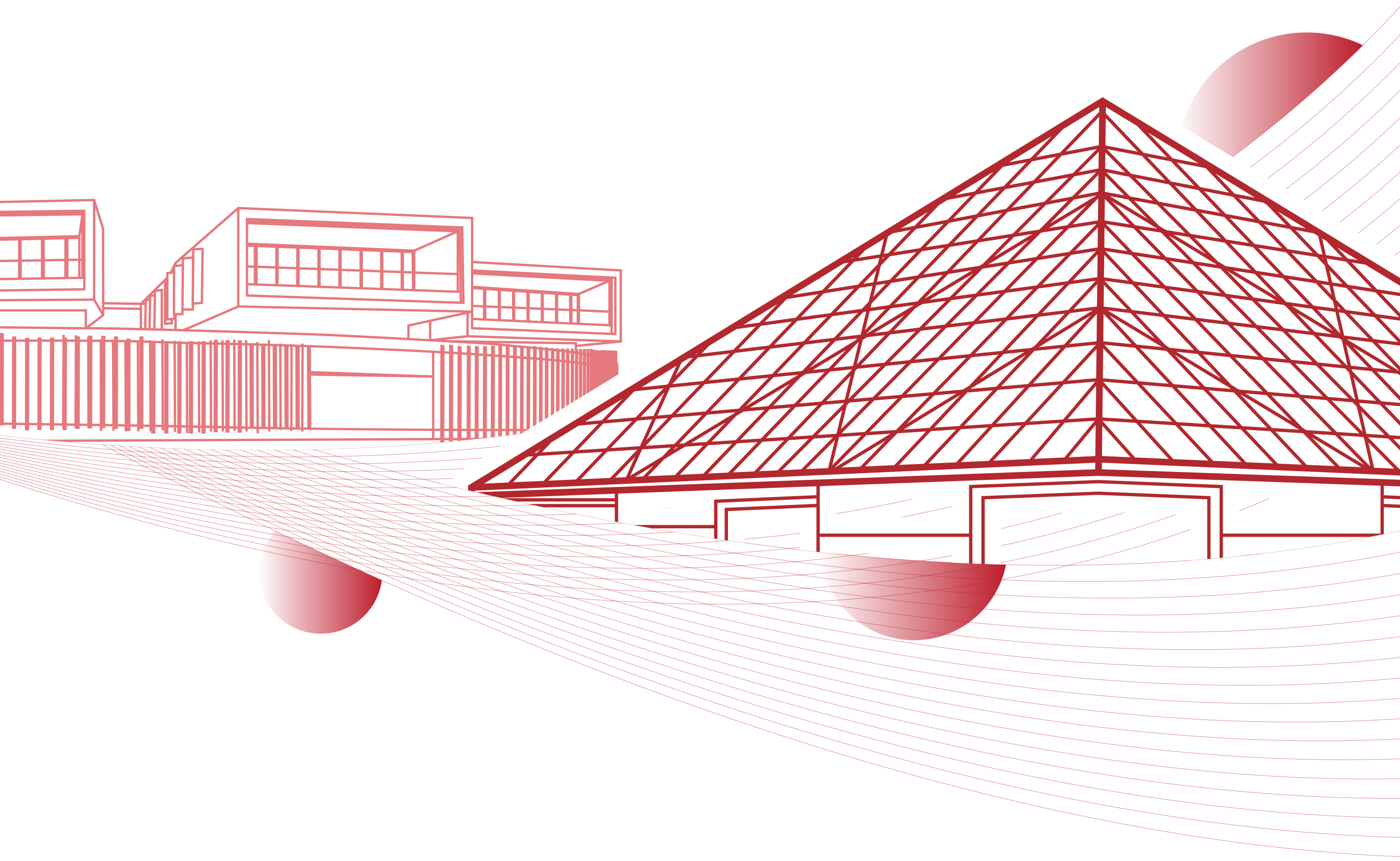
CHINA DEPTH GLOBAL BREADTH

2020 CEIBS
CORPORATE SOCIAL RESPONSIBILITY
WHITE PAPER



中歐國際工商學院
CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL

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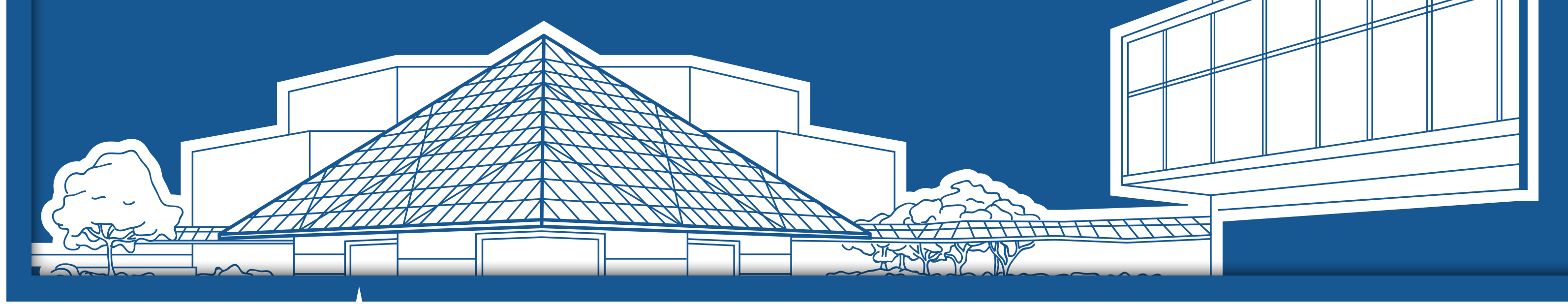

FOREWORD

The Covid-19 pandemic has brought mounting uncertainties and complexities to the world economy. Our globalized society faces the challenge of bringing the virus under control while minimizing its impact on the economy. Economic difficulties substantially heighten the urgency for a more equitable and sustainable society.

At the same time, there is an ever-pressing need to enrich and expand the CSR framework in the context of social and economic development. CEIBS has incorporated CSR programs into teaching, research, and student/alumni activities since its inception. The international business school jointly founded by the Chinese government and the European Union has accelerated knowledge creation and dissemination during the pandemic to support economic stability and business development. The institution has also served as a key communication channel between academia and industry by synthesizing and sharing innovative practices and experiences of alumni enterprises. The timely release of the *CEIBS Corporate Social Responsibility White Paper* provides a new, multidimensional and dynamic framework for enterprises to understand CSR and sustainable development in a complex and ever-changing business climate.

2020 marks the third year of the "Corporate Social Responsibility Initiative," a joint project between CEIBS and the CEIBS Alumni Association. The white paper goes beyond business operations to shed light on the latest CSR trends and developments affecting China and the world. The paper reflects the progress made in environmental protection, business-nature symbiosis, and social development. These reflections are undoubtedly even more relevant in the face of the Covid-19 outbreak.

This year's white paper's successful launch is the result of the collective efforts of CEIBS professors and research teams, as well as alumni associations and companies. The professors obtained the research presented in the paper through the employment of detailed CSR parameters focused on business leaders, employee behavior and their relationship to the external environment. This granular and nuanced form of research is a powerful tool for guiding the healthy development of CSR.

The five CEIBS alumni companies featured in the white paper offer exceptional examples of aligning business practices with social needs. Their learning-based future-proof business innovations are a powerful demonstration of how best to bring CSR to the forefront of business activities. These five firms all received the CSR Award in April 2019 at the second CEIBS Alumni Corporate Social Responsibility Award, organized by the CEIBS Alumni Association. Some 53 alumni enterprises and organizations competed for awards that covered innovation, philanthropy, and the environment. Eventually, 15 companies took home the prizes. Under the guidance of Professor Chen Jieping and in cooperation with the five CSR Award winners, our research team put down in writing their innovative practices following investigations and interviews.

While the world faces a common challenge of combating the Covid-19 pandemic as the second half of 2020 commences, it is the immediate action of every individual that will make a real difference. As CEIBS European President Dr. Dipak Chand Jain famously said, "We live under the same sky, but everyone sees a different landscape." The time to change the world and thrive against all the odds is now. By bringing students, faculty, and alumni together, CEIB strives to create more connections, partnerships, and value in the post-pandemic era.

Prof. Li Mingjun
CEIBS President

Prof. Ding Yuan
CEIBS Vice President and Dean

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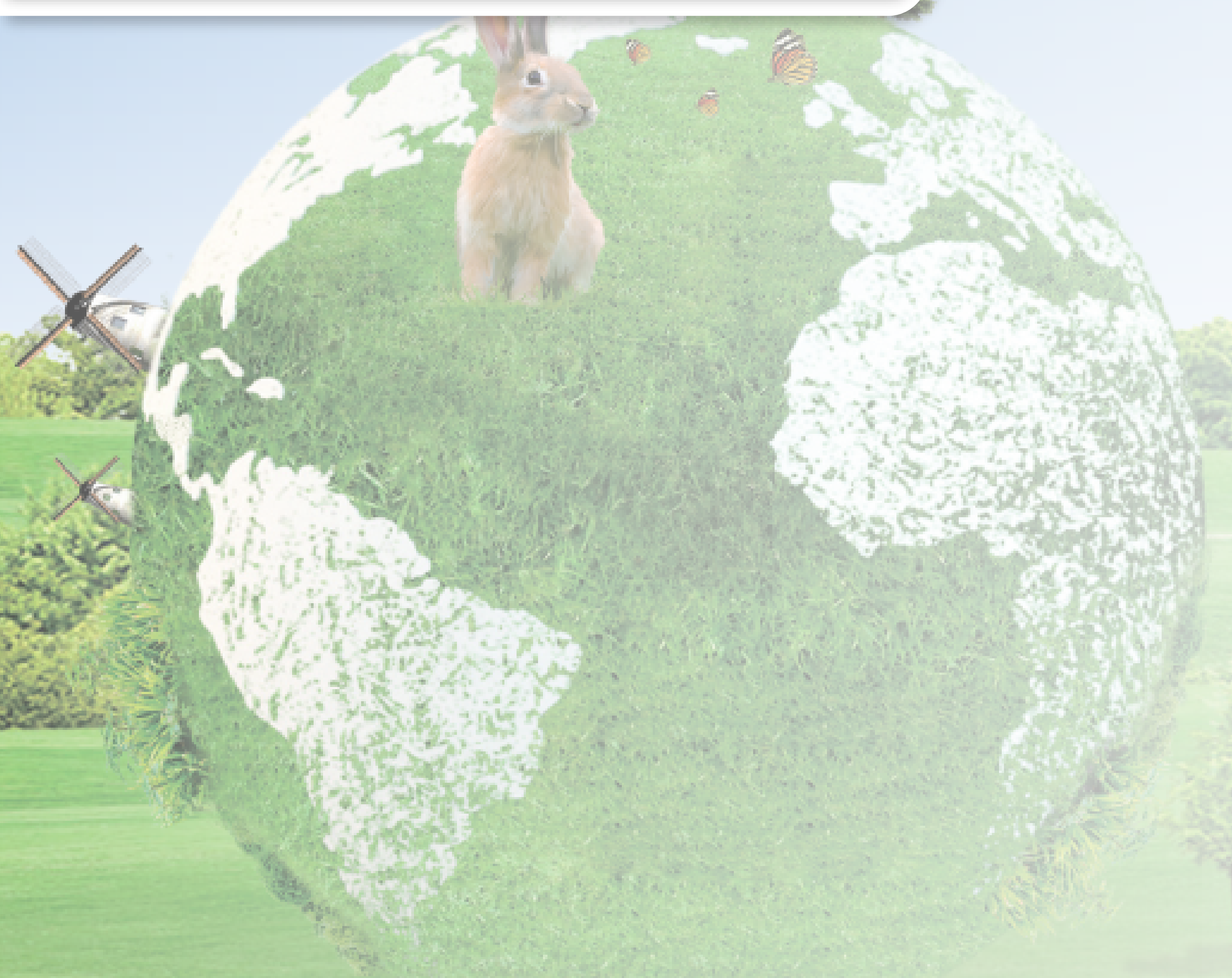
I CSR TRENDS GLOBALLY

CSR Trends Globally: Bold and Practical Solutions for the Environment

By Lydia J. Price, China Europe International Business School (CEIBS)
Laurie Underwood, Xi'an Jiaotong-Liverpool University



> *Society's calls for business responsibility tend to shift from closing gaps in employment, equality and health care, to reversing environmental threats like pollution, climate change and biodiversity loss. Technology is a constant, either in the guise of monster-under-the-bed (think AI job displacement), or superhero (think meat alternatives). As we wrote our report early this year, companies were raising commitments to nature in response to new scientific reports about environmental risks. Now, suddenly Covid-19 is shifting our perspective back to the human and social challenges of preserving jobs, health and safety. What this shows is that sustainable business must necessarily be **integrative and multi-faceted**. Each year our reports show companies widening their scope of responsibility. It's a trend we applaud, and one we'll continue to track.*
>
> — Lydia J. Price
> CEIBS Professor of Marketing

In many ways, 2019 was a pivotal year as global leaders began to recognize environmental challenges as more worrying than economic downturns or social inequalities—topics that dominated headlines in recent years in response to populist politics. Environmental risks dominated the World Economic Forum's (WEF) *2020 Global Risks Report*, released in January 2020, occupying the top five spots in terms of risk likelihood and claiming three of the top five spots in terms of risk impact.[1]

The WEF identifies the risk perceptions of global decision-makers annually within five categories—economic, environmental, geopolitical, societal, and technological—and this year marked the first time that entries from a single category (environmental) dominated a top-5 list. That outcome no doubt was influenced by high profile, UN-backed reports released in 2019 indicating that climate change and biodiversity loss are already at dangerously high levels, and furthermore, that worrisome trends are mostly accelerating rather than declining despite commitments from world political leaders to take corrective action. Meanwhile, scientific reports offered new insight on the mounting dangers of microplastic pollution.

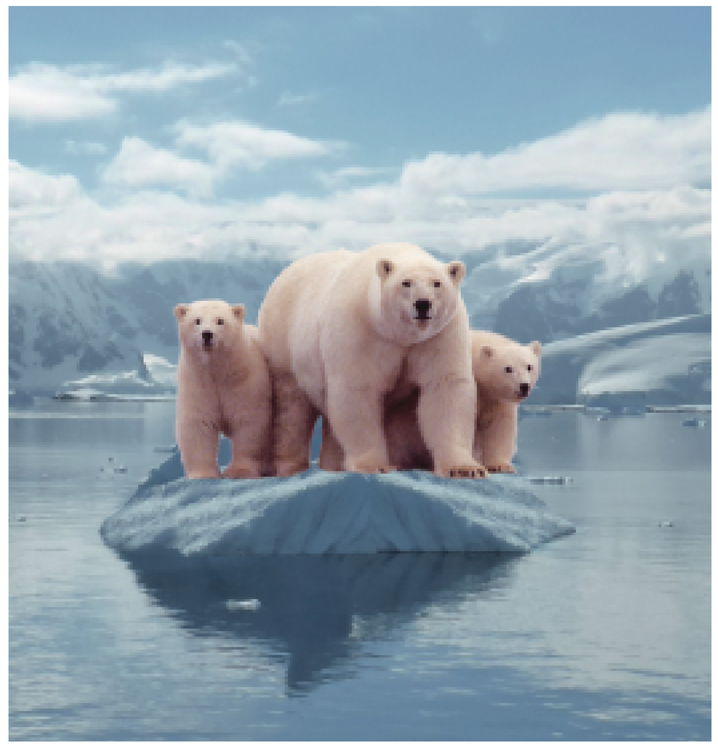
To counter the bleak outlook presented by these independent, third-party reports, large MNCs began offering big, bold plans to achieve a *net positive* impact on the environment, meaning they will give back to nature more than they take each year. Some are even contemplating the challenge of compensating for *legacy* harms to the environment since the time of their company's founding. Multi-disciplinary collaborations—a theme we highlighted in last year's report—are expanding in scope and ambition, recognizing that systems transformation is needed to solve our gravest environmental difficulties. Meanwhile, companies and organizations increasingly reorient innovation efforts to leverage natural systems, thus creating a growing class of efficient and effective "environmental technologies."

In the chapter below, we first review the three highest priority environmental issues now facing the planet, according to the world's most-respected global NGOs. Secondly, we discuss five promising advances in corporate and citizen practices in 2019, as stakeholders cooperate to counteract the most challenging megatrends of environmental degradation.

Science Sounds the Alarm over Three Key Issues

Issue #1: Climate Change

The UN's Intergovernmental Panel on Climate Change (IPCC), issued two rigorously researched and widely respected reports in 2019—*Climate Change and Land* (August, 2019) and *Special Report on the Ocean and Cryosphere in a Changing Climate* (September, 2019).① In them, the UN warns in stark terms that fast and aggressive action is required right now to mitigate the worst climate change risks. In 2018, the UN Environment Programme (UNEP) reported that, to keep global warming within 1.5℃, reductions in global greenhouse gas (GHG) emissions will have to reach 7.6 percent annually from 2020 to 2030. [2] But global climate control talks in Madrid in 2019 (see **Sidebar1**) failed to set a unified path for government action going forward, prompting a number of business leaders to accept the responsibility for driving change themselves. The challenge is daunting: reduce carbon emissions from the business sector to zero (carbon neutrality) or, more ambitiously, remove more carbon from the atmosphere than businesses emit (carbon negativity; also referred to as climate positivity).



[Sidebar1] Key Outcomes: Recent Conference of Parties (COP) on Climate Change

COP21 (December 2015 in Paris, France)

· 195 nations jointly agreed to maintain temperature increases "well below" 2℃, with 1.5℃ recognized as a difficult but not impossible target to achieve.[3]
· To do so, each country will develop "Nationally Determined Contributions" (NDCs) for carbon reductions.
· Forestry and land protection were prioritized.

COP23 (November 2017 in Bonn, Germany)

· President Trump withdrew the US from the Paris Accord in June 2017. However, an alternative US delegation representing states, cities and companies established a pavilion under the banner "We Are Still In."
· China was largely seen as stepping into the leadership void left by the US exit.
· Developing nations charged rich nations with failing to meet their commitments up to 2020.

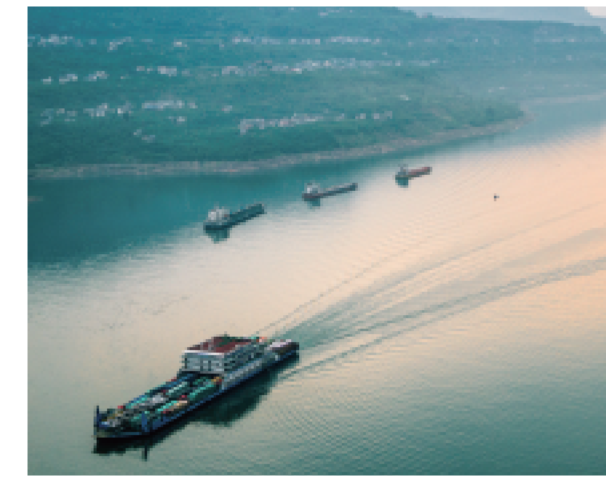
COP25 (December 2019 in Madrid, Spain):

· Unlike previous COPs, there was no debate regarding the urgency or truthfulness of climate change impacts.[4] Nevertheless, the meeting was largely deemed a disappointment for failing to set rules for international carbon markets.[5] Participating nations delayed the creation of new guidelines until COP26 in 2020.[5]
· Another impasse: the meeting failed to establish compensation for nations already suffering from "loss and damage" caused by climate change—damages which may reach US$150 billion a year by 2025.[5]
· In a sign of growing public concern over climate change, the event attracted protesters seeking faster, more effective action.
· The EU, the UK and other governments decided to strengthen their own carbon reduction regulations independently.[5]

①: The IPCC's Special Report on the Ocean and Cryosphere in a Changing Climate, created by more than 100 authors from 36 countries and referencing 7000 scientific papers, compiles new scientific research on the effects of climate change on ocean and cryosphere. It was approved by all 195 IPCC member governments before publication. The IPCC's Special Report on Land and Climate involved hundreds of experts from 52 nations worldwide over a two-year period.

Issue #2: Biodiversity Loss and Ecosystem Preservation

In May 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) delivered a report on a three-year UN-backed research project showing that biodiversity loss poses a threat as harmful to human wellbeing as climate change, though the problem has been under-recognized until quite recently.[5] The report argued that transformative change is needed on a massive scale to avoid catastrophic losses in the essential ecosystem services provided by natural systems—e.g., sequestering carbon, purifying and storing water, filtering pollutants, and providing wildlife habitat. The study revealed that nearly 1 million species are currently threatened with extinction, and we are now losing species 1000 times faster than ever before—a scale and pace much greater than anticipated.

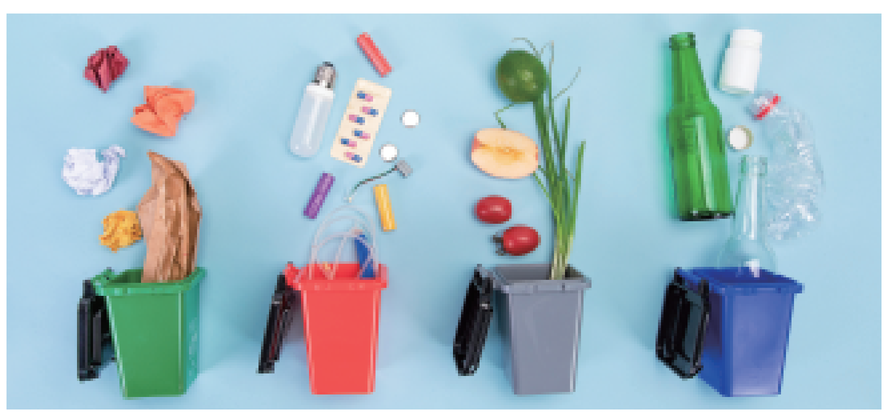


Governments, companies, and NGOs have already stepped up their responses. The UN identified 2020 as a critical year for nations to set an agenda of 'make or break' actions in the decade to come.[6] A number of global meetings are scheduled, among which China plans to host the UN Convention on Biodiversity COP15 in October 2020 in Kunming. The meeting is slated to finalize overall biodiversity planning for the decade, along with decisions on capacity-building and resource mobilization. China is already putting a number of related initiatives into practice. Most notably, a 10-year ban was implemented on Yangtze River fishing in order to replenish stocks that had dropped by more than 75 percent since the 1950s[7]. Meanwhile, companies are making their own big pledges. 'Regeneration' of natural systems and 'net positive' initiatives are replacing 'sustainability' in the CSR plans of many MNCs, and the search is now on for the means to achieve such lofty goals. As with climate change, the challenge is monumental: to transform business into a force for preserving, and even generating, healthy natural ecosystems.

Issue #3: Plastic Waste

Worldwide production of plastics has reached 300 million tons yearly—equal to the weight of the world's entire human population.[8] Of particular concern is the high proportion (50%) of single-use plastics—including 5 trillion plastic bags annually [9]—and the fact that plastic use by volume increased faster in the 2000s than during the previous four decades. UNEP reports that, of the 8.3 billion tons of plastics created since the 1950s, roughly 79% has ended up in a landfill or the natural environment, 12% has been incinerated, and only 9% has been recycled. The bulk of disposed plastics—8 million tons annually—wind up in the world's oceans. This places the world on a trajectory in which, if the rate of increase continues, the oceans will contain more plastics than fish by 2050.

Technological advances have greatly increased our access to high- quality data on the scope and scale of microplastics entering the oceans and atmosphere. Those data show that microscopic plastics now exist virtually everywhere, including in the food we eat and the water we drink.[9] On a more positive note, however, investigations of single-use plastic have moved beyond defining the problem and into finding solutions. More governments are limiting or banning their use (see sidebar2), and businesses are following suit. Among them, Sodexo, American Airlines, Red Lobster, Dell, Disney, and Bon Appetit Management have announced plastics bans or reductions in the past two years. More than 250 others, including Pepsico, Unilever, Nestle, L'Oreal, Coca-Cola, and H&M have signed onto the New Plastics Economy Global Commitment (organized by the Ellen MacArthur Foundation in collaboration with the UN, WEF, WWF and 40 academic institutions). Co-signatories commit to three goals: recycling used products into new materials, discontinuing single-use plastics packaging, and using only re-used, recycled or composted plastics packaging by 2025.[10]



[Sidebar2] Governments Restrict Single-Use Plastics

- EU passed regulations in March 2019 banning single-use plastics (utensils, straws, stirrers, and cotton buds) by 2021.[11] The EU also strengthened its polluter pay regulations and will require member states to collect 90% of plastic bottles by 2029.
- Canada announced plans in June 2019 to ban single-use plastics by 2021.[12]
- Peru has restricted visitors from bringing single-use plastics into its protected areas since January 2019 and will phase out single-use plastics entirely by 2022.[13]
- China, France, UK [13], Chile, Kenya, have all restricted or banned single-use plastics bags. India is in the process of developing similar legislation.[14]
- Individual states and cities, including California, Seattle, Washington DC and San Diego, have banned various types of single-use plastics.[13]

Companies and Citizens Respond

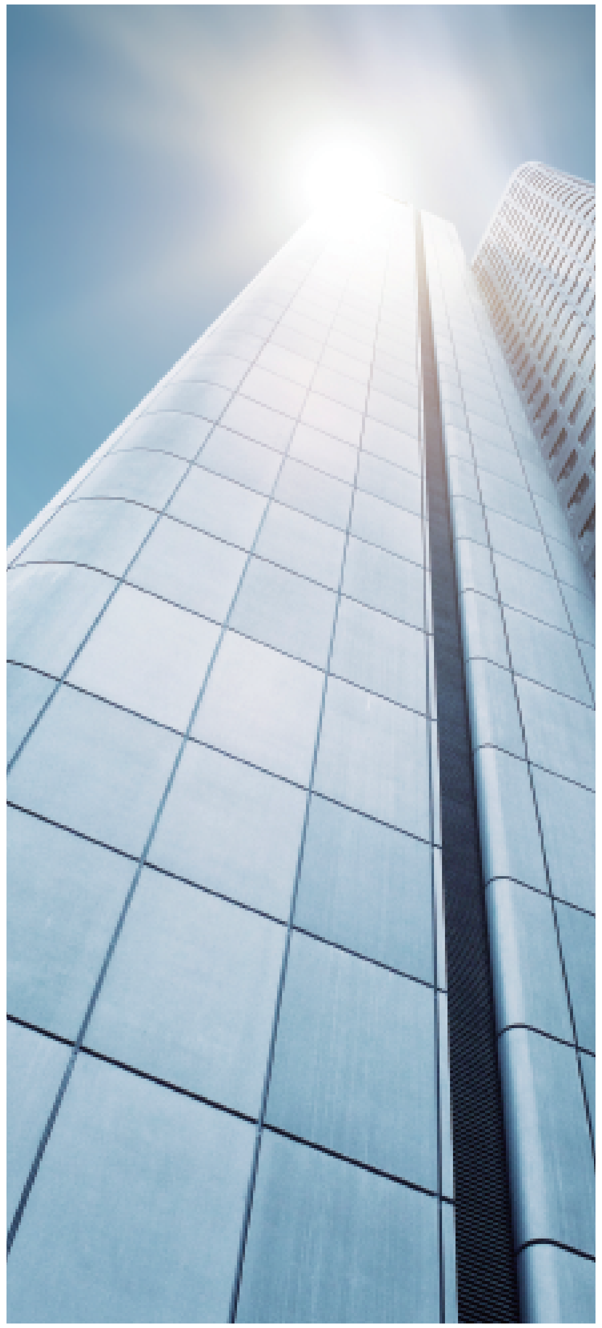
Due to the gravity, scope and scale of these critical challenges to our environment, companies are rethinking and recalibrating their approach to corporate responsibility, and citizens are increasing their engagement. Below, we list what we consider to be the five most compelling advances of the year.

Advance #1: Companies Commit to Net-Positivity

In the latest *CEO Study on Sustainability*② produced by the United Nations Global Compact and consulting firm Accenture, UN Secretary General H.E. Antonio Guterres emphasized the need to "… mobilize the private sector" to fight climate change, eradicate poverty and fulfill the overall Sustainable Development Goals (SDGs) by 2030. The title of this year's report, which summarizes interview and survey data from 1000 CEOs and 1500 senior business leaders globally, is *The Decade to Deliver*. Among the key findings: 75% of North American and Asian top executives see a need to "decouple economic growth from the use of natural resources and environmental degradation." [15] To achieve that, companies are moving beyond their previous ambitions to be "less unsustainable" and are now moving strenuously to become a net-positive force for good.

A number of large-scale, high-profile Western MNCs have pledged to replenish more natural resources than they use. Starbucks promised in January 2020 to become resource positive—storing more carbon and providing more clean water than they use, while entirely eliminating waste. Although no timetable was set for those achievements, the company has begun long-term research and innovation to completely transform its current practices, including the use of disposable cups. For now, their first-stage efforts are notable for working with NGO World Wildlife Fund (known outside North America as World Wide Fund for Nature) and consultancy firm Quantis to carefully assess baseline carbon, water and waste footprints across the entire value chain.[16] This initiative will serve as the reference for other MNCs designing interventions with big and bold positive impact.

②: In September 2019 UN Global Compact and Accenture released their fifth triennial Strategy CEO Study, compiling insights from 1,000 CEOs in 21 industries and 99 countries, gleaned from a poll of 1500 senior business leaders and interviews with 100 executives.



Microsoft is pledging to go beyond "net zero" on carbon emissions; eventually removing all legacy carbon generated either directly or by electrical consumption since the company founding in 1975. Specifically, in January 2020, company executives committed to carbon negativity in current operations by 2030 (removing more carbon than is emitted each year), so that cumulative net carbon removals will compensate for all historical emissions by 2050. As Microsoft's corporate blog states: "While the world will need to reach net zero, those of us who can afford to move faster and go further should do so." [17] Using a new US$1 billion "climate innovation fund," the company will use its own technology to assist suppliers and customers worldwide to reduce their carbon emissions, and foster the development of new methods of carbon capture, reduction and removal. From 2021, Microsoft also promises that carbon reduction will become "an explicit aspect of our procurement processes for our supply chain" .

These leading organizations are signaling that upstream and downstream business partners will have to work together in the search for net positive outcomes. Moreover, they recognize that success hinges on the support of government policies to level the competitive playing field with traditional companies that still adhere to the most harmful environmental practices. A growing number of companies are engaged in policy conversations about the need to raise taxes and end subsidies for carbon- and resource-intensive businesses. They want to see more support and funding for green innovation and the transition to a clean and inclusive economy. In May 2019, for example, US oil companies, automakers and consumer products manufacturers launched the Americans for Carbon Dividends, campaigning lawmakers to pass a carbon-tax-and-dividend plan—a move that will likely increase prices for their products.[18] BP and Royal Dutch Shell each donated US$1 million to the campaign. Meanwhile, Ford Motor Co. became a founding member of the similarly focused Climate Leadership Council. Finally, dozens of corporations from IT (IBM), healthcare (Kaiser Permante), finance (Capital One Financial Corp.), chemicals (DSM) and consumer products (Nature's Path) also campaigned congress for a tax on carbon emissions.[19]

[Sidebar3] Impactful Initiatives: Climate and Biodiversity

Business For Nature—Formed during a July 2019 meeting of the WEF in Dalian China, and in conjunction with the Trondheim Biodiversity Conferences in Norway, this coalition of 360 companies worldwide urges governments to form wide-reaching international agreements as early as 2020 to reverse nature loss.[19] They focus on five key goals: an emergency declaration for the planet, an ambitious post-2020 framework, renewed environmental targets, increased ambition and Nature-Based Solutions, and governance of the High Seas Treaty.[20]

Climate Action 100+—Within this coalition of 370 investors (representing US$35 trillion in assets), each has committed to net zero emissions. The group includes the largest GHG emitters on earth.[21]

CDP—This not-for-profit charity provides a "global disclosure system" to help companies, investors, and local governments manage their environmental impact. Focused on sustainability within supply chains, CDP seeks to cut 1 billion metric tons of emissions by committing key suppliers to the world's largest corporations to increase their renewable energy usage by 20 percentage points.[22]

Advance #2: Circular Economy Gets Practical

In recent years, the Circular Economy (CE) concept has gained acceptance globally for its potential to simultaneously protect the environment and enhance resource efficiency by keeping goods and materials circulating in the economy and out of landfills. PwC notes that CE "derives its inspiration from nature's biological cycle and creates closed loop material and energy cycles where waste is a problem because it is seen as value leakage." [23] Accenture consultants identify CE as a US$4.5 trillion opportunity over the next decade, with industries including fast moving consumer goods and electricity generation able to capture US$110 billion and US$250 billion respectively by achieving CE transformations.[24] Similarly, the Ellen MacArthur Foundation (EMF)—a world leading CE think tank—argues that CE can unlock more than US$560 billion of value in the fashion industry through collaborations across the value chain, from production to marketing to after-sales care.

The CE concept works on three key principles: a) prioritize renewable inputs, b) maximize product use (e.g., via sharing platforms, product as a service, and design for durability), and c) recover by-products and waste. Though elegant in design, and promising in terms of recaptured economic value from waste streams, the model has proven difficult to execute. Recently, however, more effort has gone into making this conceptual model highly practical. EMF, for example, released a holistic metrics and measurement system called Circulytics in January this year[25] to allow companies of any size or complexity to assess their overall level of circularity. The tool will greatly boost internal and external transparency, and EMF consultants will offer insight on the most productive areas of improvement. After studying data inputs from participants, Circulytics experts assign a comprehensive score and deliver feedback about possible improvements to company strategy, innovation, internal skills, systems, processes and infrastructure, as well as external engagements.[26] More than 30 member companies of the CE100 initiative tested the tool in 2019 (see Sidebar4).

With the help of the Ellen MacArthur Foundation CE early movers are starting to publicize the lessons of their practical experiences through a dedicated CE podcast called *Explore the Circular Economy*. Italian Bank Intessa Sanpaolo, for example, has situated CE efforts within the bank's Innovation Center. The Innovation Center now acts as a startup in launching a dedicated CE platform supported by a €5 billion fund to help customers catalyze their shift to a circular economy.[27] The center's work has included widespread training of bank leaders and staff to understand the new opportunities presented by circular businesses, as well as the risks of continuing their financial support for linear businesses (now at risk in a new age of climate regulation and growing natural disasters such as the massive November floods in Venice). A dedicated CE lab works collaboratively with researchers, clients and financial staff to identify and improve on circular solutions. Today, circular design is gaining recognition as a promising area for the bank to add value to Italy's many creative small businesses.

[Sidebar4] Impactful Initiatives: Circular Economy

CE100—Widely respected as the world's leading Circular Economy network, this organization connects companies, innovators, governments, and academic institutions by offering comprehensive information as well as workshops, seminars, and learning resources. Launched by Ellen MacArthur Foundation, CE100s new Circulytics tool has been tested by members including BASF, DSM, IKEA, Novo Nordisk, and Unilever.[28]

Factor 10—A Circular Economy project launched in 2017 by WBCSD (World Business Council for Sustainable Development), this coalition of more than 20 companies provides detailed guidelines and methodology for the transition toward a CE business model. The group seeks to eliminate waste by 2050 through improving resource efficiency tenfold.[29]

The Global Commitment—Launched in 2018, this coalition of 400+ organizations supports a vision of CE in which plastics are kept "in the economy and out of the ocean" and "in which plastics never become waste" [30] by promoting a system of "innovate, eliminate, circulate" . Members include 200 of the world's largest producers and users of plastics packaging (responsible for more than 1/5 of plastic packaging used worldwide), as well as 16 governments, 26 financial institutions, 50 academic institutions, and leading NGOs including WEF and WWF.[31]

Advance #3: More Solutions Grounded in Nature and Science

Nature-based solutions (NBS) tackle socio-environmental challenges by cultivating, restoring and or managing natural systems.[32] The European Commission seeks NBS initiatives to "… *bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions*." [33] These solutions often prove to be lower in cost and more effective than technology-based, human-developed solutions. For example, 2019 Ohio State University research into reducing air pollution found that, in 75 percent of the countries polled, plants reduced emissions more efficiently than did high tech systems such as smokestack scrubbers.[34]

Tree planting is a popular NBS used by companies and countries globally to offset carbon emissions. The potential is evident; given that one mature tree can, on average, absorb 40 pounds of CO_2 yearly.[35] But massive scale is needed to make tree-planting programs effective. Last year, we saluted Ant Financial's innovative App Ant Forest, for planting 100 million trees in China's arid desert regions as a reward for "green" behavior by 500 million registered users.[36] Innovators are now harnessing drone technology to speed things up even more. British start-up, Biocarbon Engineering, has developed drones that plant hundreds of trees within minutes by firing "seed missiles" across fields.[37] In Yangon, Myanmar, the drones accelerated the work of local citizens and non-profits seeking to reforest more than 350,000 acres of land with more than 1 billion trees. Villagers are trained as drone pilots to carry out the high speed planting, freeing up the time of others to care for the new seedlings.

Tom Chi, founder of the educational program Prototype Thinking and co-founder of Google X, refers to tree-planting drones as "invention catalysts" that have transformative potential to spark a complete system reset. With one drone operator able to plant 100,000 seedpods daily, he sees potential for the technology to eventually plant 20 billion trees per year for only US$80 million in operating costs[38], while generating many more local jobs for tree care. After 50 years, that kind of productivity could remove as much carbon from the air as humans have produced since the beginning of the industrial revolution.

Science-based solutions (SBS), in contrast, are more narrowly aimed at maintaining global warming below 2℃. Soil is one focus of science-based investigations. Researchers have recognized that soil stores more carbon than is found in our atmosphere plus all living plants and animals.[39] Modern agriculture and grazing practices release much of that carbon into the atmosphere, accelerating climate change. Investigations are underway to determine the potentially beneficial impacts of changing farming practices so as to reduce tillage, rotate crops and rotate animal grazing zones.

Rethinking meat is another integrative initiative that is gaining traction. Given that beef and dairy producers are the biggest contributors of GHGs in the agricultural sector, a number of SBS initiatives seek to reform beef or entirely eliminate it from our diets. The "Beef Up Sustainability" initiative launched in July 2019 by global food producer and distributor Cargill aims to reduce beef-related GHG emissions across the company's North American supply chain by 30 percent by 2030—an amount equivalent to removing 2 million cars from US highways per year.[40] Cargill's investments into science-based innovations cover the full product-use cycle, from improving cattle feed and optimizing fertilizers, to improving grazing management with ranchers, upgrading packaging, and reducing post-consumer food waste of beef.

An entirely different approach is presented by Impossible Foods, a company committed to "eliminating the need to make food from animals." The US-based company debuted its first laboratory-created, fully plant-based meat substitute—the Impossible™ Burger—in 2016,[41] claiming that: "It's delicious, nutritious, and made using but a small fraction of the land, water and energy required to make meat from a cow." In 2019, the company began offering the Impossible Whopper, now available at 7,800 locations of Burger King, as well as launching "Impossible Pork" and working to develop other meat-, fish- and dairy-alternatives made from plants. The company, which sells products in Singapore, Hong Kong and Macau, is now targeting China as a promising potential market, after giving out 50,000 free samples at the 2019 China International Import Exposition.[42]

Advance #4: Finance Deepens the Conversation on Climate Risk and Opportunity

As we mentioned last year, global financial institutions are moving quickly to address the growing risks and opportunities of climate change and other forms of environmental degradation. 2019 saw a notable increase in the number and variety of financial companies attending "greenfin" meetings and conferences, and a palpable sharpening of the ensuing conversations.

Risk analytics company Trucost (part of S&P Global) ramped up calls for companies to report on both physical and transitional risks to their businesses. Currently, financial reports tend to underestimate climate risks due to a disproportionate focus on manageable *transition* costs including government taxes and penalties, changes in technology, and loss of reputation. Going forward, they must recognize the estimated chronic and acute risks of *physical* changes in the environment that might manifest under different climate scenarios (e.g., temperature rises of 1.5℃ to 4℃)[43]. Data from a Trucost survey of the 500 largest publicly listed, US-based companies and the 1,200 largest global companies shows that business leaders identify the greatest causes of 'physical risk' as: "water stress, heat waves and wildfires linked to increasing global average temperatures … if fossil fuels continue to dominate and carbon emissions continue to rise." [44] The report continued: "60% of major US companies and 40% of major global companies have at least one asset at high risk from these physical climate risks." [45] The well-respected Taskforce on Climate-Related Financial Risks (TCFD), which we profiled in last year's report, has issued guidelines for conducting scenario analysis to assess various types of climate risk.[46]

Peter Bakker, President of the World Business Council for Sustainable Development (WBCSD), sees the recent changes in financial reporting as critical for the ongoing viability of the capitalist system. He advocates a triangular solution for capitalism: 1) every company must set science-based targets for climate and biodiversity (i.e., net-zero carbon and net-zero nature loss), 2) companies must follow TCFD guidelines to integrate climate risk in governance, management and disclosure, and 3) the financial system must develop standardized ESG indicators that are comparable across companies and industries.[47] With these changes, he argues, investors will redirect capital to support the market transformations so necessary for planetary wellbeing.

Investors are speaking up in support. BlackRock Chairman and CEO Larry Fink, for example, once again raised a clarion call (in his most recent annual CEO Letter) for the finance industry and the users of financial services to recognize that: "Climate change has become a defining factor in companies' long-term prospects," [48] adding his belief that "we are on the edge of a fundamental reshaping of finance" , with improved financial reports playing a key role. In a move that will surely catalyze industry change, Fink has asked all BlackRock investee companies to issue both a TCFD-based report on climate change risks and an SASB-based industry report on sustainability (see Sidebar5).

[Sidebar5] Impactful Initiatives: Financial Reporting

Science Based Targets—So far, 750+ of the world's largest companies have joined this initiative to set carbon reduction targets in line with the Paris Agreement to maintain global warming within 2℃. As these companies enact their plans, pressure to cut emissions will cascade down through their supply chains and value chains. Carbon Intelligence is one organization offering guidelines for participating companies.[49]

TCFD—The Task Force on Climate-Related Financial Disclosure was founded in 2015 by the United Nations' FSB (Financial Stability Board) as a way to produce "productive, coherent principles and guide-lines for companies to accurately disclose their climate-related risks" [50] Since TCFD released its first recommendations in 2017, membership has grown to 930 organizations by December 2019 (representing US$11 million in market capitalization).[51]

SASB—Since 2011, the Sustainability Accounting Standards Board has operated as a nonprofit organization focused on setting and disseminating financial reporting standards which businesses worldwide use to "identify, manage and report on the sustainability topics that matter." [52] To date, 330,000 standards have been downloaded by companies across 200 nations.

Global Investor Statement to Governments on Climate Change—In December 2019, a coalition of 631 institutional investors (together managing assets worth US$37 trillion) issued the statement during COP25 to demand that world governmental leaders proactively and effectively address climate change. Specifically, government leaders were pressed to "phase out thermal coal power, put a meaningful price on carbon pollution, end subsidies for fossil fuels, and update and strengthen nationally determined contributions to meet the goals of the Paris Agreement." [53]

Advance #5: Millennials Engage

Another trend that strongly solidified in 2019 was the rising visibility and increased activity of the world's youth. Motivated by the growing reports of a radically transformed future world, today's GenY and GenZ are voicing their concerns and making their choices about jobs and purchases in ways that clearly distinguish them from elder generations. As the WEF states in a recent website post: "Today, youth-led collective action is proving decisive in combating global challenges." The article praises millennials for their active and positive support for environmental protection as well as social causes including protections for women and girls, stating: "young people are at the forefront of change.[54]

One dramatic sign of the power of today's youth: teenaged Greta Thunberg's appearance during the February 2020 Academy Awards to announce her new TV series on BBC. The series will "follow Greta's international crusade, which takes her to the front line of climate change in some of the most extraordinary places on earth, as she explores what actions could be taken to limit climate change and the damage it causes." [55] The high profile announcement follows *Time* magazine naming Ms. Thunberg as Person of the Year (in December 2019) in recognition of her impact on both youth and world leaders to start *acting* on climate change and stop merely talking about it. Governments are showing signs that youth voices matter. Progressive and inclusive US cities (Houston, Grand Rapids, Omaha, Philadelphia) are establishing special boards and commissions representing youth, thus expanding the definition of diversity to include age and perspective alongside race, gender, and religion.

In addition, products and services designed by and for today's responsibility-minded youth are flourishing in the marketplace. Sharing economy "unicorns" from the transportation and hospitality industries are now joined by fashion industry newcomers such as The RealReal, which (after a successful IPO in June 2019) has a market capitalization of US$2.39 billion.[56] The success of this second-hand fashion retailer testifies to the popularity of a business model allowing youth to frequently change wardrobes at a reasonable price while also overcoming the waste-generating problems of fast fashion (an industry charged with triggering a 40% drop in the lifespan of clothing in recent years).[57] From 2016 to 2018, the US second-hand apparel market grew 21 times faster than retail clothing overall; looking ahead, nationwide revenues from US "resale" clothing are expected to grow from US$24 billion to US$51 billion by 2023.[58] The resale model is now being replicated in China, where newcomer Y:closet offers luxury clothes and accessories on a sharing platform popular with online shoppers. That platform now has 15 million registered users, and analysts expect luxury fashion sharing to eventually bloom among Chinese youth who want to update their wardrobes frequently, but either can't afford luxury prices or simply view second-hand purchases as part of a youthful and green lifestyle.[59]

Business schools and universities are also witnessing growing demand for courses and extra-curricular activities focused on social impact and sustainable management. Impact investing is now popular with MBA students worldwide, and b-school competitions increasingly feature a sustainability or social impact dimension. The challenges are difficult to solve, giving students an opportunity to stretch their problem-solving abilities to the limit—but they also offer rays of hope that business will seriously begin transforming our economies for the better. The current cohort of CEIBS MBA students shares this global enthusiasm for change; The Social Impact and Responsibility Club has a record number of participants this year, and the club's activities, often organized in cooperation with other functional business clubs, have led to recognition and awards. In addition to raising their understanding and awareness of our planet's most pressing environmental and social problems at present, the students are hopeful that these activities can open pathways to impactful lives and careers. If your company has need of a business-sustainability professional, or a general manager seeking a purposeful career, be sure to reach out to us for connections. And keep sharing your responsible business practices and experiences. Together, we can have impact.

