

The background image shows two men standing outdoors. The man on the left is wearing a white shirt and a black face mask, looking down at a red smartphone. The man on the right is wearing a dark blue suit and a light blue face mask, looking down at a tablet or folder. They are standing in front of a brick wall and a glass-walled building with a city skyline visible in the background.

DECIPHERING THE IMPACT OF COVID-19 ON CHINA BUSINESS

A publication of CKGSB's research
and analysis on business and
the economy in an unprecedented year



CKGSB
长|江|商|学|院
CHEUNG KONG GRADUATE
SCHOOL OF BUSINESS

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“ABOUT

The COVID-19 pandemic is an unprecedented event that has upended global supply chains, challenged traditional business operations and thrown decade-long economic growth into disarray. While much of the world is still battling the virus, others are forging a path to recovery.

Drawing on its world-class faculty and their unrivaled China insights, the Cheung Kong Graduate School of Business (CKGSB) has analyzed the pandemic's impact in China and the solutions that businesses have found to ensure sustainable growth. Examining the transformation of companies and how they have leveraged technological and economic disruptions to achieve growth, this special publication offers a closer look into the world's largest economy and key takeaways for businesses in the rest of the world. Using CKGSB's unique interdisciplinary approach, this report explores the effects of the pandemic from multiple angles, including psychology, finance, economy, business and the environment, so as to provide a more holistic and accurate view to business leaders interested in learning about China and finding lessons to apply in their respective areas.

01

PSYCHOLOGY:

Psychological Resilience Before and After Work Resumption during COVID-19

by Professor Zhang Xiaomeng

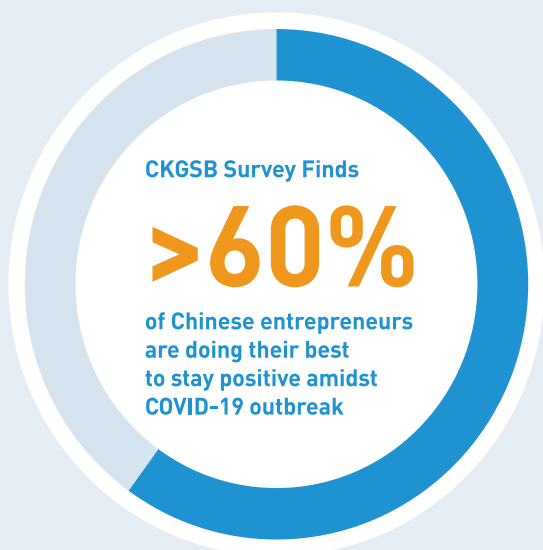
Associate Professor of Organizational Behavior, Associate Dean, Co-Director of Research Centre of Leadership, Behavioral Science & Psychology, Cheung Kong Graduate School of Business





Once the COVID-19 outbreak was officially announced in Chinese media on 22 January 2020, every company in China had to take unprecedented actions. While the state took measures to support companies facing existential woes, entrepreneurs were also actively helping themselves, and each other. The CKGSB Leadership and Motivation Research Center, overseen by Professor of Organizational Behavior Zhang Xiaomeng, sprung

to action to document the changes in leadership and organizational management by launching a series of surveys to understand the core concerns and strategies of entrepreneurs in a wide range of sectors in those initial fast changing and challenging times. The hope was that this research will feed into the business community's debates worldwide, and help businesses turn risk into opportunity.



Resuming work

The first theme the survey addressed was "Resuming work." The team sent their survey out to senior executives in CKGSB's Executive Education and Executive MBA programs and received anonymous responses from students from across industries and seniority levels.

The survey was first distributed and retrieved within a 24-hour period from 12-13 February 2020. The research team received a total of 1,112 responses for the first survey.

Survey Overview

01. Resuming work

Most companies (67.5%) decided to resume work on or after February 17. Of those, most decided to resume work at the end of February at the earliest (38.13% of the total sample).

02. Pay cuts

More than half of surveyed employers decided against pay cuts despite work being put on hold. A total of 665 companies (59.8%) continue to offer full pay.

03. Avoiding lay off staff

More than half of all surveyed employers did not lay off staff despite operational holdups; a total of 619 companies or 55.67%.

04. Production forecast

55.84% of surveyed employers believed they will be able to resume normal production and operations by the end of March. 18.62% of employers chose to resume work before the end of February. 37.32% decided to resume work before the end of March. 13.76% of respondents believe full economic recovery will take place in June.

05. Dealing with financing crunch

Companies felt the most effective ways to deal with an unexpected financing crunch are through: bank loans (59.17%), layoffs, and pay cuts (43.35%), bringing in new shareholders and investors (41.73%), and business contraction (37.77%).

The team also solicited entrepreneurs' thoughts on how they would lighten the financing burden, using open-ended questions. Of the 1,112 respondents, a total of 139 valid responses were collected, and 177 suggestions were made. Of these, the top three were: seek policy support (37.3%), make managerial adjustments (31.1%), increase cash flow or financing channels (12.4%).

06. Positive mindset

Over 60% of entrepreneurs were doing their best to stay positive. Specifically, 700 entrepreneurs are focusing on "maintaining staff confidence to overcome difficulty" (62.95%) and 412 respondents chose to "cut costs to keep the company afloat" (37.05%). This reflected the level of confidence and a key decision-making trend at the time of questioning.

Key Findings

The main findings of the analysis from the survey provided a snapshot of the debates entrepreneurs were having when faced with the difficult decisions of returning to work.

Most entrepreneurs opted to maintain confidence and improve team cohesion. Most chose not to cut pay or lay off staff, deciding to focus on employee health and safety under these difficult business conditions.

While actively seeking policy support, most companies focused on internal preparations, adjusting operational and managerial tactics, protecting their cash flow, and expanding financing channels.