[Sidebar6] Impactful Initiatives: Youth Shaping the World

Global Shapers Community-This network of 8000 thought-leaders in 165 countries—each under the age of 30—was founded by WEF in 2019 to gather "inspiring innovators, activists and entrepreneurs … who play a central role in creating lasting change in their communities and the world." [60] Members focus on three principle goals: standing up for equity and inclusion, protecting the planet and nature, shaping the future of education and employment. WEF holds a Global Shapers Summit annually.[61]

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II CSR PRACTICES IN CHINA

CSR Practices in China: Concerted and Coherent Actions towards Sustainability

By Chen Jieping, CEIBS Professor Emeritus
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There is a fast growing consensus among Chinese enterprises about the need to implement social responsibility practices. In addition to making traditional donations, more and more companies are pursuing innovative models and integrating social responsibilities into corporate strategies, creating core values while also turning a commercial profit.

Looking towards the future, companies will face rising challenges such as climate change, damage to ecosystems and the growing gap between the rich and the poor. Chinese firms will only prosper from a new wave of economic opportunities and weather all storms if they remain committed to living in harmony with nature and nurturing a reciprocal relationship with society.

This white paper represents only the tip of the iceberg when examining the diverse range of practices and solutions undertaken in China. This document aims to inspire more companies to adopt such strategies, thereby making significant contributions to social wellbeing and development.

— Chen Jieping, CEIBS Professor Emeritus

Economic prosperity has historically failed to provide sufficient solace for the maladies that it also brings. Crises such as climate change, ecological destruction and a widening wealth gap have intensified, impeding national development around the world. Providing solutions to such global issues and building a community capable of providing a shared future for humankind has become one of the most significant challenges of our times. Chinese companies continue to explore proactive approaches to social responsibilities to counter such dilemmas and contribute solutions and wisdom. Last year's white paper summarized and categorized CSR practices in the country according to responsibilities in promoting economic development and legal compliance. Other categories included constructing responsible and reliable supply chains, strengthening the responsibility of internet platforms and promoting green finance. These offer useful examples and reference points for both CEIBS alumni and the general public.

Based on these practices, this white paper will look back on Chinese companies' progress in terms of CSR practices from last year and illustrate their ideas and actions from the perspectives of 1) their coexistence with the natural environment; 2) the unification of business goals with social well-being; and 3) the realization of sustainable development. The first part of the paper will review how firms have cultivated a symbiotic relationship with nature by adopting low-carbon production, protecting biodiversity and relieving pressure on the environment. The second part will examine how they contribute to poverty relief and rural development, create equal job opportunities and grow more inclusive of underrepresented groups such as women, the physically challenged and younger generations. The third part will discuss how firms balance economic gains with social responsibilities, integrate commercial aims with public welfare and how social responsibility investments can guide sustainable business development.

In Harmony with Nature

The Global Footprint Network (GFN) estimated that the world had already consumed its annual "quota" of global natural resources for 2019 on July 29th last year and marked the day as Earth Overshoot Day. The international environmental protection organization issued a report to mark the event. The document warned that humanity continues to "overdraw" on resources for the rest of year.[1] The GFN pointed out that humankind's average speed of natural resource consumption is 1.75 times that of normal self-replenishment on Earth and the rate is 2.2 times higher in China.

Carbon dioxide accumulation in the atmosphere has led to an ecological "overdraft" on Earth's systems, with effects such as deforestation, soil erosion, falling freshwater reserves, loss of biodiversity and climate change. Natural disasters such as typhoons, wildfires, drought and flooding consequently occur. This scenario calls for caution. Chinese companies are making practical changes to reduce the burden. These changes include adopting low-carbon production processes, protecting biodiversity and reducing waste plastic.

Actions towards Low-Carbon Production

In April 2019, the China Meteorological Administration's Climate Change Center published the latest monitoring data on climate change nationally and globally. Data in the *Blue Paper of Climate Change in China (2019)* shows that temperatures are still increasing, while extreme climatic and meteorological events in China are intensifying, cryosphere deterioration is accelerating and climate-related risks are rising.[2] The impact on humankind, animals and plants and the global ecosystem is universal and may even be irreversible. Collins Dictionary named climate strike① the New Word of the Year in 2019, as the public put pressure on authorities and enterprises to take action.

The Chinese government attaches great importance to climate change issues. President Xi Jinping called for proactive national strategies to counter the issue at the 2018 *National Conference on Environmental Protection*. He also provided more impetus and guidance for the establishment of a fair and just global climate governance system based on mutually beneficial cooperation. President Xi expressed hope that China would become an important player, contributor and leader in promoting ecological progress worldwide.[3] Since 2018, the government has initiated a series of measures to alleviate climate change effects, including industrial restructuring, energy structure optimization, emission controls, carbon sink expansion and atmospheric pollution prevention. Energy consumed per ¥10,000 of GDP decreased 2.6% annually in 2019 and CO_2 emissions per ¥10,000 of GDP decreased 4.1%.[4]

In response to this governmental initiative, industrial associations and social organizations have formulated agreements and proposals as guidelines for low-carbon transformation across the industrial chain and at enterprise level. For example, the Real Estate Industry Green Supply Chain Initiative (Green Chain Initiative) advocated the adoption of environment-friendly supply chains across the whole industry, while calling for adherence to the principle of non-purchasing of non-green products and establishing a white list for environmentally compliant suppliers to reduce carbon emissions and pollutant discharge across the value chain. In 2019, the Green Chain Initiative called for reduced carbon emissions and energy efficiency based on environmental compliance. It added a green list to the white list to prioritize enterprises that qualify for environmental certification and perform well in energy conservation and emissions reduction.[5]

Enterprises have been earnestly living up to the call for low-carbon development. For example, factories belonging to Beautycos International, part of L'Oréal Paris, use solar, wind and biomass energy for power and heating and officially hit zero carbon-emissions in June last year.[6] Thermal plants, which generate most of China's power, face great difficulties in cutting CO_2 emissions. To help solve this problem, JD Digits, the e-commerce giant's fintech arm, applied AI deep learning to improve boiler efficiency. The move reduced power generator set energy consumption by 0.5%. Estimates suggest the technology could cut annual coal consumption of a 600-megawatt medium-sized generator set by 3,600 tons and annual CO_2 emissions by nearly 9,000 tons.[7] Regional grid operators are also pursuing "environmentally-friendly electricity" transformation. The State Grid Company in Huzhou produces and delivers power in an energy-saving, efficient and low-carbon manner while fostering a way of producing, living and consuming based on such ecological electricity.[8]

①: Climate strike is a form of protest where students and workers go on strike to demand that governments take action to curb climate change.

Protecting Biodiversity

From global warming to Amazon forest fires, Australian bush fires, Covid-19 and locust plagues in Asia and Africa, the catastrophic consequences of humankind's traumatic relationship with nature is evident. Enterprises and society must work to avert the potentially dire effects of ecosystem deterioration, species extinction and biodiversity loss. Compared with climate change that has an immediate impact on everyday life, biodiversity has a more remote effect as humans rarely interact with wild animals and plants on a day-to-day basis. Therefore, this aspect receives comparatively less attention, as evidenced by its relative insignificance in CSR disclosure compared with other issues.

Since the Covid-19 outbreak, the public has again turned their attention to wildlife. Eating wild animals or encroaching on their natural habitat raises the chances of virus exposure and transmission. As part of efforts to protect wild animals and plants, Alibaba has partnered Tencent and other companies to launch an IT business alliance to crack down on illegal trading online and other crimes involving wildlife. These firms use IT technologies to screen relevant information and forestall transactions. They also use their own platforms to raise public awareness of the importance of protecting wildlife and refraining from consumption and related transactions.[9]

The *Framework of Global Biodiversity After 2020* draft proposal sets out ways to reverse biodiversity loss and retrogression by 2030 to restore balance by the middle of the century to promote a symbiotic relationship between humanity and nature.[10] Chinese enterprises widely explore biodiversity protection and have formed both "nature-based" and "human-oriented" solutions. For example, Yili Group, the dairy product giant led by 2002 CEIBS EMBA alumnus Pan Gang, has operated a sustainable corn farming and wetland protection project in Songnen Plateau in Heilongjiang province since 2016. The corn comes from a 1,000-mu (670 square-meter) sustainable pilot farm. The water saved could protect 54,000 mu (36 square-kilometers) of wetland. The Inner Mongolia-based company also launched the "One Pack of Milk for 4.6 square-meters of Wetland" project, through which it donates a proportion of revenue from sales of Satine-branded organic milk. The donation is equivalent to the cost of protecting 4.6 square-meters of northeastern China wetland for one year.

Many firms now incorporate biodiversity into their daily management and taken measures to reduce the adverse effects of their business activities on biodiversity. For example, limestone extraction for cement factories typically causes significant topographical changes and damages wildlife habitats. Consequently, Huaxin Cement conducted an ecology and biodiversity impact assessment during the initial feasibility stage of its Meizishan mine project to ensure environmental damage remained within a reasonable range. When determining a mining plan, the Hubei-based firm also designed an environmental restoration plan to ensure the sustained availability of mines and protect biodiversity.[11]

Other enterprises have leveraged their technical strengths in innovative ways to promote biodiversity protection and achieve mutually beneficial results. Mobile entertainment firm 37Games developed China's first animal protection title — "Saving Wildlife" combines technical advantages and wildlife protection social responsibilities into a "game plus public welfare" model. Players score points by avoiding obstacles and saving animals. This title raises gamers' awareness of wildlife protection by encouraging them to participate in virtual missions. In the game, the developer created challenging obstacles and also provides tips to protect wildlife in real life.[12]

Relieving Pressure on the Environment

Plastic waste and micro-plastics have devastating effects on groundwater, soil, oceans and maritime organisms. The United Nations Environment Program points out that the wide use of these materials has had an increasingly severe impact on the global environment. Estimates suggest that some 8 million metric tons of plastics are dumped into the ocean annually, equivalent to five grocery bags per every foot of coastline around the globe. Plastics account for between 60% and 90% of waste that gathers on coastlines, ocean surfaces and the seabed.[13] This marine pollution threatens the lives of at least 800 maritime species and enters the food chain, ultimately ending up on household dining tables. Micro-plastic concentration in the downstream Yangtze River has reached 500 thousand particles per square-kilometer and they have been detected in bodies of water in faraway regions like Tibet autonomous region and Qinghai province.[14] Japanese researchers even detected waste micro plastics in the air last November.

Dealing with marine waste plastics and micro-plastics was high on the agenda at the G20 Summit in June last year. All parties agreed on the Osaka Blue Ocean Vision to end plastic leakage into the ocean by 2050[15]. As a major plastic producer, China is also reexamining the use and disposal of plastics to fundamentally curb plastic pollutants. The State Council rolled trial plans in 2019 to develop "waste-free cities" while the Hainan provincial government issued a complete ban on the production, sales and use of non-biodegradable plastic products. Shanghai has issued strict guidelines on household waste classification while property developer Vanke has initiated a zero-trash office work plan.

As plastics and waste emerge as a key issue, the necessity for drawing up recycling plans has become a common goal among local authorities, enterprises and the general public. The primary problem in plastics recycling is the retrieval of used products and packaging from consumers. This aspect is also key to building a closed-loop recycling economy. Signify (previously Philips Lighting) has adopted an innovative business model to solve the problem. Instead of selling lights directly, the Dutch electronics firm leases lighting to customers while still retaining ownership rights. By doing this, the company remains responsible for light replacements and recycling thereafter. The move has helped to transform the company from traditional "one-time selling" to recycling-oriented "lighting services provision." Thus it has established a mutually beneficial relationship with its customers and boosted the recycling economy's development.[16]

Other enterprises have pursued recycling and trash-into-treasure programs to provide sustainable solutions. Domestic company Reclothing Bank, for example, is dedicated to upcycling thrown-away clothing into fashion pieces trend from patched-up clothing to regenerated materials and then to synthesizing environment-friendly ones. The Shanghai-based firm made a breakthrough last year with the creation of an RPET (recycled polyethylene terephthalate) environment-friendly material by extracting fiber from recycled plastic bottles, greatly reducing garbage landfill and consumption of non-renewable resources. Its environment-friendly production could save 42% of energy, 45% of green gas and about 94% of the water used in traditional technologies, helping the high-polluting textile industry to go green.[17]

Unifying Business Goals with Social Wellbeing

The 2018 Nobel Prize for Economics focused on "technological innovation, climate change and economic growth" research, while the 2019 award centered on "experimental practices in alleviating global poverty." Poverty reduction is the United Nations' primary sustainable development goal and the core element of sustainable development philosophy in China. Since the reform and opening up, the population living in absolute poverty in Chinese rural areas has fallen from 770 million to 5.5 million last year, while the poverty incidence rate has dropped to 0.6%.[4] The UN Secretary-General António Guterres has spoken highly of efforts to alleviate poverty in China, commenting that "China is the country that has made the most contribution to global poverty relief." [18] Chinese enterprises, a leading force in reducing poverty in the country, have contributed many innovative practices and solutions to the cause.

Companies don't focus on narrowing the wealth gap alone; they are increasingly paying attention to social injustice from a broader perspective. The International Labor Organization indicated last July that countries are slowly moving towards reducing informal employment. Some 61% of workers around the world still engage in informal employment and women, younger generations and the physically challenged still face grave challenges in gaining equal access to decent jobs.[19] Business models and technological innovations are revolutionizing the way people work and live. In the context of huge advances in technology, promoting inclusiveness and reducing social inequality have become critical issues.

Poverty Alleviation and Rural Reconstruction

Enterprise-level targeted poverty alleviation programs in China not only address poverty issues at a basic level but also create a means for the underprivileged to generate wealth themselves. If the Nobel Prize in Economics represents a theoretical contribution to global poverty reduction factors, then the experience of more than 700 million Chinese people provides first-hand accounts of how to alleviate poverty on a global level potentially.

China's poverty-stricken areas are mostly found in remote and isolated regions, typically featuring a hostile natural environment and a weak industrial foundation. Even if gifted particular resources, it remains difficult for these communities to turn them into stable revenue channels due to various constraints. Some companies have industrialized local resources to create endogenous growth and help surrounding areas pull themselves out of poverty. For example, in central Gansu province lies the Linxia Dongxiang Hui ethnicity autonomous prefecture, where little industry had previously existed and residents had struggled to make ends meet. Major property developer Country Garden entered into one-to-one assistance partnerships with local villagers and sent dedicated poverty relief officials to commercialize local resources such as goats since 2018. The Foshan-based realtor also introduced grants, technical training and cooperative breeding to help local industries become more self-subsistent with better quality products on a larger scale. The area has now cultivated a pillar industry based on the "three treasures of Dongxiang," namely, goats, potatoes and embroidery.[20]

Through poverty reduction efforts, enterprises have helped to shape and foster special local industries. However, they have also applied e-commerce and big-data to empower poverty-stricken areas to jump onboard the internet and digital economy. For example, Alibaba has formed a direct supply network using its online marketplace Taobao and mobile payments service Alipay through what it calls the "one county, one merchandise" model. The Hangzhou-based tech giant has also looked to selling via live-streaming to promote the sale of quality goods sourced from impoverished areas. Alibaba also employs big-data analysis to guide agricultural production and help these areas discover, cultivate and develop local specialty products to blaze a trail in e-commerce during poverty relief efforts.

Poverty alleviation fights against absolute poverty, while rural reconstruction generally struggles against relative poverty by instilling a pleasant rural landscape, creating wealth for farmers and cultivating strong agriculture. Rural finance has always been a weak link in the traditional financial system.[21] JD Digits has developed a data-driven digital finance system, especially for the rural market. The system expedites a process of metamorphosis agriculture while also boosting rural finance's overall development. The system allocates credit lines to farmers based on quantitative models and each farmer's historical production data, free of any mortgages or collateral. During production, it allocates fixed funding amounts at fixed times to the industrial chain based on such models to precisely control the liquidity. Interest is calculated phase by phase to maximize the efficiency of fund utilization. It also helps farmer households manage risks and realize the informatization and automation of agricultural production management to enable "foolproof" agriculture.

Equal Job Opportunities

The World Economic Forum's *Global Gender Gap Report 2020* states that at least 257 years is needed to eradicate the global gender-based economic inequality gap. This projection is 55 years more than in the 2018 estimate. The gap mainly exhibits itself in the lower proportion of women in managerial positions, the low level of labor participation and lower levels of income. The reasons behind this include relatively higher proportions of women in positions vulnerable to automation, a lower proportion of women in high-income technical roles and career path limitations for women due to familial responsibilities.[22]

Job-related gender discrepancies have garnered much attention from companies. Some have carried out women's leadership projects, provided support for family-bound female employees and disclosed gender equality data in CSR reports to promote equal rights.[23] The *Bloomberg Gender-Equality Index* is the only database in its field with broad investment implications. The New York media firm launched the tracker to reward and accredit those companies dedicated to improving gender equality transparency. New energy vehicle manufacturer BYD, computer giant Lenovo and catering group Yum China were the first Chinese entrants on the index in 2019 due to their excellent performance in creating an equal and inclusive working environment for employees. Yum China, which runs KFC and Pizza Hut in the country, was one of two catering enterprises in the index's global category due to efforts to eliminate gender differences by raising female representation in the boardroom and at senior management level.[24]

Technical advances such as AI and cloud computing have brought significant benefits to society, while at the same time provoking concerns about employment. Some tech firms have demonstrated that such breakthroughs can create large amounts of new jobs while replacing certain existing ones. JD Digits' services for individuals and SMEs provides a good example. While the company has achieved zero human interference through Big Data and AI, it has created more than 3,000 positions in data processing, technological R&D and risk control.[25] At Alibaba, the tech ecosystem has given rise to new positions such as AR-based cosmetic makeup simulation engineers, holographic image constructors and AI dialect speech trainers. In addition to creating new roles, Alibaba also provides training and certifications to skill-up existing personnel. For example, the company's Lark-like workspace management app Ding Talk rolled out external training and certification for "digital managers" in December 2018. As of this May, the company had trained and certified more than two million digital managers.[26]

Inclusive and Pluralistic Society

Firms pay more and more attention to social inclusiveness and regard pluralism and inclusiveness as top priorities in terms of their social responsibilities. Some focus on improving social roles and the status of stay-at-home rural women by bolstering their job competitiveness and entrepreneurial skills to unleash them a major driving force of social development. For example, Mary Kay's China subsidiary launched a Sustainable Development Goals② model village project in Chuxiong city in southwestern Yunnan province based on the multi-level marketing firm's experience in career training and development for women. The project aims to empower local women to find jobs and forge out new sources of income. Mary Kay joined hands with six UN agencies in September 2019 to launch a global "entrepreneurship accelerator for women," combining online courses with offline practical training to enable higher levels of participation in social-economic development.[27]

People with physical and sensory disabilities often struggle to navigate society. Due to the efforts of IT companies such as Alibaba and JD.COM to connect more resources to their internet platforms, the physically challenged can overcome their physical inhibitors and gain equal access to job opportunities or even start up their own business. Search giant Baidu launched the "AI-Assisting Eyesight" initiative in May 2019 to help massage therapists, a popular profession among China's blind community. Baidu's smart speaker system allows them to voice-activate air conditioning, lights and televisions and therefore work more conveniently and effectively.[28] On October's "White Cane Safety Day," local services O2O platform Meituan introduced a voice-activated online takeout app for the visually impaired, allowing them to choose an eatery, order dishes, pay and even ask for a refund, completely unaided. This also marked the first lifestyle service app tailor-made for the visually impaired.[29]

Health issues in impoverished areas have also raised widespread concerns. Companies' efforts have not only helped less well-off adolescents become healthier, but they have also had a positive effect on their education. For example, Mengniu Dairy has donated milk to schools in countryside areas since 2002 through the Inner Mongolia-based company's "School Milk Program."[30] Another dairy producer Yili Group promotes equal access to education while providing nutrition and health services to children from poor backgrounds. The "Yili Future Park" is a non-profit project that provides diversified science education for children. The project comprises an online platform for children of urban and rural-based children alike to share science-related stories and enjoy the discipline together.[31]

With an internet penetration rate of more than 90%, adolescents are the most active user group in China's cyberspace. As a melting pot of ideas and thoughts, the internet is home to both positive and negative content. Adolescents who are still in the developmental stage are among the most susceptible to these ideas. While the internet can bring much joy, users are also vulnerable to potential risks that could harm them, such as cyber-attacks, malicious software, privacy leaks and addiction.[32] In July 2019, Xinhua News Agency rolled out the search app "Huayang Searching," China's first such software that screens content that could be malicious for teenagers.[33]

②: The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

Sustainably Upward

The success of an enterprise has never depended on revenue increases alone. Instead, success is a combination of factors including employee growth, consumer recognition, business goodwill and contributions to society. Only through promoting the growth of employees, clients, investors, society and all other stakeholders, can a company develop sustainably.

Chinese companies outnumbered American counterparts on the Fortune 500 list for the first time last year, with 129 entries compared with 121 from the US.[34] However, a Chinese enterprise is yet to enter the Global 100 most sustainable corporations from Canadian financial outlet Corporate Knights. This indicates that while many Chinese businesses have achieved significant growth in terms of strength and scale, they still hold relatively little influence in sustainable development. The reason may stem from an undue emphasis that companies place on economic goals while ignoring their social and environmental responsibilities. It may also be the case that companies are unaware of how to create social value while at the same time remaining in operation and maintaining competitiveness.[35]

Balancing Interests and Responsibilities

A chemical plant in Xiangshui county industrial park, Jiangsu province, suffered a serious explosion in March 2019, causing at least 78 deaths and more than 600 injuries. The direct economic loss was ¥1.97 billion (US$282 million③). After the accident, the media revealed that the local government had set very low standards for environmental protection.[36] This means that local authorities and firms may have put profits before the social good. Some enterprises are bent on short-term economic growth while ignoring their responsibilities to employees, clients and consumers. Some even seek out economic growth at a high cost to the environment. These harm society and nature while also impeding the long-term growth of enterprises themselves. Firms need to identify business opportunities based on economic, social and environmental red lines, and incorporate social and economic values into their growth targets to achieve sustainable development.

As technologies like Big Data and AI grow at astonishing rates, their applications in commercial, living and workplace scenarios have helped tremendously to save labor costs. For example, with the onset of Covid-19, Alibaba's DAMO Academy R&D initiative has launched an intelligent *epidemic robot*. It uses knowledge packs from public health institutions supported by machine learning algorithms to answer most general inquiries, significantly reducing pressure on human services. Nevertheless, some enterprises abuse advanced technologies to the detriment of consumers. For example, 315 Gala, a popular evening show on state broadcaster CCTV, ran an expose on a tech firm in 2019 that used AI to make unwanted robocalls. This not only goes against morality but also constitutes a form of deceit and criminal activity. Therefore, companies should remain prudent at all times on their responsible use of technology.

Data security risks have become increasingly evident with the expanded use of new technologies. Some platforms collect user information without consent or the appropriate agreements, or lack proper measures for user information protection. Such data safety and privacy protection issues are now top of the agendas of related enterprises. Some have voluntarily undertaken obligations to protect user information and put forward effective measures and solutions. During the 2019 “Double Eleven” online shopping festival, prominent Chinese courier SF Express rolled out a feature to hide user phone numbers from delivery staff to protect their data better and boost safety.[37] Takeout delivery services such as Meituan and Alibaba's Ele.me quickly followed suit along with house rental platforms like Zuke.com with functions to prevent user harassment from advertisers and agents.

③: ¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.

Commerce and Public Welfare

In November 2019, media reports suggested that staff at Shuidi, a Chinese mutual insurance startup that crowd-funds donations for patients with serious illnesses, was encouraging patients to exaggerate their conditions to secure more donations. The platform would then take a slice of the funds as a commission and even provide fixed templates to describe sicknesses in a way to garner more sympathy. The expose led to great outcry and aroused debate[38] mainly regarding the fine line between commerce and public welfare. This platform pursued a business model combining crowd-funded public welfare with insurance sales. The parent company uses the platform to attract web traffic and generate revenue by selling insurance. Commercial profits contribute to support public welfare operations to realize sustainable growth. While the model itself is innovative, the firm tarnished its initial mission when carrying out its operations.[39] This case demonstrates the grave challenges faced during the integration of commerce and public welfare.

Companies that realize public welfare through their business model are known as social enterprises. If firms, in turn, aim to pursue economic benefits through related publicity, it is considered to be public welfare marketing or even speculative behavior. Hongmao Pharmaceutical drew public outcry last December after its inclusion on the China Association of Traditional Chinese Medicine's 2018 CSR star company list. While the company had broken the law over 2,500 times and received more than 10 market bans over 10 years, it also participated in a multitude of targeted poverty reduction initiatives and public welfare programs. Such dichotomized behavior triggered much public debate over whether its participation in CSR initiatives had been well-intentioned.[40] Research shows that enterprises carrying out outward CSR projects more readily receive the public's praise and goodwill. However, they should remember that such activities' goal is not to gain laurels but to nurture sustainable development. To this end, enterprises must bring benefits to employees, clients and a broader range of stakeholders.

How can commerce and public welfare become better integrated? Peter F. Drucker, the founding father of modern management studies, noted that the essence of companies is to solve social problems and each social problem represents an opportunity. Some far-sighted enterprises engaged in social and environmental issues have innovatively brought social, environmental and commercial goals under the same umbrella, turning problems into opportunities. Alipay's Ant Forest is one such initiative to realize a mutually beneficial integration. The Alipay app feature encourages low-carbon activities such as using public transportation, buying tickets online and paying their utility fees online to accumulate “green energy” on their accounts. When users accumulate a certain amount of energy, they can cash it in to commission the planting of a real tree in areas affected by desertification. This innovative model has awakened the public to environmental protection and promoted a low-carbon lifestyle. It has also helped Alipay gain user traffic and usage time, as well as expand social interactions and application scenarios. By doing so, Ant Forest has significantly expanded and enhanced Alipay's payment and social functions.

SRI as a Sustainability Driver

Socially responsible investment (SRI), also known as green or sustainable investment, is a strategy in which a company considers the social impacts of its investments simultaneously with financial gains to realize sustainable profit distribution. When choosing target firms, it evaluates environmental, social and governance (ESG) factors as well as financial forecasts to ensure that the enterprise will yield positive and quantifiable social and environmental effects while also achieving financial targets.

SRI in China mainly took the form of bank lending activities in the early days. The Central Government, along with the State Council, proposed the concept of "building a green financial system" with the 2015 *Integrated Reform Plan for Promoting Ecological Progress*. The 13th Five-Year Plan, issued the same year, elevated green finance to a national strategic level. The Industrial and Commercial Bank of China, the Industrial Bank and Huaxia Bank became the first batch of the country's commercial lenders to become signatories of the UN Principles for Responsible Banking in September 2019④.[41] Under the guidance and promotion of supervisory departments, China's banks have sought out new green financing practices. For example, the Industrial Bank launched the Investment in Green Innovation project in September 2019 to support low-carbon, energy-saving initiatives. They can contribute to the curtailment of climate change and establish an innovative financing model for environment-friendly development practices.[42] As of the end of last year, the total outstanding credit balance for green financing among the 21 major banks in the country exceeded ¥1 trillion.[43]

Recently, as socially responsible investments spread to securities, equity investment and industrial funding practices, responsibility-based products such as the ESG stock indices, green bonds and green funds continuously thrive. For example, the ESG responsibility investment fund under asset manager E Fund, evaluates companies' performance through negative screening and its evaluation system. First, it weeds out stocks with negative ESG records, such as high pollution, high energy consumption and poor environmental governance before scoring publicly listed companies and groups the top 80% into a stock pool for selection. Finally, it inspects the environmental effects, social responsibility performance and governance levels of the companies based on public disclosures and investigations and integrates these indicators into a final score.[44] As of the end of last year, 11 public funds employ ESG evaluation with a total scale is ¥15.3 billion, according to Wind data. Of these, four were established last year, with a combined scale of nearly ¥5.2 billion.

Boosted by the philosophy of "doing business for the general good" and "public welfare-based market operations," SRI is gaining even more momentum. Social responsibility investors target poverty reduction, elderly care, environmental protection and other issues at present through the public welfare system, business models and financial means.[45] For example, Ehong Capital, an investment firm, has financed Lvkang Medical Care, a platform dedicated to providing quality life for the elderly. This project set a precedent for using influence-backed investment to solve social sore points.[46] Another successful example is CFPA Microfinance, which aims to provide resources to middle and low-income groups in rural areas. It has now become the most widely used platform for rural micro-financing and has generated tremendous social value.[47]

As the public grows increasingly aware of climate change, environmental damage, wealth disparity and social injustice, companies face a trio of key issues: how to operate in harmony with nature, how to balance corporate goals with public welfare needs and how to profitably realize sustainable development. More and more firms understand the significance of CSR for jointly promoting economic development and a healthy society. Moreover, companies are starting to move beyond philanthropy to integrate CSR practices with business decisions and operational strategies.

Chinese companies paid more attention to environmental protection over the past year, reducing greenhouse gas emissions and developing the recycling economy through innovations in technology and business models. They also focused on social equality and justice, offing targeted poverty alleviation programs and equal job opportunities. More firms looked to address social issues while realizing commercial goals and embarked on explorations in this regard. Social responsibility investment also channeled capital into the promotion of sustainable development.

Looking forward, Chinese companies still face considerable challenges. These include maintaining sustainable development while expanding on existing capacity and scale, and balancing commercial goals with social values. This white paper sheds light on the challenges, and seeks to inspire enterprises to approach sustainable development from a broader perspective, incorporating nature and society into development goals. Chinese enterprises can bring through more vivid examples of social responsibility practices.

④: *The UN Principles of Responsible Banking framework* is enacted by the financial initiative organization under the UN Environment Programme, among others, to help banks maintain their social goals in accordance with UN Sustainable Development Group and Paris Agreement on Climate Change. It helps banks to play a key role as financial intermediaries and boost climate change action and sustainable development.

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III CSR PRACTICES OF CEIBS ALUMNI COMPANIES

ZBJ: The Intrinsic Altruism of a Service Transaction Platform

By Zhang Chi, CEIBS Case Center

Photo courtesy of ZBJ.COM

> *There is a widely held belief that it's the job of businesses to generate economic value, while it's the responsibility of the government to create social benefits in order to serve its people. We at ZBJ believe that our company should create social value along with economic value — the unity of making profits and generating social benefits is worth us fighting for.*[1]
>
> — Zhu Mingyue
> Founder and CEO of ZBJ, CEIBS EMBA2013 Alumnus

Zhu Mingyue loves to share this story about his debate with a prominent designer at a cafe in Beijing in 2013. The designer blamed him and his zbj.com (ZBJ) for undervaluing designers and disrupting the designing industry. Zhu rebutted by asking two questions: "How many customers have you served, as the largest design company in China?" , and "How many designers have you hired?" The designer answered with pride, saying they served 100 customers per year and hired 700 designers, which was already a remarkable achievement in this industry. Zhu then said, in a calm tone, "There are 89 million business entities in China, and the number is still increasing by 50,000 every day. You can only serve 100 customers per year, so how about the other 80 million companies? Who can they turn to for professional brand marketing services or transformation? What about the millions of professional or non-professional designers in China, who may not be your employees, but still want to find a design job, build their own design business, or make a difference in the world and achieve their ambitions with their designing skills? What ZBJ wants to do is provide solutions to these people's pain points." After hearing his words, the designer softened his attitude.[2] "ZBJ is here to support small and medium-sized enterprises (SMEs)," Zhu said.

Zhu Mingyue founded ZBJ in 2006 in Chongqing. The company has launched several "transformation campaigns"① under his leadership, and grown into a unicorn in service crowdsourcing, which was once considered one of the "least promising" , "slowest-growing" business fields. ZBJ has now evolved into a service market based on talent sharing, with 22 million registered users (as of December 2019). The professionals and agencies on ZBJ can provide more than 1,000 types of services covering the entire business life cycle for companies. ZBJ provides special benefits and training programs, including its offline workspace sharing service Zwork②, for businesses operating on this platform, helping more than 14 million professionals to adapt to the internet age and serve clients all over the world. With the help of ZBJ, a successful incubator, 100,000 professionals have established their own companies. Combining the SaaS ecommerce platform with offline incubators, ZBJ is able to pool together third-party resources to provide "Internet Plus" solutions and all-around services for micro, small and medium-sized enterprises (MSMEs) in all industries, helping businesses to upgrade their brand, technologies and business models and eventually driving regional industrial transformation.[3]

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①: "Transformation campaigns" were reforms carried out by ZBJ to change its products and business models. Every transformation campaign pushed the development of the company. In December 2018, ZBJ launched the latest transformation campaign "Campaign 10" , which focuses on serving buyers and aims to improve the closing rate and to upgrade the company's operation mode. The main goal of this campaign is to improve the closing rate to no less than 80%, while establishing a system connecting the entire company's information flow, capital flow and user data. It also aims to generate ¥10 billion (¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.) in revenue and build a platform ecosystem that benefits buyers, service providers and the platform itself.

②: "Zwork" is a business community built for knowledge workers around the world. Well-connected to the talent-sharing platform ZBJ, Zwork offers entrepreneurs flexible working space in several Chinese cities, as well as all-around, one-stop corporate and consultation services provided by professional teams in customer communication and entrepreneurship training.

Starting Up: to Address the Pain Points in Service Transactions

In the early 2000s, Zhu Mingyue, always curious about new things, was fascinated by online shopping, a new business model at the time. He noticed a specific need to be satisfied. “There were so many talented people, who were excellent writers, designers, or planners, but they couldn't find the opportunities to use their skills.” Zhu said, “Meanwhile, there was another group of people, who just started their companies, most of which were small or micro-enterprises. They couldn't afford a professional creative design company.” He saw an entrepreneurial opportunity in this. “We believed we could establish a platform to connect these two group of people,” he said.[4]

Zhou Yong, Vice President of ZBJ and President of ZBJ's Bajie Institute of Digital Economy, considers ZBJ as a service marketplace for companies. The core of service delivery, he believes, is an intrinsic altruism that prioritizes customer experience and value. “When we match people's demands and skills to make a deal, we have to think from the perspective of customers. We need to take into consideration the interests of customers and the public, and even trade or social benefits. That is the essence of our business,” he said.

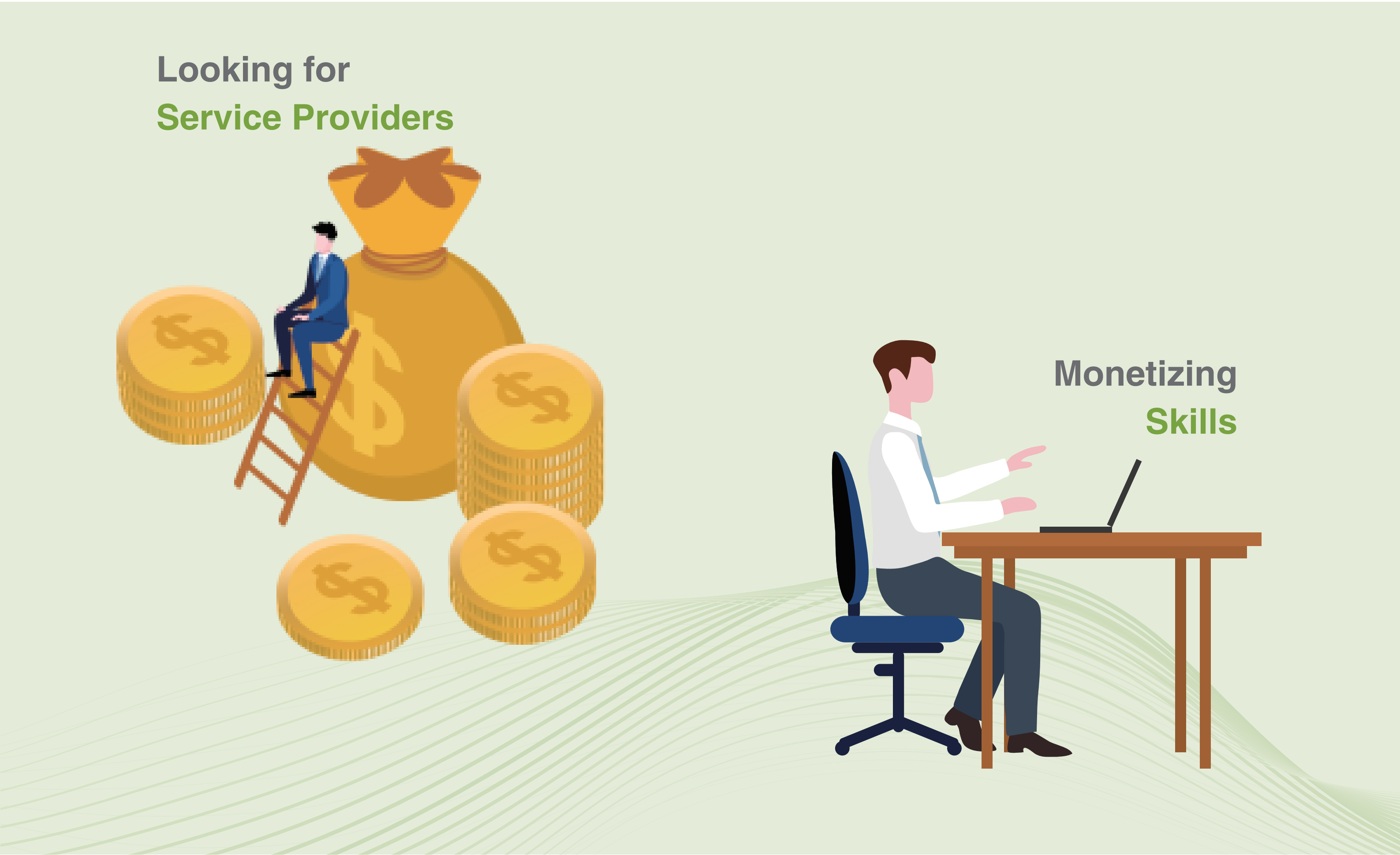
The philosophy of “altruism” pushes ZBJ to upgrade their business model, fix their flaws and solve the pain points in service transactions.

The Witkey Model③

ZBJ used a reward system in the beginning. In this system, buyers of creative services would post their demands and rewards on the platform, and service providers would submit their works to bid for the reward. The customer would select the most satisfactory work and pay them the reward. Zhu soon noticed this system was only suitable for short-term small tasks, and the providers' works could fall victim to IP thefts. Therefore, ZBJ launched a new bidding system. In this system, customers would post their demands first, and then choose among the service providers who showed interest. The chosen provider would provide services for the client.[5] Meanwhile the previous reward system remained available for buyers searching for low-cost services. ZBJ also launched a warrant service for customers, guaranteeing that there is no plagiarism or cheating in the final works and that service providers will pay the customer twice the price as compensation for flawed works. In 2011, ZBJ changed its bidding system focusing on customers, to a hiring system focusing on providers. This new system targets the mainstream demands of intermediate customers, which account for 60 percent of all customers on the platform.[5] Providers would set up online shopfronts on ZBJ to promote their business, while customers would choose the service they need and make payments directly.

While other “Witkey” websites advertised themselves as “the most professional” or “having the largest number of tasks and bidders” , ZBJ was the first to claim itself as “the Witkey website with the highest business integrity” [6]. Zhu believes integrity and safety are the most essential values of a service business. Ding Ran, head of service provider management, explained, “Most Witkey websites do not offer refunds, while for all customers on ZBJ, we promise a full refund if no one bids for their task.” [5] ZBJ has established an evaluation system that ranks service providers based on their transaction records and customers' reviews.[7] Higher-rated providers will have lower commission rates. ZBJ also has a non-negotiable rule that all ZBJ employees are strictly prohibited from taking orders on the website, or they will be fired.

③: The term “Witkey” is a combination of the words “wit” and “key” , which stand for the key of wisdom. Originating in China, this term refers to people who make a profit on the internet with their wisdom, knowledge, skills or experiences. They monetize their wisdom, knowledge, skills or experiences by solving, through the internet, other people's scientific or technological challenges, or problems in work, life or study.



Eliminating Commissions and Providing Extended Services

In June 2015, after weighing the pros and cons, ZBJ announced they would eliminate all commissions except those on speculative works and piecework. Guo Jun, former head of marketing at ZBJ, said that ZBJ kept charging 20% commissions for speculative works and piecework only to prevent fraud or plagiarism and to protect service providers. For the providers, no commission is undoubtedly good news, meaning they no longer have to pay extra fees when monetizing their skills.

Without the commissions-its only source of income, ZBJ launched a new business model, which Zhu described as “building ‘rigs’ on ‘the ocean of data’”. ZBJ has since gathered plenty of users, service providers and original works. These resources are the ocean of data, where the platform and customers could extract value as rigs.[8] ZBJ now offers additional services, especially in intellectual properties, finance, taxation, technology services, and service standardization. These additional services are now its major sources of revenue.

Building a Platform

In 2014, ZBJ decided to position itself as a platform business and it has been gradually moving its self-owned operations onto the platform ever since. A platform company has to develop a new business model that doesn't rely on commissions. "Building an internet platform is not the same as growing a simple service company. A service company just needs to serve clients, but an internet platform has to think from the perspective of the entire society, the industry and the public. Otherwise, we could not create a cross-side network effect, because users come and go," said Zhou Yong. Therefore, ZBJ has been promoting a corporate culture that emphasizes creating social value along with economic value.

Ding Ran's words in an interview revealed ZBJ's commitment to its positioning in the market, "When we talk about the value of our platform internally, we always say that we are not just a profitable business, but also one with social responsibilities. When people joined us, they did not come just for money or for surviving; they also changed the way they worked. Some even quitted a more stable job to achieve their dreams of entrepreneurship and help us to develop this platform. When we attract more people like them, we will feel a stronger sense of responsibility." [9]

Supporting Government Efforts to "Delegate Administrative Power, Improve Regulation and Upgrade Services"④

In the past, China's economic development relied more on medium- and large-sized enterprises, which the government managed through administrative means. Now, SMEs have become a major driving force behind the country's economic growth. To facilitate their growth, market forces have to play a decisive role in the allocation of resources. Since the 18th CPC National Congress, the central government has been pushing forward the "Decentralization-Control-Service" reform as an important tool for transforming government functions and improving administrative efficiency. Specifically, the reform involves streamlining administration and delegating power, improving regulation, and optimizing service. [10] The goals include: reducing enterprise costs; increasing the attractiveness and competitiveness of the real economy; optimizing the business environment; promoting profound changes in government functions and creating a fair living environment for the people. [11] However, due to a lack of direct communication channels, it used to be difficult to foster mutual understanding and trust between the government and SMEs. ZBJ's platform, by using big data, was able to step in to plug the hole. Its online bookkeeping function has been welcomed by many local market regulators. "This is because we are able to support the government efforts to implement the 'Decentralization-Control-Service' reform," Zhou Yong said.

Delegating Regulatory Power	Improving Regulation	Upgrading Services
ZBJ keeps records of transactions of tens of millions of SMEs on its platform, no matter where they are domiciled, thus guaranteeing the authenticity of these records. This allows the platform to learn about individual companies and the industries they are in. Besides, ZBJ is a strong advocate for industry self-regulation and the government can trust the website with part of its regulatory power and give business entities more freedom.	ZBJ, working with the National Bureau of Statistics of China, has developed an index based on the big data collected by the platform to measure the level of activeness of MSMEs in the service sector. Based on transaction volumes and revenues of companies on the platform and other data, the index can be used to gauge economic prosperity. At the macro level, the index helps local governments understand economic development and identify problems impeding growth, such as an underdeveloped modern service sector or failure to make full use of the internet on the part of local businesses. At the micro level, the index allows ZBJ to have detailed information about individual SMEs, enabling it to give local regulators warnings of potential violation of regulations by a certain company, in which case, the regulators can notify the company of the consequences or help the company to build the capabilities it lacks, instead of using it for law enforcement purposes.	ZBJ is assisting businesses in obtaining precisely the government services they need, such as subsidies for entrepreneurship, without going through unnecessary bureaucracy, thus preventing rent seeking and increasing the transparency in the distribution of government resources.

④: The strategy is aimed at streamlining regulation to lower barriers to entry, improving regulation to promote fair competition in the market, and enhancing public service efficiency to create a business-friendly environment.

Facilitating the Development of Remote, Isolated Areas

In his report to the 19th CPC National Congress held in 2017, President Xi Jinping announced a rural vitalization strategy. "Issues relating to agriculture, rural areas, and rural people are fundamental to China as they directly concern our country's stability and our people's wellbeing. Addressing these issues should have a central place on the work agenda of the Party, and we must prioritize the development of agriculture and rural areas," he said.[12] In 2020, the central government pointed out in No. 1 Central Document that "efforts need to be made to win the battle against poverty as the country strives to complete the building of a moderately prosperous society in all respects this year." The document contains a number of priority areas of work, including vigorously developing e-commerce in rural areas; strengthening the construction of cold-chain transport and supply chains to make up for discrepancies in infrastructure with urban areas; and building big data centers for agriculture and rural areas, and carrying out pilot digitalization projects in villages based on existing resources.

"ZBJ is a necessity for clients in remote, isolated areas," Zhou Yong said. "They are underserved locally and lack access to quality industry resources, like logo design, marketing, business planning, and fundraising report compiling. On our platform, however, they can get quality professional services with a little money." Zhou's idea resonated with Zhu Mingyue. "Companies in remote places like Xinjiang and Inner Mongolia need the internet more, compared to peers in more developed areas. To find services like brand building, bookkeeping, tax filing and marketing, they depend on ZBJ more than companies in tier-one cities such as Beijing, Shanghai and Guangzhou," Zhu said. Back in 2015, ZBJ started building sales teams nationwide.

In 2018, ZBJ and the Guizhou provincial government signed a strategic cooperation framework agreement to advance poverty alleviation, develop a big data industry and improve environmental health in the province. Under this agreement, ZBJ pledged to help incubate 1,500 startups in the modern service and big data industries, which will create, directly or indirectly, nearly 100,000 jobs.[13] "The business model of ZBJ is the solution to the lack of service resources in Guizhou. With this platform, the Guizhou government is able to attract resources outside the province to fulfill local demands and to attract investment as well," Zhou Yong said. Under the agreement, ZBJ will offer at least three services to Guizhou: a) developing a special regional platform to consolidate the cultural, tourism and recreational resources in the province; b) helping formulate corporate and industrial standards in support of the growth of individual businesses to build up their capacity of offering stable services; and c) attracting business resources like capital into the province to enhance local service providers' capability to remain in business.

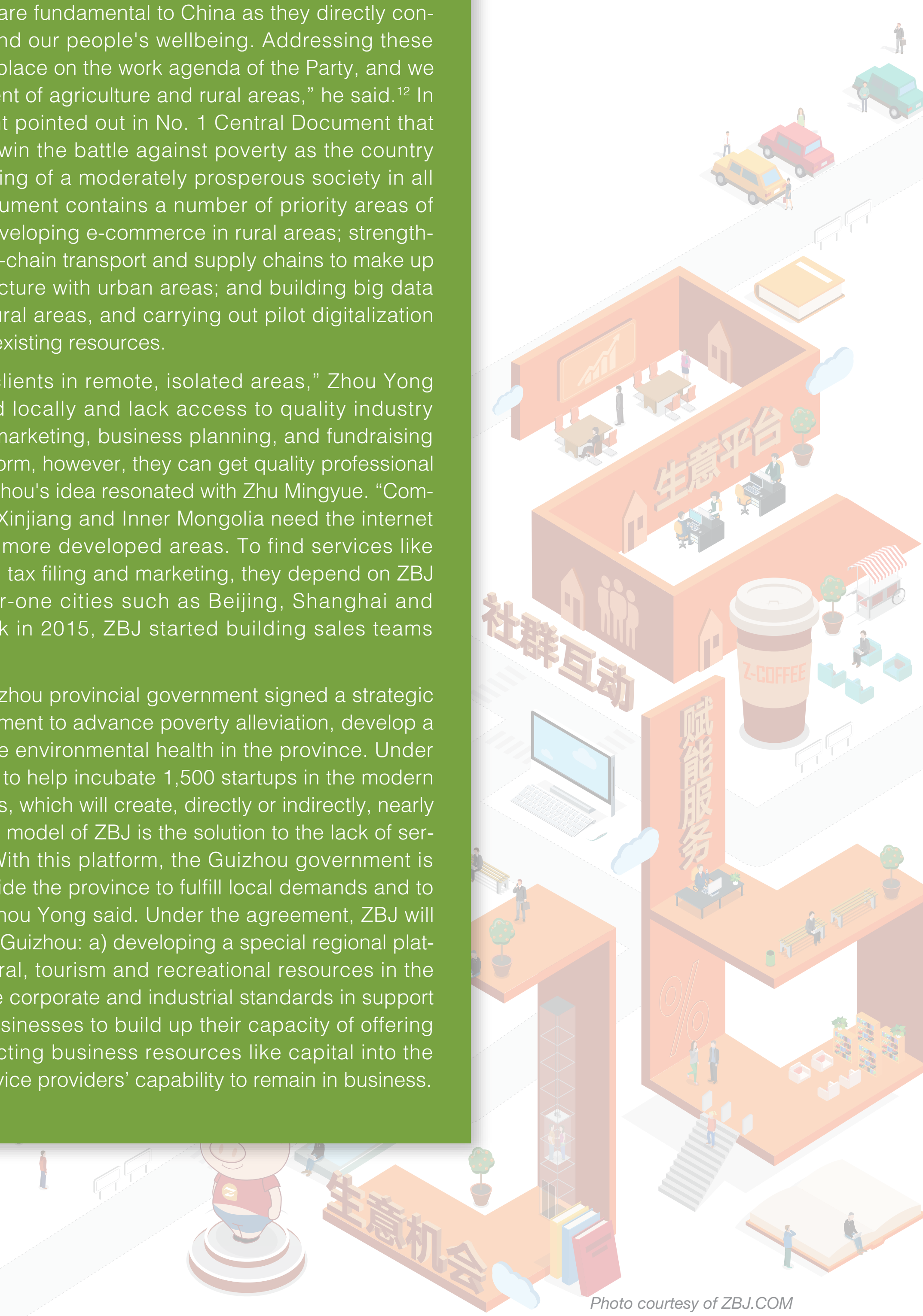


Photo courtesy of ZBJ.COM

Empowering SMEs

In its 13th Five-Year Plan, the Chinese government pledges to develop a modern Internet-based industrial system by implementing the "Internet Plus" Action Plan. Specifically, it involves promoting the extensive use of the Internet to revolutionize the modes and organization of production, i.e., making industries more networked, intelligent, service-oriented and synergized. Under the plan, large Internet companies are encouraged to open up their innovation resources to micro- and small-sized enterprises and start-ups, and establish open-ended Internet-based innovation alliances.[14] ZBJ has brought together 13 million professionals and organizations on its platform, and made 1 billion matches for users totaling more than 20 million transactions. Relying on massive amounts of data and strong mining capabilities, ZBJ has established a big data-based platform providing "Internet + big data" service for entrepreneurs, employers, traditional industries and regional governments. In this way, ZBJ has helped unlock value of big data, drive the digital transformation and upgrading of traditional industries, and promote the deep integration of the digital economy and the real economy. [15]

ZBJ has been building SMEs capacity in a number of ways.

Transforming traditional companies. Traditional SMEs in relatively developed areas are facing huge challenges, too. "Many business owners in these areas were born in the 1950s and 1960s and are in traditional industries. Their children are not willing to give up white-collar jobs in big cities and take over the family business. These owners themselves may not care much about the future of their companies, but local governments do. They hope our platform can help these firms transform by adopting internet, digital and cloud computing technologies," Zhou said. Through big data-based smart analytics tools, ZBJ allows its users to identify their needs and service providers on the platform to identify their deficiencies. ZBJ developed eight capability dimensions based on the big data of users' needs. The platform or its users can assess service providers' capabilities through these dimensions to find their shortcomings, allowing the platform to offer tailored empowerment measures to each company.

Sharing resources for research and development (R&D) and innovation. In December 2017, ZBJ and the Science and Technology Department of Yunnan Province entered into a strategic cooperation agreement to build the "Internet Plus" Technological Innovation Cloud Platform for Yunnan. The platform will help address the weakness of SMEs in R&D and product design, and blaze a trail for joint R&D and innovation on the internet. Generally, SMEs are unable to recruit or afford well-educated R&D professionals and thus have difficulties in building their own R&D capacities. The best way to solve this problem is to spare them the trouble of designing. Meanwhile, SMEs' biggest advantage is their quick response to market demands, putting them in the best position to offer customized and targeted services. Given the weakness and strength of SMEs, ZBJ decided to serve as their "back office" on the platform, taking over all the design and development activities, so that the SEMs could focus their resources on taking orders, selling products and delivering services. "We have developed a platform for joint R&D and innovation with the Department of Industry and Information Technology of Yunnan Province," Zhou said. "The platform functions as a shared manufacturing center for all the SMEs on the platform and also offers supply chain services. SMEs used to incur high procurement expenses and suffer from unstable supplies because of their weak bargaining power. Our platform has changed the whole game by pooling together the demands of about 10,000 companies. Besides, it has the support of the local government, so we can help SMEs get cheap and steady supplies. In doing these things, we can really address their weaknesses."

Changing the ways to obtain new customers. In the past year, Bama, a county in Guangxi Province, has launched a series of Bama-branded products, like pork, tea seed oil, and hemp, and played a leading role in establishing an investment company along with eight neighboring counties to develop the tourism industry in the entire area. Behind the huge transformation of Bama is a Chongqing-based company called Boguan Dazhi. A few years ago, the company almost went out of business. "As a design company, our job is to provide design services for customers. But in reality, we spent all day entertaining our customers at the dinner table. The industry was weak and fragmented and thus lacking bargaining power, so we could only get new orders by pleasing customers," the founder of the company said. Through ZBJ, entrepreneurs and customers can get to know each other and go on to strike a deal in a shorter period of time.[16]

Expanding business reach. Before doing business on ZBJ, Yichen, a company based in Guangdong Province, served customers within the province only. After opening an online store on the website, the company started to receive orders from across the country. Moreover, it had the opportunity to participate in a project that had the support of the Canadian Prime Minister and offered great services to the well-known Canadian brand Umbra. [11]

Providing Jobs for the Disadvantaged

As early as September 2014, Premier Li Keqiang incorporated "mass entrepreneurship and innovation" in a new national strategy, setting off a wave of entrepreneurship and innovation across the country. In 2016, on a tour to the Ministry of Human Resources and Social Security, he urged the ministry to increase the service industry's ability to absorb more migrant workers, and create more entrepreneurial or employment opportunities in their local areas.

The flexible employment offered by ZBJ is a quick fix to unemployment among disadvantaged groups, adding momentum to the implementation of China's targeted measures in poverty alleviation and the national strategy of mass entrepreneurship and innovation.

ZBJ, together with the China Disabled Persons' Federation and the Chongqing Disabled Persons' Federation, launched a program called the "Sunshine Plan" aimed at helping disabled entrepreneurs through training in starting a business, boosting online exposure, and promotional support, making it easier and more convenient for them to start their own business. The Plan enables disabled people to access a broader market and to innovate in a larger range of fields, allowing them to focus more on their profession and business operation. By September 2017, the plan had benefitted a number of businesses, including Chuangwai Visual, Aijing Interaction and Chuge Design, three startups with a monthly revenue of over ¥10,000 respectively.[17]

As for undergraduates planning to start their own business, ZBJ launched a program called the "Sky Eagle Plan", offering them support in company registration, tax filing, trademark and copyright registration, and patent application. The plan's goals are to attract over 50,000 participants nationwide, help more than 3,000 university students to launch their companies on ZBJ, and support them in generating ¥100 million worth of orders annually, by the end of 2021.[18]

ZBJ has launched several service platforms over the years aimed at offering vocational training and employment services to veterans, supporting China's national policies of prioritizing veteran employment. In the future, ZBJ will develop more service platforms targeting specific demographic groups. "We are thinking of doing something for women, especial well-educated full-time housewives. They may have trouble adapting to the corporate world by the time their kid attends school. We can offer them job opportunities to help them realize their own value," Zhou said.

Photo courtesy of ZBJ.COM

Thriving by Benefiting Other Businesses: Serving as Infrastructure of the Digital Economy

"There is no doubt that the biggest social responsibility of a company is to run a successful business," Zhou said. The launch of ipr.zbj.com in 2014 represented ZBJ's first attempt to extend its service line, which generated a revenue of ¥9.4 million by the end of the year. The figure exceeded ¥100 million in 2015, and nearly quadrupled in 2016. In May 2017, cs.zbj.com, another service extension, earned a monthly revenue of ¥10 million to achieve a break-even. ZBJ Financial's revenue also exceeded ¥100 million.[19] In July 2019, ZBJ filed with the China Securities Regulatory Commission Chongqing Branch to prepare for an IPO on the SSE STAR Market. [20]

"But at ZBJ, we think we need to do more, because we, as a platform company, are responsible for the well-being of many other people, not just our own employees," Zhou said. A new work philosophy and lifestyles have been gaining momentum. Many young graduates refuse to work for an organization in the traditional way. Instead, they choose to start their own business and work as a partner or to become a freelancer working on an online platform, using their professional skills while enjoying the freedom to work anywhere. In this new era, ZBJ is moving towards becoming infrastructure of the digital economy. "This is the most important reason why the platform can't fail," Zhou Yong said.

"When designing our platform, we think about the needs of the country, industries and individual companies," Zhou Yong said. "Future businesses are going to operate on an online platform. Many secondary functions of firms will be fulfilled by the platforms. This is not a future that ZBJ is trying to create, but a certainty that our company must prepare for. Ultimately, platform companies exist by pooling together social resources, instead of sharing their own resources, so platform companies in the Internet era must take on more social responsibilities."

"The most important social responsibility of a platform company and the most valuable contribution it can make to society is to enable more people and companies to do business and prosper on it," Zhou Yong said. ZBJ has been and will be following the principle of "thriving by benefiting other businesses" and the business philosophy of "creating social value along with economic value" .

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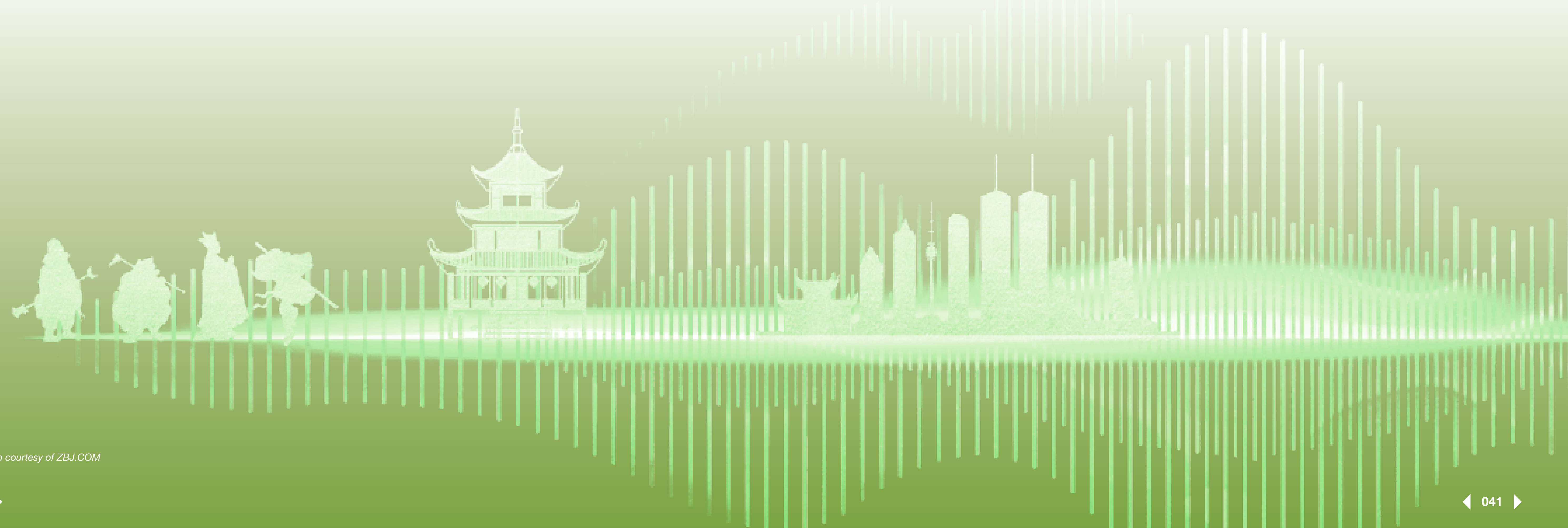


Photo courtesy of ZBJ.COM

Sinoeco: "Business + Technology" Dual Drivers for the Conservation of Aquatic Life in China

By Huang Xiayan, CEIBS Case Center

Photo courtesy of Sinoeco

> *Being able to contribute to slowing down the extinction of species is my biggest pride.*
>
> — Ye Ming
> Chairman of Sinoeco, CEIBS EMBA2016 Alumnus

The beauty of Nature lies in the diversity of its flora and fauna. Wuhan Sino-SCI Ruihua Eco Tech Co., Ltd., or 'Sinoeco', is a private company located in Wuhan, and is home to the world's leading research facility for aquatic ecology. By harnessing both the power of business and technology, Sinoeco is a Chinese company that also clearly demonstrates its social responsibility through its cutting-edge work in aquatic ecological conservation and restoration.

Since its establishment in 2010, Sinoeco's mission has been to "use science and technology to preserve ecology". In 2013, it experimented with a new business model geared to allow the company to fulfil both its social and business goals. Then, in 2019, Sinoeco entered the fixed pre-listing period under the guidance of a compliance advisor required to prepare its listing on the main board. In just a few years, Sinoeco not only matured into an industry leader it also became China's only technological service provider covering the entire industrial chain in aquatic ecological conservation and restoration.[1] Since its inception, it has deepened its expertise in this specialist field and established a market network that penetrates China's seven major river basins and covers more than 20 provinces, provincial-level cities and autonomous regions. Throughout this process, Sinoeco has championed corporate social responsibility, employed technology that ensures the harmonious coexistence of humans and nature, and has demonstrated how corporate business and social values can thrive side by side.

A Business Model Designed to Defend Aquatic Biodiversity

Endangered Species: the Ecological Crisis of the Yangtze River

Wuhan is a beautiful river town located at the confluence of the Yangtze and Han rivers. It is also the city where Ye Ming, chairman of Sinoeco was born and raised. Ye Ming grew up playing on the banks of the Yangtze and considers that the river runs in his blood. As a youth, spending time along the water's edge, Ye Ming was often able to sight river dolphins racing and diving in and out of the water: ships straining against the currents, river dolphins chasing after the waves in pairs or in threes, occasionally showing bulbous heads and black sides above the water as they plunged and sliced through the surface of the water…

These scenes now only exist in Ye's memory. Human activity such as damming, pollution, overfishing, channelling, shoreline hardening, mining and quarrying[2] has severely depleted biodiversity in the Yangtze River basin. According to historical statistics, there were more than 4,300 aquatic species in the Yangtze River Basin, including over 400 fish species. Eleven of them, such as the Chinese sturgeon, Yangtze sturgeon and Yangtze finless porpoise, are subject to national level priority protection orders. There are over 170 fish native to the Yangtze River. Currently, in the Yangtze River Basin, 92 endangered fish species are listed in *China Red Data Book of Endangered Animals,* and close to 300 species are listed in the appendices of CITES (the *Convention on International Trade in Endangered Species of Wild Fauna and Flora*).[3]

As of 2000, there has been no record of natural breeding of the Yangtze sturgeon, and its wild population has been almost completely wiped out. In 2007, the Baiji Dolphin, also known as Goddess of the Yangtze River, a Grade-I wild animal subject to state-level priority protection, was declared to be functionally extinct. Since 2013, there has been no sighting of the white sturgeon known as the king of freshwater fish. In 2018, the population of Yangtze dolphins only amounted to half the number of giant pandas[3]. In 2019, the four biggest domestic fish (black carp, grass carp, silver carp and bighead carp) were down by over 90% compared with the 1950s in terms of frequency of occurrence of fish stocks.[4]

Two Major Social Responsibilities Shouldered by One Business Model

Species are endangered and face extinction along the Yangtze River, leading to the degradation and collapse of the Yangtze ecosystem. It is worrying to realise that although it is known that the ten-thousand-li long river is sick, technology, research, and knowhow to protect it, are lacking. Although there are "hard restrictions" imposed by relevant policies, a question remains: what can be done by the private sector to safeguard this 'Mother River' ? This is the issue that haunts Ye Ming. "The protection of species is critical" is a phrase he repeats constantly: and he is ready to make protecting aquatic life his calling, and believes that "protecting aquatic life is good, and it should be possible to protect biodiversity if we have the right business model" .

Adopting the right business model to preserve aquatic life can raise public awareness about the problem, rally public support behind the cause, and ensure greater recognition is given to the value it has for society. At the same time, it can be profitable. Ye believes that the primary purpose of a business is to be profitable, while good governance is a fundamental part of being socially responsible. He adds that "there are three types of effort: the kind that is rewarding but tedious, the kind that is fun but not rewarding, and the kind that is both fun and rewarding." Conservation of aquatic life is good for the country, the people and future generations. It is therefore rewarding, and it is also definitely fun for Ye: the company makes a profit whilst honouring its commitment to society and to the environment, and so succeeds in merging economic interest with social values.

A One-Stop-Shop Technology Service Provider Bringing Benefit to All

Aquatic conservation programs usually comprise a series of components such as the building and operation of fish restocking facilities, fish passage design and implementation, and habitat restoration. In this type of comprehensive system, each organization, such as research institutes, survey and design institutes as well as fishing companies will have different strengths. An aquatic ecological compensation program usually needs to integrate multiple resources. Consequently, communication between so many players is expensive and progress is slow. When Ye Ming joined Sinoeco in 2013, he immediately grasped this nettle and pioneered a new model that would offer a range of services that covered the whole industrial chain.

Sinoeco is the only company in the aquatic ecological conservation business capable of offering a comprehensive service: it is a one-stop biotechnological shop for its clients. It could be compared to a hospital that offers not just clinical services, but also a pharmacy and surgery. Sinoeco can provide aquatic ecological inspections, program design and implementation, as well as quantitative assessment of separate links along the whole sector value chain. It has established a technological system for aquatic ecology that includes diagnosis and appraisal, technological service, as well as operations and management support that provide a comprehensive package capable of providing solutions to all problems related to aquatic ecological conservation and restoration. "Our aim is to be the Union Hospital of aquatic ecology," Ye says.

Sinoeco's whole industrial chain business model has been a recipe for success. In just six years, it has become China's biggest tech provider for fish restocking facilities and the biggest fish passage and monitoring provider. As of March 2020, its operations covered more than 20 provinces, municipalities and autonomous regions in China, with 40 restocking facilities serving over 40 clients—the largest client base in China. It had close to 20 fish passage demonstration projects, dwarfing any competitor in China. Its scorecard also includes China's first fish collection and transportation system demonstration project as well as more than 180 ecological monitoring and assessment projects, making it the clear leader in this sector in China. According to Hu Baolin, former Deputy Director of the State Council Three Gorges Project Office, in the absence of large-scale systematic and comprehensive conservation of the Yangtze River, Sinoeco's experience with its whole industrial chain business model must be transposed so that aquatic ecological restoration can be transformed from a single-point service to a comprehensive service. [5]

Sinoeco's whole industrial chain business model has assured its rapid ascent in the industry and guarantee its viability and competitive edge. Its economic interests and contribution to society through aquatic life conservation, are mutually reinforcing. In figures, Sinoeco has maintained an impressive 30% or so increase in its annual revenues over the last few years. Every year, Sinoeco releases more than 10 million rare fingerlings of 72 species. It has also launched habitat restoration projects and tackled the root of fish survival problem.

At the same time, Sinoeco's whole industrial chain business model has delivered tremendous value to its customers. Ye explains: "our clients, who have seen their per-unit investment go down, see the benefit of our model." Sinoeco's synergistic solution has reduced client reinvestment. Sinoeco brings value to its clients and builds trust with them through cooperation. With the average contract lasting 5 years, Sinoeco is acclaimed in customer loyalty. Some customers have maintained contracts with the company for 20 years. This underpins Sinoeco's stable development.

Boosting Technological Strength, Conserving Ecology with Technology

From Teamwork to Platform: Striving for Technological Breakthroughs and Innovation

Aquatic ecological technologies are regional. Given the huge variety of natural conditions in the bodies of water in China, ecological restoration must target problems considering local circumstances and there is no turn-key solution. Ye Ming explains with an analogy: "we cannot treat fish of the Yangtze River with methods designed for American salmon." Consequently, the technological threshold for aquatic ecological conservation is quite elevated.

"Strictly speaking, we are not an environmental protection company. We are more of a biotech company." Ye emphasizes further that biotechnology lies at the heart of Sinoeco and the services it provides to its clients consist mainly of aquatic biological restoration and the building of the aquatic ecosystems. At its launch in 2010, Sinoeco made "using technology to conserve ecology" its mission, and since then has consistently given technological innovation centre stage.

Sinoeco first set up a tripartite structure for its technological development: a technology committee composed of authoritative aquatic biologists; an expert committee comprising up to 35 contracted experts from over 20 first-class institutes and universities; and a 200-strong professional specialist technology team in which a third of its members hold advanced degrees or senior specialist positions. In addition, Sinoeco has 5 specialized innovation teams covering the conservation of aquatic resources, ecological monitoring and assessment, fish passage facilities, water circulation equipment, and ecological restoration. All of these teams provide ongoing technological support for the company's development.

In parallel, Sinoeco established a three-tiered independent innovative research and development system comprising a Research Institute of Aquatic Ecological Conservation of the Yangtze River, a Provincial Engineering and Technology Centre for the Conservation and Restoration of Aquatic Species, and a CMA-accredited assessment laboratory for aquatic biodiversity. For the first component, in 2017, Sinoeco began forging ties with numerous aquatic ecology experts with a view to populating a Research Institute of Aquatic Ecological Conservation of the Yangtze River, which would become China's first think tank dedicated to the protection of aquatic ecology in the Yangtze. Then, Sinoeco built the Hubei Engineering and Technology Centre for the Conservation and Restoration of Aquatic Species as a hub for dispatching and managing the company's technologies. Finally, in February 2019, a subsidiary company of Sinoeco was certified by the national CMA and became the first CMA-accredited third-party platform, among private-sector applicants, qualified to carry out aquatic biological monitoring and assessment.

Sinoeco's unwavering ambition to be innovative and original has been the source of its numerous technological achievements. As of March 2020, Sinoeco boasted reproductive techniques for 78 aquatic species, the largest number in China by a private company, including core technologies such as artificial breeding and rearing techniques for rare aquatic species: all-parameter-controlled RAS technology, restoration technologies for passage of migratory aquatic species, re-naturalization of rivers, lakes and habitats, and techniques to evaluate the process of aquatic ecological restoration. Sinoeco's independently developed RAS equipment now commands a market share of 80%. The company also houses 47 national patents, has had over 40 scientific papers published, and has a Certified Intellectual Property Management System.

Photo courtesy of Sinoeco

From Incentivising to Caring: Building a Culture of Sustained Technological Innovation

Ye Ming believes that creating value for society is just one side of the coin for a company: the other side is its commitment to the staff who are the architects of this social value. As the field evolves, new ecological technologies emerge. To broaden the horizons of its workers and enhance their professional and innovative ability, Sinoeco has regularly held the 'Sinoeco Forum' , where experts of the field gather to share best practices and frontier knowledge, in a stimulating environment for employees to learn and exchange.

Lectures given by external experts aside, Sinoeco has a series of internal technological exchange and incentive schemes. At its annual convention held at the beginning of 2019, for instance, some employees were recognized as "Sinoeco TechStars" for their contributions to scientific and technological innovation. Sinoeco also announced a Reward Schemes in Technological Achievements and Innovation to provide different financial and non-financial incentives to employees based on different types of achievement, thus giving impetus to their enthusiastic and proactive engagement in technological innovation.[6]

Giving recognition and supporting employees enables an organization to fulfil its duty to them as people. "Recognizing the value of our employees is essential, by supporting their career progression, income, dignity and self-esteem." Ye says, "My principle is to pay them 10% more than our competitors." Providing room and board to non-local staff is also among the measures implemented by the company as a way of looking after its workers.

From Inside the Industry to the General Public: Raising Scientific and Ecological Awareness

As a pioneer in the field, Sinoeco's scientific research is fairly comprehensive, and has led to numerous breakthroughs in the field of aquatic biotechnology. Mindful of its social responsibilities however, Sinoeco sees its role extending well beyond the company itself.

A standardized industry order can facilitate the rapid and healthy development of the field. Sinoeco has actively participated in the drafting of rules such as the China National Energy Administration's *Technical Protocols for Operation and Management of Fish Restocking Stations around Hydropower Projects* and *Technical Protocols for Outcome Assessment of Fish Restocking Stations around Hydropower Project*. In addition, based on its own experiences and practices, Sinoeco has voluntarily put together Sinoeco's *Protocols for Operation Management of Fish Restocking Station*, which is now openly available after have been reviewed and passed by the China Renewable Energy Engineering Institute.

Beyond this, Sinoeco has actively promoted the application of scientific approaches to aquatic ecological conservation to other fields. For example, releasing or setting fish free, is very popular. Many people do not know, however, that the unguided release of fish can hamper natural growth and propagation of other species in certain areas and even devastate local species. Good intentions may therefore be counterproductive for the natural environment and upset the ecological balance. Ye is emphatic in saying that the release of fish is a highly scientific activity that needs to be carefully controlled and supervised.

To get more people to understand the rationale of releasing and scientifically protect aquatic life, Sinoeco has invited students, parents, and the general public to visit fish restocking stations to participate in stocking and releasing activities, and organised information sessions and demonstrations on scientific releasing. Notably, as of December 2019, Sinoeco's stocking stations had received more than 3,000 visitors from both inside and outside the industry and more than 30,000 people had participated in its outreach and educational events on stocking and releasing.

Sinoeco has also responded positively to government's call for better Yangtze River governance. Its involvement in public-interest advocacy and promotional events is such that as of December 2019, it had printed 20,000 brochures and held more than 40 seminars on the subject. Notably, in November 2019, the Social and Legal Section of the China Media Group organized the production of a documentary entitled "*Life of the Yangtze*" aimed at raising awareness about good Yangtze river governance and spreading conservation success stories. Sinoeco spared no effort to support the film crew when they made the trip to a Sinoeco restocking station to film an example of how fish should be released in the public interest.

Synergize Public Interest Groups to Upgrade Ecological Conservation

Sinoeco's efforts to protect aquatic life extend far beyond the above-mentioned operations.

A tech company specializing in aquatic conservation, Sinoeco has not only been devoted to protecting biodiversity but also actively engaged in charity and environmental protection projects as part of its social responsibility efforts. Under Ye Ming's leadership, Sinoeco has become a role model in this regard, as evidenced by its vigorous involvement in multiple initiatives such as establishing the environment industry alliance, saving the Yangtze finless porpoise, launching popular science campaigns for aquatic conservation, and spreading the value of ecological and environmental protection.

As a case in point, Sinoeco joined the Yangtze River Dolphin Protection Campaign in October 2016. This campaign brought together government, universities and research institutes, businesses, NGOs, and the public to save the Yangtze dolphin from extinction, restore its population, and keep the Yangtze ecosystem stable. For example, the "Assisted Patrolling" project was launched, which involved training 1,000 fishermen to become dolphin caretakers. As of the end of 2018, a total of 15 demonstration stations had been established for river dolphin patrols, with 106 participating patrollers scanning 348,474.9 kilometres annually on their rounds, and carrying out 668 anti-poaching trips.

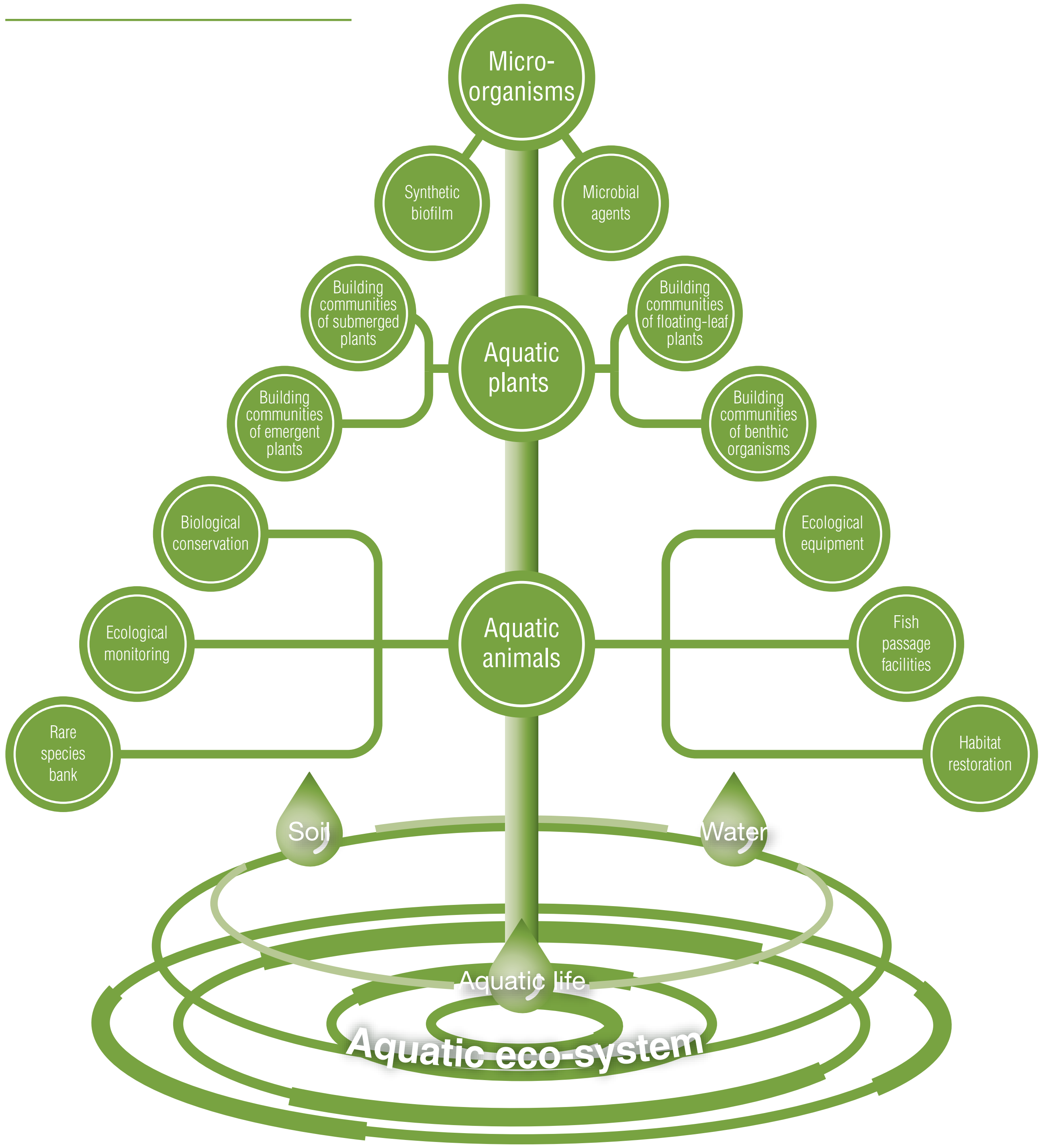
At the behest of Ye Ming, Sinoeco has been supporting the Yangtze River Dolphin Protection Campaign for four consecutive years, raising funds on September 9th Charity Day, and mobilizing resources to save Yangtze dolphins.

Sinoeco has been focusing on protecting aquatic life and restoring natural habitats as it grows, in fulfilment of its CSR obligations. According to Ye, the biggest challenge lying ahead will be how to conduct charity work using a business approach, and he is currently exploring solutions. For Ye, charity projects and business models are not mutually exclusive: assuming a social responsibility is not a trivial matter and can only be achieved through the sustainable development of business. Protecting China's aquatic ecosystems is a mammoth task ahead, and Sinoeco is committed to making unremitting efforts to contribute to the cause through the use of tech solutions.

On November 14, 2019, the results for the 10th All China Environment Prize, the highest form of recognition for work in the field of ecological and environmental protection, were announced. Sinoeco was the only private company to have obtained honourable mention in ecological conservation. This not only acknowledges Sinoeco's achievements of the last nine years, but also charts its path for the future. In the past, Sinoeco was driven by dual drivers of business and technology, and saw itself as part of the social environment thereby actively assuming its social responsibility. In future, Sinoeco will continue to work for the public interest, and pursue its journey on the sometimes twisting road of ecological conservation to play its part in making China an ecologically minded civilization.

Ye Ming attended the 10th China Environment Awards Ceremony/Photos courtesy of Sinoeco

Sinoeco's Business System



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Better Life Group: The Golden Touch Project for Targeted Poverty Alleviation

By Ruan Liyang, CEIBS Case Center

"Enterprises playing a major role in development-oriented poverty reduction programs should capitalize on market trends and opportunities to achieve "targeted" alleviation. They need to focus specifically on two aspects: one is to make the best use of every resource they have and allocate them to where they are most needed, and the other is to put in place long-term effective measures and help develop industries according to local conditions. The latter is expected to provide poor households with a sustainable source of income and prevent them from falling back into poverty."

— Wang Tian
Chairman of Better Life Group, CEIBS CEO2007 alumnus

Founded in March 1995, Better Life Group today ranks among China's top 500 enterprises and top 100 private service companies, with more than 700 physical stores across Hunan, Jiangxi, Sichuan, Chongqing, Guangxi, and other provinces. A leading player in China's retail industry, Better Life Group has in recent years consolidated its strengths, while embracing new technologies and a changing market environment. The company's multifold digital transformation and globalization strategies have helped transform it into a data-driven smart retail business that integrates online and offline channels. It has also developed a comprehensive supply chain underpinned by a global distribution, warehousing, and distribution network.

Better Life Group attaches great importance to corporate social responsibility and has contributed to a number of worthy causes, including poverty alleviation, disaster relief, supporting vulnerable groups, and boosting employment. In particular, it has made over ¥150 million① in charitable donations, established the Fuguang Charitable Foundation for vulnerable groups, and created over 70,000 jobs. In March 2016, Better Life Group launched the 'Golden Touch Project,' which provides poverty alleviation by harnessing the company's strengths in distribution and logistics to develop local industries. The Group has explored sustainable models for reducing poverty through industry, including buying agricultural products from farmers, creating jobs for farmers, offering vocational training, and investing in poverty-alleviation industries.

①: ¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.

Harnessing Industry to Alleviate Poverty

Industry-led poverty alleviation involves using a fine-tuned approach to develop agriculture, tourism, and improve infrastructure in poverty-stricken areas. This in turn boosts economic growth, employment, and local incomes. In recent years, the Chinese government has formulated a series of industry-led poverty alleviation policies, including the 'Decision of the CPC Central Committee and the State Council on Winning the Fight against Poverty' issued by the State Council in 2015, and the 'Poverty Alleviation Plan for the Thirteenth Five-Year Plan Period.' These have stimulated growing interest in poverty alleviation from the private sector and bolstered partnerships between the government and non-government entities.

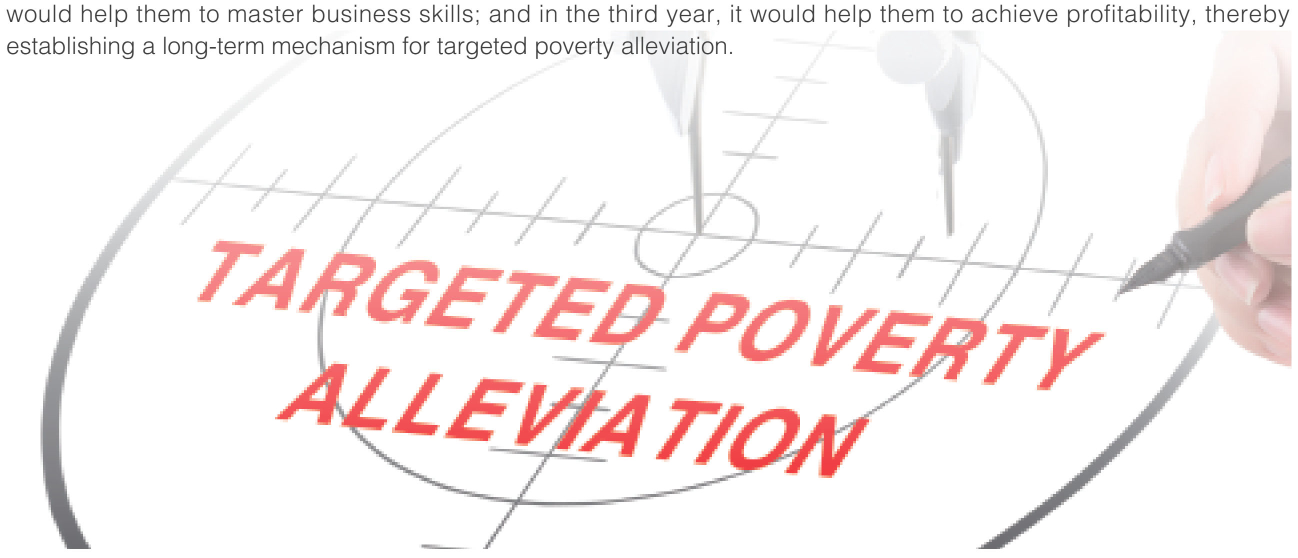
As one of China's top 500 companies and a leader in retail, Better Life Group has taken an active role in industry-led poverty alleviation. As the Group sees it, there are currently many hurdles to achieving poverty alleviation in China, including rural hollowing caused by labor migration, and resource wastage caused by bad practices and supply-demand imbalances. The solutions include seeking industry-led regional development; promoting the differentiation, upgrading, and growth of regional industries; creating unique flagship industries; involving private capital in industry-led poverty alleviation; and taking advantage of distribution channels that are at the disposal of the government and major businesses.

The Golden Touch Project: Long-term Mechanisms for Poverty Alleviation

During China's annual parliamentary session in March 2016, NPC deputy Wang Tian, who is also the chairman of Better Life Group, put forward a proposal with the title, 'Introducing market-oriented operations and using industry to drive targeted poverty alleviation.' Wang also unveiled the Golden Touch Project, which aims to harness the Group's hundreds of stores, e-commerce platforms, and extensive logistics networks across China to better utilize low value-added agricultural products and other resources, helping to clear a path for industrial development in poverty-stricken villages. As Wang puts it, "This isn't just a passing fad. We want to use our unique resource base to target and support poverty-stricken villages through market mechanisms, with the goal of achieving sustainable development."

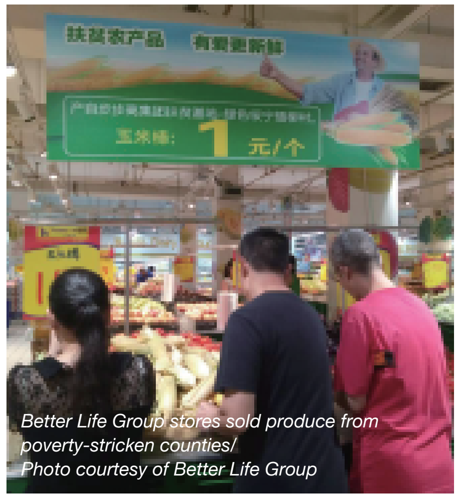
In April 2016, Better Life Group established a poverty alleviation management department. While only small, the department was able to mobilize resources from the Group's procurement, brand, and finance departments to ensure the smooth implementation of poverty alleviation work.

Corporate social responsibility should be a long-term commitment. Aiming for quick, easy fixes is disadvantageous for both the companies and communities involved, and poverty alleviation programs should seek to be self-sustaining. With this in mind, when creating the Golden Touch Project, Better Life Group set out a three-step plan: in the first year, it would provide charitable assistance to encourage impoverished households to set up businesses; in the second year, it would help them to master business skills; and in the third year, it would help them to achieve profitability, thereby establishing a long-term mechanism for targeted poverty alleviation.



A Charitable Vision

In the first year of the Golden Touch Project, Better Life Group set up poverty alleviation bases in more than 20 villages in Hunan Province, where its headquarters are located. The bases undertook to buy all products produced by farmers under an exclusive sales agreement. The first bases were located in areas that were a provincial priority for poverty alleviation. With the support of the provincial government's poverty alleviation team, the Group reached out to poverty-stricken villages that could find no market for their agricultural products. It bought local products at a premium and sold them on through its own supermarkets. For example, Better Life Group sold mooli (a type of radish) for up to ¥1.6 per kilo in its stores, but paid farmers ¥1.4 per kilo. After factoring in freight and other costs, it only just broke even. As Wang Tian puts it, "Ours is a charitable program, not a business. We don't try to make money from poverty alleviation."


Better Life Group stores sold produce from poverty-stricken counties/
Photo courtesy of Better Life Group

In the year that the Golden Touch Project was launched, a growing number of agricultural products from impoverished villages appeared in Better Life Group's supermarkets and online stores, including mooli from Chaliu village in Suining County, radishes from Huanglishan village in Xintian County, ginger from Quanxi village in Guidong County, maize from Guantuan village in Tongdao Dong Autonomous County, and asparagus lettuce from Chahua village in Xiangtan County. The Group encouraged consumers to take part in 'buying is donating' events, which not only gave villages an outlet for their produce, but also delivered varied produce to consumers.

Helping Farmers to Stand on Their Own Feet

Following some initial success, Better Life Group began to look for other villages that it could support through this approach. In order to improve efficiency and processes, the Group concluded purchase agreements with agricultural cooperatives that had extensive operating experience in this field. The cooperatives provided agricultural technology and management services for poor households and performed standardized pre-processing and packaging. The Group then purchased the finished products to sell in its own supermarkets.

Unlike at the outset, when Better Life Group simply organized charity events, as the Golden Touch Project gained traction, the Group began to work towards a loftier goal—to raise the aspirations of the poor. To do so, the Group's supermarkets began refusing unsatisfactory vegetables from the cooperatives, which encouraged producers to focus on quality. At the same time, poor households realized that if they wanted to be profitable, they would have to produce high-quality agricultural products, instead of relying solely on goodwill.

Better Life Group base for targeted poverty alleviation/
Photo courtesy of Better Life Group

Chen Zhiqiang, party secretary and CEO of Better Life Group, believes that successful poverty alleviation isn't about offering a 'blood transfusion,' but rather showing people how to 'make their own blood,' to use a metaphor. As he describes, "We can't just sell products for farmers. We need to improve the viability of their businesses, so that in the future, they can find their own markets without the support of poverty alleviation teams and Better Life Group."

By applying this model, Better Life Group has further expanded its poverty alleviation project to include partnerships with a vegetable cooperative in Sangzhi County, a waxberry cooperative in Xinhua County, a goat cooperative in the town of Chunkou in Liuyang city, a vegetable cooperative in the town of Jinjing in Changsha County, and a ginger cooperative in Guidong County.

‘Industrializing’ Poverty Alleviation Efforts

Through the Golden Touch Project, Better Life Group found better ways to match consumer needs with agricultural production, helping to deliver deeper, more targeted industry-led poverty alleviation. The Group helped impoverished communities to build their own production bases, including for raising free-range hens and cultivating mushrooms. In this way, it was no longer just unleashing the potential of existing production facilities, but also adding new capacity. In effect, the Group had found a way to ‘industrialize’ the poverty alleviation process.

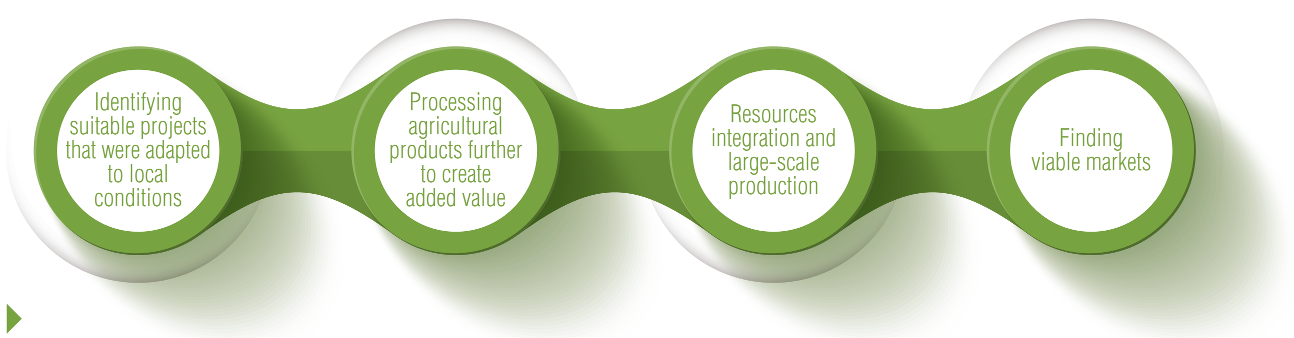
Firstly, for industry-led poverty alleviation to work, it was necessary to identify suitable projects that were adapted to local conditions. That means taking stock of available natural resources, planting habits, and the local labor force. Better Life Group considered the above factors and recommended a number of suitable agricultural products to target villages, such as sweet corn in Chunfeng village in Guidong County and free-range hens in Chaoshuipu village, Xintian County. The Group promised to buy all of the under an exclusive agreement, which incentivized farmers to produce more.