This unprecedented pandemic forced companies to accelerate transformation and upgrading, focusing on building organizational capabilities, and developing breakthrough innovations to enhance their core competitiveness.

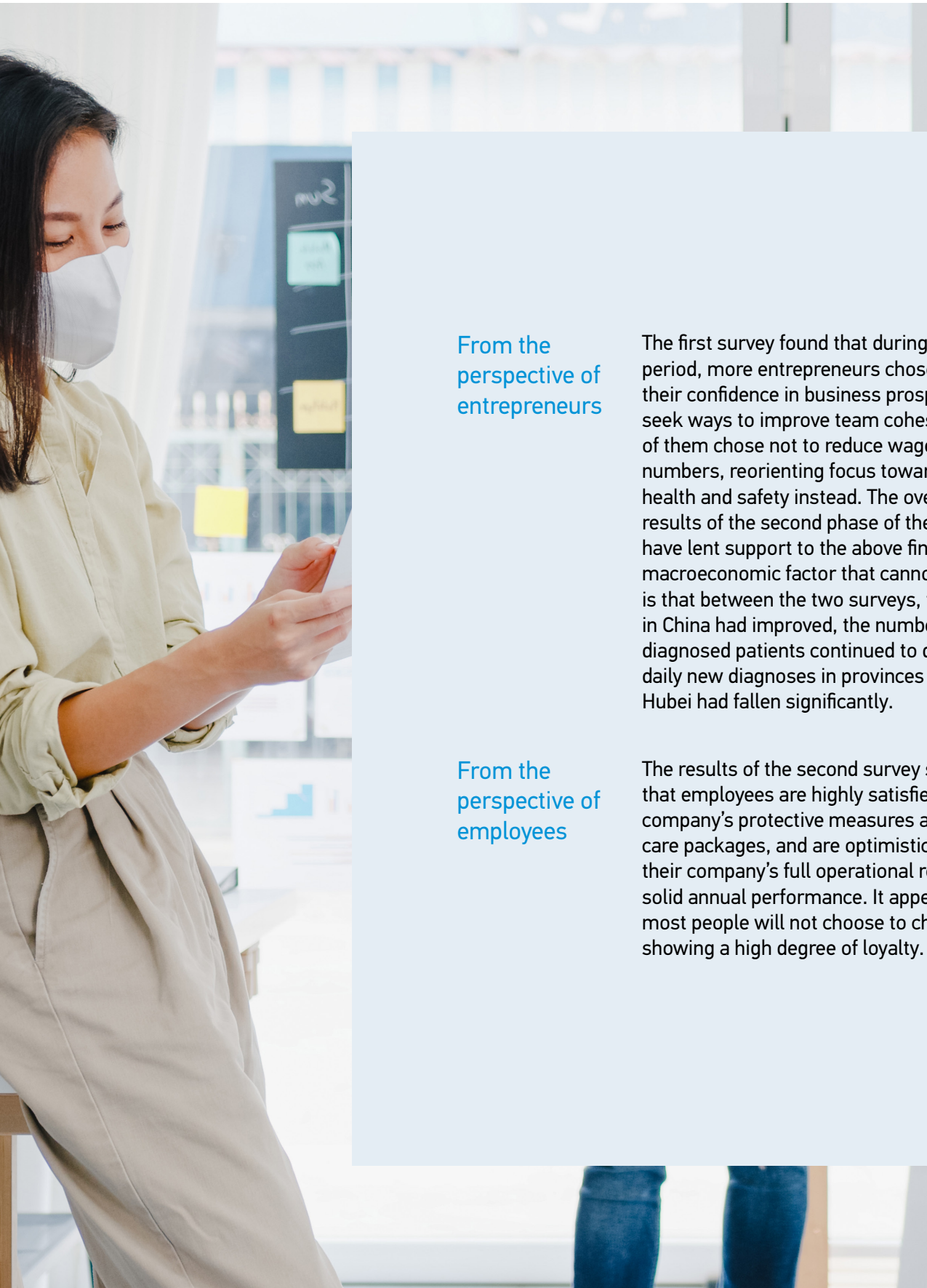


The results of this survey revealed an important component of entrepreneurial leadership and organizational capabilities: resilience. The ability to recover and rebound after a period of adversity is key to the long-term survival and success of a company. Adversity is both a test and experience of resilience. The more severe the adversity, the more difficult the organizational choices faced, and the greater the resilience an organization develops.



Tracking Work Resumption

By April 21, the sample size had expanded from the original 1,112 leaders and executives to 5,835 full-time employees. Despite the unprecedented challenges brought by the epidemic, the survey found that entrepreneurs and employees had higher levels of resilience, more optimistic expectations, lower levels of stress, higher satisfaction, and higher loyalty than was perhaps expected.



From the perspective of entrepreneurs

The first survey found that during the survey period, more entrepreneurs chose to keep up their confidence in business prospects and seek ways to improve team cohesion. Most of them chose not to reduce wages or staff numbers, reorienting focus towards employee health and safety instead. The overall results of the second phase of the survey have lent support to the above findings. The macroeconomic factor that cannot be ignored is that between the two surveys, the situation in China had improved, the number of newly diagnosed patients continued to decline, and daily new diagnoses in provinces outside Hubei had fallen significantly.

From the perspective of employees

The results of the second survey showed that employees are highly satisfied with their company's protective measures and employee care packages, and are optimistic about their company's full operational recovery and solid annual performance. It appears that most people will not choose to change jobs, showing a high degree of loyalty.