Secondly, it was necessary to process agricultural products further to create added value, reduce risks and wastage, and create new outlets for hard-to-sell products. For example, research carried out by the Group showed that the mountainous village of Tangdai in Shaoyang County had severe land and water shortages and a dearth of young laborers; this meant that they could only plant simple crops such as sweet potatoes, which would need further processing to generate a decent income. Based on this research, the Group invested ¥3 million in a processing factory that produced sweet potato vermicelli to help villagers escape poverty.

Thirdly, it was necessary to pool resources and replace traditional, low-intensity production in rural areas with large-scale mechanized production. Better Life Group crunched some numbers and discovered that the Group's annual sales of agricultural products exceeded ¥10 billion, but their sales in Hunan Province accounted for less than 10% of the total. While this indicated considerable scope for more industry-led poverty alleviation in the province, it also exposed a problem: Hunan suffered from a shortage of large-scale, standardized agricultural production. Indeed, farming in the area was done on such a small scale that villages couldn't even fill a truck with their produce—harvests often amounted to no more than 500 to 1,000 kilograms. Such unintensive production wouldn't be enough to lift farmers out of poverty. Therefore, in partnership with local governments, the Group encouraged villages to specialize more: often entire villages, towns, and sometimes even counties would collectively produce a specific product. At the same time, the Group sought out forward-thinking, well-resourced individuals who had a firm grasp of agricultural technology to help oversee and scale up poverty alleviation projects.

Finally, it was important to find viable markets. Many farmers gave little thought to marketing before planting crops, resulting in large harvests for which there were no buyers. “Industry-led poverty alleviation requires marketing channels, and our Group offers an ideal sales platform,” says Wang Tian. In addition to its own stores, Better Life Group was able to provide information about other domestic markets and e-commerce channels. At the same time, the Group performed big data analysis on sales data to identify which agricultural products were in short supply, and encouraged farmers to adjust their crop choice accordingly.

Based on this experience, the Group was able to boost the scope and precision of its industry-led poverty alleviation program. By focusing on consumer demands, the Group built bridges between markets, and farmers in impoverished regions. Wang Tian argues that, “If poverty alleviation is to be sustainable, then consumption must be used to drive industrial development in poor areas and eliminate poverty. Many impoverished areas are endowed with a rich natural bounty. Trustworthy sales channels afford an opportunity for farmers to sell more products, and for consumers to access these products.”



Creating a Benchmark: Shibadong's Bottled Spring Water

Wang Tian tested the spring water in Shibadong village/ Photo courtesy of Better Life Group

Shibadong is a Miao ethnic village located in Huayuan County in Xiangxi Tujia and Miao Autonomous Prefecture. The village gets its name, which means ‘eighteen caves’ from a network of karst caves in the area. In 2013, the village's per capita net income was ¥1,668 or just 18.75% of the national average for farmers. The village had 225 households with 939 members in total, of which 136 households (542 people) were classed as poverty-stricken. In November 2013, President Xi Jinping came to inspect the village. He proposed a set of guidelines which advocated seeking truth from facts, adapting to local conditions, and implementing targeted guidance and poverty alleviation.’ This marked the beginning of China's targeted poverty alleviation efforts. Subsequently, ten targeted poverty alleviation projects were launched in the area, with a focus on boosting production, promoting rural tourism, reallocating labor, and providing medical assistance and environmental compensation. This put the spotlight on poverty alleviation efforts in Shibadong village.

Towards the end of April 2017, Wang Tian made a field trip to Shibadong village to explore the local ecology. He found that the village was mountainous, with little arable land and steep roads, making it unsuitable for growing crops or raising livestock. However, after making some inquiries, he learned that there was a mountain spring in the village whose water potentially had commercial value. He visited the spring together with village officials and took a sample of the water for testing. The results showed that the water had many desirable properties. Wang entered into discussions with stakeholders about the best targeted poverty alleviation strategy for building a bottling plant in the area.

In June 2017, Better Life Group established a spring water bottling plant in Shibadong village after making an investment of ¥30 million. The plant, called Hunan Shibadong Mountain Spring Water Co., Ltd., had an initial production capacity of ¥100 million per year. The Group saw the project as a key driver for the village's collective economy and a means to achieve poverty alleviation. After the plant came online, 15% of all earnings went to the village collective. Moreover, with the exception of a few technicians, the plant exclusively employed local people, including those from poor households. The factory formally began production on October 8, 2017, and on March 22, 2018, after 11 months of hard work, the bottling plant was finally listed on the stock market.

The Shibadong village spring water bottling plant was an improvement on Better Life Group's original industry-led poverty alleviation plan, and its mission was expanded to include the goals of 'ensuring sustainable poverty alleviation and preventing villagers from falling back into poverty.' The plant created 30 jobs for villagers. Whereas in the past, many villagers had to travel to find work elsewhere, the construction of the bottling plant meant that many could now stay in their hometown. The bottling plant assisted with poverty alleviation in a number of ways. Firstly, 15% of the plant's profits were paid to the village collective, with a minimum annual dividend of ¥500,000. In addition, for every bottle of water produced, 1 cent was paid into the village's poverty alleviation fund for further development that would benefit everyone. During peak times, the water factory could employ up to 130 local workers. Between 2017 and 2018, the village collective earned dividends of over ¥1.2 million from the plant, which has turned villagers into employees, and farmers into shareholders.

In addition to marketing Shibadong's spring water through its own retail channels, Better Life Group also recruited distributors and sales agents for the bottled water from across Hunan Province in a bid to scale up operations. Such was its success that the Shibadong project became a benchmark for industry-led poverty alleviation. This prompted other poverty-stricken areas to approach the Group, including the counties of Mayang, Anhua, and Pingjiang in Hunan province, as well as villages in Chongqing and Guizhou Province. Wang Tian hopes that more villages with access to clean water can benefit from poverty alleviation. In the future, he even plans to establish a Shibadong poverty alleviation fund that would build Shibadong into a poverty alleviation brand and provide support for other impoverished villages.

After the Shibadong project, Better Life Group continued to explore other new approaches for industry-led poverty alleviation. One example was in the town of Jiwei in Huayuan county, which is known as western Hunan's granary thanks to its abundant and fertile arable land. There, in a village called Yanluo, Better Life Group invested ¥20 million in a rice factory (Hunan Rice Agriculture Co., Ltd.), which entered into operation on September 28, 2019. This was the Group's second project in the county to harness modern industry as a means of driving targeted poverty alleviation.

The rice factory is located in a three-sided courtyard with a total floor area of 1,300 square meters. The site contains a processing factory, agricultural exhibition hall, and office area. The factory, which has a daily capacity of 40 tons, created 42 jobs, for 12 of which locals were given preference. The Yanluo village collective was granted 15% of the factory's earnings, and the village built up its economy around the rice milling industry. The rice factory directly purchased and processed high-quality rice from Jiwei town and launched a series of products, including 'Chongshan Tribute Rice' and 'Zila Tribute Rice.' In addition, the factory planted carefully selected seeds from these two 'tribute' varieties to create its own 'Tribute Rice' range. Through product standardization and branding, the factory was able to generate sustainable revenue growth.


Shibadong spring water/Photo courtesy of Better Life Group


The 'Tribute Rice' range/Photo courtesy of Better Life Group

Targeted Poverty Alleviation: the 'Twinning' Model

Building on the success of the Golden Touch Project, Better Life Group launched another program that used a 'twinning' model to allow Group employees to directly engage with impoverished households.

On January 9, 2018, at Better Life Group's annual management meeting, Wang Tian called on more than 1,000 senior and middle managers to pair themselves with impoverished households in their locality. This targeted poverty alleviation program, which was known as the 'Thousand Households Project,' aimed to take up the mantle of the Golden Touch Project.

The twinning arrangement worked in three ways. Firstly, each senior manager at Better Life Group was paired with an impoverished household. Secondly, donations made to impoverished households by the Group's middle and senior managers were matched by the Fuguang Charitable Foundation. For example, if a manager donated ¥1,500 to a household each year, and an additional ¥1,000 for their children's education, the Foundation would also donate ¥2,500 to the household. Thirdly, managers were required to visit their twinned family and invite the latter back to their own homes at least once a year. This twinning arrangement was designed to help impoverished households build up a sense of confidence and pride, while helping to reduce poverty, raise aspirations, impart knowledge and skills, provide financial assistance, and support industry.

The Thousand Households Project was warmly welcomed by managers at Better Life Group, who signed a written pledge to participate in the program. On February 6, 2018, Chen Zhiqiang led a team of managers to Jingzhi village in Longhui County, where they offered condolence payments, bursaries, rice, and cooking oil to impoverished families during Spring Festival. This initiative was then enthusiastically adopted by managers at all of the Group's business divisions (including regions).

By the end of 2018, a total of 874 senior managers at Better Life Group had participated in the Thousand Households Project, providing support to 3,558 villagers from 874 twinned households in impoverished parts of Hunan, Xinjiang, Jiangxi, Guangxi, and other provinces. In 2019, managers commenced a second round of visits to their 'adopted' families. After their initial pairing in 2018, the focus for 2019 shifted to offering guidance and support to help lift villagers out of poverty. In August 2019, a subsidiary of Better Life Group, Better Life Real Estate, helped the village of Shixi in Yuanling County by agreeing to buy 500 kilograms of peaches grown by local farmers who couldn't find a buyer. Meanwhile, the Group's poverty alleviation management department promoted a 'buying is donating' campaign to other departments and bought over 1,000 kilograms of yellow peaches from Shixi, bolstering villagers' confidence that they could escape poverty by developing industry. Over time, the Thousand Households Project helped the Group's managers to establish close relationships with countless impoverished households while raising ¥2 million in donations over just two years. The material and moral support extended by managers bolstered villagers' determination to shake off the shackles of poverty and achieve moderate prosperity.

Backed by its own sales channels, supply chain, and other market resources, Better Life Group has helped to build partnerships between the government and private sector that ensure that industry-led poverty alleviation can be sustainable. Between 2016 and 2019, the Group assisted 75 poverty-stricken villages, established 58 procurement bases, and signed strategic poverty alleviation agreements with 18 poverty-stricken counties, including the counties of Chengbu, Suining, Yongshun, and Xinhua in Hunan Province, as well as Luopu County in Xinjiang. The Group provided direct and indirect assistance to some 12,000 poverty-stricken households, helping to boost their annual incomes by over ¥3,500 on average, and spending a total of ¥750 million on agricultural product purchase agreements with poor counties and villages. The Group's successful industry-led poverty alleviation model, which draws on its own business strengths, provides a point of reference for other businesses and organizations that want to contribute to China's poverty alleviation effort.

Yili Group: Building a Green Future by Living CSR Values

By Zhu Qiong, CEIBS Case Center

Photo: Yili Group

> *With foresight, we can shape the future; with cooperation, we can create synergy; and with mutual benefits, we can find a win-win solution.*
>
> — Pan Gang
> Chairman and President of Yili Group,
> CEIBS EMBA2002 Alumnus

Yili Industrial Group Co., Ltd. is the first A-share listed company in China's dairy industry, and the largest dairy company providing the largest selection of product offerings. Thanks to its premium products, leading comprehensive services and sustainable development capabilities, Yili has been a trusted sponsor of the world's top events and competitions, and a highly recognized brand among all levels of government and the community. It was the only officially designated dairy product supplier for the 2008 Beijing Olympic Games, the World Expo 2010 in Shanghai, the 2016 G20 Hangzhou summit, the 2019 CISM Military World Games in Wuhan, and will continue to be the sole supplier for the 2022 Beijing Winter Olympics. Yili is also a partner of the World Economic Forum, Bo'ao Forum for Asia, World Internet Conference and other top summits. In 2019, Yili reported a total revenue of ¥90.223 billion[①], up 13.41% YoY, and a net profit of ¥7 billion, up 7.73% YoY, ranking first for the sixth year in a row in Asia's dairy industry. With a dominant scale and strong sustainability, as evidenced by its annual revenue growth as high as ¥10 billion for several consecutive years, Yili continued to lead the pack in Asia in terms of market share and penetration, and return on net assets.

As a leading, out-performing company in the dairy industry, Yili has been fully committed to its CSRs. Yili's vision was to become one of the world's most trusted health food providers. In order to achieve this goal, Yili took the lead in incorporating CSR performance in its strategic plans, and took it upon itself to build a green, sustainable dairy industrial chain. In this process, it has become the cornerstone of China's drive toward sustainable development.

①: ¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.

Three Stages of CSR Performance at Yili

In 2019, Yili issued its annual CSR Report, recording great progress in the performance of CSRs since 2007.

Inception

The seeds of Yili's strategic CSRs were planted by its Chairman and President Pan Gang. As early as 2007, two years after he became Chairman of Yili, Pan put forward the vision of "green leadership", i.e., to become a leader in "green production, consumption, and development", as part of its green, sustainable development strategy. That year, Yili released its first ever CSR report, and began to implement its unique "Healthy China Social Responsibility System" which includes Yili's support for youth, the environment, and the communities in which it operates. It also introduced the first social responsibility emergency plan in China.

In 2009, Pan Gang upgraded his vision from "green leadership" to "co-building a green value chain", calling on the whole industry to forge a consensus on green, environment-friendly and sustainable development, in order to achieve healthy interactions between industry, nature and communities. In 2010, Yili became the first company in the dairy industry to complete a thorough assessment of its carbon footprint.

Improvement

In 2011, Yili started to implement its strategy of "co-building a green value chain". This strategy includes environmental protection and mutually beneficial cooperation with stakeholders. On the environmental front, to ensure every link of its supply chain was green, Yili carried out a thorough assessment of the carbon footprint of its operations - from the selection and conservation of milk sources, to the use of biodegradable packaging materials, through to the match between logistics links and the production line, and to energy conservation and emission reduction.

To ensure synergistic growth, Yili built a benefit-sharing business model for dairy farmers, partners and employees, which encourages active collaboration for a shared green business ecosystem. (See "Win-win value chain" below)

In 2015, the United Nations adopted the historic new agenda, entitled "Transforming Our World: The 2030 Agenda for Sustainable Development," which was agreed upon by the 193 Member States of the United Nations, and includes 17 Sustainable Development Goals (SDGs). After studying the 17 SDGs and taking into consideration its own strategy, Yili identified 9 goals to pursue: no poverty, zero hunger, good health and well-being, quality education, decent work and economic growth, responsible consumption and production, climate action, life on land, and partnerships for the goals. In December 2016, Yili became a signatory to the "Business and Biodiversity Pledge," a voluntary commitment to the objectives of the UN Convention on Biological Diversity, in which it made nine pledges, demonstrating the strengths and commitment to SDGs of a Chinese company.

Upgrading

In 2017, Yili upgraded its CSR performance system from the "Healthy China Social Responsibility System" established in 2007 to one known as "World Integrally Sharing Health" (WISH). Under the new system, Yili worked to implement the nine SDGs in the four key areas of action: a win-win value chain, quality and innovation, public good, and nutrition and health.

In order to implement WISH, Yili set up a "1234" management system. The "1" stands for a steering committee, i.e., the Sustainable Development Committee, chaired by Pan Gang. The head of the Department of Enterprise Affairs served as its secretary-general. The committee manages four working groups responsible for coordinating efforts geared towards sustainable development by various departments. The "2" refers to two specialized work areas: i) special management of the group's public good projects, and risks related to sustainable development of overseas investment projects; and ii) special research into the Sustainability Report and sustainable development of the dairy industry. The "3" refers to three levels of responsibilities for implementing the group's sustainable development strategy, namely, the Group, business units, functional departments and branches, while "4" stands for four key areas of action.

Four Key Areas of Action

Building a Win-win Value Chain

Yili incorporated the interests of all stakeholders in the industrial chain—agro-pastoralists, suppliers, distributors, consumers and employees—into its profit model, and designed a win-win mechanism for all. To make the mechanism work, Yili needed to fulfill two major commitments: "decent work and economic growth" and "partnerships for the goals".

Agro-pastoralists

The upstream part of Yili's value chain consists of millions of agro-pastoralists. After the Sanlu Scandal (Tainted-Baby-Milk Scandal) in 2008, Yili was acutely aware of the need to empower agro-pastoralists to improve their animal husbandry capacity and product quality. Yili identified four major challenges faced by them—inadequate technology, a lack of access to finance, high risks, and slower-than-expected transformation, and decided to support them on these fronts. In 2018, Yili invested ¥3.588 billion in agro-pastoralists.

Technology: To help agro-pastoralists build husbandry capacity, Yili provided field guidance and set up a "Cow School", a training camp for second-generation cow farmers and an "Elite Stock Breeding Workshop" to provide training in production procedures, operation management, and financial management.

Finance: Without any collateral to back a loan, agro-pastoralists were unable to purchase silage, scale up production, and improve facilities and equipment. In order to help them gain access to finance, Yili took it upon itself to assume material risks for their bank loans. After assessing their operations and funding needs, Yili provided them with joint liability guarantee. On top of that, it teamed up with banks and other financial institutions to launch 13 financial products tailored specifically to their needs, such as "Silage Protection" and "Pasture Protection". These products enjoyed great popularity among the agro-pastoralists. As of 2019, Yili had provided financial support to more than 5,000 partners along the value chain, totaling ¥35.9 billion.

Industry: To help agro-pastoralists reform their "small, scattered and financially weak" operations, Yili introduced an integrated husbandry model to encourage cultivation of high-quality forage. In 2017, under this model, silage growers signed contracts with dairy farmers, driving the cultivation and sales of more than 416,000 acres of high-quality silage corn each year. Agro-pastoralists obtained fresh silage feed from reliable sources, while farmers on average made a profit of more than ¥3,600 per acre from high-quality silage, generating an annual income of ¥1.6 billion.

Risk mitigation: The risk of animal husbandry comes not only from the production cycle, but also from changes in regional and international markets—characterized by bouts of imbalances between supply and demand of raw milk. In order to share the risks of agro-pastoralists and promote the balanced development of the supply chain, Yili signed price protection contracts with them. Even if market prices fall, Yili will still buy raw milk at the contract price, thus preventing them from losses. Similarly, if there is a surplus of raw milk, Yili will buy out at the contract price.

Suppliers

For suppliers, Yili has established a "Full Life Cycle Supplier Management System" . This system includes management standards for suppliers in all aspects of cooperation, ranging from product development participation, classification, performance management, to risk control, relationship maintenance, capacity building, and through to exit. In particular, by requiring suppliers to sign the *Sunshine Action Commitment Letter,* Yili holds them equally responsible for environmental protection and green development, such as using green, environmentally friendly, biodegradable, low-weight, high-strength materials.

In addition, Yili worked to promote the sustainable development of suppliers through the establishment of a Supplier Development Institute and the creation of a joint quality engineer training and certification system. By the end of 2018, 95.6% of Yili's suppliers had obtained quality management certification (210 in the field of environmental management, and 82 in the joint quality engineer certification).

In April 2019, at the Yili Group Supplier Conference, Yili led the establishment of the industry's first global network of sustainable supply chain (known as the "WISH Network"). The network requires that both suppliers and vendors perform their social responsibilities in the procurement process, by integrating sustainable development and implementing Article 10 of the *Yili Programme of Action for Sustainable Development*. This helps contribute to the achievement of SDG 17: "Partnership for sustainable development" .

Distributors

Yili has always pursued win-win cooperation with distributors—even protecting their interests at its own cost in difficult times.

In order to help build distributor capacity, Yili established the Distributor Development Institute in 2016 to provide multi-party training in business operations, team management, new retail, market operations and product promotion. In 2018, Yili benefitted 39,653 people through distributor training activities.

Yili's top-performing distributors attended an executive education workshop at Renmin University of China/Photo courtesy of Yili Group

Consumers

In addition to efforts of providing consumers with quality health products, Yili has created offline and online "transparent factories" and a Future Milk Platform as a direct link to consumers.

Yili has opened 36 brick-and-mortar "transparent factories" across the country for consumers to visit. Its online "transparent factories" are open 24/7. In 2018, the company attracted 13.55 million visitors to its physical factories, and 157.45 million to its online factories.

Its Future Milk Platform, an inclusive platform dedicated to promoting innovative development and upgrading of the dairy and health food industries, allow consumers and innovators to co-create and share benefits. The platform brings together innovative third-party technology platforms, institutions and creative teams to collect, organize and evaluate creative concepts and ideas, and converts creative and inspiring concepts into marketable products. In 2018, 67 creative products were developed on this platform.

An online "transparent factory" /Photo courtesy of Yili Group

An online "transparent factory" /Photo courtesy of Yili Group

Employees

Employees are seen as an essential asset for achieving the corporate goal of building a win-win industrial chain. Yili provides employees with more than 40 items of benefits, 85% of which are non-statutory.

Yili places employee health and safety at the heart of its operations. It has put in place effective measures to mitigate occupational hazards and ensure employee safety in the workplace, such as noise reduction, temperature regulation, and improved ergonomics. In addition, it regularly monitors occupational and environmental conditions, conducts occupational health check-ups, and provides employees with personal protective equipment and ongoing safety training in identifying, controlling and eliminating potential risks.

Yili also introduced the "Happy E Station" information platform, inviting professional psychological counseling institutions to provide employees with training and counseling in career orientation, family management, marriage, child birth and education, among other things. It also opened a 24-hour service hotline to enhance employees' psychological resilience. In addition, Yili organized a variety of fun sports events and games and care activities to maximize the wellbeing of employees.

In addition to creating an equal, diverse and gender-equitable workplace, Yili also offers a range of capacity-building and training programmes. Statistics as of the end of 2018 show that its 56,079 employees attended 12 training sessions per person that year. Yili was the first in the dairy industry to introduce Six Sigma to improve technical training. In 2018, among the employees trained, 67 received the Six Sigma Green Belt Certification, 17 became Black Belts, and 2 became Master Black Belts.

"Green Travel, Fun Cycling" biking event/ Photo courtesy of Yili Group

Pan Gang attended the 2019 onboarding ceremony/Photo courtesy of Yili Group

Quality and Innovation

This action was aimed at the goals of “responsible consumption and production” and “climate action” .

Responsible Consumption and Production

Climate Action

Responsible Consumption and Production

As a leader in the dairy industry, Yili officially launched the “Quality Leadership Strategy” in 2014, extending food safety efforts to all partners in the value chain and building a global quality management system.

In 2015, Yili replaced it with the “Quality Leadership 3210 Strategy” . The “3” stands for three goals: to build a world-class quality assurance team, establish stringent standards in the industry, and offer top quality products. The “2” stands for two systems: a world-leading quality management system, and an independent whole-chain quality management system. The “1” refers to a one-off rejection of processes and results that do not meet food safety and product quality requirements throughout the value chain, while the “0” means zero food safety incidents.

In 2017, Yili started to build a “Whole Industry Chain Quality Management Ecosystem” and coordinated quality control of the whole value chain through benefit-sharing mechanisms. Yili managed to get players in the upstream of the value chain to adopt standardized, intensive pasture farming and management practices. As a mid-stream player itself, Yili developed the most stringent quality standards in the industry, which are 50% higher than the national ones. Additionally, Yili further raised the bar 20% higher on some of its key products. In the downstream of the value chain, Yili established a big data-based electronic product traceability programme covering the entire value chain. Comprising the “Product-specific Traceability Code System” and the “Food quality and Safety Traceability System Platform” , the programme ensures full traceability of product information.

On the supply side, all of Yili's suppliers achieved standardized production and scale of economy. Yili conducts remote real-time monitoring of milk production, storage and transportation processes, ensuring intelligent control of raw milk quality.

Yili set up a quality monitoring and control system at group, business unit and factory levels, involving more than 80 units along the value chain in the inspection of up to 1,000 items.

From 2015 to 2018, Yili recorded zero food safety incidents in the implementation of its quality leadership strategy. In order to contribute to responsible production and consumption, Yili invested ¥460 million in R&D and ¥319 million in testing in 2018. In the same year, it earned 182 patents. Meanwhile, Yili participated in the formulation of 64 national, industry and local standards.

Climate Action

In order to achieve green and sustainable development, Yili has constructed an environmental sustainability model with three objectives: i) bringing greenhouse gas emissions down to below 1.87 million tons by 2020; ii) cutting the overall energy consumption per unit of product and improving the greening of the manufacturing process; and iii) meeting pollutant emission standards and reducing water and power consumption per unit of product. To this end, Yili invested ¥286 million in environmental protection in 2018. As a result, it managed to cut energy consumption by 16,000 metric tons of standard coal equivalent, save 790,000 tons of water, and turn five factories into green facilities of national standards.

Philanthropy

This action was geared toward three SDG commitments: “quality education” , “life on land” and “no poverty” .

Caring for Youth

Conservation of Biodiversity

Caring for Youth

Yili has launched two dedicated programs for youth—“Yili Nutrition 2020” and “Yili Ark” .

“Yili Nutrition 2020” was launched in 2017 to provide students in poor mountainous areas with milk. In 2019, a new component—screening for congenital heart disease—was added. In 2018 alone, Yili invested a total of ¥52 million in products and nutritional support, benefiting more than 600,000 students in 130 cities and counties across 25 provinces and regions.

Following the launch of the “Yili Nutrition 2020” project, Yili's student milk products team, which had mainly dealt with distributors on a commercial basis, got in direct contact with consumers. In some areas, the team developed health profiles for children, kept track of their health conditions, and used collected data to facilitate Yili's product development, thereby introducing better products and services for children. This virtuous circle deepened the understanding of social responsibility among members of the team, and encouraged them to integrate social responsibilities into business decision-making.

Through this project, Yili also mobilized more government and social resources toward supporting poor areas. Such efforts have been contributing to the national strategy of targeted poverty alleviation, and the achievement of “no poverty” “zero hunger” and other SDGs. In 2018, Yili donated ¥11.5 million worth of powdered milk through the “Yili Nutrition 2020” program, a poverty alleviation through nutrition enhancement campaign benefiting 73,000 people.

“Yili Ark” , launched in 2012, is a project for child safety education and training. As of 2018, seven campus safety workshops were organized under the project for more than 300 campus safety managers from 40 counties and districts across 25 central and western provinces (municipalities and autonomous regions). In addition, more than 70 safety education events were organized for children throughout the country, delivering safety skills and materials to more than 200,000 children. In 2016, Yili launched China's first campus safety assessment index system “Yili Ark Holograms” to help schools identify campus security risks and develop solutions.

Photo courtesy of Yili Group

Photo courtesy of Yili Group

Photo courtesy of Yili Group

Photo courtesy of Yili Group

Conservation of Biodiversity

As a signatory to the Convention on Biological Diversity's *Business and Biodiversity Pledge*, Yili not only invested resources and took actions at home and abroad to protect wildlife and wetlands, but also identified six aspects of its production and operations that had a major impact on biodiversity and took management measures to conserve biodiversity.

In addition, Yili invited consumers to join in its protection efforts. On World Wetlands Day 2018, Yili launched the "4.6 Square Meters Wetland Protection" campaign, promising that for every box of Satine organic milk sold, Yili would donate the needed money for conserving 4.6 square meters of wetlands. This creative marketing campaign lasted 3 days, and product sales surged 496%. By the end of 2018, the wetlands that Yili conserved was almost as big as the size of New Zealand.

In November 2018, Yili released its first biodiversity conservation report to share conservation results with the rest of the world.


Wetland protection/Photo courtesy of Yili Group

Nutrition and Health

This action was aimed at the goals of "zero hunger" and "good health and wellbeing" .

Yili has been conducting breast milk research for 16 consecutive years since 2003. In 2018, it upgraded the Maternal and Infant Research Center to the Institute for Maternal and Infant Nutrition, which produced two white papers on China's breast milk research informing the R&D of infant formula in China. Based on the institute's research findings, Yili pioneered the development of different types of low-lactose products using lactose hydrolysis, fermentation, membrane filtration and other techniques. It also conducted research into the effect of interventions on lactose intolerance and the clinical efficacy of low-lactose functional products. The findings were recognized by authoritative organizations.

Yili has been advocating for healthy living based on its expertise. As the first dairy sponsor of the Olympic Games in China, Yili has been working with Olympics committees for 13 years. In 2017, it created the "Vitality Winter Olympics Academy" in conjunction with the Beijing Organizing Committee for the 2022 Winter Olympic Games. Free and open to the general public, the Academy is intended to encourage more people to learn about the Winter Olympic Games. By the end of 2018, the Academy had attracted more than 85 million online visitors.


Photo courtesy of Yili Group


Photo courtesy of Yili Group

CSR Indicator System

While performing its CSRs through concrete actions, Yili also developed an indicator system for the assessment of the economic, environmental and social impact.

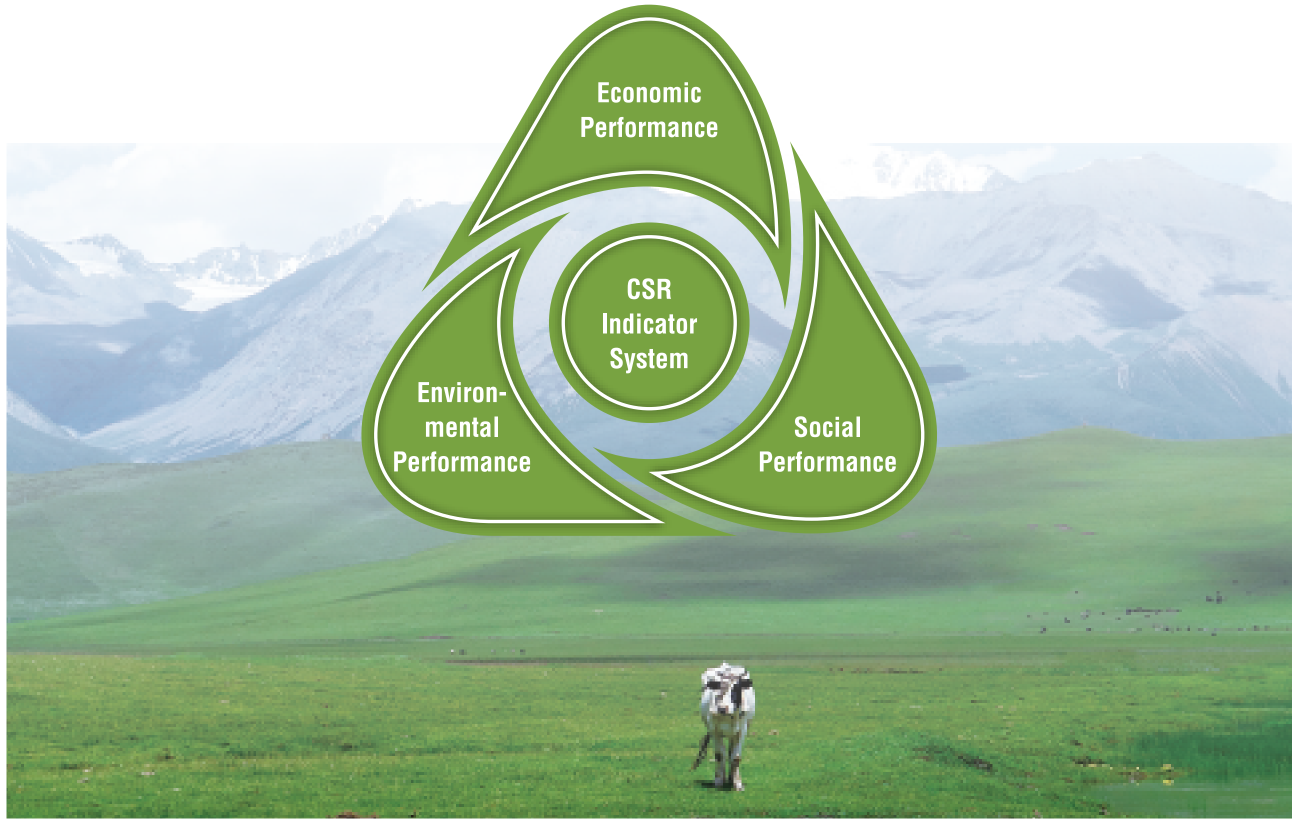
On the economic front, Yili developed two categories of secondary indicators for measuring direct and indirect economic impact of its CSR performance, which include a number of tertiary indicators each. The direct economic impact indicators are designed to measure economic interests of shareholders, investors and the government, while the indirect economic impact indicators include Yili's R&D investment and patent licensing. R&D investment reflects how much Yili has invested in providing communities and consumers with better quality products and services. Patent licensing measures how Yili performs the responsibility of protecting intellectual property rights to enhance its own competitiveness.

On the environmental front, Yili's first and foremost goal is to minimize the negative impact of its operations. In order to achieve this goal, Yili developed four secondary indicators, i.e., risks, climate, waste, and resources. The resources category includes the largest number of tertiary indicators. In particular, green packaging and green transportation reflect Yili's emphasis on the selection, reduced energy consumption and minimized use of packaging materials, and on reducing transport energy consumption.

On the social front, Yili's indicators, centred on managing relationships with stakeholders, include five secondary elements—employees, products, supply chain, industry and communities.

The above indicators are classified into 77 qualitative indexes and 65 quantitative ones.

On September 19, 2019, Yili was one of the few companies in the dairy industry to be recognized as a "Corporate Social Responsibility Model" by the United Nations Food and Agriculture Organization's representative office in China and the China Association for the Promotion of International Cooperation in Agriculture (CAPIAC). In the past 12 years, Yili has been consistently performing its CSRs in line with the vision of becoming the world's most trusted health food provider. As it transitioned to green growth on multiple fronts, from the corporate level through to the industrial chain, both at home and internationally, Yili has become a pioneer and role model for green development.



Phoenix Contact China: A Force for Good Creating Mutually Beneficial Outcomes

By Cao Zhijing, CEIBS Case Center

Photo courtesy of Phoenix Contact China

> *"If a profit-making company is not creating real value or making positive contribution to the community in which it operates, it is not a truly successful business. There may be many businesses out there earning great profits at the cost of society, but Phoenix Contact China is definitely not one of them."*
>
> — Gu Jiandang
> President of Phoenix Contact China,
> CEIBS EMBA2006 Alumnus

In 2018, Phoenix Contact (China) Holding Co., Ltd. ('Phoenix Contact China') held a networking event for employees to which it invited a special guest. The guest was a young woman called Zubaidaimu Memet who hailed from China's western province of Xinjiang. Zubaidaimu was a former student at the Phoenix Contact Project Hope Primary School, an institution funded by Phoenix Contact China to improve education for poverty-stricken children. Back in 2006, when the school was first established, Zubaidaimu was in the third grade, and was a beneficiary of the project. In 2007, Phoenix Contact China's founder Li Musong and current president Gu Jiandang invited teachers and student representatives at the school to attend an exchange event in Nanjing to learn about automation technologies. Zubaidaimu was selected to join the delegation. After returning from the Nanjing trip, Zubaidaimu resolved to study hard and improve her Mandarin so that she could secure a place at university. Her dream finally came true in 2016 when she was admitted to Henan University of Economics and Law. Inspired by Zubaidaimu's success, her two sisters also worked hard, and received high school and university diplomas respectively, before embarking on their own journey to realize their dreams.

This is one of many heart-warming stories to come out of charitable projects organized by Phoenix Contact China. Building Hope primary schools represented Phoenix Contact China's first attempt at CSR. Although the company's early CSR projects had nothing to do with its business operations, it has gradually incorporated CSR practices in its business models. The company's president, Gu Jiandang, believes that charitable projects have allowed Phoenix Contact China to better define its mission and helped the management team form a strategic focus for the future, i.e., laying the groundwork for smart manufacturing and Industry 4.0 through support to education. Over the past 26 years, Phoenix Contact China has been searching for more comprehensive and meaningful ways to implement corporate responsibility. That involves exploring a number of issues: how to achieve rapid growth in China, how to implement modern management practices, and how to create value for society while ensuring sustainable development—one of the most fundamental tenets of CSR.

About Phoenix Contact China

Founded in 1923, Phoenix Contact Group ('Phoenix Contact') is a global leader in electrical connectors and interfaces, and industrial automation solutions. The Group produces over 60,000 types of product that span the energy, process manufacturing, automotive, wind power, telecommunications, rail transport, water treatment, machinery, industrial electronics, building automation and many other sectors.

Phoenix Contact China was established in Nanjing in 1993. By 2019, Phoenix Contact China had grown to become Phoenix Contact's largest overseas R&D and manufacturing base, and a regional headquarters comprised of six wholly-owned companies and one joint venture; it employed over 2,000 employees and generated over ¥3 billion[1] in annual sales.

Phoenix Contact China is a shining example of fruitful Sino-German cooperation and the company is committed to promoting the development of 'Industry 4.0' in China. In 2014, Phoenix Contact China launched its 'Connecting Smart World' smart strategy, which set out a four-pronged roadmap to roll out Industry 4.0 and smart manufacturing. Phoenix Contact China is also accelerating its digital transformation and harnessing its own strengths to create synergies with partners.

①: ¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.

A Force for Good

Established almost 100 years ago, Phoenix Contact has fostered a corporate culture that stands for *independence, innovation,* and *trust in partners*; this provides strong impetus for the company's sustainable development. 'Independence' stands for the company's commitment to self-reliance and its determination not to rely on public share listings or bank loans. 'Innovation' means using innovative technology, products, solutions, and business models to boost efficiency, drive sustainable development, and create value for customers. 'Trust in partners' means building relationships of trust with employees and other stakeholders that are based in mutual dedication, friendship, and integrity; shaped by shared, long-term interests; and seek to generate shared growth.

Phoenix Contact China has inherited the corporate values of 'friendship, tolerance, trust, responsibility, and goodwill' from its parent company. In addition, unlike many foreign companies that operate in China, Phoenix Contact China has adhered to a policy of only employing local staff and managers throughout its 26 years in China, which is yet another aspect of its 'independent' approach. As the company has built up its operations in China, it has developed a deep connection with the local market that has given it unique insights into CSR. Since its inception, the company has made trust a key responsibility and devoted itself to advancing Chinese industry. Phoenix Contact China believes that implementing trust mechanisms shouldn't be a box-ticking exercise, but a strategic interaction that reflects a deep understanding of the company's responsibility and mission. Trust and responsibility are embedded in everything a company does, whether in relation to society, customers, employees, or investors. Rather than forming short-term partnerships, companies should seek to combine trust and responsibility in long-term relationships, where partners each have a stake in the other's reputation.

In addition, the company's management, including former president Li Musong and current president Gu Jiandang, agree that the fundamental mission of Phoenix Contact China is to create value for society. As Gu puts it, "In our view, a profitable company is still a failure if it doesn't create value for, or otherwise advance society. Phoenix Contact China will never seek success at society's expense, even if such a business model should exist."

Guided by its mission of creating value for society, Phoenix Contact China believes that CSR goes beyond charitable activities or investments in a specific field. Yi Shubo, a PR manager at the company, argues that in the narrow sense of the term, CSR means charity or serving the public interest, ranging from donating to schools, supporting orphanages, providing earthquake relief to chipping in to help fight Covid-19. However, Phoenix Contact China interprets CSR more broadly to mean generating value for supply chains, business ecosystems, the natural environment, and for all stakeholders.

The company places education at the heart of its CSR activities because it is convinced that education can change the world and people's destiny. Whether it's supporting Project Hope schools and vocational education, or partnerships between academia and industry, Phoenix Contact China's investment in education has assumed a number of forms over the years. Today, its commitment to education has moved beyond charitable donations to become a strategic corporate focus that goes hand-in-hand with its business model and technological progress.

Phoenix Contact China knows that the investments it has made to spur industry and social progress may not yield immediate returns, but believes that it will be rewarded for its work in the long run.

Creating Educational Models For the Future

From Project Hope To Comprehensive Educational Aid

Phoenix Contact China first became involved in Project Hope shortly after it was established in 1994, when it invested in its first charitable project. According to Gu Jiandang, the project was quite small, but it nonetheless embodied the company's core values: “It doesn't matter if your company's small or cash-strapped. What matters is that you want to create value for society and do your bit for Project Hope schools, or similar schools that need help.”

In 1999, Phoenix Contact China formed a team that was charged with the mission of giving back to society. In 2003, it began sponsoring the construction of Project Hope primary schools, and since then it has helped construct eight such schools in the provinces of Jiangsu, Ningxia, Gansu, Yunnan, Shandong, Qinghai, Inner Mongolia, and Xinjiang. It has also supported two schools in the remote and impoverished city of Nagqu in Tibet, as well as two schools for the children of migrant workers in Nanjing. In 2007, Phoenix Contact China joined the ‘Realize Your Dream’ aid program initiated by Jiangsu Province's[2] Youth Development Foundation, which has since helped nearly 400 students from underprivileged backgrounds to fulfill their dreams of going to college. In 2011, the Musong Charity Fund was set up with an endowment from Li Musong, Gu Jiandang, and the company's young management team, and Phoenix Contact China also used earmarked funds to establish the ‘Giving Back to Society Fund.’ Together, both funds committed to invest ¥10 million over the following ten years to reinvest in society.

In addition to providing financial aid to underprivileged areas and students, Phoenix Contact China has invested considerable resources in promoting modern educational practices, and has harnessed its influence in the industry to popularize professional skills and knowledge. Since 2001, the company has established over ten automation laboratories, handed out scholarships, and sponsored campus events at over ten universities in China, including Nanjing University, Huazhong University of Science and Technology, Southeast University, Tongji University, and Zhejiang University. As this cooperation has expanded, universities have started to directly recommend some of their top students to Phoenix Contact China, and the company has also overhauled its talent development program.

On the subject of Phoenix Contact China's mutually-beneficial cooperation with stakeholders, Gu Jiandang remarks: “At Phoenix Contact China, our main goal is not to pursue *absolute* success. Instead, we view trust as a responsibility and seek to create symbiotic relationships with our stakeholders to achieve *mutual* success. This principle underpins our core philosophy and values and informs our approach to social responsibility.”

Phoenix Contact Project Hope Primary School in Huzhu County, Qinghai Province/Photo courtesy of Phoenix Contact China

Inauguration of the Musong Charity Fund and ‘Giving Back to Society Fund’/Photo courtesy of Phoenix Contact China

②: The “Dream to Reality” program is a public welfare program initiated by the Project Hope Office of Jiangsu Province. The program raises funds to help freshmen with financial difficulties to fulfill their dreams of a university education.

Underpinning the high quality of the company's innovative products is Germany's advanced vocational education, which is known as a “dual system” that combines apprenticeships with vocational education in various cities. In addition to learning theoretical and cultural knowledge at part-time vocational schools, students enrolled in the “dual system” also receive vocational skills training in enterprises. According to the German Federal Ministry of Education and Research, the proportion of students in dual vocational education in Germany in 2017 was 51.7%.[3] The dual system is the mainstream choice because it meets the needs of Germany's manufacturing industry. After receiving professional training in a company, job candidates are equipped with practical skills and a sense of responsibility and identity with the profession.

In 1994, a programmatic document on Sino-German cooperation in the field of vocational education was introduced. Since then, China has been piloting the German dual education system in various cities. However, due to a shortage of school infrastructure and funding, China's vocational education remains unbalanced and deficient. At the same time, as vocational education lags behind industry needs, enterprises are reluctant to cooperate with vocational schools. Yet despite other companies' disinterest in vocational education, Phoenix Contact China has chosen to commit itself to this cause. In particular, the company has worked to promote the dual education system, with a view to reforming China's approach to vocational education and improving learning to better meet the needs of society.

Since 2006, Phoenix Contact China has been an active proponent of Sino-German cooperation in vocational education. It has tried to introduce Germany's dual education system to China and promote vocational education in the country by hosting and supporting the Sino-German Vocational Education Conference. For example, it has established a smart training platform, intelligent manufacturing academy, and dedicated classes geared for Phoenix Contact China at Nanjing Jiangning Higher Vocational and Technical School to bring advanced technology into the classroom. It has also designed training programs comprised of various elements, including sandwich courses, on-the-job training, industrial placements, and company visits, among others. Students who pass the final assessment are offered a chance to work full-time at Phoenix Contact China subject to mutual consent.

From providing scholarships and training, to introducing cutting-edge industrial technology to students, Phoenix Contact China has made full use of its unique position as a ‘hidden champion’ in the industry to explore effective modes of industry-university cooperation. As far as students are concerned, this is the true definition of ‘sustainable value.’

Phoenix Contact's smart tech solutions and applications/Photo courtesy of Phoenix Contact China

③: A look at Germany's dual education system, 2018-08-22, https://www.sohu.com/a/249433151_497772

Investing in Education For the Future

In 2013, Germany unveiled its "Industry 4.0" initiative, i.e., promoting application of Internet technology in factories, machines, equipment and products to make its manufacturing industry fully connected. The full connectivity and integration of value chains, product life cycles, production processes and management information would greatly enhance the competitiveness of the manufacturing industry. Meanwhile, the corresponding changes on the demand side would pressure device suppliers like Phoenix to make strategic, product and organizational upgrades.

According to Gu, the core driving force of Phoenix Contact China's digital transformation was the integration of information technology (IT), operational technology (OT), and digital technology (DT) to reinvent customer value. The key to implementation was local innovation and building a platform organization. Gu believed that the company should not aspire to transition to smart manufacturing single-handedly, but rather should leverage the capabilities of supply chain partners. Therefore, the company has been committed to promoting Sino-German cooperation in the era of Industry 4.0. For instance, it's been supporting the World Smart Manufacturing Summit; it initiated the establishment of the Intelligent Manufacturing Research Institute and co-created the Eco-empowerment Co-Founding Club④ to invest in outstanding home-grown enterprises.

In addition, Phoenix Contact China increasingly recognizes the importance of talent development in this new age of intelligent manufacturing. It wants to move beyond pro-forma activities and carry out meaningful CSR. Specifically, the company's management aims to deepen its involvement in the education sector, where it hopes to pioneer a new business model. This will involve building a dedicated intelligent manufacturing educational platform that supports and empowers students and helps to create an intelligent education ecosystem.

The first plank of this strategy is the establishment of an intelligent education empowerment platform. As early as 2007, Phoenix Contact established the EduNet International Education Network, an automation education and research platform designed to promote the development of the automation industry and automation education. In 2018, Phoenix Contact China also established the Intelligent Manufacturing Academy, whose mission is to harness industry to support education and develop an intelligent education empowerment platform. Phoenix Contact China is also seeking to integrate industry and education in an intelligent manufacturing ecosystem that boasts its own dedicated institute, education system, courses, and laboratory to cultivate intelligent manufacturing talent.

The second plank is the organization of competitions that encourage creative thinking. Phoenix Contact has been organizing the global 'xplore New Automation Award' competition since 1998, while Phoenix Contact China has been holding a competition for intelligent technology innovations and applications since 2014. In 2018, the company received over 180 entries from students in more than 70 Chinese universities, all of which used PLCnext, a flexible, next-generation control platform developed by Phoenix Contact. Phoenix Contact China provides the products, technology, and professional guidance to help participants transform their creative ideas into reality.