Survey Overview

01. Psychological conditions

At the time of returning to work, the 5,835 business owners and employees who responded to the survey showed a high level of resilience. The average sample's psychological resilience score was 29.97 on a range of 0-40, with a standard deviation of 6.75. Average anxiety and depression levels were within a normal range. The average anxiety score was 2.85 on a range of 0-21, with a standard deviation of 3.64. The average depression score was 3.74, on a range of 0-27, with a standard deviation of 4.10.

02. Returning to work

At the end of February, 90% of respondents' companies had resumed work in full or in part (including telecommuting). Regardless of whether or not they had already resumed work, 68% of respondents kept paying employees full salaries. The proportion of people returning to work with full pay was around 60%. More than two-thirds of respondents' companies did not cut salaries, and 84% of companies laid off zero staff.

03. Business performance expectations

Most respondents believed the company's annual performance would suffer to some extent. 77% of respondents believed that their company will perform at least 70% as well as expected prior to the outbreak, of which 10% believed that their company will outperform pre-outbreak expectations. The sectors at the top of this list are finance (17.85%), real estate (15.82%), and the internet (14.48%).

04. Working hours and efficiency

The vast majority of respondents have, to varying degrees, been working fewer hours than before the outbreak. Nearly half had been working less than 50% of pre-outbreak hours. More than half reported a somewhat diminished efficiency working from home.

05. Job satisfaction

88.5% of respondents were satisfied or very satisfied with their employer's epidemic prevention measures and 85% registered satisfaction or high satisfaction with their company's care package. About 68% of those were highly satisfied with their work status, and 75.5% were very happy with communication between colleagues.

06. Stress situation

More than 70% of respondents believed that they are currently under moderate or below moderate levels of stress. The main sources of stress are the epidemic (58.66%), finances (40.19%), and work intensity (26.74%).

07. Salary expectations

72.21% of respondents believed that they will not be laid off, and their own judgment on the possibility of being laid off has a strong negative correlation with seniority in the company. 51.89% of respondents think that their annual income will be flat, and 11.45% think it will increase.

08. Loyalty

More than 70% of the respondents believed that they are unlikely to or will definitely not switch companies after the epidemic.