The third plank is the establishment of intelligent laboratories and smart factories. In 2014, Phoenix Contact China and the Chinese-German School of Applied Sciences at Tongji University jointly established China's first Industry 4.0 smart factory laboratory. Since then, several other similar laboratories have been opened at Huanghuai University, Xinjiang Vocational University, Tongji University's School of Telecommunications, Zhejiang University, Heilongjiang Institute of Technology, Harbin Engineering University, Tianjin Sino-German University of Applied Sciences, and Nanjing Technical Vocational College. Textbooks have been developed to support teaching at these labs. The laboratories serve as educational and training platforms for intelligent manufacturing and play to the strengths of local industry. By combining teaching, training, and research functions, the laboratories provide intelligent, digital, and modular educational facilities with a practical, forward-looking perspective.

On the organizational front, Phoenix Contact China has created two teams that are responsible for CSR and intelligent education respectively. The CSR team promotes charitable cooperation programs on behalf of the company, while the intelligent education team provides educational equipment and products.

Gu Jiandang believes that the intelligent education promoted by Phoenix Contact China has a commercial and industrial dimension, while also contributing to corporate social responsibility. Products and demonstration production lines offered by the company to universities and research institutions come under its intelligent manufacturing and industrial solutions; equipment purchases made by universities and research institutions drive the company's business; and long-term partnerships with universities to provide scholarships, training, curriculum design, or the construction of laboratories help to meet Phoenix Contact China's CSR commitments.

④: The Eco-Empowerment Co-Founding Club was established by Phoenix Contact China together with a group of hidden champions. Its mission is to bring together industry, academia, research and users to create an intelligent industry ecosystem with mutual benefits and synergy.

Perseverance Yields Success

Phoenix Contact China's CSR efforts have been questioned by many industry players, who doubt that they can generate positive returns for the company. Gu Jiandang believes that in today's fast-moving world, if the company can consistently create value for society, then it stands to benefit in at least two ways. Firstly, the company can grow its sectorial and regional influence and gradually develop a more sustainable business model. Secondly, the company can establish its own ecosystem. While supporting education and empowering individuals by building professional teams may not generate immediate returns, it is certain to have a positive impact on the company's development on a longer horizon.

Phoenix Contact China has already won considerable recognition for its commitment to corporate social responsibility. The company was handed the 'Outstanding CSR Award for Chinese Companies' in 2010, designated as a 'Chinese Equipment Manufacturer with Leading CSR Practices' in 2012, and in 2019 took home the 'CEIBS Alumni CSR Award,' just to name a few. As Gerd Eisert, former chairman of Phoenix Contact, commented during a visit to Phoenix Contact China, "We have invested in more than 50 countries around the world, but there is nowhere in the world except China—not even at our headquarters in Germany—where a road is named after our company. There is even an urban landmark in China—the Phoenix Terrace—that is dedicated to our company." Phoenix Contact China believes that if it can 'connect dots into lines and lines into networks,' then the company's goodwill will unlock more possibilities and help it to build a brighter future.

IV CEIBS CSR RESEARCH

The Adoption of Green Practices by Chinese Firms: Assessing the Determinants and Effects of Top Management Championship ›››

By Li Yina, South China University of Technology
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"In order to achieve sustainable competitive advantages in the global market place, business enterprises must improve their environmental and social performance as well as economic performance. To improve environmental performance, companies must adopt green supply chain and operations management practices. Government policy incentives and customer pressure can positively influence top management's championship for environmental management (EM). Top management's commitment to EM is critical for firms to adopt proactive operate environmental strategy and practices.

We hope that our studies will help top management to formulate strategies and implement environmental management practices to enhance their competitive advantages. We also suggest that policy makers should employ effective incentive policies to help firms take green initiatives."

— Zhao, Xiande
Professor of Operations and Supply Chain Management, CEIBS

Responding to concerns regarding global warming and energy scarcity, many firms have taken action to develop and enhance environmental management (EM). Although earlier research has investigated how firms manage their relationship with the natural environment and what factors influence a firm's choice of green initiatives, exploring external institutional forces and internal organisational factors together may help resolve some of the inconsistency in previous studies.

In order to learn more about the factors influencing Chinese companies' EM activities, we surveyed 148 senior managers from manufacturing firms in the Pearl River Delta (PRD) region, Guangdong province, China. The PRD region represents more than 85 percent of Guangdong province's GDP and 9 percent of China's GDP in 2015. It is among the top three regions in China in terms of economic development and the most important manufacturing base for electronics products in the world. However, it is also one of the most polluted regions in China.

This article was adapted from a paper published in the May 2019 issue of the Journal of International Journal of Operations & Production Management: The adoption of green practices by Chinese firms: Assessing the determinants and effects of top management championship. Visit https://www.emerald.com/insight/content/doi/10.1108/IJOPM-12-2017-0753/full/html.

Theoretical Overview

Government Pressure: Command and Control Policy vs. Incentive Policy

Government pressure has typically been viewed as the most important external force for an organisation's green initiatives. Two kinds of government policies can be distinguished: command and control policy vs. incentive policy. Command and control policy refers to a mandatory compliance approach that forces firms to take on similar shares of the pollution-control burden, regardless of the cost, such as emission standards and product bans. Incentive policy refers to market-based approaches that encourage firms to undertake pollution control efforts that are in their own interests and that collectively meet policy goals, such as subsidies, taxes and tradable quotas.

In practice, government might simultaneously exert both command and control policy (“stick”) to ensure compliance, and incentive policy (“carrot”) to offer reward. However, for government pressures to be successful in influencing a firm's strategy, they need access to and the attention of top management. Even if government pressure is strong, it is the top management that ultimately makes the decision to be green or not.

Customer Pressure: Overseas Customers vs. Domestic Customers

Customer pressure is another institutional force that exerts impositions or inducements on firms to adopt green practices. With the strong green consciousness across society, customers (including both end consumers and downstream supply chain partners) have developed a preference for green products.

In China, customer pressure comes from two different sources, overseas customers and domestic customers, and these may exert different forces on top management. Many overseas customers, especially those from developed countries/regions, for example, have built green barriers and exert stringent environmental pressure on Chinese firms, typically surpassing domestic requirements. Customer pressure from these buyers has been shown to be an effective way to improve the environmental performance of Chinese companies.

On the other hand, at least one previous survey reported that, although Chinese customers’ environmental consciousness has increased greatly, their willingness to pay for green products is still very low. Another survey confirmed that, in China, higher prices are a major obstacle to the purchase of green products.

Internal Pressures and Top Management Championship: Resources and Capability to Change

Many studies have recognised that the implementation of green initiatives is likely to require changes in technology, processes or routines. Such changes can be difficult for firms to undertake, as they are forced to reconsider the pattern of activities that they perform. In the traditional economic view, any environmental improvement effort transfers a cost previously borne by society back to the firm. Green practices are perceived as costly and time-consuming activities that require additional resources. Thus, resources are necessary for firms to respond to the institutional pressures to adopt green practices. As such, the top management's decision regarding the adoption of green practices likely depends on whether a firm possesses the required resources, and recognises the profit available from such initiatives.

Another factor affecting top management's championship of EM is capability to change, measured as organisational inertia (or how quickly a firm can be reorganised when faced with threats and opportunities in the environment). Organisational inertia exists in most organisations and the stronger the inertial force, the slower organisations change when faced with environmental changes. Unfortunately, organisational inertia routinely stymies any response to environmental change, and is viewed as a key barrier to fostering institutional willingness to develop and implement strategic changes.

If a firm's response to environmental change is slow, and it is not capable of adapting in a timely manner, it will be unable to respond either to external pressure or to internally driven demands for change. Therefore, when top managers consider whether to adopt green practices, they will need to assess whether the firm's speed of response can be commensurate with the temporal patterns of the environmental challenges the adjustment to their structure is designed to overcome.

Top Management Championship, Green Culture and Green Practices

The upper echelon theory posits that firms’ strategic decisions are a reflection of the top management's values and cognitive bases. Top management championship is also suggested to be a very important interpreter of a firm's response to environmental issues, and it affects the scope and speed of adoption of green practices.

For green strategies, champions with stronger ecological stewardship are more likely to frame green issues as opportunities, and will expend more time and resources on green initiatives to inspire collective commitment and advocate action than those with a low level of concern. As a whole, top managers are responsible for establishing EM vision and goals, providing resources and training, and stimulating implementation and improvement.

Top management can affect the success of a firm's new initiatives through the promotion of employee involvement and empowerment, as well as by instituting reward and incentive systems to direct employee behaviour. In other words, to implement environmental programmes effectively, a firm must foster a green culture. While it is top management that initiates any EM effort, a green philosophy must be embraced by the entire organisation, at the operational and employee levels.

With the support of a green company culture, employees will be motivated to participate in green practices with an understanding of how the firm's environmental performance can affect and be affected by their duties and decisions. Accordingly, a green culture is expected to be conducive to instructing and motivating the firm's employees to conduct green practices.

Results and Discussion

Government and Customer

Our survey revealed that different types of governmental pressures and different customer sources of green demand have differential direct effects on top management championship for green practice. Specifically, we found that incentive policy implemented by government and green demand from overseas customers are positively associated with top management championship, while the effects of command and control policy and domestic customer demand are not significant.

Evidently, top management in China is more motivated by incentive policies than by command and control policies, at least in relation to green practices. On one side, while the Chinese government has developed many environmental mandatory regulations, their enforcement has been weak and ineffective. This leads to firms frequently ignoring environmental regulations. On the other side, from an economic perspective, poor enforcement of command and control policy in China means there is no effective economic sanction (i.e. loss to the firm), while incentives mean there is a positive economic contribution to the firm.

Though both overseas customers and domestic customers want environmentally friendly products, our finding also suggests there are different levels of green demand between overseas and domestic customers. That is, overseas customers have a higher level of green demand. The different levels of green demand, in turn, lead to different responses from top management. Specifically, top management displays a higher level of enthusiasm toward meeting green demand from overseas customers than from domestic customers.

Resources Pressure and Organisational Inertia

As expected, there was a significant negative influence of resources pressure on top management championship. Contrary to our expectations, however, we found no significant influence of organisational inertia on top management championship. The nonsignificant relationship between organisational inertia and top management championship could be attributable to the role of power distance in Chinese culture, where decision making is a top-down process and top management has the power to break established paradigms and make changes. In the case of EM, it seems that top management in China could easily overcome resistance to change and initiate green practices.

Top Management Championship and Green Culture

Finally, the findings of our study suggest that the impact of top management championship on green practices is partially mediated by green culture. To implement EM successfully, top management championship serves as a good starting point and builds the basis for EM programmes, but follow-up actions taken by employees at the operational level ultimately determine the effectiveness of the implementation. Thus, cultivating green culture within organisations is an important and effective mechanism to achieve green practices implementation. Fostering an environmentally friendly organisational culture, as an extension of top management championship, is critical to the success of green practices.

Managerial Implications

Our study also offers several implications to supply chain managers and policy makers. First, it is important for managers to realise that green championship of top management in Chinese supplier companies may be bounded by the firm's institutional environment. In a market with a strong cultural and legal commitment to EM, legitimate would be considered an efficient and effective driver for EM. However, in emerging markets such as China that are characterised by relatively low domestic environmental awareness and weak legal enforceability, firms may perceive limits of command and control policy. Thus, getting the environmental commitments can be difficult.

Our study further suggests a task list for public policy makers in emerging markets. Governments in these countries should transform institutional environments in a way that facilitates top management championship in firms. Our results indicate that although the Chinese government tends to favour command and control policies over incentive policies, top management are more motivated by incentive policies. Therefore, the policy makers should take note and review the current environmental policies, with a view to strengthening the enforcement of command and control policy, otherwise more generally to increase the use of incentive policy.

In addition, our study confirms a negative influence of resources constraints on top management championship. Since the implementation of green practices initially involves additional costs, while the payback period is relatively long, scarcity of resources hinders top management from engaging in green practices. From the green supply chain management perspective, supplier development initiatives by buyers could be an important practice to promote and help suppliers in China to cultivate the necessary capability to implement green practices. Meanwhile, policy makers should employ effective incentive policies (e.g. subsidies and preferential tax policies) to overcome the scarcity of resources and help firms to take green initiatives.

Third, our study informs managers of the importance of top management championship and green culture. Our results suggest that a firm can best respond to green pressure when top management is in support of these initiatives and employees are fully understood and motivated. Specifically, a firm's top managers and their commitment to EM are a critical component to a firm's ability to achieve green supply management success. Employees' understanding of and training in the green management approach are key to the success of implementing environmental initiatives, as employees are often the initiators and recipients of the activities. Thus, top management may need to develop systems to involve employees in the development of a firm's environmental strategy or decision-making process.

Effects of Proactive Environmental Strategy on Environmental Performance

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In recent decades, industrial sectors have been heavily pressured by relative stakeholders to improve their environmental performance. In response, a growing number of firms have developed environmental strategies to guide and communicate their environmentally friendly vision, direction, and actions. The literature on environmental management suggests that proactive environmental strategy is an important topic receiving increasing interest. Some studies suggest that firms with a proactive environmental strategy enjoy higher performance, however, some contradictory empirical findings indicate that proactive environmental strategy does not necessarily lead to performance improvement. These inconsistent findings may lead to confusion regarding the roles played by proactive environmental strategy in supporting the realization of environmental goals and may impede the utilization of proactive environmental strategy in practice.

The study constructed and tested a research model linking two implementation variables of a proactive environmental strategy, green human resource management (GHRM) and environmental legitimacy (EL), and environmental performance. The mediating roles of the implementation of green operational practices (GOP) and the potential moderating roles of operational barriers (OB) and managerial barriers (MB) were further examined. The proposed hypotheses are empirically tested using a dataset of 260 sample plants in 11 countries/regions. In summary, this study aims to explore the following research questions:

Q1: What are the effects of GHRM and EL on environmental performance?

Q2: What are the roles of the implementation of GOP in the relationships explored in Q1?

Q3: How do OB and MB affect the links between GHRM, EL and the implementation of GOP?

This article was adapted from a paper published in the June 2019 issue of the Journal of Journal of Cleaner Production: Effects of proactive environmental strategy on environmental performance: Mediation and moderation analyses. Visit https://www.sciencedirect.com/science/article/pii/S095965261932181X.

Theoretical Overview

Green Human Resource Management and Environmental Legitimacy

This study examines the effects of GHRM and EL on environmental performance with the aim to clarify the effects of proactive environmental strategy on environmental performance from a strategy implementation perspective.

The natural-resource-based view (NRBV) suggests that both an internal competitive approach and external legitimacy are necessary for sustained competitive advantage. This study identifies two implementation variables of proactive environmental strategy, green human resource management (GHRM) and environmental legitimacy (EL), which are internal and external approaches, respectively.

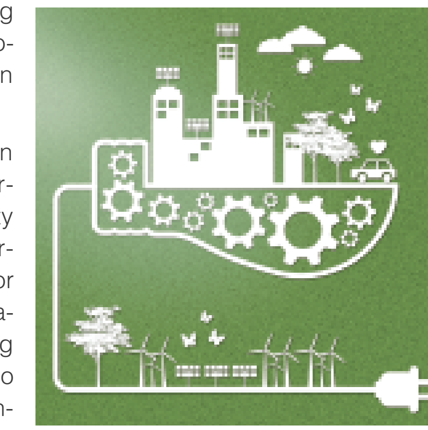
GHRM represents a key internal approach to pursue the success of a proactive environmental strategy. Key elements of GHRM include green training, teamwork, employee empowerment, performance appraisal and rewards. These key factors could develop valuable, rare, imperfectly imitable and non-substitutable green human resources and work as crucial predictors of competitive advantage. Firms that attribute importance to green human resource factors can accumulate the necessary tacit and ambiguous resources and knowledge that enable firms to identify environmental problems and solve them effectively.

External legitimacy-based processes and activities also appear to be important for environmental strategy, as firms cannot separate themselves from the resource support from the external environment. According to resource dependence theory, organizational legitimacy can help a firm source resource support from related stakeholders. EL indicates the extent to which a firm's environmental initiatives are congruent with regulations, societal norms and the firm's expectations or outcomes. Since environmental initiatives are complex and innovative, EL can help address “the liability of newness” . A clear link between an environmental project and regulations indicates a firm's congruency with the environmental requirements or expectations of the government and its agencies. This helps firms obtain access to institutional support, such as funding and staff, and in turn result in competitive advantage.

The Implementation of Green Operational Practices

This study further proposes that the implementation of GOP might work as a transformation mechanism through which GHRM and EL impact environmental performance. By doing so, this study reveals the mechanism through which proactive environmental strategy contributes to higher environmental performance.

It is suggested that a proactive environmental strategy contributes to performance improvement with the development of managerial and manufacturing processes. The implementation of GOP captures the extent to which a firm has applied green operational initiatives. The implementation of GOP includes the usage of environmentally friendly designs, packaging and raw materials as well as cleaner production, among other practices. It is suggested that green operational management can provide a solid foundation for externally oriented green practice implementation and has great potential for performance improvement.



GHRM and EL reflect what firms want to do, whereas the implementation of GOP indicates what firms actually do. The former is a firm's rhetoric surrounding proactive environmental strategy, while the latter indicates the reality of its proactive environmental strategy. Based on the strategy–action–performance paradigm, the implementation of GOP can serve as a crucial mediator in the links between GHRM, EL and environmental performance. Firms emphasizing the importance of GHRM and EL may be more capable of identifying environmental issues and integrating new internal and external resources to address these issues. In doing so, they can ensure the successful implementation of GOP, which predicts improved environmental performance.

Operational Barriers and Managerial Barriers

This study proposes the impacts of GHRM and EL on the implementation of GOP might be moderated by operational barriers (OB) and managerial barriers (MB). By studying the moderating role of OB and MB, this study reveals the conditions influencing the effectiveness of proactive environmental strategy.

As the implementation of proactive environmental strategies is highly complex and comprehensive, it is easy for firms to encounter obstacles that might hinder the effectiveness of environmental strategies. These obstacles or barriers might result in a misfit between the firm's proactive environmental strategy and its structures, leading to a weakened effectiveness of proactive environmental strategy. Operational and managerial barriers (OB and MB, respectively) represent two important categories of barriers encountered by firms in environmental management.

OB are related to constraints within operations management systems, such as the relatively high costs and the lack of sufficient technology, processes or materials in realizing successful environmental management. According to contingency theory, the success of proactive environmental strategy is context dependent. A high level of OB can hinder the process of GOP implementation and reduce the effectiveness of GHRM and EL in facilitating the implementation of GOP.

MB are another concern in the implementation of green practices or projects. They reflect the insufficiency of structures and procedures that inhibit the firm's environmental operation and strategy uptake. A high level of MB implies a lack of environmental commitment, such as poor cross-functional and top management commitment and a hostile culture for environmental management. This inefficient organizational culture makes environmental strategy less useful in facilitating environmental actions by management.

Results and Discussion

Direct Effects of Green Human Resource Management and Environmental Legitimacy on Environmental Performance

The findings confirm a significant positive relationship between GHRM and environmental performance but fail to support the proposed positive link between EL and environmental performance. These findings imply that not all dimensions of proactive environmental strategy support environmental performance improvement. This findings empirically clarifies that the way strategy is defined matters in exploring the link between proactive environmental strategy and performance.

The insignificant finding on the link between EL and environmental performance seems contrary to the existing literature that suggests a positive link between EL and environmental performance. There are a few explanations for these conflicting findings.

The first plausible explanation could be the coexistence of positive and negative influences of EL, leading to an insignificant relation between EL and environmental performance. Although firms that tend to be environmentally focused can obtain access to necessary resources and efforts from their relevant stakeholders, they also have to change or switch from their existing processes and buy new devices and materials. This increases firms' waste generation and resource consumption.

The second explanation could be that the contributions of EL to environmental performance depend on the translating role of crucial organizational capabilities, such as green supply chain process and green product design capabilities. These are necessary to translate a proactive environmental strategy into performance improvement.

Another explanation could be that crucial obstacles in environmental management make EL meaningless for competitive advantage achievement. As demonstrated in this study, high costs and poor technology could reduce the effectiveness of EL in facilitating crucial antecedents of improved environmental performance.

Mediating Role of The Implementation of Green Operational Practices

This study identifies an important mechanism, the implementation of GOP, through which a proactive environmental strategy impacts environmental performance. The results in this study confirm that the implementation of GOP fully mediates the effects of GHRM on environmental performance, suggesting that the implementation of GOP works as an important mechanism through which GHRM enhances environmental performance. This finding indicates that firms that emphasize the importance of human resources management in environmental issues are more likely to adopt GOP, which is an important predictor of high environmental performance.

This results in failing to support the mediating role of the implementation of GOP between EL and environmental performance. One reason could be that firms emphasizing the importance of EL prefer to engage in externally oriented activities, such as green supply chain practices, rather than internal operational practices. This is because the main purpose of EL is to indicate congruency with the requirements and expectations of stakeholders, and external environmental activities may be more effective in enhancing a firm's environmental reputation.

Moderating Roles of Operational Barriers and Managerial Barriers

This study takes a contingent perspective and analyzes the moderating roles of OB and MB. The results demonstrate their different roles in influencing the effectiveness of GHRM and EL. OB reduce the effectiveness of EL in facilitating the implementation of GOP. When the level of OB is high, firms who emphasize the importance of environmental congruency may be less likely to implement GOP successfully because of the expected high uncertainty in environmental management and the low return to investment.

MB negatively moderate the links between GHRM and the implementation of GOP. Therefore, a high level of MB might result in a low efficiency of the implementation of GOP for firms emphasizing the strategic importance of GHRM in environmental management.

Insights

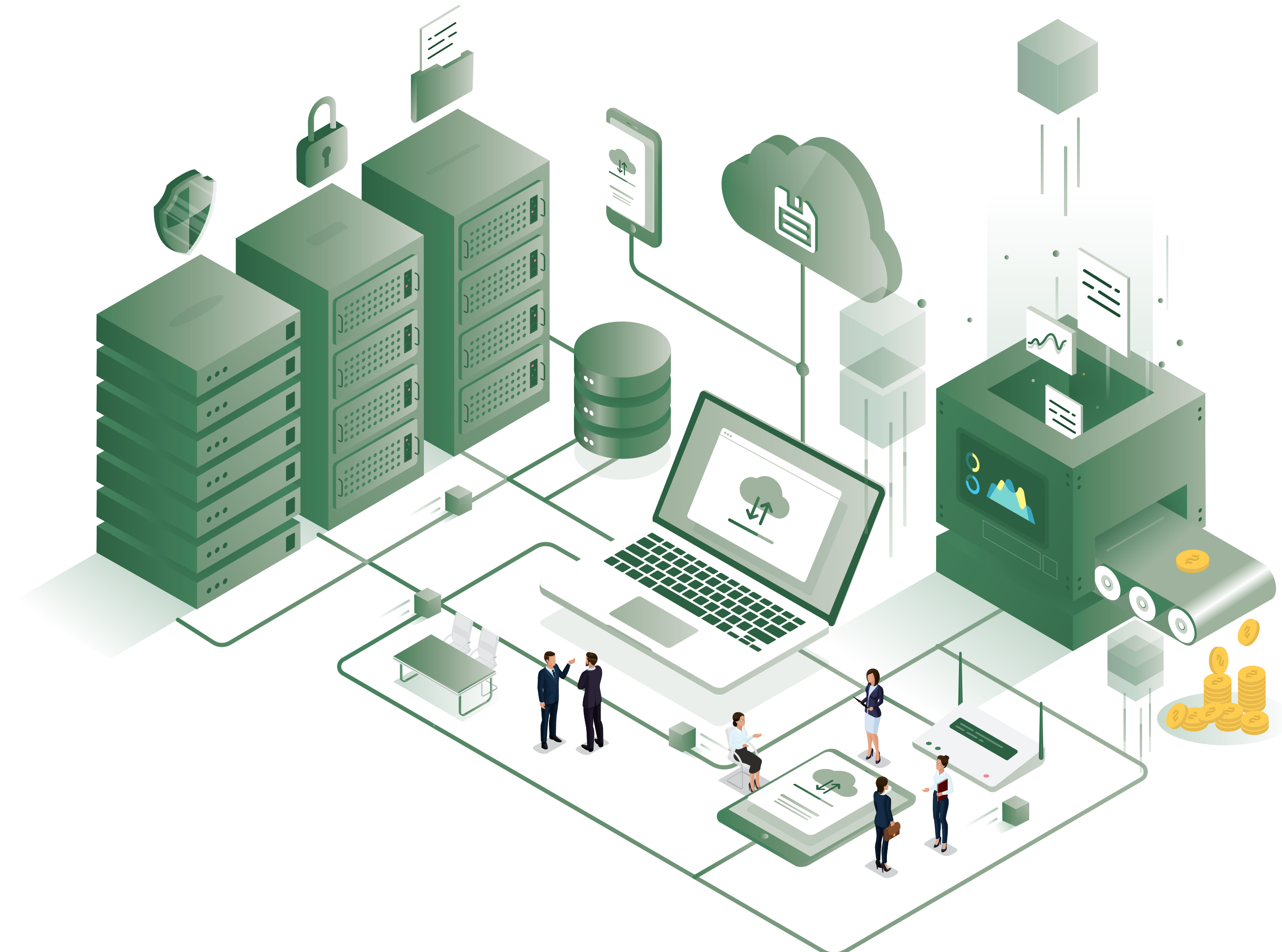
From a managerial perspective, this study provides the following meaningful practical insights.

▶ Highlight the importance of green human resource factors when developing a proactive corporate environmental strategy. Managers can promote green training and teamwork for environmental issues to provide guidance on knowledge and capabilities accumulation and to support proactive corporate environmental strategy.

▶ Bear in mind that just stressing EL is not sufficient for improved environmental performance. Firms need to make essential investments and develop capabilities, such as green supply chain collaboration, to gain from environmental strategy.

▶ Be aware that without certain actual environmental practices and implementation, it is not possible to benefit from proactive environmental strategy. They might consider and encourage integrating environmental thinking into their operations to support higher environmental performance.

▶ Be aware of threats from barriers to environmental management. In particular, they should consider taking a broad and lifecycle perspective on environmental initiatives rather than focusing on short-term performance and consider fostering top management commitment as well as cross-functional buy-in.



Corporate Social Responsibility and Collective Organisational Citizenship Behaviour

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Cao Rujiao, University of Maryland
Byron Y. Lee, China Europe International Business School (CEIBS)

This article was adapted from a paper published in the December 2019 issue of the Journal of Frontiers in Psychology: Corporate Social Responsibility and Collective OCB: A Social Identification Perspective. Visit https://www.frontiersin.org/articles/10.3389/fpsyg.2019.02720/full.

“As firms consider spending time and resources on socially responsible activities, my research shows that the corporate social responsibility (CSR) activities can provide additional benefits to the firm through its positive impact on employee attitudes and behaviors. My research identifies the pathways through which CSR can encourage employee behaviors that help the firm. Results show that employees pay careful attention to the social responsibility activities of their firm and are proud when the firm make a positive contribution to society. In return, employees will reciprocate within a firm will collectively reciprocate by taking actions that help the organization. In this way, CSR can create a virtuous cycle through its employees that benefits society as well as the firm itself.”

— Byron Y. Lee
Assistant Professor of Management, CEIBS

Although evidence has shown a positive relationship between collective organisational citizenship behaviour (OCB) and organisational performance, the antecedents of collective OCB are still understudied. OCB is defined as “individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and that in aggregate promotes the effective functioning of the organisation” . Previous studies suggest that in top-performing companies, it is a norm that employees display OCB in their daily work, such as helping and supporting each other, in order to do the best work possible.

Although the time spent by managers and employees in OCB behaviours has increased by more than 50% over the past two decades, recent data has revealed that the distribution of OCB is often extremely lopsided, with 20%-30% of OCB coming from 3%-5% of employees. This finding highlights the importance of studying the antecedents of collective OCB, as organisations would benefit much more from collective OCB rather than lopsidedly distributed individual OCB.

Previous studies have reported that top management's ethical leadership and a high-performance work system are firm-level antecedents of collective OCB. Extending this line of research, we surveyed more than 1700 employees, HR directors and CEOs from 160 firms in China to learn more about how corporate social responsibility (CSR), defined as a company's discretionary actions and policies that appear to advance social well-being beyond its immediate financial interest and legal requirements, might serve as another important antecedent of collective OCB.

In addition, we also sought to advance a theoretical model that elucidates the mechanism through which CSR may impact employees' collective OCB at the firm level. Specifically, we proposed that perceived external organisational prestige and employees' collective organisational identification (OI) would mediate the relationship between CSR and collective OCB.

Theoretical Overview

CSR and the Company's Organisational Prestige

Organisational prestige is defined as employees' beliefs about how other people outside the organisation, such as customers, competitors, and suppliers, view or evaluate their organisation. Prior to conducting our study, we predicted that CSR would act as an important antecedent of organisational prestige for the following reasons:

(1) CSR promotes an organisation's visibility to the public. Such efforts are often recognised and valued by the communities that are the direct beneficiaries of the CSR initiatives. As a result, organisations' CSR actions help them obtain respect and trust from the communities;

(2) An organisation's engagement in CSR may have a positive impact on other stakeholders' (e.g., government, customers, suppliers) judgments about that organisation, which also influence its prestige; and,

(3) Although CSR practices mainly focus on external stakeholders, they can also influence organisational prestige as perceived by the internal employees because employees seek information about how outsiders view or evaluate their organisation through word of mouth and public media.

Organisational Prestige and Collective Organisational Identification

In beginning our research, we also anticipated that organisational prestige would be positively related to employees' collective organisational identification, which is defined as the extent to which employees hold a shared feeling of attachment and belonging to their organisation. Being a member of an organisation that has positive and socially respected characteristics makes employees believe that they also hold those positive and socially respected characteristics. Therefore, employees who identify with prestigious organisations obtain a corresponding sense of personal status.

Organisational prestige may also promote employees' OI by creating a sense of belongness for the employees. Research has shown that employees tend to hold prosocial values and expect those values to be practiced in the organisations they work for. When employees perceive their company as possessing higher organisational prestige, they will feel that outsiders believe their organisation demonstrates a strong commitment to important social values, such as contributing to the community and preserving the natural environment. Thus, employees may perceive that the values of the organisation are aligned with their personal values. Such a feeling of value congruence may create a sense of belongness and motivate employees to identify more strongly with the organisation.

Collective Organisational Identification and Collective OCB

Collective OCB is defined as the extent to which employees of an organisation collectively engage in OCB. Firm-level collective OCB may emerge through two processes:

(1) Employees working in the same firm are exposed to the same organisational factors, such as organisational culture, top management leadership, and CSR practices. As a result, they are likely to develop a shared understanding with regard to the normative level of their OCB; and,

(2) Organisations that expect their employees to display a high level of OCB tend to attract and hire individuals who are willing to engage in such behaviour. Those employees who do not fit into such an environment will eventually leave the organisation, resulting a homogenous level of OCB within the firm.

Additionally, in conducting our study, we further anticipated that employees' collective OI would be positively related to their collective OCB for the following reasons:

(1) When employees identify with their organisation, they regard the goals of the firm as intrinsically motivating and are likely to exhibit self-sacrificial and organisation-oriented behaviours. Collectively, employees who share high levels of OI have stronger commitment to organisation goals and, therefore, are more likely to devote greater effort to their tasks and display higher levels of OCB; and,

(2) When employees identify with an organisation that practices CSR, these employees are more likely to activate and reinforce their self-images as altruistic and helpful. This alignment occurs because their sense of self is consistent with the organisation's goals and values. Therefore, the employees are motivated to display higher levels of collective OCB, as this behaviour will help them maintain their social identity as typical members of the organisation.

Mediating Effects of Organisational Prestige and Collective Organisational Identification

Furthermore, we anticipated that organisational prestige and collective OI may sequentially mediate the link between CSR and collective OCB. In particular, we proposed that organisational prestige may mediate the positive impact of firm-level CSR on employees' collective OI. Firm-level CSR was expected to be positively related to organisational prestige for three reasons:

(1) CSR practices promote the organisation's visibility to the public, and hence help the organisation obtain respect and trust from the communities;

(2) CSR initiatives result in positive evaluations from external stakeholders (e.g., government and customers) because those initiatives satisfy those stakeholders' expectations for modern organisations to advance social welfare; and,

(3) Those external stakeholders' positive evaluation and judgment about the focal organisation will also boost the internal employees' perceived organisational prestige.

Organisational prestige, in turn, was expected to boost employees' collective OI for the following two reasons:

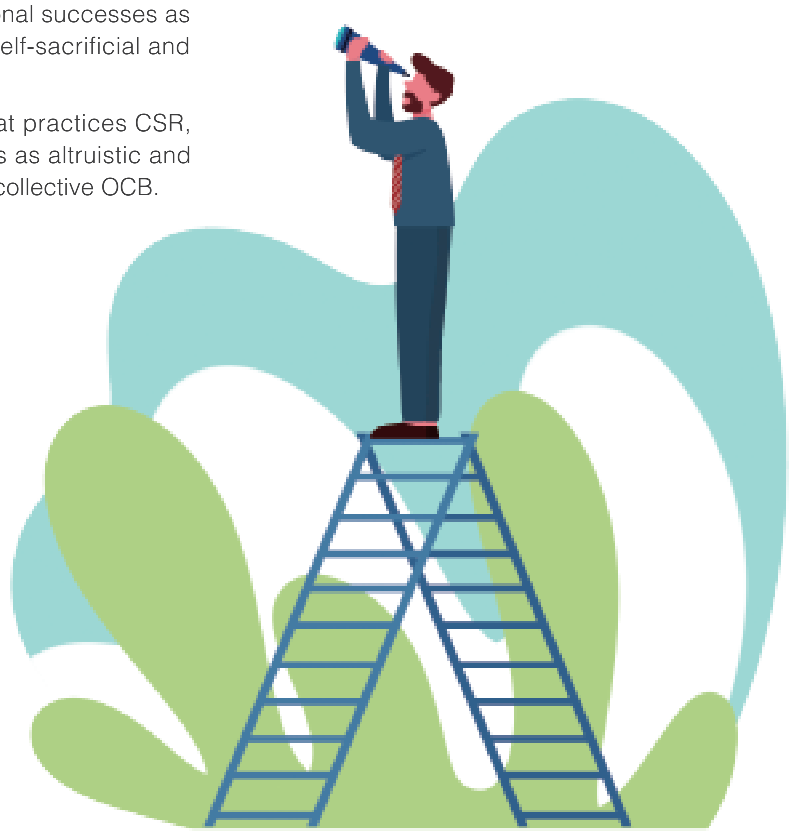
(1) Identifying with a prestigious organisation can enhance employees' self-worth and fulfill their need for self-enhancement; and,

(2) Organisational prestige may enhance employees' collective OI by creating a sense of belongness for the employees.

Collective OI was also expected to mediate the positive effect of organisational prestige on employees' collective OCB for the following reasons:

(1) Employees with high OI perceive their organisational successes as their personal successes, and therefore tend to exhibit self-sacrificial and organisation-oriented behaviours;

(2) Employees, who identify with an organisation that practices CSR, are more likely to activate and reinforce their self-images as altruistic and helpful, and thus are motivated to display higher levels of collective OCB.



Results and Discussion

The results of our survey showed that CSR did in fact have a positive effect on organisational prestige, which in turn had a positive effect on collective OI. Collective OI was positively related to collective OCB. Our study thus contributes to the OCB literature by identifying CSR as a firm-level antecedent of collective OCB. Specifically, our results indicate that, at the firm level, CSR practices may enhance employees' collective OCB by promoting organisational prestige and collective OI.

Practical Implications

Our study has important practical implications. In particular, top management of organisations should be aware that their CSR practices may influence both external and internal stakeholders simultaneously. First, CSR may help create competitive advantages for the organisation by boosting its external prestige. External stakeholders tend to believe that more socially responsible companies are more credible and trustworthy, and thus perceive these companies more favourably in terms of prestige and reputation. By making their CSR initiatives visible to the public, organisations may receive positive regard and enjoy a more favourable reputation with key external stakeholders, such as customers and competitors. Therefore, organisations should actively engage in corporate communications about their CSR activities via advertisements, promotions and CSR reports, which can help the organisation build a positive image among external stakeholders.

Second, our results suggested that CSR practices may also influence internal stakeholders—that is, employees—by promoting their collective OI and subsequently their collective OCB. If top management wishes to foster greater collective OI and collective OCB among the firm's employees, an effective strategy could be actively communicating the positive impacts of CSR activities to those employees and help them understand enhanced external prestige resulted from those CSR practices. Taken together, our findings provide good reasons for organisations to adopt social responsibility as a firm-level strategy to gain competitive advantages.

V RESEARCH ON CSR REPORTS OF A-SHARE LISTED COMPANIES

Research on CSR Reports of A-share Listed Companies

Center for Wealth Management, CEIBS
Centre for Accounting and Financial Big Data Research, Shanghai University of Finance and Economics

INTRODUCTION

Subjects

2018 Annual CSR Reports published by A-share listed companies between January and June, 2019.

Methods

The *2019 Research on CSR Reports of A-Share Listed Companies* was compiled by reference to the CSR indicator design in China and abroad, and the authoritative CSR report guide, with a focus on Chinese social concerns, based on big data, in order to establish a distinctive CSR indicator system.

Data Sources

Most data in the research were derived from digital CSR reports and annual reports of listed companies published on http://www.cninfo.com.cn. Other sources include the "CSR Database", "Violation and Punishment Database", and "Litigation and Arbitration Database" on *the Chinese Research Data Services Platform*, the "Company Violation" and "Company Litigation" sections in the *WIND* database, and relevant news in *Baidu and Genius Financial Database.*

Data Processing

The research combined big data technology with manual correction:

1) Data mining: Distributed crawling was adopted to collect large amounts of raw data from the websites of companies and regulatory authorities, and mainstream search engines.
2) Data cleaning: The data were deeply cleansed to put right erroneous value, and eliminate duplicates and outliers to ensure consistency according to predefined rules.
3) Data matching: The required information was precisely identified from a large number of social responsibility reports, news reports and announcements.
4) Data mining and visualization: Manual processing and machine learning were combined to extract and mine required data from mass data (e.g., text information), and visualize relevant findings.

> "*Corporate social responsibility is not just about corporate charity. The concept of CSR clearly goes beyond that: it should serve to improve a company's culture, and boost its core competitiveness and strategic decision-making. Ultimately, it helps a company conform to societal expectations, and achieve sustainable development.*"
>
> — RUI Meng
> CEIBS Professor of Finance and Accounting,
> Director of CEIBS Centre for Wealth Management

CONTENTS

Abstract

In order to implement the decisions of the CPC Central Committee and the State Council on promoting the steady and sound development of China's capital market, and push listed companies to regulate their operations, improve corporate governance, and safeguard the legitimate rights and interests of investors, China Securities Regulatory Commission (CSRC) unveiled the revised *Codes of Corporate Governance of Listed Companies* in September 2018, which aims to motivate listed companies to play a leading role in environmental protection and social responsibility, and establish a basic framework for environmental, social responsibility, and corporate governance (ESG) information disclosure. As a result, some companies will upgrade their CSR report to ESG report in the next two years.

Presently, CSR report disclosure enables companies to stay on good terms with stakeholders, maintain a sound corporate image and a reasonable valuation, and make public their annual fulfillment of social responsibility. The research looks at the definition of the CSR report, companies unveiling their CSR reports, and indicators and their impact on stock prices in the secondary market.

As a centerpiece of non-financial information released by a listed company in the capital market, the CSR report can help us analyze and track its performance and figure out how it maintains corporate image. The CSR report also improves the company's information environment so that external investors can make better decisions. Since CSRC, Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) rolled out CSR guidelines in succession, an increasing number of companies have disclosed CSR reports, which expand in both length and content year by year. Companies that release CSR reports vary considerably in industry, region, type of organization, and board. This research collects and evaluates financial and non-financial information released by listed companies to forecast their prospects in order to help investors make decisions better.

The research classified the indicators in the CSR report into seven groups, with the following findings: (1) Social responsibility management: A low proportion of companies performed social responsibility management that tends to incur high costs. For lack of mandatory requirements, only a few companies engaged a third party for CSR report assurance. (2) Company operations and management: A growing number of companies have attached more importance to strategic sharing as the Belt and Road Initiative was rolled out. The regulatory authorities have been tightening their grip on companies in terms of anti-corruption and compliance, especially in the financial industry susceptible to compliance risks. (3) Product quality and innovation: Both the number of patents and the amount of R&D expenditure edged up; companies in East China were the best performers in R&D innovation. (4) Responsibility for employees: Companies are focusing more on employees' rights and benefits. Over 80% of the listed companies disclosed remuneration incentives, among which private businesses were the most active and state-owned enterprises (SOEs) were most highly motivated to disclose their supplementary employee benefits. (5) Diversity and equal opportunities: The status and voice of female directors, supervisors and executives have yet to be improved. The non-discriminatory policy, which was underappreciated, varied greatly among all types of organizations. (6) Environmental responsibility: SOEs and foreign-funded enterprises were more active in fulfilling this responsibility, while private enterprises had a weaker sense of environmental responsibility. Thanks to the national tough battle of "pollution prevention and control" , all "environmental responsibility" indicators went up significantly. (7) Social contribution and charity: Listed financial companies and SOEs showed a sharp sense of social responsibility, as evidenced by their strong engagement and generous donations. Owing to the gloomy job market in 2018, however, the "job creation" indicator went down, while the "layoff" indicator went up.

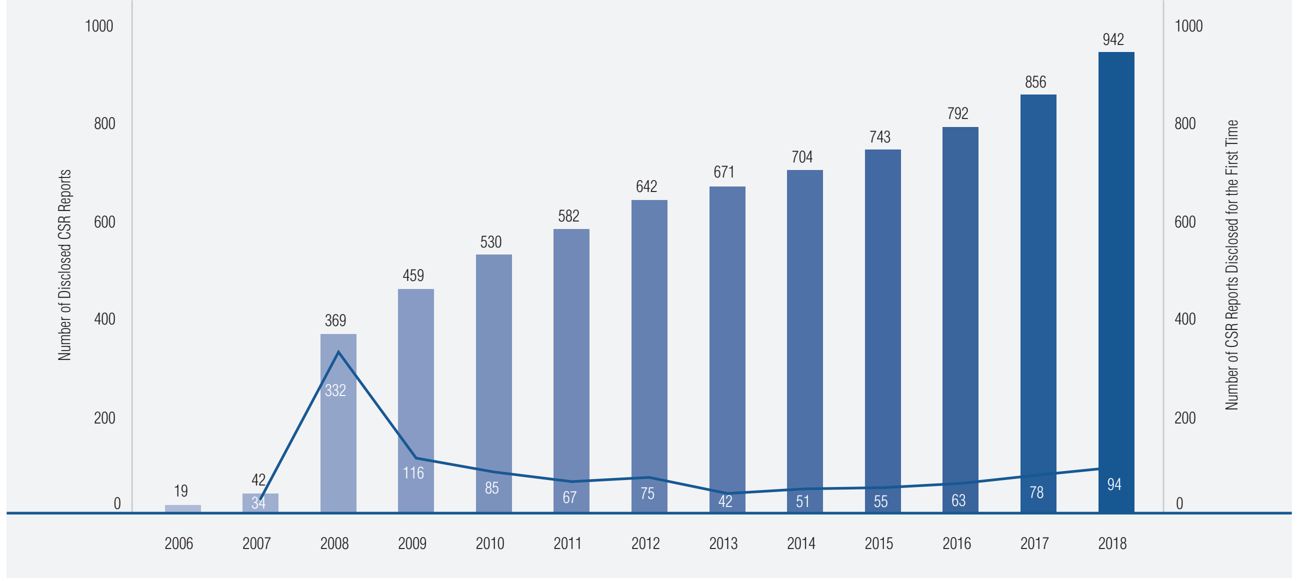
The CSR report is based on the combination of mandatory disclosure and voluntary disclosure, with a low proportion of third-party assurance. Though less reliable than financial statements, the CSR report contains non-financial information that is a worthy addition to financial information and influences investors' decisions. To examine the economic value of the CSR report, the researchers built an investment portfolio based on the report information and analyzed its profitability. The research found that after buying the companies with the highest CSR scores and selling those with the lowest scores according to their 2018 CSR reports, the portfolio generated accumulative excess return of 3.12% in the following three months, i.e., an annualized rate of 12.48%. Moreover, among the components of social responsibility, social responsibility management, company operations and management, product quality and innovation, and responsibility for employees played an instrumental role in boosting the profitability of investment strategies.

This research has probed into CSR reports at length to help regulatory authorities better understand CSR disclosure in the capital market, and enable investors, intermediaries and securities analysts to improve their investment decisions. This research aims to boost the efficiency of the economy by optimizing resources allocation in the capital market, and facilitate decisions on pollution control and economic transformation.

Overview of CSR Report Disclosure of A-Share Listed Companies

Number of Disclosed Reports: The number grew steadily, but the disclosure rate was still at a low level.

As a part of information disclosure by listed companies, CSR disclosure has captured growing attention from the top management. As a result, the number of disclosed CSR reports is increasing year by year. Except for 2008 and 2009, when three types of companies① were subject to SSE's mandatory disclosure policy, the number of companies that published CSR reports for the first time remained stable in other years. In 2019, 942 companies listed on SSE and SZSE disclosed 2018 CSR reports (including sustainability reports), 86 more than the previous year (up 10.05% year-on-year). Among them, 94 companies published CSR reports for the first time, more than 78 in the previous year. But it is noteworthy that only one-fourth of A-share listed companies released CSR reports. Overall, the disclosure rate was still at a low level, with much room for improvement.