**The major stressors
our respondents
experienced during the
survey period were:**



The epidemic

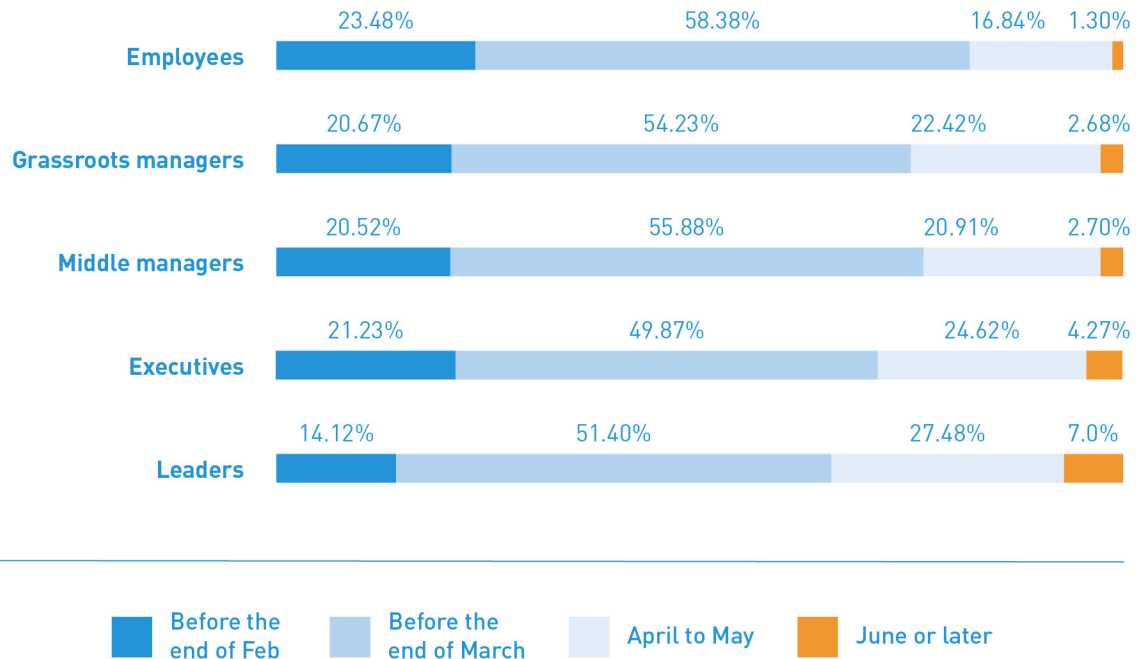


Finances

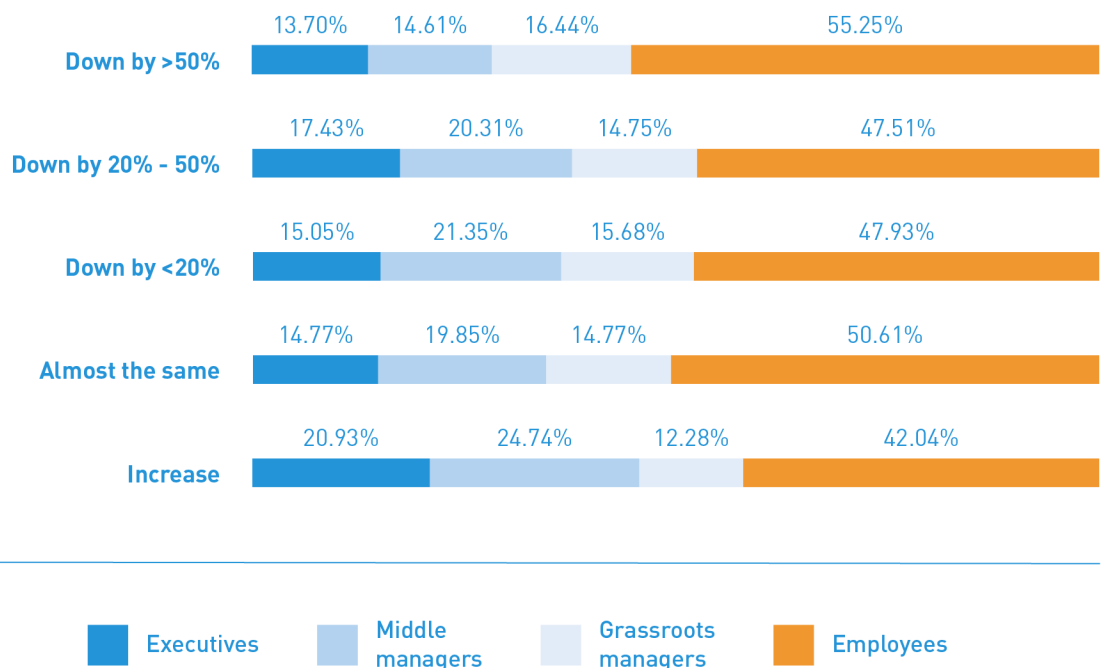


Work intensity

Respondents' Expected Time of Work Resumption



Expectation of Respondents of Different Seniorities on Salaries and Bonuses





Resuming work: Gender Differences

We see that before and after the resumption of work, the interviewed entrepreneurs and employees showed high resilience, optimistic expectations, low to medium stress levels, high satisfaction, high levels of loyalty, but gender differences were prominent.

In the return to work period, female respondents suffered greater income reduction risks before and after returning to work, higher work intensity, higher levels of anxiety and depression, and lower levels of psychological resilience, compared with male respondents.

At the same time, the study found that female leaders and executives showed higher levels of psychological resilience than men of the same level under the premise of greater pressure, which is critical to improving the resilience of the entire organization. Therefore, companies should give female employees a smoother promotion path, more empowerment and growth opportunities in the selection and retention. At the same time, they should stimulate women to show more leadership, and promote the advantages of a more balanced leadership for the benefit of the companies' development after the epidemic.

Survey Overview

01. Gender proportion

The proportion of female leaders, middle managers, grassroots managers, and regular employees with a college degree is higher than that of men of the same level. The proportion of postgraduates and above in all ranks is higher for women than for men.

02. Gender and management roles

Women are strikingly underrepresented in management roles. From a female perspective, gender is negatively correlated to the level of responsibility and years of work. As level rises and working years increase, the proportion of women to men gradually decreases.

03. Gender and company size

Female respondents mainly work in lower-revenue, small and medium-sized enterprises, outnumbering men in companies with a headcount of under 1,000 and with less than RMB 50 million in revenue.

04. Returning to work

In returning to work, women faced greater income pressure: the proportion of women returning to full pay (52.89%) is lower than that of men (64.52%), and the proportion of unpaid women waiting to restart work (7.01%) is higher than that of men (3.8%). Proportion of women with full salaries is generally lower (66.39%) than that of men (70.26%), and proportion of women with a pay cut in various percentages is generally higher than that of men. As for expected annual incomes, 14.21% of men are predicting an increase in wages, compared with 8.62% of women.

05. Loyalty score

The overall loyalty score of men (25.51) is slightly higher than that of women (24.97). The proportion of “definitely will switch jobs” respondents is slightly higher among men (6.97%) than among women (6.42%). The proportion of male respondents who chose ‘definitely will not switch jobs’ (43.13%) is much higher than that of female respondents (31.76%). The proportion of women (71.06%) who believe they will not be laid off at all is lower than that of men (73.39%).

06. Working from home

In comparing length of time between “working from home” and “working in the office”, the proportion of men who selected working from home for less than half of the time working in the office was higher among men (48.6%) than among women (43.08%). Women made up a higher proportion of those selecting working from home for more than 50% of the time when they work in the office, with those women selecting working at home more than one and a half times as much, making up 3.77% of the sample, higher than men at 2.54%.

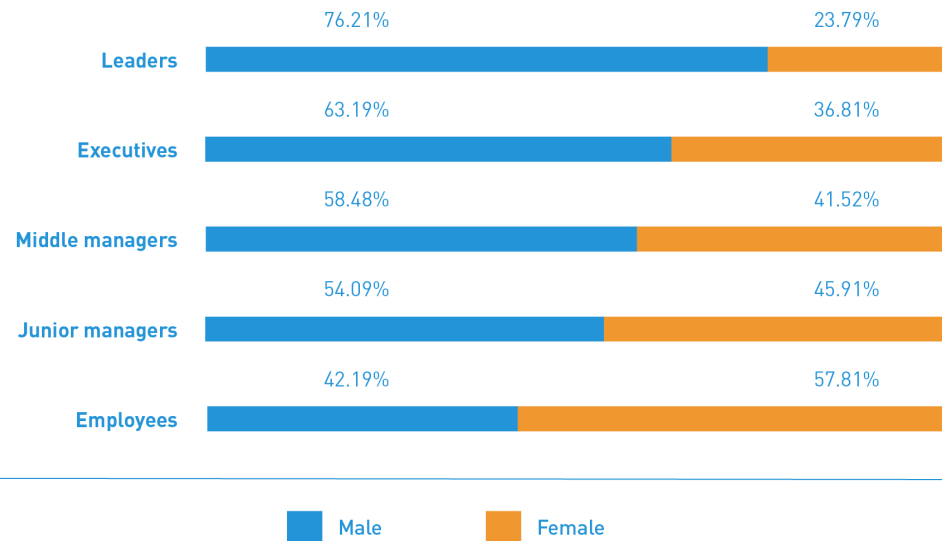
07. Stress level

Women registered lower stress than men (2.91 as opposed to 3.0). For women leaders however, their stress level is higher than that of men in similar positions (3.13 as opposed to 2.93). The percentage of women leaders who have not resumed work (14.44%) is higher than that of men (9.02%). Women’s satisfaction with the way their workplace has communicated is higher than that of men, while their satisfaction with workplace status, employee care, and epidemic prevention measures is slightly lower than of men.