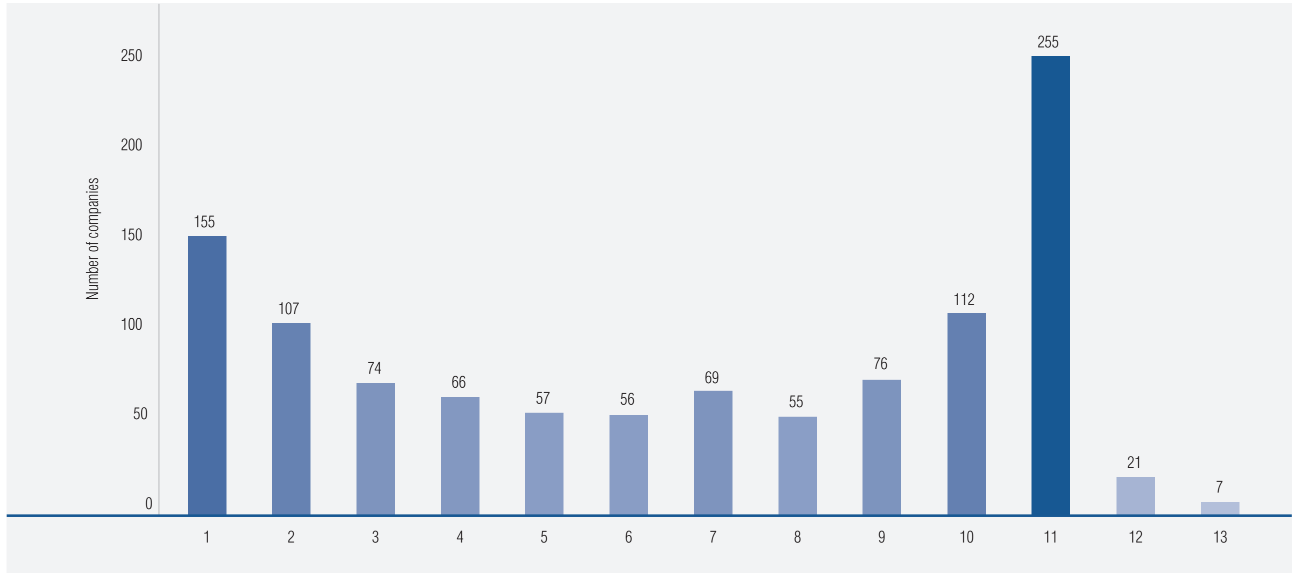


Number of Disclosures: Nearly half of the companies made a CSR disclosure at least nine times, while a few companies did so only once.

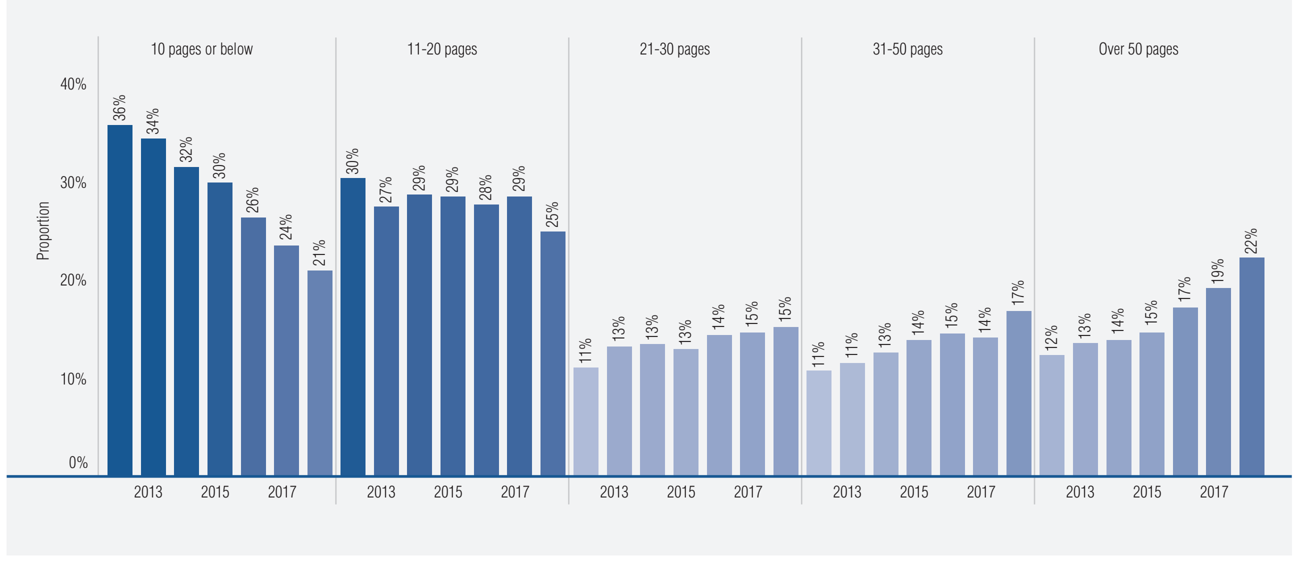
Between 2007 and 2019, a total of 1,110 A-share listed companies disclosed their annual CSR reports. The quality of these reports varied greatly, due to a pronounced gap in companies' awareness of disclosure. To be specific: 1) A few companies failed to make a full disclosure. Except for 94 companies that disclosed CSR reports for the first time in 2019, 61 companies made a disclosure only once between 2007 and 2019; 2) Nevertheless, a fair number of companies were active in CSR disclosure. Nearly half of the companies published CSR reports at least nine times in the same period; 3) A small number of companies took the lead in CSR disclosure. Around 21 companies released CSR reports 12 times; seven companies kept doing so for 13 years in a row.

Moreover, the length of a CSR report can reflect the amount of disclosed information to some extent. We have found that compared with the reports with fewer pages, those with more pages cover more diversified forms of social responsibility and more specific ways of fulfillment. The average number of report pages increased annually from 2012 to 2018. The reports averaged 33 pages in 2018, slightly more than 29 in 2017.

①: In December 2008, SSE released the *Notice on Listed Companies' Preparation for 2008 Annual Reports*, which mandated CSR report disclosure for three types of listed companies (firms included in the SHSE Corporate Governance Index, firms that issued foreign-funded shares listed overseas, and financial firms).



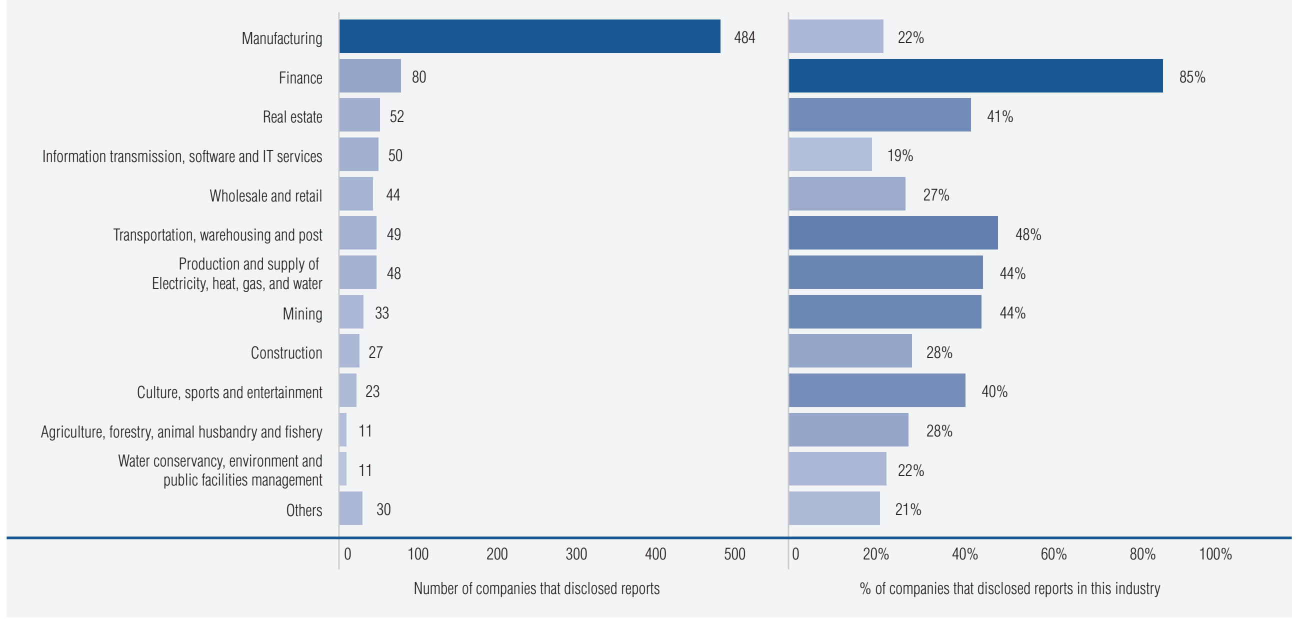
According to the statistics on the pages of CSR reports between 2012 and 2018: 1) The proportion of the reports with no more than ten pages remained the largest between 2012 and 2015, but it decreased annually until it was lower than the proportion of the reports with 11–20 pages in 2016; 2) Between 2012 and 2018, the report length increased significantly as the proportion of the reports with more than 20 pages was on the rise (above 50% for the first time); 3) The report length varied significantly from company to company. The longest report released in 2018 contained 170 pages, while the shortest one had only three pages.



Analysis of Companies That Disclosed 2018 CSR Reports

Distribution of Companies by Industry: The manufacturing industry saw the largest number of reports, but overall, the disclosure rate was still at a low level.

Of all 942 CSR reports published in 2018, the number varied hugely across industries[②]. Manufacturing companies released the largest number of reports (484), around 51.38% of the total; overall, however, the disclosure rate was still lower, as only 22% of A-share listed manufacturing companies disclosed CSR reports. The financial industry showed the highest disclosure rate as 80 financial companies published CSR reports, making up 85% of A-share listed enterprises in the financial industry. This owed much to SSE's mandatary disclosure requirement for financial companies.

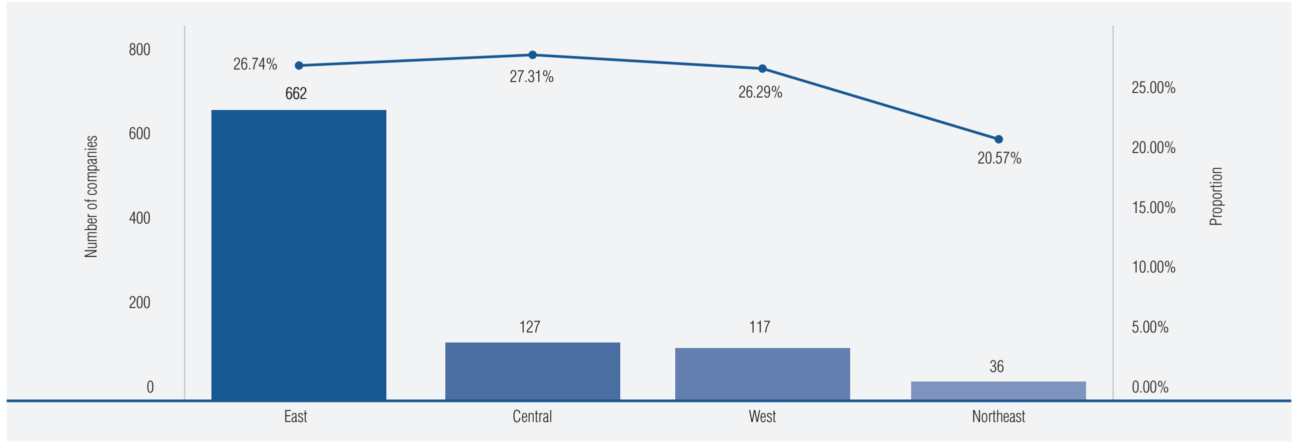


Distribution of Companies by Region: The majority was concentrated in East China; the disclosure rate was the highest in Fujian Province.

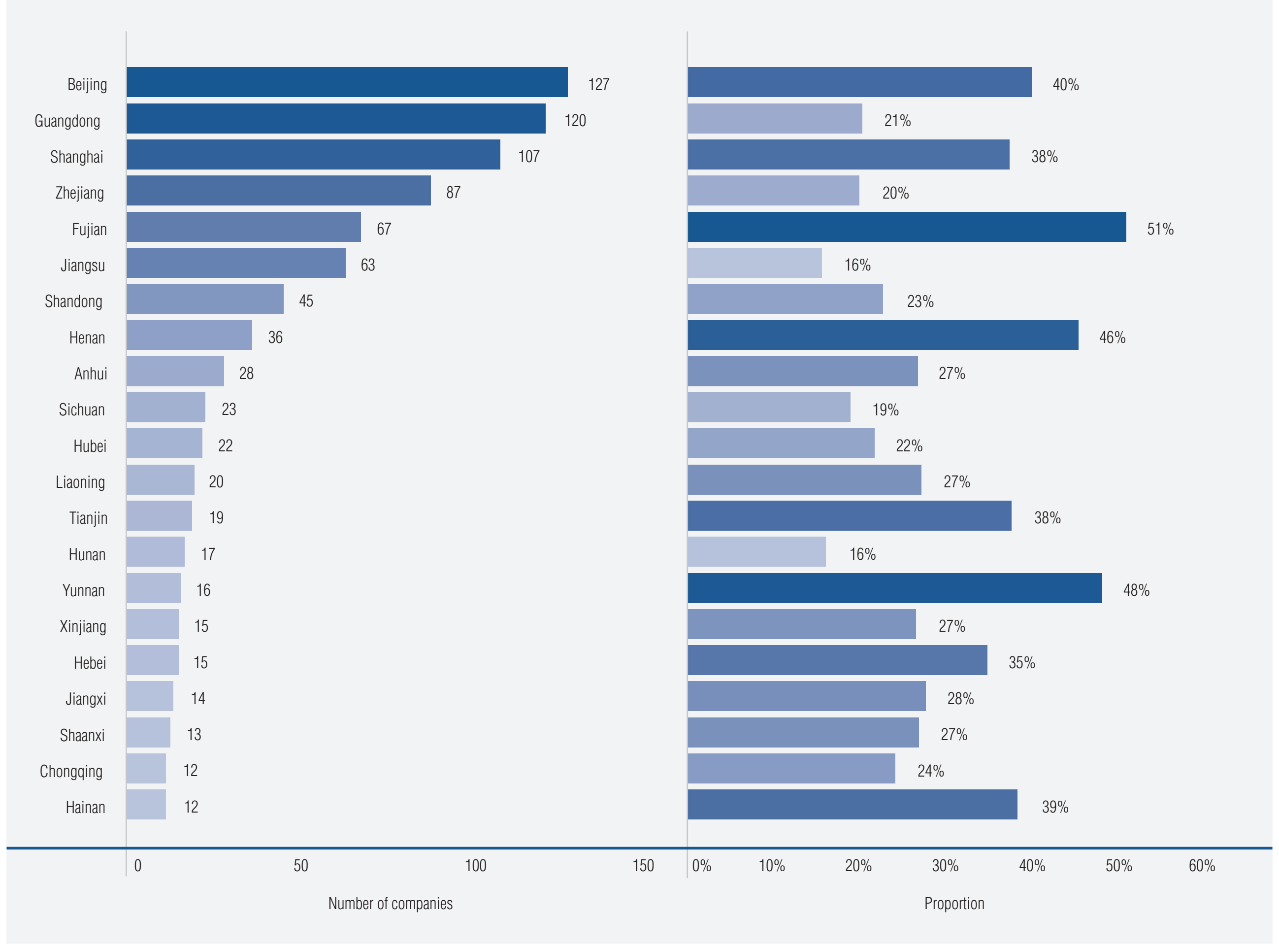
Of all 942 CSR reports published in 2019, the number varied hugely across regions.

(1) Companies in East China released the most reports (662), while those in Northeast China the least (36). Except for Northeast China, around 26% of listed companies in each region disclosed reports, with small regional differences.

②: Companies were classified by industry based on *The Guidelines for Classification of Listed Companies by Industry* issued by China Securities Regulatory Commission.



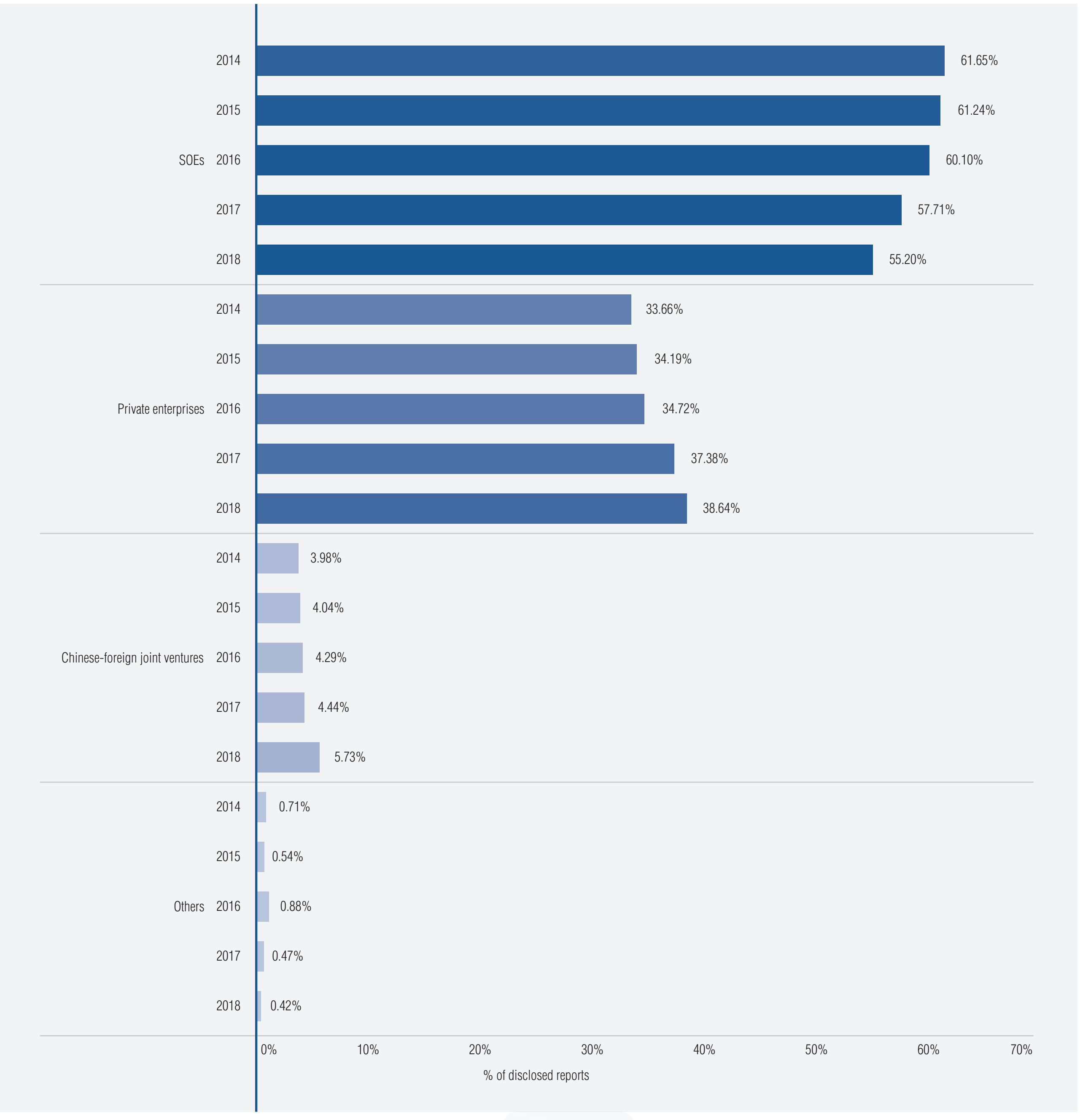
(2) By province③, A-share listed companies in Beijing published the most reports (127), followed by Guangdong and Shanghai; as for the disclosure rate, Fujian topped the ranking, with 67 reports (51%), followed by Yunnan (48%) and Henan (46%).



③: For the sake of comparability, the provinces with fewer than 10 reports are not included here.

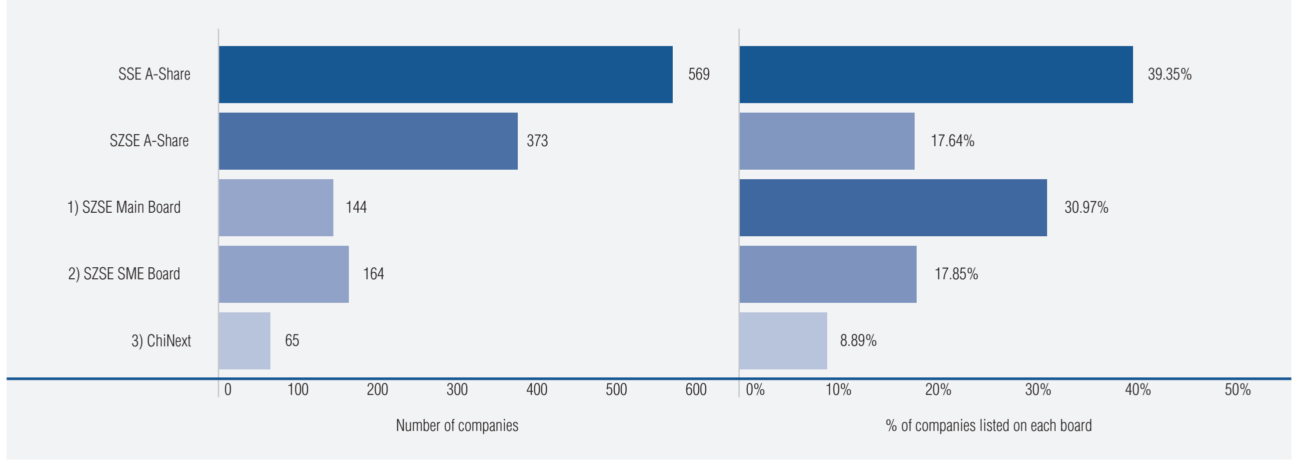
Distribution of Companies by Type of Organization: SOEs were in majority, with the proportions of private enterprises and foreign-funded enterprises on the rise.

Of all 942 CSR reports published in 2019, SOEs published 520 reports (55.20%), a slight decrease from the previous year; private enterprises released 364 reports (38.64%) and Chinese-foreign joint ventures 54 (5.73%), with the proportion of both on the rise.

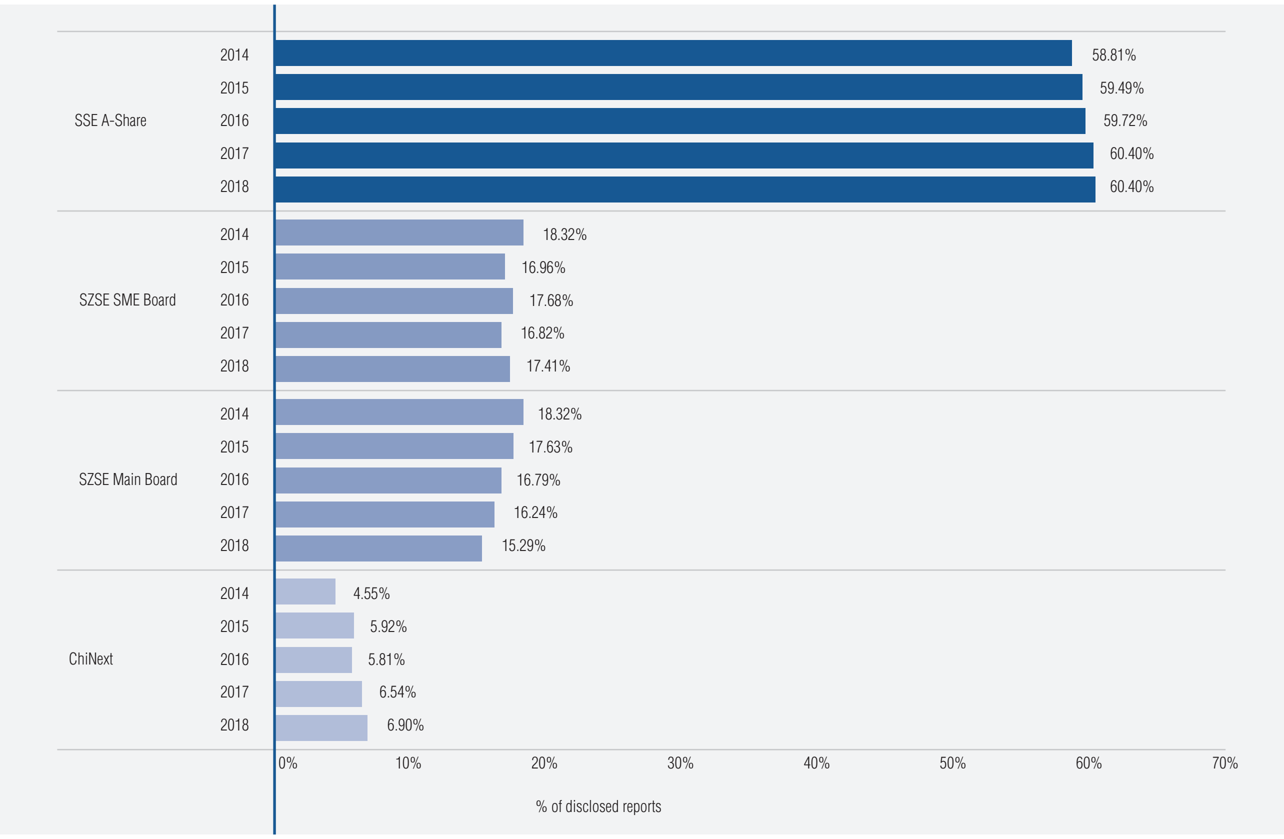


Distribution of Companies by Board: 60% of the companies were listed on SSE; the disclosure rate was lower among the companies listed on ChiNext, but it was on the rise.

Of all 942 CSR reports published in 2019, 569 (60%) came from the companies listed on SSE; 373 (40%) came from the companies on SZSE, among which 144 were listed on the Main Board, 164 on the SME Board, and 65 on ChiNext. Overall, 39.35% of A-share companies listed on SSE and 17.64% of those on SZSE disclosed CSR reports. Among the three boards of SZSE, the Main Board saw the highest disclosure rate (30.97%), followed by the SME Board (17.85%) and ChiNext (8.89%).



According to 2014-2018 statistics, A-share companies listed on SSE contributed an increasing proportion of annual CSR reports over the years, while the SZSE saw a slight decline in its share of reports, except ChiNext, where the proportion of the companies disclosing CSR reports rose from 4.55% in 2014 to 6.90% in 2018.



Analysis of Indicators in 2018 CSR Reports

Indicators in 2018 CSR reports fall into seven categories:

(1) Social responsibility management
(2) Company operations and management
(3) Product quality and innovation
(4) Responsibility for employees
(5) Diversity and equal opportunities
(6) Environmental responsibility
(7) Social contribution and charity

To evaluate the companies' CSR awareness and performance, this research analyzed each indicator in the above categories.

It is noteworthy that different from the CSR indicators released by other institutions, the above indicators are based on various big data research methods and data processing procedures, including data collection, cleansing, and mining. For instance, we adopted distributed crawling to access CSR reports of listed companies, and their annual reports, penalty information and company news from their websites, websites of regulatory authorities, and mainstream search engines. We cleansed these data according to predefined rules and identified required information from a sea of CSR report texts and news reports. Big data technologies were also used for data mining and visualization. In conclusion, big data thinking and methods were adopted throughout the research, specifically in the following areas:

(1) Accounting irregularities
(2) Disputes over product quality and safety
(3) Patents
(4) R&D expenditure
(5) Share of R&D personnel
(6) Disputes over staff health and safety
(7) Female executives
(8) Female directors
(9) All-male directors, supervisors and executives
(10) Environmental penalties
(11) Donations
(12) Layoff

CSR Indicator System

Social responsibility management	1) website column 2) leading team 3) education and training	4) report assurance 5) report inclusiveness
Company operations and management	1) strategic cooperation and sharing 2) anti-bribery and anti-corruption 3) business integrity	4) commendation for sound governance 5) accounting irregularities 6) financing disputes
Product quality and innovation	1) quality management 2) commendation for super quality 3) after-sales service 4) customer satisfaction 5) disputes over product quality and safety	6) patents 7) R&D expenditure 8) share of R&D personnel 9) share of technical personnel
Responsibility for employees	1) remuneration incentives 2) supplementary benefits 3) on-the-job training 4) communication with employees 5) staff care	6) safety management system 7) training on production safety 8) occupational health and safety certification 9) disputes over staff health and safety
Diversity and equal opportunities	1) female executives 2) female directors 3) all-male directors, supervisors and executives	4) vulnerable groups 5) equal opportunities
Environmental responsibility	1) environmental benefits 2) energy conservation 3) reduction in three types of waste 4) circular economy 5) green office	6) environmental protection and public welfare 7) environmental certification 8) environmental commendation 9) environmental penalty
Social contribution and charity	1) donations 2) social contribution value per share 3) charitable activities 4) contribution to education 5) volunteering	6) international aid 7) job creation 8) contribution to economic growth 9) layoff

Social Responsibility Management

This part includes:

(1) Website column (2) Education and training (3) Leading team (4) Report assurance (5) Report inclusiveness

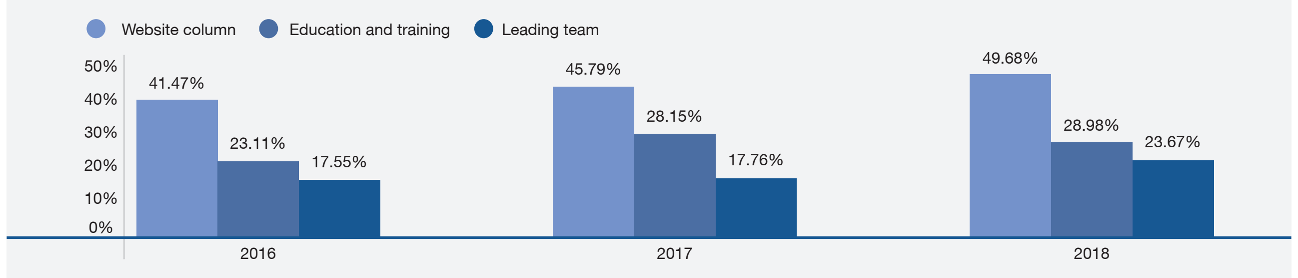
These five indicators are used to evaluate the companies' CSR management in terms of awareness and performance.

Among the 942 companies that disclosed 2018 CSR reports[4]:

(1) Website column: 468 companies opened a CSR column on their official website that conveyed information concerning CSR fulfillment, accounting for 49.68% of the total, up 3.89% year-on-year. By industry, 77.78% of the companies in the construction industry[5] launched a CSR column, accounting for the highest proportion; by type of organization, 55.56% of the foreign-funded companies opened a CSR column, making up the highest proportion, around 10% higher than private enterprises. By region, a significantly higher proportion of companies in East and West China ran a CSR column than those in Northeast and Central China.

(2) Education and training: 273 companies provided CSR training in the fields of anti-corruption, compliance and CSR awareness, accounting for 28.98% of the total, up 0.83% year-on-year. By industry, 42.42% of the mining companies delivered CSR training, representing the highest proportion; by type of organization, 30.19% of the SOEs carried out such training, making up the highest proportion, around 3% higher than private enterprises; by region, a significantly higher proportion of listed companies in West China offered such training than those in other regions.

(3) Leading team: 223 companies set up a leading team dedicated to CSR management, accounting for 23.67% of the total, up 5.91% year-on-year. By industry, 39.39% of the mining companies built a CSR team, making up the highest proportion; by type of organization, 40.74% of the foreign-funded companies established such team, accounting for the highest proportion, 24% higher than private enterprises; by region, the proportion of the companies with a CSR team was the highest in West China (29.06%) and the lowest in Northeast China (5.56%).



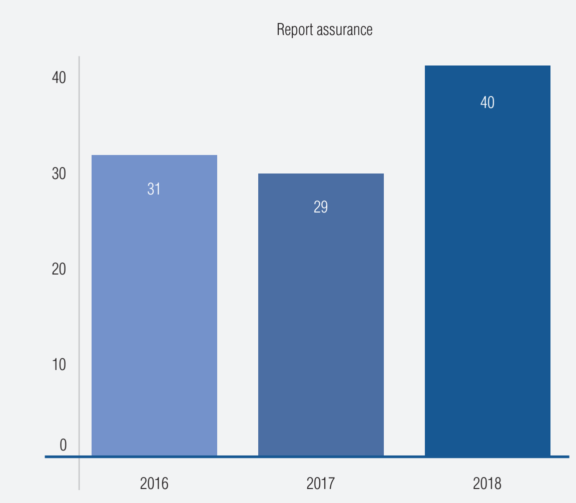
By industry - 2018	Website column	Education & training	Leading team
Mining	54.55%	42.42%	39.39%
Wholesale and retai	54.55%	38.64%	25.00%
Finance	51.25%	36.25%	32.50%
Construction	77.78%	33.33%	33.33%
Manufacturing	49.17%	32.64%	22.11%
Real estate	61.54%	21.15%	19.23%
Production and supply of electricity, heat, gas and water	50.00%	16.67%	27.08%
Transportation, warehousing and post	36.73%	16.33%	28.57%
Information transmission, software and IT services	30.00%	14.00%	16.00%
Culture, sports and entertainment	39.13%	0.00%	4.35%

By organization type - 2018	Website column	Education & training	Leading team
SOEs	51.35%	30.19%	26.92%
Chinese-foreign joint ventures	55.56%	29.63%	40.74%
Private enterprises	46.15%	27.20%	16.76%

By region - 2018	Website column	Education & training	Leading team
West	47.86%	32.48%	29.06%
East	52.27%	28.70%	23.87%
Northeast	38.89%	27.78%	5.56%
Central	40.94%	27.56%	22.83%

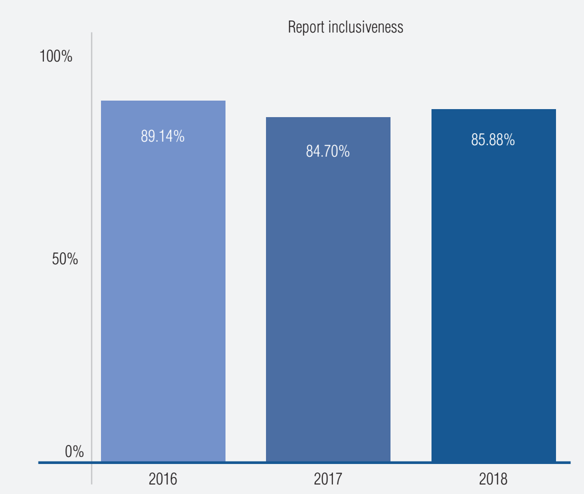
[4]: The samples for analysis were 942 companies that disclosed 2018 CSR reports; the same below.
[5]: The comparison of CSR reports in 2018 by industry does not cover the industries with fewer than ten reports (the same below).

(4) Report assurance: 40 companies had their 2018 CSR reports assured by a third party, accounting for only 4.25% of the total. For lack of a mandatory disclosure requirement, only a few companies sought a third party for report assurance. Of 40 companies, 18 were engaged in the financial industry, making up half of the companies with assured reports.



By industry - 2018	Number of companies
Finance	18
Manufacturing	11
Transportation, warehousing and post	4
Mining	2
Wholesale and retail	2
Production and supply of electricity, heat, gas and water	1
Real estate	1
Public health and social work	1
Total	40

(5) Report inclusiveness: 85.88% of the 2018 CSR reports conveyed a full range of CSR information, thanks to the *Guidelines for Preparation of the "Report on Fulfillment of CSR"* promulgated by SSE. More foreign-funded companies passed muster in terms of report inclusiveness than SOEs. The proportion of the companies with inclusive reports was similar in East, Central, and West China, higher than that in Northeast China.



By organization type - 2018	Proportion
Chinese-foreign joint ventures	90.74%
Private enterprises	87.91%
SOEs	84.04%

By region	Proportion
West	88.89%
East	86.40%
Central	83.46%
Northeast	75.00%

Conclusion and Analysis of “Social Responsibility Management”

According to the classical economics theory, enterprises should play a social role of utilizing resources as efficiently as possible to launch products and services, and sell them at the prices consumers are willing to pay. As the market economy is evolving, large multinational companies are mushrooming and gradually going beyond simply providing the public with products and services. Enterprises are required to play a more positive role in terms of environmental protection, employee entitlements, and public welfare projects.

The “social responsibility management” indicators reveal how much a company values social responsibility. Sound social responsibility management is not only the prerequisite for a high-quality CSR report, but also the bedrock for the company's active role in addressing social concerns and fulfilling CSR responsibility. From the lowest cost of execution to the highest, these indicators are “website column” “education and training” , and “leading team” . The share of the companies fulfilling these indicators decreases as the cost of execution rises. That reveals that companies lean toward the CSR practices that incur lower cost.

SOEs and Chinese-foreign joint ventures did better in fulfilling these indicators than private enterprises. CSR is inseparable from business ownership and control. Therefore, companies of different types and with different stakeholders vary greatly in the CSR philosophy and management. To live up to higher CSR expectations from the government and the general public, SOEs chose to take on CSR voluntarily as a part of their strategic vision; thanks to foreign capital injection, Chinese-foreign joint ventures were highly motivated to assume social responsibility because they had a sharper sense of CSR and a more urgent need to project a sound corporate image than other types of enterprises in China. As enterprises played a leading role in fulfilling social responsibility, their impressive performance as measured by social responsibility management indicators reflected well on their massive investment in social responsibility management; private enterprises, by contrast, showed the weakest awareness of social responsibility management as they were at the bottom.

The “report assurance” indicator saw the lowest fulfillment rate in this part. For lack of a mandatory disclosure requirement and the high cost of execution, only a few companies (mostly SOEs and financial companies) engaged a third party to audit their CSR reports, while over 90% of the reports were published without third-party assurance, and their credibility was cast into doubt. External auditing, a special way of economic control, is an effective supervisory mechanism for corporate governance. As auditing grows more sophisticated, non-financial information is covered by the auditing system. As the quality of the CSR report, a centerpiece of non-financial information, is capturing growing attention from the public, it will be an inevitable trend for listed companies to have their CSR reports audited.

The “report inclusiveness” indicator saw the highest fulfillment rate in this part, thanks mainly to official CSR guidance, including the *Guidelines for Social Responsibility of Listed Companies* released by SZSE, and the *Notice on Strengthening Listed Companies' Social Responsibility Fulfillment and on Issuing the “Guidelines on Listed Companies' Environmental Information Disclosure”* and *Guidelines for Preparation of the “Report on CSR Fulfillment”* by SSE. As stipulated in these documents, listed companies are encouraged to establish a sound social responsibility system and check up on its implementation on a regular basis. Based on these guidelines, the regulatory authorities have also improved CSR regulations so that listed companies can refer to them and disclose a wider range of information when preparing a CSR report.

It has been no longer a choice for enterprises, but their responsibility to create social value in the fields of environment, society and management, and take the lead in addressing many social concerns. Listed companies in China still have a long way to go in social responsibility management. SOEs and foreign-funded companies are playing an exemplary role. Progress in CSR management will depend on heightened CSR awareness and guidance offered by the regulatory authorities.

Company Operations and Management

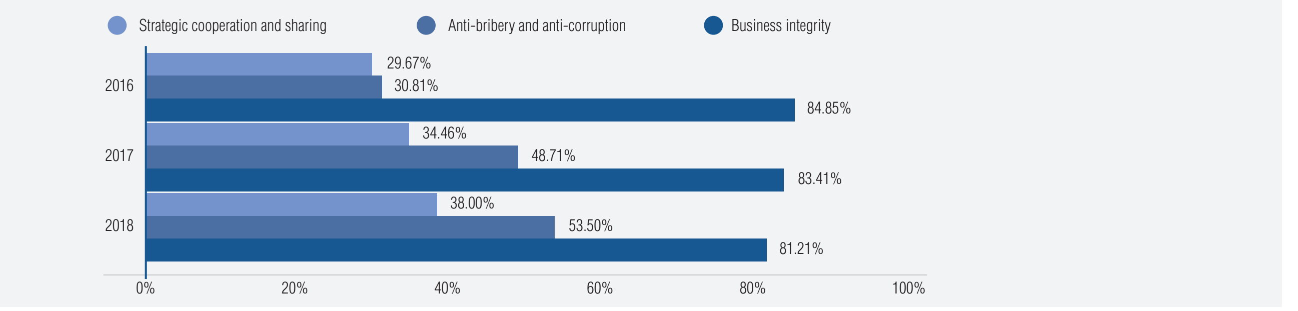
This part includes the following six indicators that reveal the companies' positive performance and negative attention they received in terms of company operations and management:

(1) Strategic cooperation and sharing
(2) Anti-bribery and anti-corruption
(3) Business integrity
(4) Commendation for sound governance
(5) Accounting irregularities
(6) Financing disputes.

(1) Strategic cooperation and sharing: 38.00% of the companies disclosed in their 2018 CSR reports that they had worked with business partners in setting up strategic sharing mechanisms and platforms, including the long-term strategic cooperation agreement, joint laboratory, and shared database, up 3.54% from the previous year. By industry, buoyed by the Road and Belt Initiative, more listed construction companies set their sights on the international market for in-depth strategic collaboration; 44.44% of the construction companies disclosed their strategic cooperation with partners, making up the highest proportion. By type of organization, there were small differences in the disclosure rate among different types of companies; private enterprises had a slightly higher disclosure rate. By region, the disclosure rate was higher in East China than in other regions.

(2) Anti-bribery and anti-corruption: 53.50% of the companies revealed in their 2018 CSR reports their measures against commercial bribery and corruption, and precaution against non-compliance. By industry, 66.25% of the financial companies disclosed their anti-corruption measures, accounting for the highest proportion, thanks a great deal to the strict compliance requirement for the financial industry. By type of organization, 61.11% of the foreign-funded companies and 60.00% of SOEs disclosed such measures, making up a significantly higher proportion than private enterprises. By region, the proportion in East China was similar to that in Central China, but lower in West China and Northeast China.

(3) Business integrity: 81.21% of the companies disclosed their adherence to business integrity and fair competition both in business philosophy and practice, indicating a slight decrease from the previous year. Construction companies delivered a remarkable performance in this indicator, with 96.30% of them laying an emphasis on business integrity; by region, there were only mild differences among companies of different types.



By industry - 2018	Strategic sharing	Anti-bribery and anti-corruption	Business integrity
Construction	44.44%	59.26%	96.30%
Manufacturing	39.67%	51.03%	83.06%
Transportation, warehousing and post	38.78%	48.98%	79.59%
Wholesale and retail	38.64%	65.91%	86.36%
Information Transmission, Software and IT Services	38.00%	58.00%	80.00%
Finance	35.00%	66.25%	78.75%
Production and supply of electricity, heat, gas and water	33.33%	60.42%	85.42%
Culture, sports and entertainment	30.43%	30.43%	69.57%
Mining	30.30%	54.55%	75.76%
Real estate	28.85%	51.92%	80.77%

By organization type - 2018	Strategic sharing	Anti-bribery and anti-corruption	Business integrity
Private enterprises	39.01%	43.41%	81.04%
Chinese-foreign joint ventures	38.89%	61.11%	88.89%
SOEs	37.50%	60.00%	80.38%

By region - 2018	Strategic sharing	Anti-bribery and anti-corruption	Business integrity
East	40.18%	54.98%	80.82%
West	35.90%	49.57%	86.32%
Central	30.71%	55.12%	79.53%
Northeast	30.56%	33.33%	77.78%

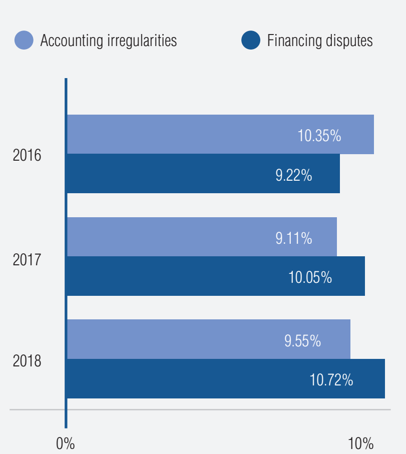
(4) Commendation for sound governance: 250 companies, around 26.54% of the total, were commended for sound governance and presented with awards like the Best BOD Award for Listed Companies and the Best Corporate Governance Practice Award. By type of organization, 28.65% of SOEs and 22.22% of the foreign-funded companies were commended for sound governance, making up the highest and lowest proportion respectively. By region, listed companies in East China had the highest rate of receiving commendation at 30.21% and the Central region the lowest at 16.54%.

By type of organization - 2018	Commendation for sound governance
SOEs	28.65%
Private enterprises	24.18%
Chinese-foreign joint ventures	22.22%

By region - 2018	Commendation for sound governance
East	30.21%
West	19.66%
Northeast	16.67%
Central	16.54%
Total	26.54%

(5) Accounting irregularities: When searching through the open database for information about accounting irregularities and penalties, we find that 90 companies disclosed accounting irregularities in 2018, accounting for 9.55% of the total, up 0.44% than that of previous year. By industry, the proportion of accounting irregularities was the highest—up to 22.00% in the IT service industry. By region, the proportion of accounting irregularities was the highest (16.67%) in Northeast China, while that in East China was the lowest (8.61%); by type of organization, private enterprises had the highest rate at 10.71% and foreign-funded companies the lowest at 7.41%.

(6) Financing disputes: By referring to litigation and penalty information in open databases, we find that 101 companies had financing disputes in 2018, accounting for 10.72% of the total and increasing by 0.67% from the previous year. 31.25% of financial companies disclosed financing disputes, the highest among all industries. 15.38% of companies in West China were involved in such disputes, higher than other regions; by type of organization, SOEs reported the highest proportion of financing disputes, up to 12.12%.



By region - 2018	Accounting irregularities	Financing disputes
West	12.82%	15.38%
Northeast	16.67%	11.11%
East	8.61%	10.72%
Central	9.45%	6.30%

By industry - 2018	Accounting irregularities	Financing disputes
Finance	17.50%	31.25%
Real estate	5.77%	21.15%
Mining	3.03%	15.15%
Wholesale and retail	11.36%	13.64%
Information transmission, software and IT services	22.00%	8.00%
Manufacturing	8.68%	7.23%
Production and supply of electricity, heat, gas and water	6.25%	6.25%
Culture, sports and entertainment	21.74%	4.35%
Transportation, warehousing and post	2.04%	4.08%

By organization type - 2018	Accounting irregularities	Financing disputes
Private enterprises	10.71%	9.07%
SOEs	9.04%	12.12%
Chinese-foreign joint ventures	7.41%	9.26%

Conclusion and Analysis of “Company Operations and Management”

Company operations and management is the foundation for a company to assume social responsibility and better corporate governance can ensure better fulfillment of social responsibility. According to Article 86 in the General Rules of the Civil Law of the People's Republic of China promulgated in 2017, “A for-profit legal person who engages in business activities shall abide by business ethics, maintain transaction security, accept government and social supervision, and assume social responsibility.” Listed companies, as the backbone of for-profit legal persons, are closely watched by the general public in terms of operations, management, and performance of social responsibility. The indicators in this part have offered valuable references concerning company operations and management.