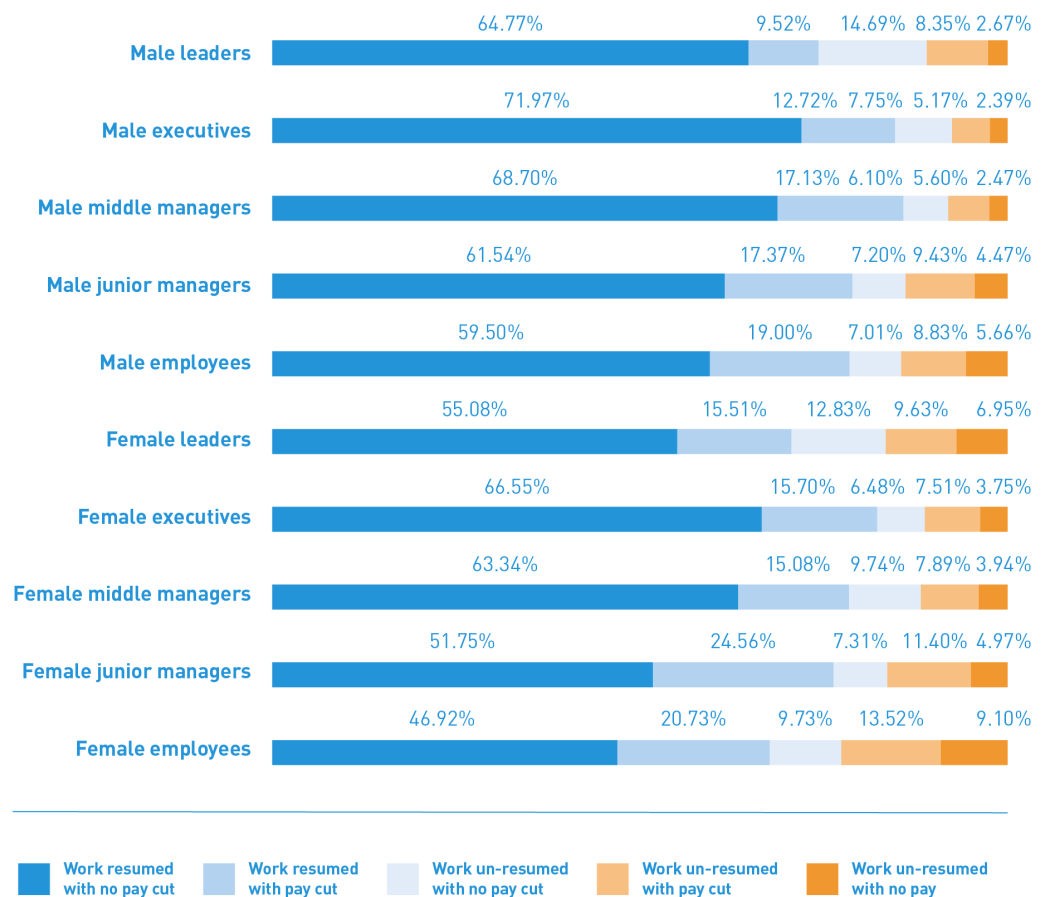
08. Psychological resilience

The average value of male psychological resilience (30.64) is higher than for women (29.18; maximum psychological resilience value of 40), and the average value of female anxiety (2.97) is slightly higher than that of men (2.75; maximum anxiety value of 21). The average level of depression (3.97) is slightly higher in women than in men (3.55; the maximum depression index is 27). Men and women as a whole showed higher levels of mental resilience, with anxiety and depression scores within normal ranges. Female leaders and executives are more resilient than their male peers.

Gender Distribution at Various Leadership Levels



Work Resumption and Payments in Correlation with Gender and Status





Building Organizational Resilience

On 26 April 2020, the survey found that psychological resilience is negatively correlated to depression and anxiety; in addition, factors affecting psychological resilience include: gender, age, education, region, company size, seniority, working years, work resumption status, loyalty, satisfaction, stress and time management.

Companies should provide personalized psychological support and build organizational resilience with the knowledge of their employees' individual psychological resilience.

Survey Overview

01. Gender

Overall, both men and women showed relatively high levels of psychological resilience, and scores for anxiety and depression are within normal ranges. The resilience of female leaders and executives was higher than that of their male counterparts.

02. Age

Psychological resilience was on average at its highest among respondents aged 40-59 (scoring 30.72 of 40), and at its lowest among 19-29 year old (28.75). With age, psychological resilience scores tend to increase and average scores for depression and anxiety follow a downward trend.

03. Education

The average score for psychological resilience increases with education level, while scores for depression and anxiety also increase with education level. The postgraduate and higher education group showed the highest level of anxiety (3.21 of a maximum of 21).

04. Region

Resilience of respondents from Hubei did not show significant differences from that of respondents working elsewhere in the country. Among the first-tier cities of Beijing, Shanghai, Guangzhou and Shenzhen, respondents in Beijing had the highest score for psychological resilience (30.55) and Shenzhen the lowest (28.83).

05. Size of company

Respondents from SMEs had the lowest level of psychological resilience and reported the highest levels of depression and anxiety.