The “strategic cooperation and sharing” indicator went up from the previous year, thanks to the considerable contribution from some industries. As the Belt and Road Initiative (BRI) is rolled out, Chinese listed companies are confronted with both opportunities and challenges. General Secretary Xi pointed out at a symposium marking the fifth anniversary of the Belt and Road Initiative that the world is undergoing major development, changes and adjustments. We should have strategic and global vision and stay alert to risks while keeping an eye on historic opportunities so as to navigate through this profound transformation unprecedented in a century. China keeps abreast with the times by proposing the Belt and Road Initiative, in the hope of linking Chinese dream with the global dream and blazing a trail of peaceful development and win-win cooperation. In this context, a growing number of listed companies have jumped at the opportunity to work with business partners and share fruitful results. Among them, the industries favored by the policies were faced with new opportunities. A number of construction and transportation companies entered into strategic cooperation with upstream and downstream companies to beef up their business chain and seek international collaboration.

“Anti-bribery and anti-corruption” is both a hot topic in the society and a major concern of the government. Since the 18th National Congress of the Communist Party of China, especially after the Second and Third Plenary Sessions of the 18th Party Congress, the CPC Central Committee has strengthened the initiatives to improve Party conduct and ensure clean government and the campaign against corruption. For the sake of Party conduct, the authority has introduced the “eight-point decision” and over ten prohibitions to address the practice of formalities for formalities' sake, bureaucratic practice, and privilege seeking and to stamp out extravagance with public funds. Corruption is also a huge obstacle to company development. Anti-corruption and clean governance is the foundation for a company's competitiveness. SOEs have cracked down on corruption with growing intensity in recent years. The investigation of several senior executives for serious violations of laws and regulations caused quite a stir in the society. Chinese-foreign joint ventures are subject to policies and laws not only in China, but also overseas, such as the *Foreign Corrupt Practices Act* in the US. Therefore, the anti-bribery and anti-corruption disclosures rate was higher in SOEs and foreign-funded enterprises, but lower in private enterprises.

The financial industry topped all other industries in the proportion of anti-corruption measure disclosures, Nevertheless, the financial industry saw a higher proportion of “accounting irregularities” and “financing disputes” , on account of huge compliance risks and increasingly stringent regulation in the industry. In April 2018, China Insurance Regulatory Commission and China Banking Regulatory Commission were merged, and China Banking and Insurance Regulatory Commission (CBIRC) was inaugurated. The regulatory authorities still imposed tough punishments during the transition. According to the online data available, in 2018, the CIRC and its regional branches issued over 4,000 fine tickets to the banking industry, amounting to ¥2,156 million[6]; and 1,430 fine tickets to the insurance industry or ¥230 million in total, up by more than 50%. The securities industry was also subject to strict supervision. The CSRC system made 310 decisions on administrative punishment throughout the year, up 38.39% year-on-year, with the fines and confiscations of up to ¥10,641 million, up 42.28% year-on-year; 50 people were banned from entering the securities market, up 13.64% year-on-year. These penalty measures ensured the sound operations of the capital market and safeguarded the investors' legitimate rights and interests, advancing the sustainable development of the capital market in the new era. Stringent regulation across the financial industry has prompted financial companies to put compliance in the heart of business strategies, and make full use of the corporate governance structure to raise employees' compliance awareness and improve the compliance system.

In conclusion, company operations and management is not only a key factor affecting business development, but also the solid bedrock for the fulfillment of CSR. Companies should keep up with the times and improve corporate governance so as to better perform CSR.

[6]: ¥ = CNY = Chinese yuan renminbi; ¥1 = approximately US$0.14 on December 31, 2019.

Product Quality and Innovation

This part includes nine indicators that mirror A-Share listed companies' awareness and performance in terms of product and service quality, after-sales services and customer satisfaction, and product R&D and innovation:

(1) Quality management	(4) Customer satisfaction	(7) R&D expenditure
(2) Quality commendation	(5) Disputes over product quality and safety	(8) Share of R&D personnel
(3) After-sales service	(6) Patents	(9) Share of technical personnel

(1) Product and service quality

1) Quality management: In 2018, 545 companies disclosed in their CSR reports the measures they had taken to improve product/service quality, such as establishing quality management systems, accounting for 57.86% of the total, up 3.07% from the previous year. Given the high standards and strict requirement on construction quality, the construction industry showed the highest level of disclosure as 70.37% of the construction companies described their quality management systems or measures in the reports; the manufacturing industry came second, at 68.39%.

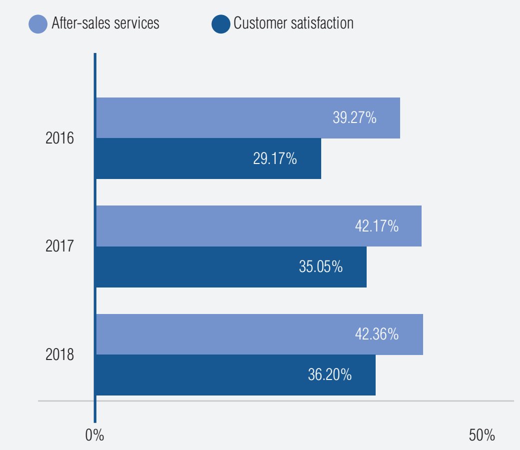
2) Quality commendation: In 2018, 608 or 64.54% of the companies disclosed in their CSR reports that they were commended or accredited for product/service quality. Due to the features of the industry, the construction industry saw the highest disclosure rate, as 88.89% of the companies listed their quality certificates or honors.

By industry - 2018	Quality management	Quality commendation
Construction	70.37%	88.89%
Manufacturing	68.39%	66.74%
Wholesale and retail	63.64%	61.36%
Mining	60.61%	57.58%
Real estate	50.00%	61.54%
Finance	43.75%	76.25%
Information transmission, software and IT services	40.00%	56.00%
Transportation, warehousing and post	38.78%	59.18%
Production and supply of electricity, heat, gas and water	29.17%	52.08%
Culture, sports and, entertainment	17.39%	56.52%

(2) After-sales services and customer satisfaction

1) After-sales services: In 2018, 399 companies disclosed in their CSR reports the measures they had taken to optimize after-sales services, including an improvement in the after-sales feedback system, accounting for 42.36% of the total, a slight increase from the previous year. The financial industry put a premium on customer experience, as 58.75% of financial companies disclosed their improvements in after-sales services, the highest proportion by industry; by type of organization, foreign-funded enterprises had the highest proportion of disclosure at 61.11%, and SOEs the lowest at 39.62%.

2) Customer satisfaction survey: In 2018, 341 or 36.20% of the companies disclosed in their CSR reports the customer satisfaction investigation they had organized. By industry, the financial industry had the highest proportion of disclosure at 60.00%; by type of organization, foreign-funded enterprises had the highest proportion of disclosure at 44.44%, and private enterprises the lowest at 30.49%.

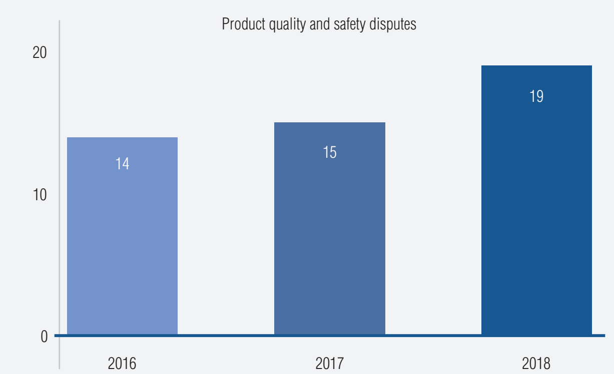


By industry - 2018	After-sales service	Customer satisfaction
Finance	58.75%	60.00%
Manufacturing	48.35%	35.74%
Wholesale and retail	47.73%	27.27%
Transportation, warehousing and post	42.86%	42.86%
Information transmission, software and IT services	36.00%	36.00%
Real estate	34.62%	32.69%
Production and supply of electricity, heat, gas and water	27.08%	25.00%
Mining	24.24%	51.52%
Construction	18.52%	25.93%
Culture, sports and entertainment	13.04%	4.35%

By organization type - 2018	After-sales service	Customer satisfaction
Chinese-foreign joint ventures	51.11%	44.44%
Private enterprises	43.41%	30.49%
SOEs	39.62%	39.62%

(3) Product quality and safety disputes

By sorting the litigation and punishment information from public databases and news reports from mainstream financial media, we have collected and summarized the incidents related to product disputes. Of the companies with CSR reports disclosed, a total of 48 companies were embroiled in product disputes between 2016 and 2018, most of which arose in the manufacturing industry; in 2018 alone, 19 companies were involved in product disputes.



By industry-2016 - 2018	Product quality and safety disputes
Manufacturing	35
Finance	4
Wholesale and retail	4
Leasing and business services	2
Construction	1
Agriculture, forestry, animal husbandry and fishery	1
Culture, sports and entertainment	1
Total	48

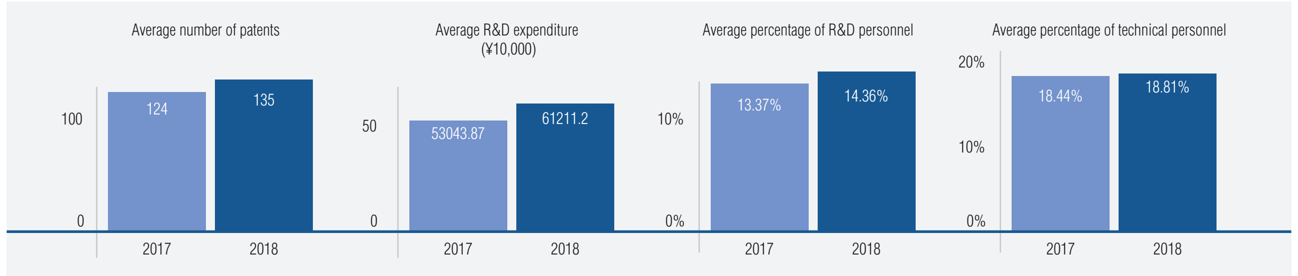
(4) Product R&D and innovation

1) Patents: In 2018, the number of patents averaged 135, up about 11 from the previous year; by region, East China topped all regions with 160 patents on average; Guangdong Province, in particular, came first with 294 patents.

2) R&D expenditure: The R&D expenditures averaged ¥612.11 million in 2018, which was ¥81.67 million higher than the previous year. East China reported the highest R&D expenditures of ¥724.60 million, of which, Beijing came first with ¥1,529.09 million on average.

3) Share of R&D personnel: In 2018, the average share of R&D personnel reached 14.36%, up nearly 1% from the previous year. East China had the highest share of R&D personnel at 15.34%; Anhui Province, in particular, topped with 18.70%.

4) Share of technical personnel: In 2018, the average share of technical personnel was 18.81%, up 0.37% from the previous year. East China had the highest share of technical personnel at 20.27%; Beijing, in particular, topped with 23.76%.



By region - 2018	Average number of patents	Average R&D expenditure	Average share of R&D personnel	Average share of technical personnel
East	160.40	72,459.76	15.34%	20.27%
Central	99.96	40,273.28	14.60%	17.43%
West	60.82	31,652.02	8.78%	13.31%
Northeast	36.44	19,033.96	12.19%	14.78%
Total	135.15	61,211.20	14.36%	18.81%

In terms of the four indicators above, the construction industry reported 466 patents on average and ¥2682.16 million of R&D expenditure on average, topping all industries in these two indicators. The industry of information transmission, software and IT services had the highest shares of R&D personnel and technical personnel, at 44.26% and 52.34% respectively, far above the average.

By type of organization, SOEs dwarfed all other types of enterprises, with 150 patents on average and ¥812.76 million in R&D expenditure; private enterprises had the highest proportion of R&D personnel and technical personnel, at 17.46% and 20.95% respectively, but they came in at the bottom of the ranking in terms of average R&D expenditure and number of patents.

By industry - 2018	Average number of patents	Average R&D expenditure	Average share of R&D personnel	Average share of technical personnel
Construction	465.70	268,215.93	16.58%	33.36%
Mining	328.03	137,272.69	8.12%	12.33%
Manufacturing	188.19	63,699.87	14.22%	18.85%
Information transmission, software and IT services	91.78	48,121.28	44.26%	52.34%
Production and supply of electricity, heat, gas and water	43.71	6,336.31	5.69%	17.88%
Transportation, warehousing and post	24.22	13,367.19	3.37%	9.14%
Culture, sports and entertainment	20.43	9,204.33	8.05%	11.41%
Wholesale and retail	18.98	28,654.89	4.24%	10.89%
Finance	16.64	13,171.80	2.20%	4.89%
Real estate	11.92	4,497.51	8.64%	23.57%

By organization type - 2018	Average number of patents	Average R&D expenditure	Average share of R&D personnel	Average share of technical personnel
SOEs	149.96	81,275.53	11.76%	17.64%
Chinese-foreign joint ventures	125.31	78,351.87	13.52%	16.47%
Private enterprises	116.40	35,641.93	17.46%	20.95%

Conclusion and Analysis of “Product Quality and Innovation”

With rapid economic and social development, continuous advancement of modern technology and upgrading of people's consumption philosophy, product quality and innovation have increasingly become the lifeblood of corporate development and a major indication of companies' core competitiveness. Responsibility for product quality is a fundamental part of CSR, and responsibility for product innovation is a key guarantee of CSR.

As an integral part of CSR, product and service quality has drawn increasing attention of the general public. Companies, as the most common organizational form in society, provide people with various products and services to satisfy their clothing, food, housing and transportation needs. Excellent products will be granted honorable title and exempted from inspection once they win the recognition and trust of society; companies with product quality problems will be condemned and opposed by society, thus suffering huge economic and reputation losses. It is a basic requirement of CSR for companies to attach high importance to their product/service quality.

In this part, the indicators related to product and service quality are ranked from the highest disclosure proportion to the lowest as follows: “quality commendation” “quality management” “after-sales service” and “customer satisfaction” . The listed companies were more inclined to disclose external reviews rather than internal measures, and gave lower attention to the after-sales feedback of products and services. More specifically, the construction industry topped all industries with the highest disclosure of “quality commendation” and “quality management” . Construction quality is not only decisive to the normal operation of a project and its return on investment, but also critical to the safety of people's life and property. Any quality problem can directly impair the interests and safety of people. Good performance on these indicators reflects the great importance the construction industry has attached to quality and safety. The financial industry showed the highest disclosure of “after-sales service” and “customer satisfaction” . As service providers, financial companies are frequently engaged in direct communication and interaction with customers. The experience and feedback of customers are a major source of information for financial companies to improve their service quality. Continuous improvement in after-sales feedback and customer satisfaction investigation enables financial companies to listen to and understand the voices of customers and improve service quality accordingly. In 2018, the number of companies involved in product quality and safety disputes grew slightly from the previous year, but few of them were publicly named and shamed because few such scandals were covered by mainstream media.

In August 2016, the State Council issued the 13th Five-year Plan on National Scientific and Technological Innovation, explicitly putting forward the general requirement, development objectives, strategic tasks and reform measures for China's scientific and technological innovation for the next five years. Product and service innovation, as an integral part of CSR, is closely related to the healthy development of companies. For companies in the modern times, technological innovation is a major source of core competitiveness for survival in increasingly fiercer market competition. By performing their responsibility of technological innovation, companies can build up their core competitiveness and become better prepared to take more CSR practices.

We observed the indicators related to R&D input, such as “R&D expenditure” “share of R&D personnel” and “share of technical personnel” , as well as the indicator related to R&D output such as “the number of patents” so as to gain a clear picture about the listed companies' performance on R&D innovation. All the four indicators in 2018 have been improved to varying degrees compared with the previous year. East China with relatively developed economy outperformed other regions in terms of “R&D expenditure” “share of R&D personnel” and “share of technical personnel” , and also had the highest average number of patents. By province, Beijing disclosed the largest amount of R&D expenditure but its average number of patents was lower than that of Guangdong. By industry, the information transmission, software and IT services industry boasted the highest share of talented personnel, while the construction industry topped in terms of R&D expenditure and the average number of patents. By type of organization, unlike the previous year, SOEs with the highest R&D expenditure boasted the highest number of patents, indicating that their overall input-output efficiency improved markedly.

Product and service quality and innovation are an important part of CSR with large room for improvement as indicated by the data above. Companies should give more attention to this aspect so as to enhance their core competitiveness and sense of social responsibility.

Responsibility for Employees

This part includes

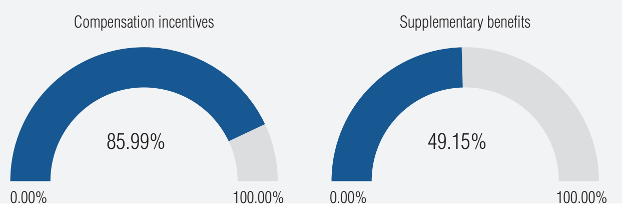
(1) Compensation incentives
(2) Supplementary benefits
(3) On-the-job training
(4) Communication with employees
(5) Staff caring
(6) Safety management system
(7) Training on safe production
(8) Occupational health and safety certification
(9) Disputes concerning staff health and safety

These nine indicators are used to evaluate the reporting entity's awareness and performance regarding staff compensation and benefits, improvement and caring, safety and occupational health, and disputes concerning staff health and safety, etc.

(1) Staff remunerations and benefits

1) Remuneration incentives: In 2018, 85.99% of companies disclosed in their CSR report that they established remuneration incentives or launched an equity incentive program that aimed to encourage employees to engage in the company's business operations; 89.01% of private enterprises had taken incentive measures for employees, representing the highest disclosure rate, while SOEs had the lowest proportion, at 84.04%.

2) Supplementary benefits: In 2018, 49.15% of companies disclosed in their CSR report that they offered employees supplementary benefits, like supplementary pension funds and supplementary medical insurance; 61.73% of SOEs offered employees supplementary benefits, representing the highest proportion of disclosure, while private enterprises had the lowest proportion at 33.24%.



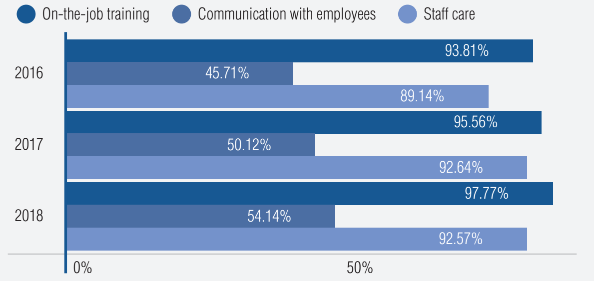
By organization type - 2018	Compensation incentives	Supplementary benefits
Private enterprises	89.01%	33.24%
Chinese-foreign joint ventures	88.89%	35.19%
SOEs	84.04%	61.73%

(2) Staff improvement and care

1) On-the-job Training: In 2018, 97.77% of companies disclosed in their CSR report that they provided on-the-job training for employees, up 2.21% from the previous year, indicating that companies continued to value the improvement of employees' vocational skills. Broken down by organizational type, the proportion of disclosure between different types of companies differed slightly. More specifically, SOEs had the highest proportion of disclosure, followed by private enterprises and foreign-funded companies.

2) Communication with Employees: In 2018, 54.14% of companies disclosed in their CSR report that they established channels for communication between executives and employees (e.g., regular conversations and general manager mailbox), up 4.02% from the previous year, indicating that enterprises attached growing importance to employee feedback. By type of organization, the disclosure rate among SOEs and foreign-funded enterprises was higher, at 57.12% and 57.41% respectively, but was the lowest in private enterprises, at only 49.45%

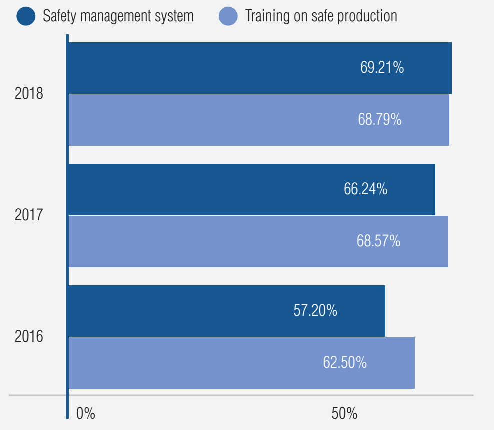
3) Staff Care: In 2018, 92.57% of companies disclosed in their CSR report that they had staff caring schemes. For instance, they organized physical checkup for employees and also cared about employees' mental health. This indicator was virtually the same as that in 2017, reflecting companies' growing concern for employee care. By type of organization, the proportion of disclosure between different types of companies differed slightly. SOEs had a higher disclosure rate.



By organization type - 2018	On-the-job training	Communication with employee	Staff care
SOEs	98.08%	57.12%	93.27%
Private enterprises	97.53%	49.45%	91.76%
Chinese-foreign joint ventures	96.30%	57.41%	92.59%

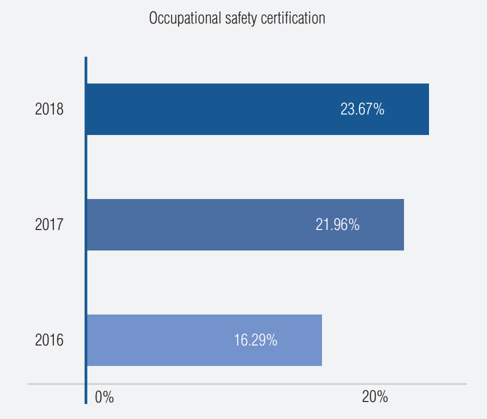
(3) Staff safety and occupational health

1) Safety management system & 2) Training on production safety: In 2018, 69.21% of companies disclosed in their CSR report that they put in place a safety management system, and around 68.79% of companies disclosed that they had provided training on production safety. Both indicators saw an increase over the previous year. In particular, the mining industry saw the highest disclosure rate—up to more than 90% in both indicators.



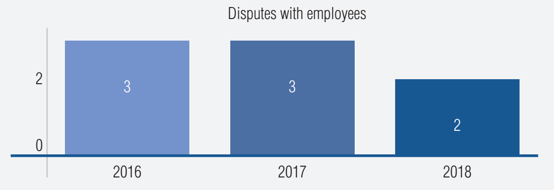
By industry - 2018	Safety management system	Training on safe production
Mining	93.94%	96.97%
Production and supply of electricity, heat, gas, and water	85.42%	72.92%
Construction	85.19%	85.19%
Transportation, warehousing and post	81.63%	77.55%
Manufacturing	80.17%	78.93%
Wholesale and retail	72.73%	79.55%
Real estate	50.00%	48.08%
Culture, sports and entertainment	39.13%	34.78%
Information transmission, software and IT services	34.00%	44.00%

3) Occupational health and safety certification: In 2018, 23.67% of companies disclosed in their CSR report that they passed the certification with regards to occupational health, up by 1.71% year-on-year. Companies in the manufacturing industry had the highest proportion of disclosure at 34.92%.



By industry - 2018	Occupational safety certification
Manufacturing	34.92%
Transport, warehousing and post	20.41%
Construction	18.52%
Wholesale and retail	18.18%
Information transmission, software and IT services	16.00%
Culture, sports and entertainment	13.04%
Mining	12.12%
Leasing and business services	10.00%
Production and supply of electricity, heat, gas, and water	8.33%
Real estate	7.69%

4) Disputes concerning staff health and safety: We collected and summarized disputes concerning staff health and safety by means of searching litigation and penalty information in public database and reporting of mainstream finance and business media. Among the companies disclosed their CSR report, 8 had disputes with employees between 2016 and 2018 and most of them were in the industries of manufacturing and mining. For 2018 alone, two companies had disputes concerning staff health and safety.



By industry - 2016 - 2018	Disputes with employees
Manufacturing	5
Mining	3
Total	8

Conclusion and Analysis of “Responsibility for Employees”

Employees are an integral part of a company and a major force that supports business development. For the fulfilment of CSR, one of the priorities for the companies is to safeguard employees’ rights and benefits, because employees could directly impact sustainable development of the company, and even exert influence on the development and stability of our society. During the course of taking on responsibilities to employees, companies became more people-oriented and placed more focus on employees’ rights, benefits and development.

According to Opinions of the CPC Central Committee and the State Council on “Building Harmonious Labor Relationship” released in 2015, employers shall safeguard basic rights of employees in accordance with the laws, including the rights to get paid, take rest, take leave, be protected for safety and hygiene, enjoy social insurance and accept on-the-job training. In this part, indicators such as “compensation incentives” “supplementary benefits” “safety management system” “training on safe production” “occupational health and safety certification” “disputes concerning staff health and safety” and “on-the-job training” reflect how the companies value and safeguard the rights and benefits of employees. With regards to compensation and welfare, private enterprises put more emphasis on “compensation incentives” , while SOEs, on “supplementary benefits” . This indicates that different types of companies have different overriding focuses. And the findings are in line with our common understanding of SOEs and private enterprises. As for employee safety, known for high risks at the workplace, companies in the mining industry had the highest proportion of disclosure in terms of “safety management system” and “training on safe production” ; statistics show that in 2018, 224 mining accidents occurred across China, a decrease by two, leading to 333 deaths, a decline by 50, down 0.9% and 13.1% respectively year-on-year. Though the situation is getting better, it's undeniable that mining remains the industry where employees’ safety risks are the highest. Speaking of occupational health, not many listed companies disclosed in their CSR report that they passed occupational health certification. Companies in the manufacturing industry had the highest proportion of disclosure in this regard. Nevertheless, in 2018, most disputes concerning staff health and safety stemmed from the industries of manufacturing and highly risky mining. When it comes to employee improvement, “on-the-job training” saw the highest fulfillment rate, which proved that listed companies valued employees’ skills. As employees are a valuable asset to a company, on-the-job training can make it more competitive, driving its sound development.

It was also stressed in the “Opinions of the CPC Central Committee and the State Council on Building Harmonious Labor Relationship” that employers shall improve democratic management system, as well as the mechanism regarding the mediation of labor disputes, thereby creating a pleasant work environment featuring harmonious labor relationship. Moreover, employers shall enhance communication with employees and place more focus on humanistic care for employees. In this part, the indicator “communication with employees” embodied the communication mechanism between executives and employees. On the whole, about half of all the companies disclosed their communication channels; nevertheless, the proportion was still lower. By type of organization, SOEs and foreign-funded enterprises attached importance to communication with employees, because they had a higher disclosure rate than private enterprises in this regard. “Staff care” ranked second only to “on-the-job training” in terms of disclosure rate. This indicator saw a consistently high fulfillment rate, which revealed that listed companies laid a continuous emphasis on employee care.

Besides, taking on responsibilities to employees and emphasizing the happiness and improvement of employees could help a company cultivate a good corporate image. A good corporate image is the company's intangible huge fortune and could help boost the company's competitiveness; meanwhile, proactively taking on responsibilities to employees is quite meaningful to our society as it could also help address social issues, improve life satisfaction of people from across the country, and maintain social stability.

All in all, safeguarding the rights and benefits of employees and fulfilling the responsibilities to employees can have a positive impact on the company itself and the society. The companies and the government need to work together to drive the development of both employees and the companies in the context of a harmonious society, thereby making sure the companies’ fulfillment of CSR concerning employees.

Diversity and Equal Opportunities

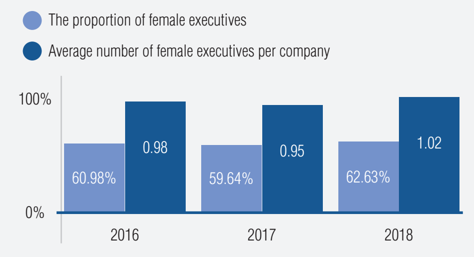
This part includes:

(1) Female executives (2) Female directors (3) All-male directors, supervisors and executives (4) Vulnerable groups (5) Equal opportunities

These five indicators are used to evaluate the reporting entity's awareness and performance regarding diversity and equal employment opportunities.

(1) The ratio of women in the top management was still lower, with the gender gap differing sharply across industries.

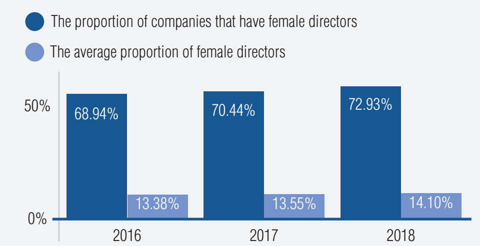
1) Female executives: In 2018, 62.63% of companies had female members on their executive team, i.e. 352 companies didn't have any female member on their executive team; Average number of female executives per company was merely 1.02, and there were only 23 companies had over three female executives; Broken down by industry, only 39.39% of companies in the mining industry had female executives and average number of female executives per mining company was 0.64, representing the lowest proportion of any industry; by organizational type, 57.50% of SOEs had female executives and average number of female executives per SOE was 0.90, representing the lowest proportion of any organizational type.

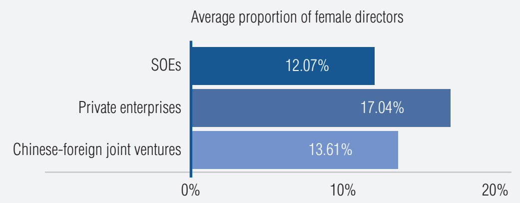


By organizational type - 2018	The proportion of female executives	Average number of female executives per company
SOEs	57.50%	0.90
Private enterprises	68.13%	1.15
Chinese-foreign joint ventures	74.07%	1.20

By industry - 2018	The proportion of female executives	Average number of female executives per company
Mining	39.39%	0.64
Production and supply of electricity, heat, gas, and water	43.75%	0.67
Construction	44.44%	0.67
Transportation, warehousing and post	61.22%	0.82
Manufacturing	62.60%	1.00
Information transmission, software and IT services	64.00%	1.10
Finance	61.25%	1.14
Culture, sports and entertainment	73.91%	1.17
Real estate	78.85%	1.25
Wholesale and retail	75.00%	1.57

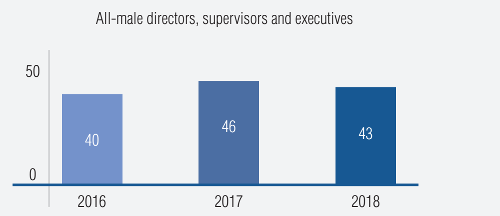
2) Female directors: In 2018, 72.93% of companies had female members on the board of directors, i.e., 255 companies didn't have any female director, while the average proportion of female directors was merely 14.10%, and only in two companies, women held more than half of the board seats; by industry, 9.24% of companies in the mining industry had female directors, representing the lowest proportion. Companies in the industries of construction and transport ranked second from the bottom; by type of organization, 12.07% of SOEs had female directors, representing the lowest proportion. Foreign-funded companies ranked second with 13.61% had female directors, while 17.04% of private enterprises had female directors, representing the highest proportion.

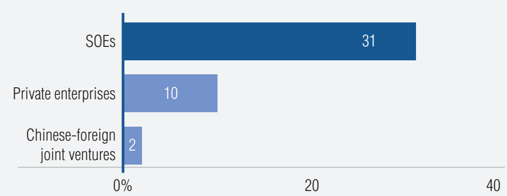




By industry - 2018	The average proportion of female directors
Mining	9.24%
Construction	9.63%
Transportation, warehousing and post	9.91%
Production and supply of electricity, heat, gas, and water	12.01%
Finance	13.92%
Information transmission, software and IT services	14.18%
Manufacturing	14.46%
Wholesale and retail	14.90%
Culture, sports and entertainment	15.17%
Real estate	17.18%

3) All-male directors, supervisors and executives: In 2018, 43 companies didn't have any female directors, supervisors and executives, accounting for 4.88% of all the companies that disclosed CSR reports that year; Broken down by industry, 22 companies in the manufacturing industry didn't have any female directors, supervisors and executives, representing the highest proportion, followed by companies in the financial and mining industries; by type of organization, 31 SOEs didn't have any female directors, supervisors and executives, representing the highest proportion, followed by private enterprises and foreign-funded companies.

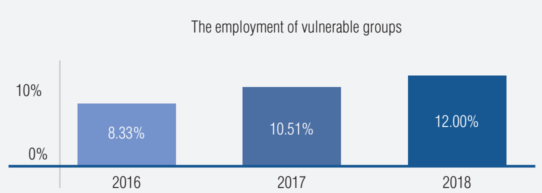




By industry - 2018	The number of companies that have no female directors, supervisors and executives
Manufacturing	22
Finance	6
Mining	4
Production and supply of electricity, heat, gas, and water	3
Transportation, warehousing and post	3
Construction	1
Scientific research and technical services	1
Agriculture, forestry, animal husbandry and fishery	1
Wholesale and retail	1
Culture, sports and entertainment	1

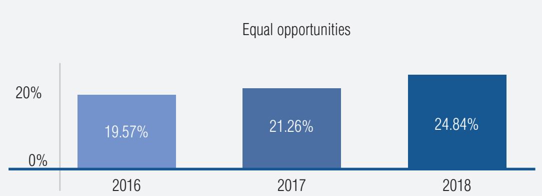
(2)Less attention was paid to non-discriminatory policies, with huge differences among different type of organizations.

1) Vulnerable groups: In 2018, 113 companies disclosed that they adopted the non-discrimination employment policy concerning vulnerable groups (disabled persons and those who had been released after undergoing labor education) in their CSR report, accounting for 12.00% of all the companies that disclosed CSR reports that year, up by 1.49% year-on-year; non-discrimination employment policy was most frequently mentioned by Chinese-foreign joint ventures yet least frequently mentioned by private enterprises.



By organizational type - 2018	Proportion
Private enterprises	9.89%
SOEs	12.69%
Chinese-foreign joint ventures	20.37%

2) Equal opportunities: In 2018, 234 companies stressed equal opportunities between different nationalities, religions and countries in their CSR report, accounting for 24.84% of all the companies that disclosed CSR reports that year, up 3.58% from the previous year; equal opportunities were most frequently mentioned by Chinese-foreign joint ventures yet least frequently mentioned by private enterprises.



By organizational type - 2018	Proportion
Private enterprises	20.05%
SOEs	27.69%
Chinese-foreign joint ventures	29.63%

Conclusion and Analysis of “Diversity and Equal Opportunities”

With the advancement of modern society, diversity and equal opportunities have become one of the much-talked-about topics of our times. Equality is one of the cornerstones for the competition and development of any company. Hence, companies should adopt an inclusive attitude towards talent, allow them to compete equally, and take on CSR regarding equal opportunities. This is commonplace in developed countries and regions, and should not be ignored in China, especially when the country is going through a rapid development process.

Females play a non-negligible part in corporate governance and the fulfilment of CSR. Research shows that a company's fulfilment of CSR cannot be achieved without the implementation of an array of decisions made by executives and decision-makers. And one important mechanism to facilitate a company's fulfilment of CSR is to adopt effective corporate governance. The diversity of executives and the board of directors, who lie at the core of corporate governance and decision-making, has been an important topic in relevant research. Gender diversity is undeniably a topic hotspot. Some research shows that compared with males, females usually have higher moral standards, so a diversified board of directors comprising a specific number of female directors could contribute to a more balanced decision-making mechanism that could ultimately facilitate the fulfilment of CSR.

In this part, indicators including “female executives” “female directors” and “all-male directors, supervisors and executives” measure the say females have in the management team of the listed companies that disclosed their CSR report. In 2018, relevant indicators showed that the average number and proportion of female executives/directors per company remained small (the average number was around 1). Considering no significant change in the level of this indicator compared with the previous year, women were still in a weak position in the top management of the listed companies that disclosed CSR reports, without much say. Take female directors as an example, indicators show that among the companies that disclosed their 2018 CSR report, nearly 30% didn't have any female director, and most of them only have one to two female members on the board of directors. As a result, female directors could only play an insignificant role. Some scholars called this “symbolic effect” — the number of female directors was so small that they might not actively participate in board discussion, or they might feel their opinions were not valued, which in turn led to their growing unwillingness to share their ideas. Under the circumstances, the decision-making of the board of directors and corporate governance could be negatively affected. To put it another way, females could not give full play to their potential regarding corporate governance and the company's fulfillment of CSR.

Non-discrimination toward and care for vulnerable groups are also crucial to a company's CSR fulfillment. Non-discrimination employment policy pertaining to vulnerable groups is an important way to help those people get accustomed to this society effectively and strive to be stronger and more independent. Providing vulnerable groups including the disabled persons with suitable jobs can not only alleviate the pressures on the government and the society, but also set a good example for the company's staff to learn from. Therefore, this measure could be crucial to the cultivation of a healthier corporate culture and work atmosphere. Not to mention, the company itself has the obligation and responsibility to adopt a non-discrimination attitude toward vulnerable groups. According to The Law on the Protection of Disabled Persons of People's Republic of China and The Regulations on the Employment of Disabled Persons, etc., employers have the obligation and responsibility to employ a specific proportion of disabled persons. But the indicator “vulnerable groups” show that only nearly 10% companies disclosed their employment policy pertaining to vulnerable groups including disabled persons in their CSR report. Worse still, as the implementation of their employment policy failed to be quantified, we didn't know whether they met the specific proportion as stipulated in the laws and regulations.

Offering equal opportunities is a key indicator of a company's values of equity and justice, as well as its fulfilment of CSR. According to the Report to the Eighteenth National Congress of the Communist Party of China, we should “establish in due course a system for guaranteeing equality in society featuring, among other things, equal rights, equal opportunities and equal rules for all; and foster an equal social environment and ensure people's equal right to participation in governance and to development.” Nowadays, social conflicts have become more prominent, “equal rights, equal opportunities and equal rules for all” proposed by the Eighteenth National Congress of the Communist Party of China were in line with public opinions and thus won favor among the general public. In response to “equal rights, equal opportunities and equal rules for all” , companies may offer equal opportunities for different nationalities, religions and countries. The indicator “equal opportunities” showed that less than one-quarter of the companies emphasized equal opportunities, with foreign-funded companies accounting for the highest proportion and private enterprises for the lowest proportion. This situation will need to be improved.

Creation of an inclusive and equal society calls for support of all individuals. At present, it is common that the listed companies in China don't attach great importance to the fulfilment of CSR in this regard. In their CSR report disclosed, most of the content concerning equal opportunities is recapitulative text, lack of substantial information and quantified data. The government, the public and the company itself should pay more attention to it and set higher requirements accordingly.

Environmental Responsibility

This part includes the following nine indicators, reflecting the concerned companies' performance regarding environmental responsibility:

(1) Environmental benefit	(4) Circular economy	(7) Environmental certification
(2) Energy saving	(5) Green office	(8) Environmental commendation
(3) Reduction of the three wastes (waste gas, waste water and industrial residue)	(6) Environmental protection and public welfare	(9) Environmental penalty

(1) Environmental benefit: In 2018, 49.15% of companies disclosed that they exploited or utilized environmentally beneficial products, services, equipment or technologies. The industries for electricity and heat production and supply had the highest disclosure rate; 77.08% of them focused on the development of clean and renewable energy and the use of environmental equipment; the financial industry came in second, with 72.50% of financial companies gradually stepping up their support for green financial products and services.

(2) Energy conservation: In 2018, 45.97% of companies disclosed their energy-saving performance. Companies engaged in electricity, heat, gas and water production and supply represented the highest disclosure rate, with 62.50% disclosing their energy-saving measures and effectiveness in the report; companies in the transportation and mining industries came in second. On the whole, compared with those in the light industry and service industry, companies in the heavy industry attached more importance to this indicator.

Environmental benefit by industry - 2018	Proportion
Production and supply of electricity, heat, gas, and water	77.08%
Finance	72.50%
Transportation, warehousing and post	69.39%
Real estate	67.31%
Construction	66.67%
Manufacturing	43.60%
Mining	39.39%
Wholesale and retail	29.55%
Information transmission, software and IT services	28.00%
Culture, sports and entertainment	21.74%
Indicator ratio	49.15%

Energy saving by industry - 2018	Proportion
Production and supply of electricity, heat, gas, and water	62.50%
Transportation, warehousing and post	61.22%
Mining	51.52%
Manufacturing	51.24%
Wholesale and retail	47.73%
Construction	40.74%
Real estate	40.38%
Finance	32.50%
Information transmission, software and IT services	14.00%
Culture, sports and entertainment	8.70%
Indicator ratio	45.97%

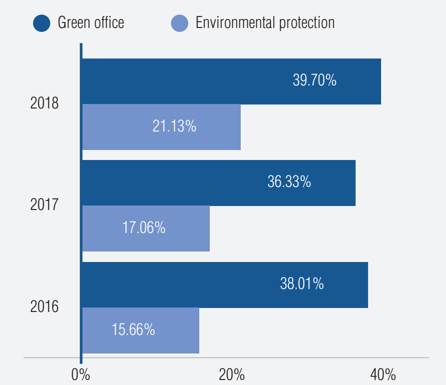
(3) Reduction in three types of waste & (4) Circular economy: In 2018, 57.75% and 33.65% of companies disclosed their efforts to reduce emissions of three types of waste and develop the circular economy respectively; among them, the mining industry had the highest disclosure rate, at 93.94% and 57.58% respectively, reflecting mining companies' efforts to lower pollution emissions and recycle resources; in general, due to the characteristics of the industry, the heavy industry paid more attention to the discharge of three types of waste and the circular economy than the light industry and the service industry.

Reduction of the three wastes by industry - 2018	Proportion
Mining	93.94%
Production and supply of electricity, heat, gas, and water	75.00%
Manufacturing	70.45%
Construction	66.67%
Transportation, warehousing and post	57.14%
Wholesale and retail	50.00%
Real estate	30.77%
Finance	25.00%
Culture, sports and entertainment	17.39%
Information transmission, software and IT services	8.00%
Indicator ratio	57.75%

Circular economy by industry - 2018	Proportion
Mining	57.58%
Construction	44.44%
Manufacturing	40.91%
Transportation, warehousing and post	32.65%
Real estate	28.85%
Production and supply of electricity, heat, gas, and water	27.08%
Wholesale and retail	22.73%
Finance	12.50%
Culture, sports and entertainment	10.00%
Information transmission, software and IT services	4.35%
Indicator ratio	33.65%

(5) Green office: In 2018, 39.70% of companies disclosed environmentally friendly measures they took in day-to-day work, like water-saving and power-saving measures and paperless office, up 3.37% from the previous year. 83.75% of companies in the financial industry disclosed their relevant measures, representing the highest disclosure rate.

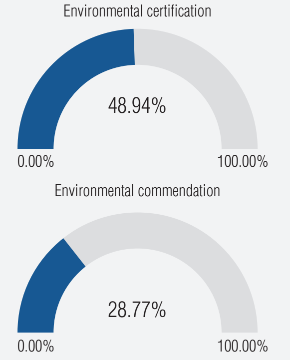
(6) Environmental protection and public welfare: In 2018, 21.13% of companies disclosed that they took part in activities concerning environmental protection and public welfare, like forest planting and garbage clearing. The proportion rose by 4.07%, compared with the previous year, showing companies' growing emphasis on environmental protection. 47.73% of companies in the wholesale and retail industries disclosed their relevant actions, representing the highest disclosure rate.



By industry - 2018	Green office	Environmental protection
Finance	83.75%	30.00%
Information transmission, software and IT services	74.00%	10.00%
Wholesale and retail	56.82%	47.73%
Culture, sports and entertainment	52.17%	17.39%
Construction	44.44%	7.41%
Transportation, warehousing and post	40.82%	26.53%
Real estate	40.38%	34.62%
Production and supply of electricity, heat, gas, and water	31.25%	31.25%
Manufacturing	27.89%	15.70%
Mining	21.21%	24.24%

(7) Environmental certification: In 2018, 48.94% of companies disclosed that they received environment management system certification, e.g. ISO14001. 69.42% of companies in the manufacturing industry disclosed their relevant actions, representing the highest disclosure rate. The construction industry came in second, with the disclosure rate of 66.67%.

(8) Environmental commendation: In 2018, 28.77% of companies disclosed that they were cited for environmental protection efforts and earned the honor of "green enterprise" and "demonstration enterprise in energy saving and emission reduction" , etc. 44.44% of companies in construction industry disclosed their environmental commendation, representing the highest proportion of disclosure.

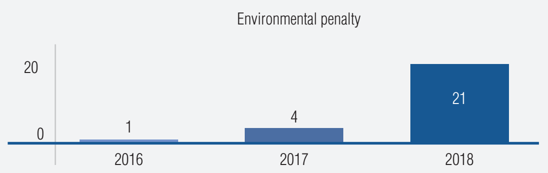


By industry - 2018	Environmental certification	Environmental commendation
Construction	66.67%	44.44%
Real estate	23.08%	40.38%
Mining	39.39%	36.36%
Manufacturing	69.42%	33.06%
Production and supply of electricity, heat, gas, and water	18.75%	31.25%
Transportation, warehousing and post	22.45%	20.41%
Wholesale and retail	36.36%	15.91%
Culture, sports and entertainment	26.09%	4.35%
Information transmission, software and IT services	36.00%	4.00%

Among the eight indicators above, SOEs ranked top in three indicators and second in two; foreign-funded enterprises ranked first in five indicators and second in one; private enterprises ranked at the bottom in four indicators, which revealed their weak awareness of environmental responsibility.

By organizational type	Environmental benefit	Energy-saving performance	Reduction of the three wastes	Circular economy	Green office	Environmental protection and public welfare	Environmental certification	Environmental commendation
SOEs	52.88%	51.35%	60.77%	33.46%	38.65%	23.27%	42.50%	31.35%
Private enterprises	45.05%	36.81%	51.10%	32.69%	39.84%	18.13%	57.14%	26.65%
Chinese-foreign joint ventures	40.74%	53.70%	72.22%	42.59%	48.15%	22.22%	57.41%	18.52%

(9) Environmental penalty: We collected and summarized incidents regarding environmental penalty by means of searching litigation and penalty information in public database and reporting of mainstream finance and business media. Among the companies that disclosed CSR reports, 21 suffered environmental punishment in 2018, a sharp increase from the previous year; most of them were manufacturing and mining companies.



Environmental penalty by industry - 2018	Environmental penalty
Manufacturing	18
Mining	3
Total	21

Conclusion and Analysis of “Environmental Responsibility”

“Environmental responsibility” has been a topic that draws great public attention. The Communist Party of China expounded on “ecological civilization construction” in the 19th National Congress, stressing that companies should be an integral part of ecological civilization construction. In addition, the Communist Party emphasized that companies should adhere to the principle of “respecting nature, conforming to the iron laws of nature and protecting nature” , pursuing “modernization on the basis of harmonious coexistence of human and nature” as healthy economic development cannot be achieved without ecological civilization improvement, and above all, play a pioneering role in ecological civilization construction.