06. Seniority and working years

There was a positive correlation between the company seniority, working years and psychological resilience. With an increase in seniority and working years, the score for psychological resilience rises. Employees who worked in their company for more than 10 years had the highest score for psychological resilience (31.03). Respondents who worked for less than a year at their company had the lowest score for psychological resilience (29.09) and the highest scores for depression (4.19 out of a maximum of 27).

07. Industry

The highest average score for psychological resilience were in respondents from the agriculture/forestry/farming/fishing sectors (31.79). The lowest score were in respondents working in transportation/shipping/logistics/warehousing (27.83). The highest scores for depression were in respondents from the culture/media/entertainment/sports (4.61) industries, and the highest level of anxiety were those working in education and training (3.95).

08. Layoffs, pay-cuts and working efficiency

In companies with greater numbers of layoffs and pay-cuts, respondents' psychological resilience trended downwards, while depression and anxiety increased. As home office efficiency increased, respondents found their psychological resilience were on the rise, and depression and anxiety levels were on the decline.

09. Loyalty

As respondents declared themselves less likely to switch jobs, their level of psychological resilience increased, and levels of depression and anxiety decreased.

10. Prevention measures

As satisfaction with their company's epidemic prevention measures, employee care package, level of communication with colleagues, and own work status increased, respondents registered lower levels of stress, higher psychological resilience, and decreasing levels of depression and anxiety. Daily exercise and time spent chatting with friends and family was also found to be positively correlated with psychological resilience.

Analysis of psychological resilience, depression, and anxiety

Through the above analysis of psychological resilience, depression, and anxiety, we found that the 5,835 entrepreneurs, managers, and employees interviewed showed a relatively high level of resilience as a whole, and a low level of depression and anxiety. But this reading varied considerably at individual and corporate levels when considering factors such as gender, age, education, region, company size, seniority, number of years of work, work resumption status, loyalty, satisfaction, stress, and time management. This is a multi-dimensional process, and cannot be tackled just at the individual level, so it requires the full and committed participation of entire organizations.

Company managers need to pay particular attention to the psychological wellbeing of female, young, recently recruited, and junior employees. Employees aged 40-59 who have served their company for more than 10 years have the highest levels of psychological resilience. Past studies have found that happiness is more “contagious” than loneliness, anxiety, and depression, and positive morale more influential than negative morale.



Thus activating the resilience of the highest resilience group in the team is particularly important to improve the overall resilience of the enterprise.

From the perspective of return to work choices

The survey found that “returning to full pay” respondents were most psychologically resilient and experienced the lowest levels of depression and anxiety, while those with “no work and no pay” were the opposite.

Therefore, companies should use whatever means possible to resume work as soon as they can (including remote working if needed). During the height of the epidemic, the fear of future uncertainty caused excessive anxiety.



How should work be carried out in this unusual period?

As so many companies have now set up a work remotely, they should continue to optimize online collaboration methods. Better teleworking efficiency and communication satisfaction can promote psychological resilience and reduce depression and anxiety. Companies should pay more attention to employee feedback too. How to help employees adapt to this new working norm to achieve a good work-life balance is a new issue that companies need to address.

From the perspective of employee care

Enterprises must strictly implement prevention and control measures, and explain clearly the importance they attach to employees' health and safety. They need to proactively understand the reasonable demands of their employees as quickly as possible. Outside of work, employees should be actively encouraged to keep fit, strengthen communication with family/friends, and maintain as active a lifestyle as possible.

From the perspective of corporate culture

The need for cohesion in times of crisis provides a rare opportunity to build organizational resilience. Companies should motivate employees to trigger their drive for mutual care and support. Company leaders need their staff to feel valued. Numerous studies have revealed that those who are accustomed to feeling and expressing gratitude and love benefit more from health, sleep and relationships, and perform better. Therefore, while this epidemic period is ongoing, the creation of a corporate culture rich in caring, communication and active expression, will generate deep emotional bonds between staff and their company which will be the basis for rapid rebound and recovery.



Stress Management

By 11 July 2020, the respondents' overall levels of stress were moderate and levels of loyalty were high. Factors that affect stress and loyalty include: gender, age, location, seniority, years in the company, company size, industry, work resumption status, time management and job satisfaction. Stress was found to be negatively correlated with loyalty and psychological resilience, which means that stress reduction measures can improve loyalty and resilience at the same time. Thus, companies should employ stress management and psychological counseling for greater organizational effectiveness.

Survey Overview

01. Stress level

Before and after resuming work, the sample of 5,835 entrepreneurs and employees reported moderate levels of stress with an average of 2.96 in the range of 1-5 (the higher the score, the greater the stress).

02. Stress level from gender perspective

Female leaders reported significantly higher stress levels (3.13) than male leaders (2.93). Among male respondents, middle managers reported the highest levels of stress (3.19). Except for leaders, female respondents reported less stress than men at all seniority levels.

03. Stress in terms of location

Respondents working in western China reported the highest levels of stress (3.02), while those working in Hong Kong, Macau, Taiwan and overseas reported the lowest levels of stress (2.84). Among respondents in big cities, those working in Guangzhou had the highest stress levels (3.04) and those in Shanghai the lowest (2.93). Hubei respondents' average stress level was 3.19, higher than that of Beijing, Guangzhou and Shenzhen.

04. Stress from an industry perspective

Stress averages across industries did not vary by much. The three industries with the highest percentage of respondents reporting "extremely high stress" and "relatively high stress" are: 16.29% in real estate, 16.17% in the internet sector and 13.22% in manufacturing.

05. Sources of stress

The main sources of stress are the epidemic (58.66%), finance (40.19%) and work intensity (26.74%).