In recent years, the losses incurred by the ecological environment degeneration resulted from pollution have been huge, and economic losses caused by a destroyed ecosystem have also been on the increase with each passing year. Undeniably, environmental pollution has become a major issue that affects economy and people's wellness. Reducing pollution and adopting sustainable development has become an imperative for all of us. The development of companies somewhat relies on social environment whilst the business of companies impacts all aspects of our society, particularly our ecological environment. Nowadays, as sustainable development is valued more by our society, companies are expected to shoulder more responsibilities with regards to environmental protection.

In 2018, the Chinese government stepped up its efforts in ecological protection by fighting the tough battle of air, water and soil pollution prevention and control. On June 13, 2018, the executive meeting of the State Council adopted the “Three-Year Action Plan for Blue Skies” , in which China's air pollution measures were further refined and expanded. In the same month, the *Opinions of the CPC Central Committee and the State Council on Comprehensively Strengthening Ecological Protection* through the Battle against Pollution specified the action plan for seven battles for blue skies, clear water, and clean soil, including pollution prevention and control in the Yangtze River Economic Belt.

To cope with environmental issues and take on greater environmental responsibilities, it is crucial for companies to produce environment-friendly products, save energy and reduce emissions, promote circular economy and green office, and participate in more activities regarding environmental protection and public welfare. In this part, compared with the disclosure rates for “circular economy” “green office” and “environmental protection and public welfare” , that for “environmental benefit” “energy-saving performance” and “reduction of the three wastes” are higher. In terms of industry, for those with severer pollution, the disclosure rate of indicators concerning clean production, energy-saving performance and emission reduction is higher, while for the service industry, the disclosure rate of indicators concerning green office and environmental protection and public welfare is higher. By type of organization, SOEs and foreign-funded enterprises performed well in terms of environmental indicators, while private enterprises were poor performers. Environmental certification and commendation aim to recognize and encourage companies to address environmental issues and shoulder greater environmental CSR. Compared with the previous year, all indicators improved, revealing that environmental efforts paid off in 2018.

Under the background of “battle against pollution” , environmental punishments extracted from the open database surged in 2018. The punishment was imposed mainly on the manufacturing and mining industries. Among the companies that issued CSR reports, 21 were punished for violating the *Water Pollution Prevention and Control Law of the People's Republic of China* and *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*. This underscores the Chinese government's commitment to fighting the tough battle of pollution prevention and control

Social Contribution and Charity

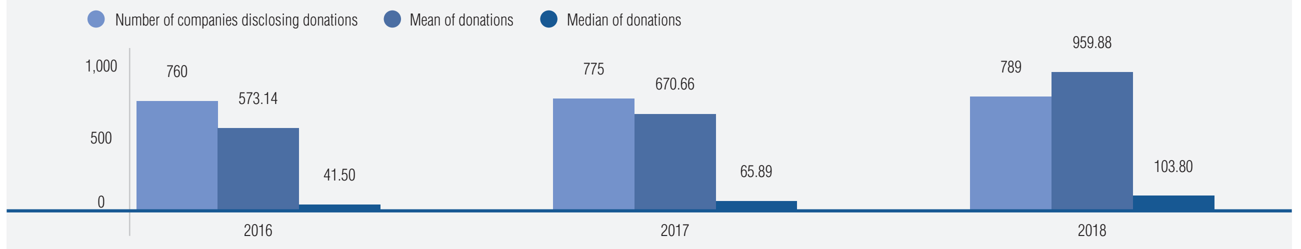
This part includes:

(1) Donations	(4) Contribution to education	(7) Job creation
(2) Social contribution value per share	(5) Volunteering	(8) Contribution to economic growth
(3) Charitable activities	(6) International aid	(9) Layoffs

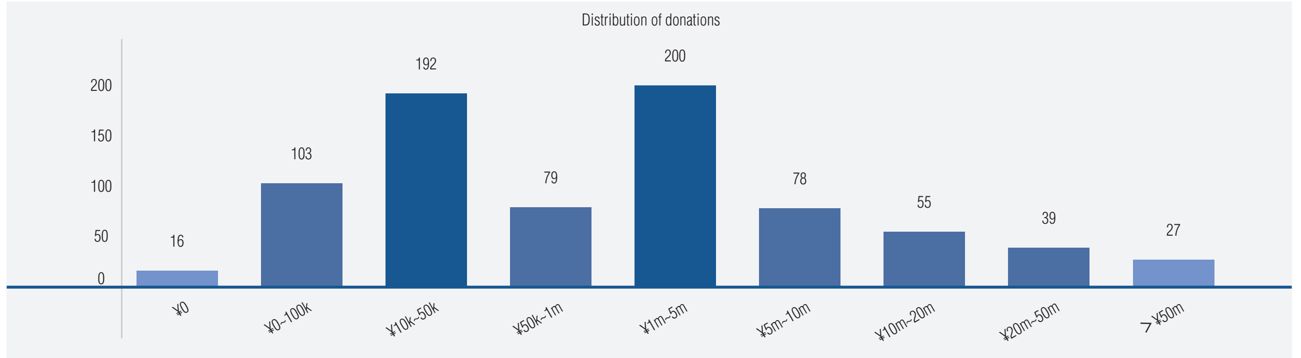
These nine indicators are used to evaluate the reporting entity's awareness and performance of social contribution and corporate charitable activities.

(1) Donations to social welfare programmes

In 2017, 775 companies disclosed their donations, the mean and the median of which amounted to ¥6,706,600 and ¥658,900 respectively. In 2018, 789 companies made a disclosure of their donations, the mean and the median of which hit ¥9,598,800 and ¥1,038,000 respectively. These data indicated that the donations by A-Share listed companies improved markedly.



Among the companies that disclosed their donations: 1) more than half donated over ¥1 million each, a significant increase from the previous year; 2) 121 donated more than ¥10 million, accounting for 15.34% of the total; 3) the donations by 27 companies exceeded ¥50 million, the highest of which throughout the year was ¥516.18 million.



By type of organization, foreign-funded enterprises and SOEs made the largest average donation, which hit ¥12.1521 million and ¥11.7382 million respectively, while the median of the donation was relatively lower, at ¥1.3168 million and ¥1.0799 million respectively; West China topped all regions with the donation of ¥11,277,300 on average and ¥1,221,000 by median.

By organization type - 2018	Mean of donations	Median of donations
Chinese-foreign joint ventures	1,215.21	131.68
SOEs	1,173.82	107.99
Private enterprises	677.65	93.17
Other enterprises	73.91	65.82
Total	959.88	103.80

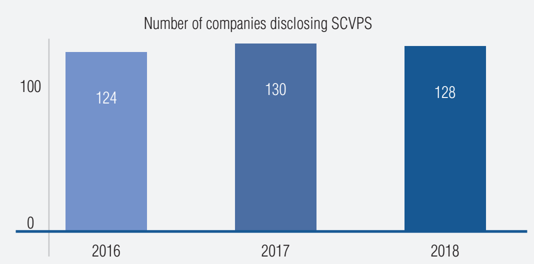
By region - 2018	Mean of donations	Median of donations
West	1,127.73	122.10
East	997.55	98.29
Central	731.92	113.01
Northeast	398.99	41.90
Total	959.88	103.80

By industry - 2018	Mean of donations	Median of donations
Mining	4,561.42	254.36
Real estate	2,628.91	143.71
Finance	2,005.05	676.40
Production and supply of electricity, heat, gas and water	1,951.14	100.00
Agriculture, forestry, animal husbandry and fishery	1,043.30	137.08
Culture, sports and entertainment	1,037.94	97.34
Construction	730.82	90.47
Wholesale and retail	556.64	125.00
Manufacturing	407.86	70.57
Transportation, warehousing and post	343.50	80.00
Water conservancy, environment and public facilities management	268.47	90.00
Information transmission, software and IT services	151.24	14.06
Scientific research and technical services	86.05	29.33

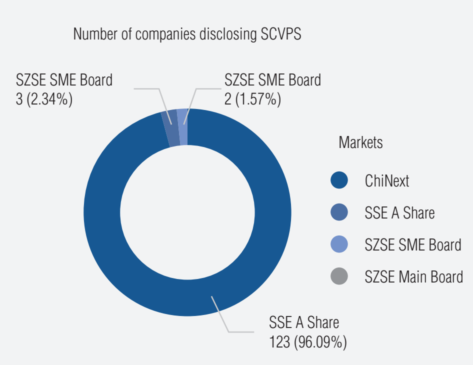
In terms of industry, the average donations of the mining industry were ahead of all other industries with ¥45,614,200, but their median was merely ¥2,543,600, indicating a huge gap between companies within the industry; the financial industry had the highest median at ¥6,764,000, with the donations averaging ¥20,050,500, second only to the mining and real estate industries. Overall, the donation by the financial industry was higher, with a smaller gap among financial companies.

(2) Social contribution value per share

1) Number of companies disclosing SCVPS: Social contribution value per share (SCVPS)⑦, brought up by the SSE, measures companies' overall contribution to society with economic benefits. In 2018, the number of companies disclosing their SCVPS reached 128, roughly the same as that in the previous year, accounting for 13.59% of the total CSR reporting companies.



Of these companies, 123 were listed on the SSE, accounting for 96.09% of the total; only 5 or 3.91% were from the SZSE, including 2 from the Main board and 3 from the SME board; the manufacturing industry topped all industries with 59 companies disclosing their SCVPS; the disclosure rate in the leasing and business service industry and the financial industry was higher, at 30.00% and 27.50% respectively.

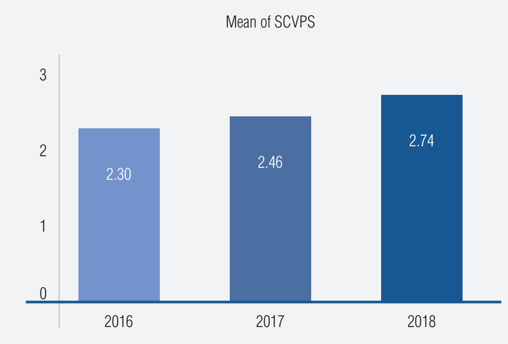


By industry - 2018	Proportion of companies	Number of companies
Manufacturing	12.19%	59
Finance	27.50%	22
Transportation, warehousing and post	18.37%	9
Mining	24.24%	8
Real estate	15.38%	8
Wholesale and retail	13.64%	6
Production and supply of electricity, heat, gas and water	6.25%	3
Construction	11.11%	3
Information transmission, software and IT services	6.00%	3
Leasing and business services	30.00%	3
Culture, sports and entertainment	8.70%	2
Scientific research and technical services	14.29%	1
Water conservancy, environment and public facilities management	9.09%	1
Total	13.94%	128

⑦: Calculation of SCVPS: SCVPS = (economic contribution + social contribution - other social costs such as environmental pollution) ÷ capital stock, wherein: "economic contribution = net profit + gross tax + interest expense + payroll" ; "social contribution = total spending on employee benefits and social security + total spending on employee training + total donations" ; other social costs, such as environmental pollution, shall be calculated based on the sum of the sewage charges and the fines imposed for environmental violations in the year.

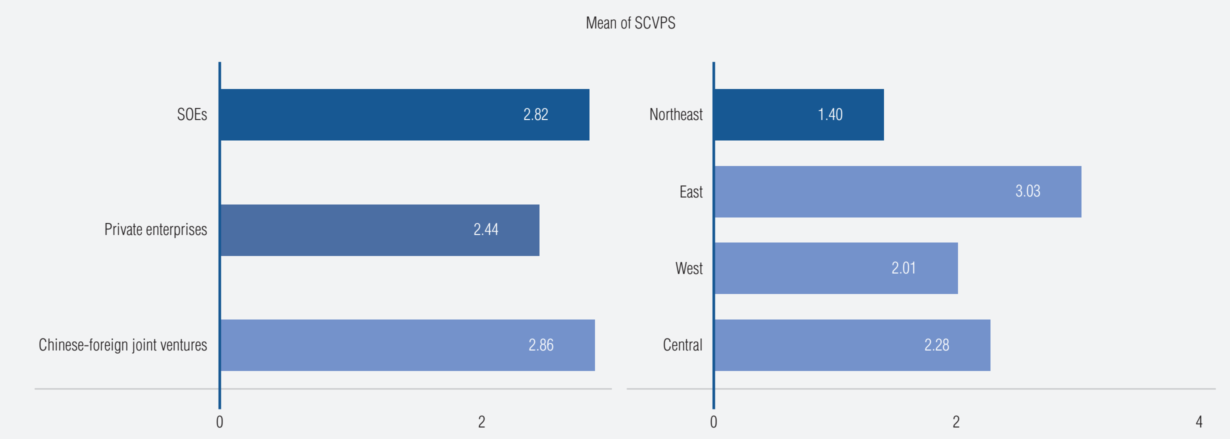
2) Mean of SCVPS

The mean of SCVPS disclosed in 2018 stood at ¥2.74, ¥0.28 per share higher than in the previous year. By industry, the financial industry showed the highest mean at ¥4.41, significantly outperforming other industries; the manufacturing industry had the highest number of companies disclosing the value, and the mean of their SCVPS was merely ¥2.32.



By industry - 2018	Mean
Finance	4.41
Scientific research and technical services	4.14
Mining	3.90
Construction	3.10
Culture, sports and entertainment	2.47
Real estate	2.44
Information transmission, software and IT services	2.42
Wholesale and retail	2.40
Manufacturing	2.32
Leasing and business services	2.25
Water conservancy, environment and public facilities management	1.79
Transportation, warehousing and post	1.41
Production and supply of electricity, heat, gas and water	1.41

By type of organization, foreign-funded enterprises had the highest mean of SCVPS, at ¥2.86, while private enterprises the lowest, at ¥2.44. By region, Companies in East China had the highest mean of SCVPS at ¥3.03, and those in Northeast China the lowest at ¥1.40.

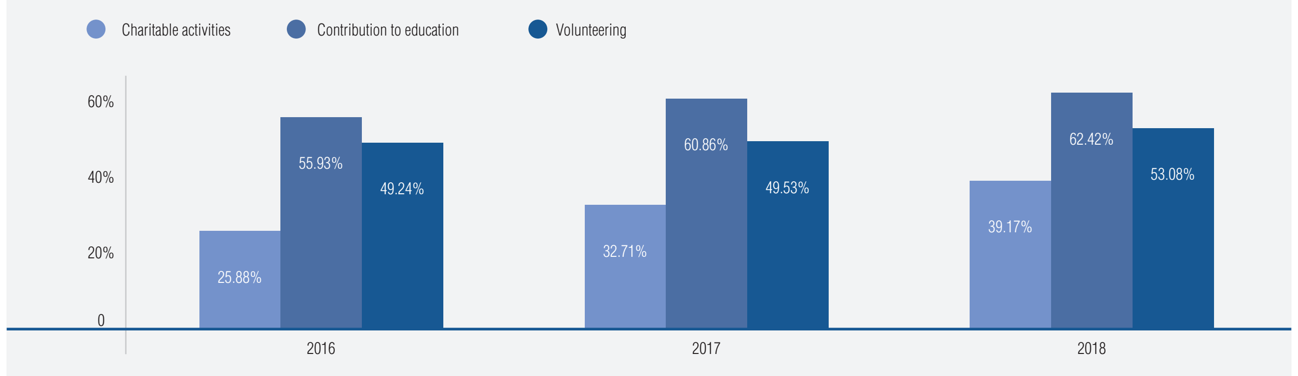


(3) Performance of social contribution

1) Charitable activities: In 2018, 39.17% of the companies launched either independent charitable programs such as dedicated charitable foundations, or charitable activities in collaboration with other organizations, representing an increase of 6.46% from the previous year.

2) Contribution to education: In 2018, 62.42% of the companies made contributions to education, including funding the establishment of schools, Hope Project and the schooling of poverty-stricken students, representing an increase of 1.56% from the previous year.

3) Volunteering: In 2018, 53.08% of the companies organized volunteer activities, including visiting elderly care centers and orphanages, up 3.55% from the previous year.



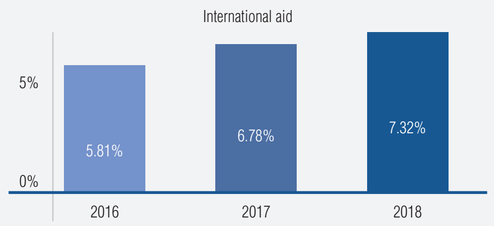
By industry, the financial industry showed the strongest performance by topping all the three indicators at 73.75%, 96.25% and 72.50% respectively, reflecting financial companies' emphasis on public welfare; **by type of organization,** private enterprises engaged in charitable activities and educational aid most actively, while SOEs were most active in volunteering; **by region,** companies in East China played the most active part in charitable activities and volunteering, and companies in West China made the largest contribution to education.

By industry - 2018	Charitable activities	Contribution to education	volunteering
Finance	73.75%	96.25%	72.50%
Real estate	57.69%	63.46%	61.54%
Wholesale and retail	45.45%	65.91%	63.64%
Information transmission, software and IT services	44.00%	60.00%	36.00%
Manufacturing	35.54%	58.47%	46.07%
Construction	33.33%	66.67%	66.67%
Transportation, warehousing and post	30.61%	48.98%	69.39%
Mining	24.24%	78.79%	51.52%
Culture, sports and entertainment	17.39%	65.22%	43.48%
Production and supply of electricity, heat, gas and water	10.42%	58.33%	66.67%

By organization type - 2018	Charitable activities	Contribution to education	Volunteering
Private enterprises	46.70%	64.84%	43.68%
Chinese-foreign joint ventures	44.44%	59.26%	53.70%
SOEs	33.27%	61.15%	59.62%

By region - 2018	Charitable activities	Contribution to education	Volunteering
East	42.60%	62.08%	56.19%
West	36.75%	70.09%	51.28%
Central	29.13%	62.20%	43.31%
Northeast	19.44%	44.44%	36.11%

4) International aid: In 2018, 69 companies offered international aid, accounting for 7.32% of the total, a slight increase from the previous year; the construction industry participated in international aid most actively, as 37.04% of construction companies disclosed their international aid; 11.11% of foreign-funded enterprises participated in international aid, accounting for the highest proportion and private enterprises the lowest at 5.49%.

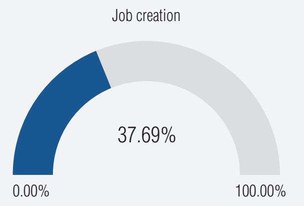


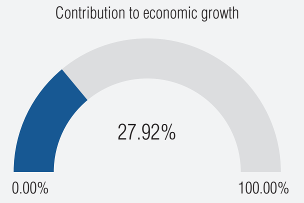
By organizational type - 2018	Proportion
Chinese-foreign joint ventures	11.11%
SOEs	8.27%
Private enterprises	5.49%

By industry - 2018	Proportion
Construction	37.04%
Mining	21.21%
Finance	7.50%
Manufacturing	7.02%
Wholesale and retail	4.55%
Transportation, warehousing and post	4.08%
Production and supply of electricity, heat, gas and water	2.08%
Information transmission, software and IT services	2.00%
Real estate	1.92%

5) Job creation: In 2018, 37.39% of the companies disclosed their job creation efforts or measures, representing a decrease from the previous year. By type of organization, 48.15% of foreign-funded enterprises disclosed their job creation, making up the highest proportion; the proportion of SOEs was virtually the same as that of private enterprises, at 36.92% and 37.36% respectively; 44.44% of the companies in Northeast China disclosed their job creation efforts, accounting for the highest proportion, while companies in Central China the lowest, at 36.22%.

6) Contribution to economic growth: In 2018, 27.92% of the companies disclosed that their business operations facilitated local economic development or their corporate policies (e.g., localized procurement policy) stimulated local economy. By type of organization, SOEs had the highest proportion of disclosure at 33.27%; by region, companies in West China had the highest proportion of disclosure at 41.03% and companies in Northeast the lowest at 16.67%.

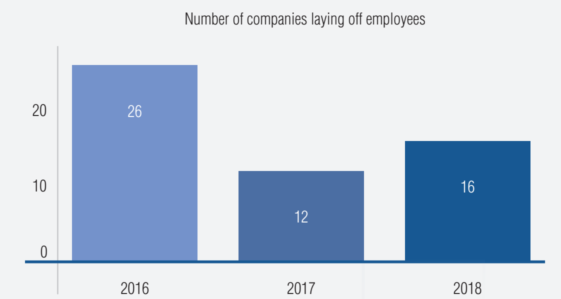




By organization type - 2018	Job creation	Contribution to economic growth
SOEs	36.92%	33.27%
Chinese-foreign joint ventures	48.15%	27.78%
Private enterprises	37.36%	20.60%

By region - 2018	Job creation	Contribution to economic growth
West	40.17%	41.03%
Central	36.22%	33.86%
East	37.16%	25.08%
Northeast	44.44%	16.67%
Total	37.69%	27.92%

7) Layoff: We have collected reports on company layoffs from mainstream financial media. Among the companies that disclosed CSR reports, there were 16 news reports relating to layoffs in 2018, a slight increase over the previous year. Among them, the financial industry triggered the most reports on company layoffs, with nine companies shedding jobs, followed by the real estate industry.



By industry - 2018	Number of companies laying off employees
Finance	9
Real estate	3
Manufacturing	2
Construction	1
Leasing and business services	1
Total	16

Conclusion and Analysis of "Social Contribution and Charity"

Chinese government has been promoting charitable activities among businesses in recent years. In the Charity Law of China promulgated in 2016, the Article 5 says that "the government encourages and supports natural persons, legal persons and other organizations in legally carrying out charitable activities that represent the core values of socialism and promote the traditional morals of the Chinese nation." And the Article 76 specifies that "natural persons, legal persons or other organizations that donate property for charitable activities are eligible for tax benefits." The Opinions of the State Council of the CPC Central Committee on Building a Healthy Growth Environment for Entrepreneurship and Encouraging Entrepreneurs to Play a Better Role ("The Opinions") was officially launched in September 2017, and it was the first time for the CPC Central Committee to make clear the status and value of entrepreneurship by issuing such an official document. According to The Opinions, it is important to encourage entrepreneurs to take the initiative to fulfill their social responsibilities, to grow a stronger sense of mission and honor regarding CSR, and to play an active part in charitable donations. These laws and regulations play a positive role in promoting the CSR practices of companies.

Companies are the most important participants and leaders of charitable activities nowadays. They can take advantage of their human, material and financial resources to make charitable activities more successful and influential. Charitable activities thus organized can play an inestimably significant role in relieving disadvantaged groups and alleviating the economic burden of the country. While running or participating in charitable activities, companies can not only promote the concept of charity, but build up their image as responsible corporate citizens and further improve their brand value and reputation. As beneficiaries of social development, companies have the responsibility to give back to society.

Looking into the donation amount of listed companies with CSR reports disclosed, we can find that there are still some "penny pinchers" making no donations at all in 2018. More than half of the companies that disclosed their donations donated over ¥1 million, a significant increase from 2017; by type of organization, Chinese-foreign joint ventures and SOEs actively participated in donation activities, playing an exemplary and pivotal role in charity. The SCVPS, initially put forward by the SSE in 2008, is not subject to mandatory disclosure and its calculation standards are vague. As a result, only a few companies, more specifically, mainly companies listed on SSE, disclosed their SCVPS. To this end, more detailed description and mandatory requirements should be put in place to ensure the comparability of data. In 2018, the performance of listed companies in various charity and social contribution indicators is ranked from highest to lowest ratio as follows: "contribution to education" "volunteering" "charitable activities" "job creation" "contribution to economic growth" and "international aid" . Financial companies showed the strongest performance and played an exemplary role in fulfilling social responsibilities. Compared with the previous year, "job creation" was the only indicator that declined. Besides, media reports on redundancies in some listed companies in 2018 laid bare the pain in the job market.

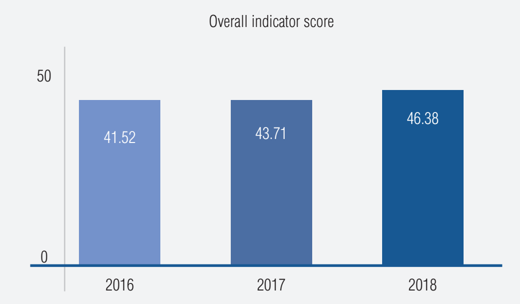
Charity work makes up an important part of CSR. Charity stands for a long-term undertaking which is an integrated embodiment of benevolence and attitude towards wealth. Charitable contributions can bring about "multiple benefits" to companies, though they may be marked as expenditures in the short run. In the longer run, by making charitable contributions, companies can increase their overall competitiveness, gain social recognition, and highlight their corporate culture and values, all of which will in turn build up their "soft strengths" and foster a more favorable social environment for their steady and sustainable development.

To sum up, although some listed companies have played an exemplary and leading role in fulfilling social responsibilities, there is still a long way to go before all Chinese listed companies can be highly dedicated to charity and public welfare. Listed companies must integrate CSR into their corporate culture and values, always bear CSR in mind in their daily operating and production activities, regard charity work as an inseparable part of their social responsibilities.

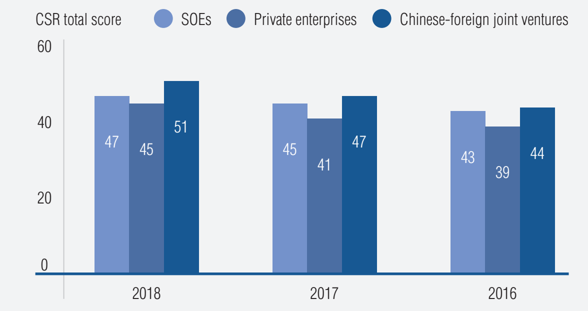
Year-on-Year Comparison of Indicators in CSR Reports

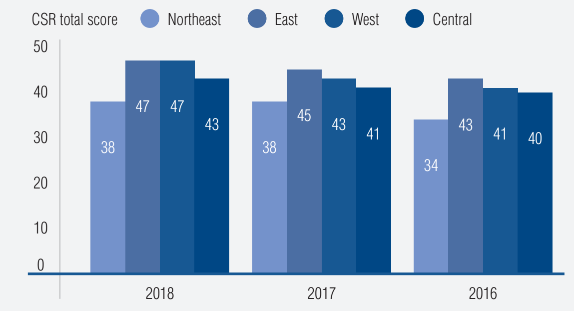
(1) Overall indicator score

In 2018, the average CSR indicator score was 46.38 (out of 100), which was 2.67 higher than the previous year and up by 6.11%. The score is not very high, which means the overall level of CSR disclosure needs to be improved. By industry, construction companies scored the highest at 53.26, while companies in the cultural, sports and entertainment industries scored the lowest, at 31.32. Compared with 2017, the CSR indicator score for wholesale and retail companies recorded the highest increase—9.65%, while that for cultural, sports, entertainment and construction companies decreased slightly. By type of organization, foreign-funded enterprises scored the highest at 51 and private enterprises scored the lowest. By region, companies in East China had the highest average score at 47 and those in the Northeast had the lowest. Compared with 2017, except for Northeast China, companies in various types of organization and across regions saw a slight rise in the score, but the growth rate varied slightly.



By industry	2018	2017	Percentage change
Culture, sports and entertainment	31.32	31.83	-1.58%
Construction	53.26	53.99	-1.34%
Transportation, warehousing and post	45.71	44.39	2.98%
Production and supply of electricity, heat, gas and water	44.76	43.37	3.20%
Mining	48.85	47.02	3.89%
Information transmission, software and IT services	38.26	36.65	4.40%
Real estate	44.20	41.59	6.27%
Finance	49.17	46.01	6.87%
Manufacturing	47.56	44.43	7.04%
Wholesale and retail	48.59	44.42	9.65%





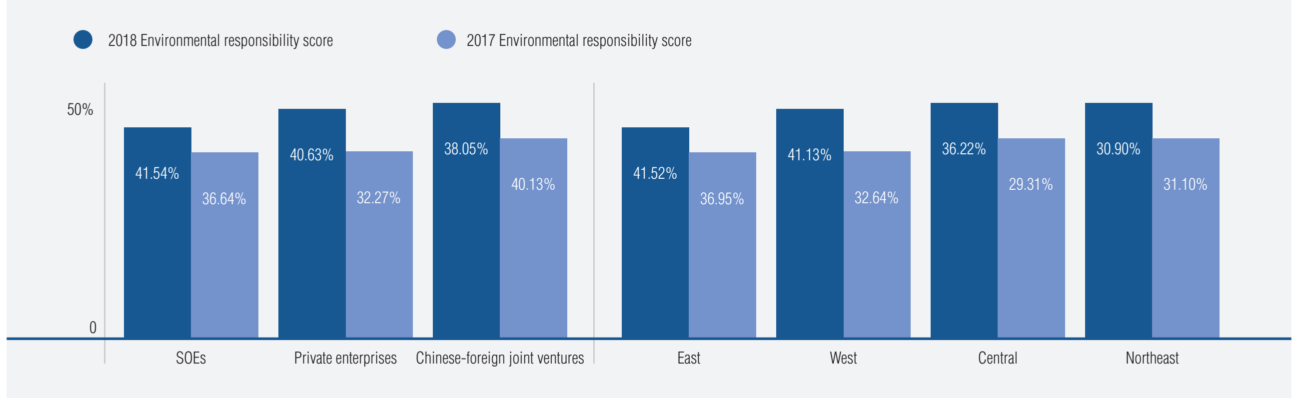
(2) Indicator score by category

In 2018, the responsibility for employees had the highest score of 67.64%, while social contribution and charity, social responsibility management and environmental responsibility had much lower scores at around 40%, reflecting the differences in the degree of fulfillment of different groups of CSR indicators. Compared with 2017, the "environmental responsibility" score recorded the highest increase—5.23%. The detailed analysis is as follows:

Indicator category	2018 score	2017 score	Difference
Product quality and innovation	49.73%	49.12%	0.61%
Social contribution and charity	37.65%	35.71%	1.94%
Social responsibility management	38.49%	35.96%	2.53%
Company operations and management	44.75%	42.00%	2.75%
Responsibility for employees	67.64%	64.78%	2.86%
Diversity and equal opportunities	41.93%	39.08%	2.88%
Environmental responsibility	40.35%	35.12%	5.23%

Environmental Responsibility:

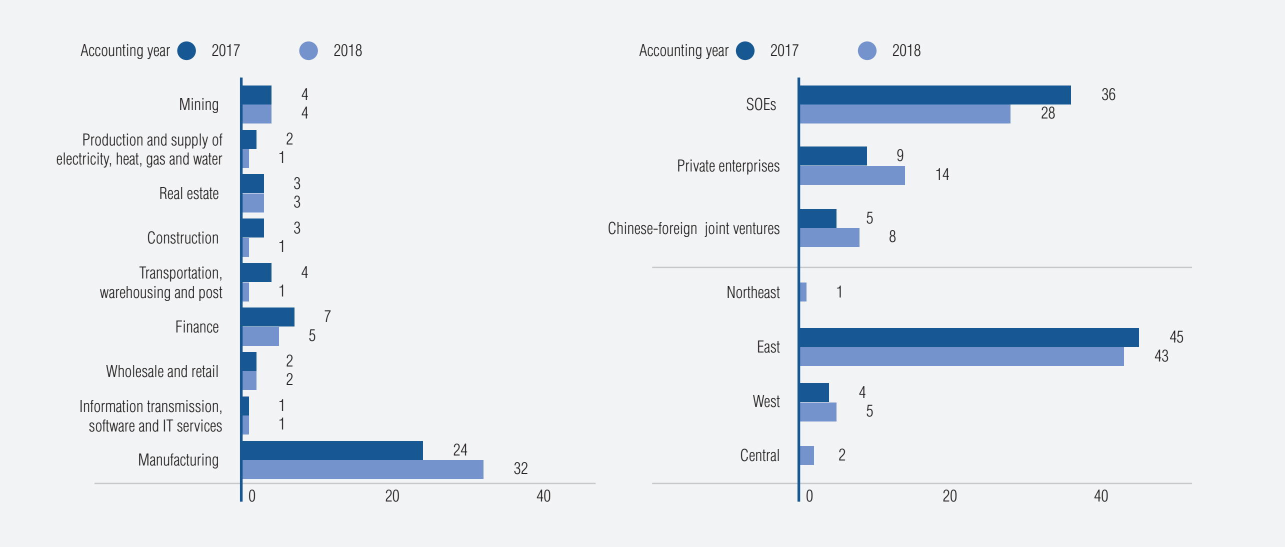
In 2018, the Chinese government stepped up its efforts in ecological protection by fighting the battle against air, water and soil pollution in an all-round way. In the same year, a series of government policies, including the *Three-Year Action Plan for Blue Skies* and *the Opinions of the CPC Central Committee and the state Council on Comprehensively Strengthening Ecological Protection by Fighting the Tough Battle of Pollution Prevention and Control,* set clear targets and specified measures for China's environmental protection. When collecting and sorting out the report data in 2018, we optimized the data sources for some environmental indicators. As a result, the Environmental Responsibility score rose significantly from the previous year. By type of organization, SOEs scored the highest at 41.54%, while Chinese-foreign joint ventures scored the lowest at 38.05%. By region, companies in East China scored the highest at 41.52%, while those in Northeast China scored the lowest at 30.90%. Compared with 2017, the environmental responsibility scores for SOEs, private enterprises and companies in Eastern, Western and Central China rose sharply. By industry, construction companies scored the highest at 47.69%. Compared with 2017, the scores for the manufacturing, and wholesale and retail industries increased significantly—by 7.00% and 6.29% respectively.



By industry	2018 score	2017 score	Difference
Difference	43.57%	36.57%	7.00%
Wholesale and retail	38.35%	32.07%	6.29%
Production and supply of electricity, heat, gas and water	44.27%	38.89%	5.38%
Mining	44.32%	40.23%	4.08%
Real estate	38.22%	34.44%	3.78%
Transportation, warehousing and post	41.33%	38.06%	3.27%
Finance	35.31%	32.43%	2.88%
Construction	47.69%	46.63%	1.05%
Information transmission, software and IT services	23.00%	22.45%	0.55%
Culture, sports and entertainment	19.02%	23.21%	-4.19%

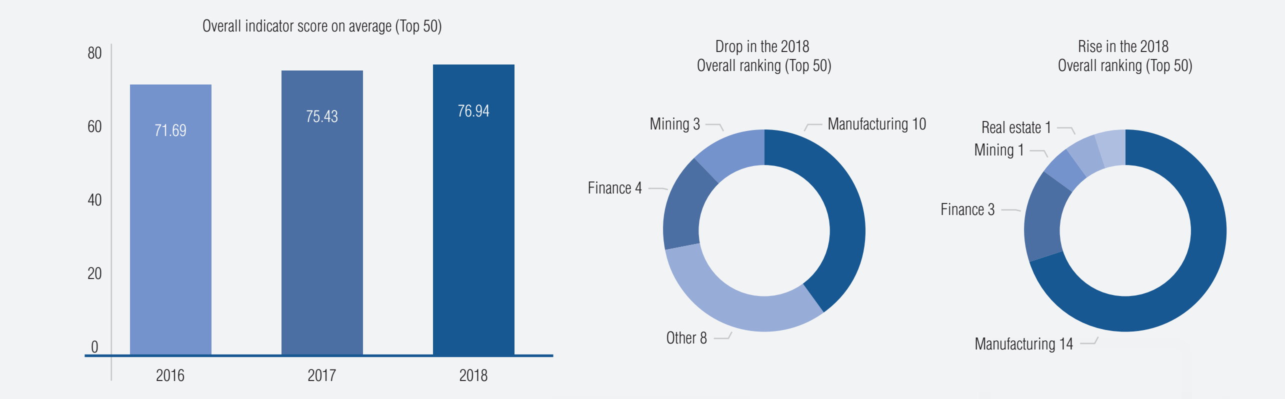
(3) Top 50 with the highest overall indicator scores

Among the top 50 companies with the highest overall scores in 2018 (see the Exhibit), 32 were engaged in the manufacturing industry, eight more than that in the previous year, and five in the financial industry, down by two compared with the previous year. There were 28 SOEs, 14 private enterprises, and 8 foreign-funded enterprises; compared with the previous year, the number of SOEs decreased, while that of private enterprises and foreign-funded enterprises increased; 43 companies were located in East China, accounting for nearly 90% of the top 50 companies, a slight decrease from the previous year.



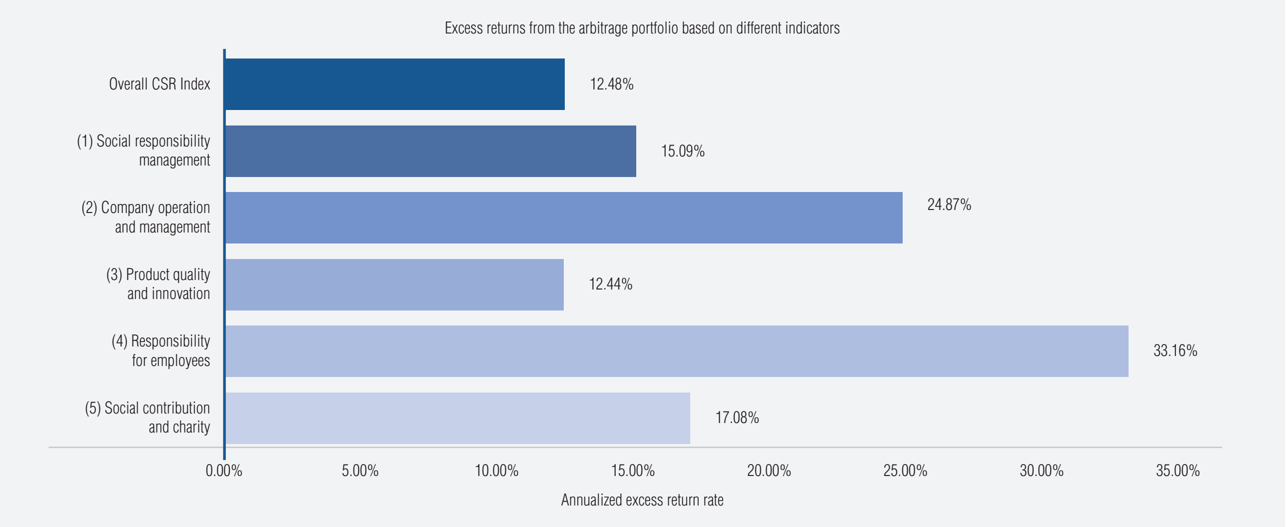
On the whole, the average score of top 50 companies in 2018 was 76.74 (out of 100), significantly higher than the overall average of 46.38; the average score of top 50 in 2018 was 1.51 higher than that in 2017, up 2.00%, lower than the overall growth rate.

Among the Top 50 companies in 2017, 20 moved up in the ranking while 29 slipped down, 12 of which dropped out of the top 50 in 2018. Among the companies that slipped in the ranking, ten were in the manufacturing industry, 4 in the financial industry and 3 in the mining industry; among the companies that moved up the ranking, 14 were in the manufacturing industry, 3 in the financial industry, 1 in the mining industry, 1 in the real estate industry, and 1 in the wholesale and retail industry. The overall change remained within the normal range of fluctuations.



Analysis of Economic Value of CSR Reports

The economic value of CSR reports is a major concern for investors in the capital market. This research looks into this issue by constructing an investment portfolio according to the report information and checking its profitability. To be specific, the researchers classify the companies based on CSR information, buy the companies with the highest CSR scores and sell the ones with the lowest scores, and then examine the excess returns from this portfolio. The excess return is defined as the stock's return in excess of the corresponding market index. For instance, the excess return of the A-share in the SSE is its monthly return minus the Shanghai Composite Index. The accumulative excess return analyzed in this report is the total excess return during the three months from May 2018 after the report release.



First of all, the research examines the economic value according to the overall CSR score, namely the total score of the CSR indicator system. After dividing the companies into three groups based on their overall scores, the researchers buy the group with the highest scores and sell the group with the lowest scores. Given that listed companies had to release their 2018 financial reports before May 2019, the researchers calculate the accumulative excess return in the three months between May and July 2019, which turns out to be 3.12%, i.e. an annualized rate of 12.48% (assuming the cash dividends are reinvested). The research also finds the result remains unchanged when the samples are divided into two, five or ten groups.

Specifically speaking, the overall CSR score is composed of seven groups of indicators, including social responsibility management, company operations and management, product quality and innovation, responsibility for employees, diversity and equal opportunities, environmental responsibility, and social contribution and charity. The research finds that the arbitrage portfolio can invariably earn positive accumulative returns whichever the indicator is adopted. The detailed analysis is as follows:

(1) Classification by social responsibility management

This part measures how much a company values social responsibility by looking into its performance in areas such as education and training, report assurance, and report inclusiveness. Sound social responsibility management is the prerequisite for the good quality of the CSR report. After classifying the companies by this score, the research finds social responsibility management has an obvious positive correlation with the accumulative excess return, which is 3.77% in three months, i.e. an annualized rate of 15.09%.

(2) Classification by company operations and management

This part includes the following six indicators: (1) strategic cooperation and sharing, (2) anti-bribery and anti-corruption, (3) business integrity, (4) governance commendation, (5) accounting irregularities, and (6) financing disputes. This reveals that comprehensive corporate governance evaluation will deliver a boost to the development of the company. After classifying the companies by the company operations and management score, the research finds the portfolio earns an accumulative excess return of 6.22% in three months, i.e. an annualized rate of 24.87%.

(3) Classification by product quality and innovation

This part includes quality management, customer satisfaction, patents and R&D expenditure, etc. They have a significant bearing on the company's economic value because of their critical role in helping the company retain customers and acquire competitive advantages. After classifying the companies by the product quality and Innovation score, the research finds the portfolio earns an accumulative excess return of 3.11% in three months, i.e. an annualized rate of 12.44%.

(4) Classification by responsibility for employees

Responsibility for employees represents the company's exclusive investment in employees. Employees constitute a cornerstone for the company's development. A strong sense of responsibility for employees will contribute significantly to the company's development in the long run. After classifying the companies by the Responsibility for Employees score, the research finds the portfolio earned an accumulative excess return of 8.29% in three months, i.e., an annualized rate of 33.16%.

(5) Classification by social contribution and charity

Social contribution and charity includes donations, charity activities and educational aid. After classifying the companies by social contribution and charity, the research finds the portfolio earns an accumulative excess return of 4.27% in three months, i.e., an annualized rate of 17.08%.

Apart from the above indicators, other indicators, such as the R&D expenditure and number of patents, also produce a considerable impact on corporate value. R&D expenditure is a measure of the company's commitment to innovation. The number of patents is a measure of what a company has achieved in innovation. Based on classification by R&D expenditure and number of patents, the research finds the portfolio earns a cumulative excess return of 1.68% and 2.18% in three months, and annualized cumulative excess return of 6.74% and 8.74% respectively. Moreover, factors such as diversity and equal opportunities and environmental responsibility are all positively correlated with future excess return.

APPENDIX: Top 50 Companies Based on 2018 CSR Reports

No.	Stock Code	Abbreviated Company Name	No.	Stock Code	Abbreviated Company Name
1	000100	TCL	26	000513	Livzon Pharmaceutical Group
2	002202	GOLDWIND	27	000002	Vanke A
3	600619	HIGHLY	28	000039	CIMC
4	600196	FOSUNPHARMA	29	600380	Joincare
5	000050	TIANMA MICROELECTRONICS A	30	000338	Weichai Power
6	601238	GAC GROUP	31	000069	China OCT
7	600104	SAIC Motor	32	002460	Ganfeng Lithium
8	000725	BOE A	33	000423	Dong-E-E-Jiao
9	600887	YILI	34	601318	PING AN
10	000999	CR SANJIU	35	000333	Midea Group
11	002594	BYD	36	600028	SINOPEC
12	002024	suning.com	37	601939	CCB
13	601600	Aluminum Corporation of China	38	000726	LUTHAI TEXTILE A
14	000963	ECPC	39	600036	China Merchants Bank
15	601899	ZIJIN MINING	40	002734	LIMIN CHEMICAL
16	000858	WULIANGYE	41	002422	KELUN
17	600062	CR DOUBLE-CRANE	42	600660	Fuyao Glass
18	601857	PetroChina	43	000729	YANJING BEER
19	002773	Kanghong Pharmaceutical	44	600098	GDG
20	001872	China Merchants Port	45	601138	Foxconn Industrial Internet
21	601231	USI	46	601390	CHINA RAILWAY
22	600050	China Unicom	47	000001	PING AN BANK
23	001979	CHINA MERCHANTS SHEKOU	48	600176	Jushi Group
24	601088	China Shenhua	49	600332	BYS
25	601328	BCM	50	002042	Huafu Fashion

AFTERWORD

"The essence of Great Learning is to foster/advance the bright virtue of mankind, to nature a people and to pursue the perfection of humanities." — *The Great Learning, one of the "Four Books" in Confucianism.*

CEIBS is committed to producing responsible leaders well-versed in "China Depth, Global Breadth." This commitment represents a considerable responsibility that modern society has placed on our shoulders. CEIBS derives inspiration from expanding teaching and training locally and internationally, sharing best business practices, and exploring how business schools can generate greater social value through CSR.

The CEIBS Corporate Social Responsibility White Paper is the culmination of forward-looking CSR insights from CEIBS professors and research teams. It presents the latest CSR trends and knowledge at home and overseas as well as CSR practices and actions on the ground in a well-organized framework designed to inspire and inform our wide community of leaders. The document contains exciting stories of alumni who are building upon the responsible business lessons acquired at CEIBS to upgrade and innovate their business operations and strategies. Their cases, in turn, enrich our CSR course syllabi and thinking. Indeed, the virtuous circle of knowledge dissemination that leads to knowledge generation through practice makes the white paper an interesting read in theoretical, practical, philosophical, and technical terms.

This white paper is the third edition since 2018 and is the result of over six months of hard work. We are grateful to school leaders for their continued support and unwavering encouragement, which has enabled work to move forward smoothly. We also thank the Case Center, as well as the Marketing and Communications, Translation and Alumni Relations departments for providing indispensable help.

We are especially indebted to the CEIBS Alumni Association for being a community of responsible business leaders and active proponents of the CSR concept and activities who contribute to our teaching and research by offering their latest cases and knowledge. Our thanks also go to alumni companies, such as ZBJ, Sinoeco, Better Life Group, Yili Group, and Phoenix Contact (China). As stellar examples of responsible corporate citizens, they actively supported the preparation of this white paper with compelling CSR cases and results.

Going forward, CEIBS will, as always, stay abreast of the latest developments and serve as a model for academic rigor, innovation, and excellence. In the best interests of the nation, we are committed to promoting and leading CSR development in China, in order to help build a sound business environment and a community that encapsulates a shared future for all of humanity.

Editorial Committee
June 5, 2020

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