06. Stress from a time management perspective

The average length of time respondents spent on sports, communicating with family and friends, hobbies, and social media were all negatively correlated with stress. The data shows that respondents who did not communicate with family and friends reported the highest stress values.

07. De-stress ways

Respondents believed the best ways to de-stress were: exercise (67.30%), work (52.36%), and communication with family and friends (50.68%). Those who selected “welfare activities” showed lowest levels of stress. The most effective ways for companies to help employees relieve stress were: improving epidemic prevention measures (72.58%), clarifying strategic goals (50.64%), and for top leaders and executives to engage in morale-boosting (44.92%).

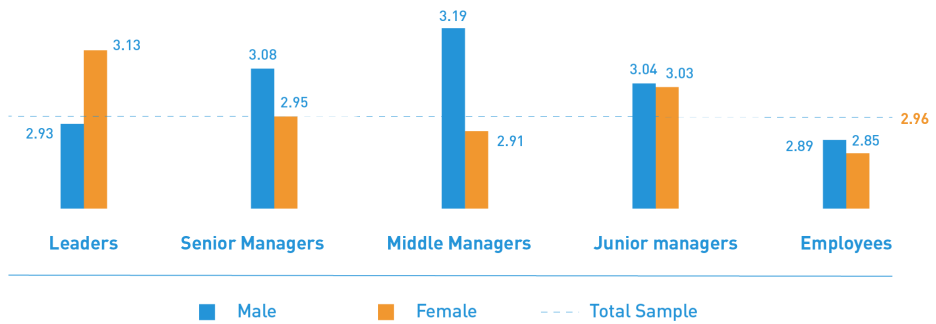
08. The loyalty level

The loyalty level of the sample as a whole is relatively high, with an average score of 25.24 out of a maximum of 30. The three sectors with the highest loyalty scores were: agriculture/forestry/farming/fishing (26.74), medical treatment/healthcare (26.28), and real estate (25.55). Loyalty levels among respondents from Hubei (26.13) were higher than average, and higher than for China’s four 1st tier cities (Beijing, Shanghai, Guangzhou and Shenzhen). Loyalty is positively correlated with respondents’ age, rank, years of work, and size of company. SMEs face the highest risk of low-level loyalty.

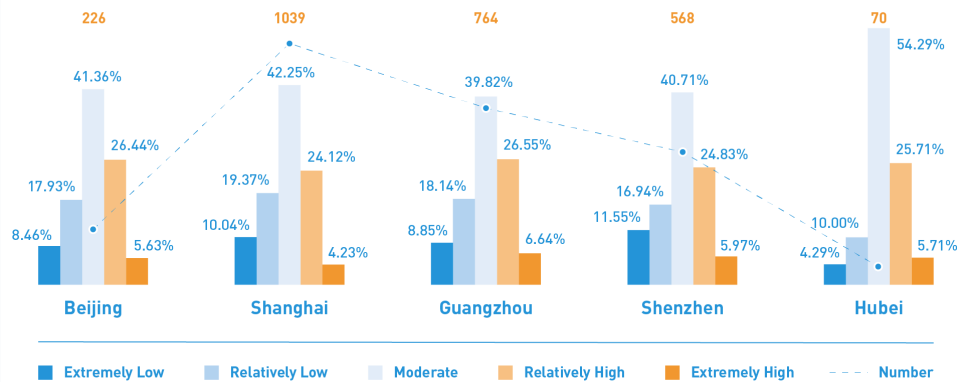
09. Stress, loyalty and psychological resilience

Stress and loyalty are negatively correlated, and loyalty and psychological resilience are positively correlated. Respondents that are more satisfied with their company’s epidemic prevention measures, employee care, colleagues’ communications, and their satisfaction with their work status, tend to be less stressed and more loyal.

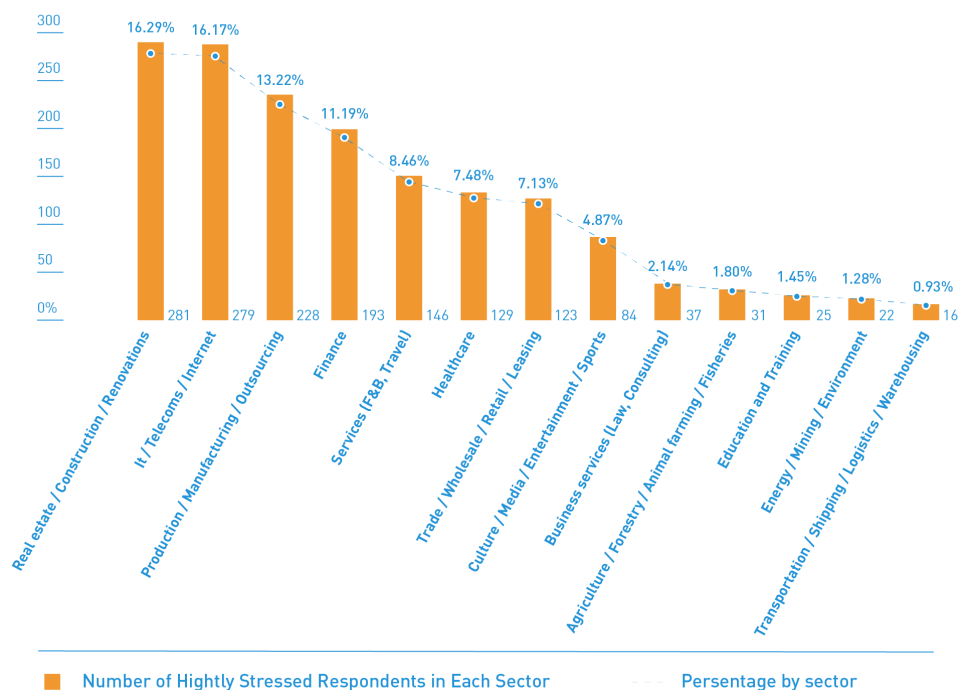
Rank x Gender Stress Comparison



Location and Stress Levels




Distribution of Relatively High Stress by Sector



Before and after resuming work, the sample of highly loyal workers had an overall moderate stress level.

The major stressors our respondents experienced during the survey period were:		The epidemic
		Finances
		Work intensity

They found exercise, working and talking to family and friends were the best ways to de-stress.

The most effective forms of counseling from their companies were:		Improving anti-epidemic measures
		Clarifying strategic objectives
		For top leaders and executives to be personally involved in boosting morale

From an objective standpoint, in terms of stress management, companies should focus on male employees, young employees and middle managers who tend to have higher levels of stress than other groups. In terms of loyalty, they should focus on young employees, new employees, female employees and high academic achievers who are less loyal than other groups. Companies should identify those with high stress resilience and high levels of loyalty in all seniority levels, including employees who have been with the company for a long time and core executives, so that they can help stabilize and improve morale.

From the perspective of work resumption

Salary cuts, layoffs, and performance target adjustments are closely related to stress and loyalty among staff. The survey showed that respondents who think they are more than 80% likely to be laid off are less stressed than those who are 50-80% likely to be laid off, reflecting the pressure caused by uncertainty. Companies should consider clarifying future performance goals and strategic adjustments to employees, and share this information throughout the company, as giving employees clear expectations helps them regain a sense of control.

Most respondents believe that working is one way to de-stress, so companies should arrange workloads in a reasonable way, so that remote working gives employees a sense of fulfillment and control, and enables them to balance work with life.

From the perspective of employee care

Companies should strongly encourage employees to form an active lifestyle, invest reasonable time in sports and fitness, communicate with family and/or friends, cultivate personal hobbies, and self-cultivation. These factors can not only help employees reduce anxiety and depression, but it also has an important role in promoting employees' loyalty. The survey found that concerns about personal career development are one of the sources of pressure for respondents.

From the perspective of corporate culture

Managers should view the epidemic situation as an opportunity to strengthen the emotional connection of employees and enhance loyalty and cohesion. In the face of this epidemic, respondents from small and medium-sized enterprises showed higher pressure and lower loyalty. Small and medium-sized enterprises should take advantage of their flexible and flat organization, communicate openly with employees, offer care packages and consolidate confidence.

One of the most important features of people's response to stress is their fear for the disease and their expectations of uncertainties, which is a greater source of stress than fear itself. Therefore, how to help oneself and employees to improve their sense of control, becomes particularly important in this special period.



Past research has revealed that, when conditions permit, the quickest and most effective way to reduce stress is to talk to someone close.

We also found in the survey that those who have zero communication with family and/or friends have significantly higher levels of stress, anxiety and depression than other respondents, and their psychological resilience and corporate loyalty are also significantly lower than other respondents. This is because social neuroscientists have found that loneliness has a huge negative effect on life and work. Therefore, increasing positive communication and establishing links between people are very helpful to reduce stress.

For enterprises, encouraging employees to establish these social relationships in different ways can help employees manage their stress levels. In this survey, we found that those who participated in public welfare activities showed the lowest degree of stress compared to other ways of reducing stress.

Since optimism and pessimism are both amplifiers of a sense of control, companies should not only enhance their employees' happiness, but also help them increase cohesion in the process of leading employees to do public welfare together.



Accelerating the Recovery

On 24 July 2020, the survey found wide disparities between respondents with high and low resilience in terms of distribution and resilience-related factors. We indexed the most important indicators such as gender, seniority and industry to generate a “recovery index”. We conducted a multi-dimensional comparative analysis of more than 9,000 valid responses to that we hope will help inspire individuals and organizations to develop targeted psychological resilience measures and accelerate recovery.

Survey Overview

01. Resilience by gender

More men than women are highly resilient; more women than men have lower levels of resilience. As age, seniority and working years increase, resilience tends to be higher.

02. Resilience by company size

Small companies' staff are less resilient. Those with fewer than 100 employees and an annual revenue of less than RMB 10 million have the smallest proportion of highly resilient staff and the highest proportion of staff with low levels of resilience.

03. Resilience by industry

The three sectors with most resilient staff are:

- energy/mining/environment (24.68%),
- real estate (21.71%),
- and services (21.66%).

04. Layoffs and pay cuts

As for layoffs and pay cuts, the largest proportion of highly resilient respondents are those who felt confident they would keep their jobs, or even receive a pay rise. At the same time, among respondents who felt they had an 80% or more chance of losing their job, or having a 50% or more pay cut due to the epidemic, many still remained resilient.

05. Resilience & activities

With greater engagement in sports and conversing with family and friends, came higher resilience levels among respondents.

06. The recovery index

The recovery index (indicating the difference between positive and negative indicators affecting psychological condition, see below for details) of the overall sample is 49.95. The recovery index of people with high resilience (65.41) is significantly higher than that of people with low resilience (21.65).

07. Gender and seniority

From the perspective of gender and seniority, the highest scores in the recovery index are found among male and female company leaders (54.94 and 54.29 respectively) while the lowest scores are among female junior managers and employees (46.60 and 46.87 respectively). The recovery index shows an upward trend as the rank of the respondents increased. Female respondents scored slightly lower in terms of the recovery index than male respondents of the same seniority level.

08. Recovery index by industry

From an industry perspective, the three industries with the highest recovery index scores are: agriculture/forestry/farming/fishing (53.36), real estate (51.61), and production/manufacturing/outsourcing (51.26). The three with the lowest recovery index scores are: business services (47.28), transportation/shipping/logistics/warehousing (46.78), and education/training (45.60).

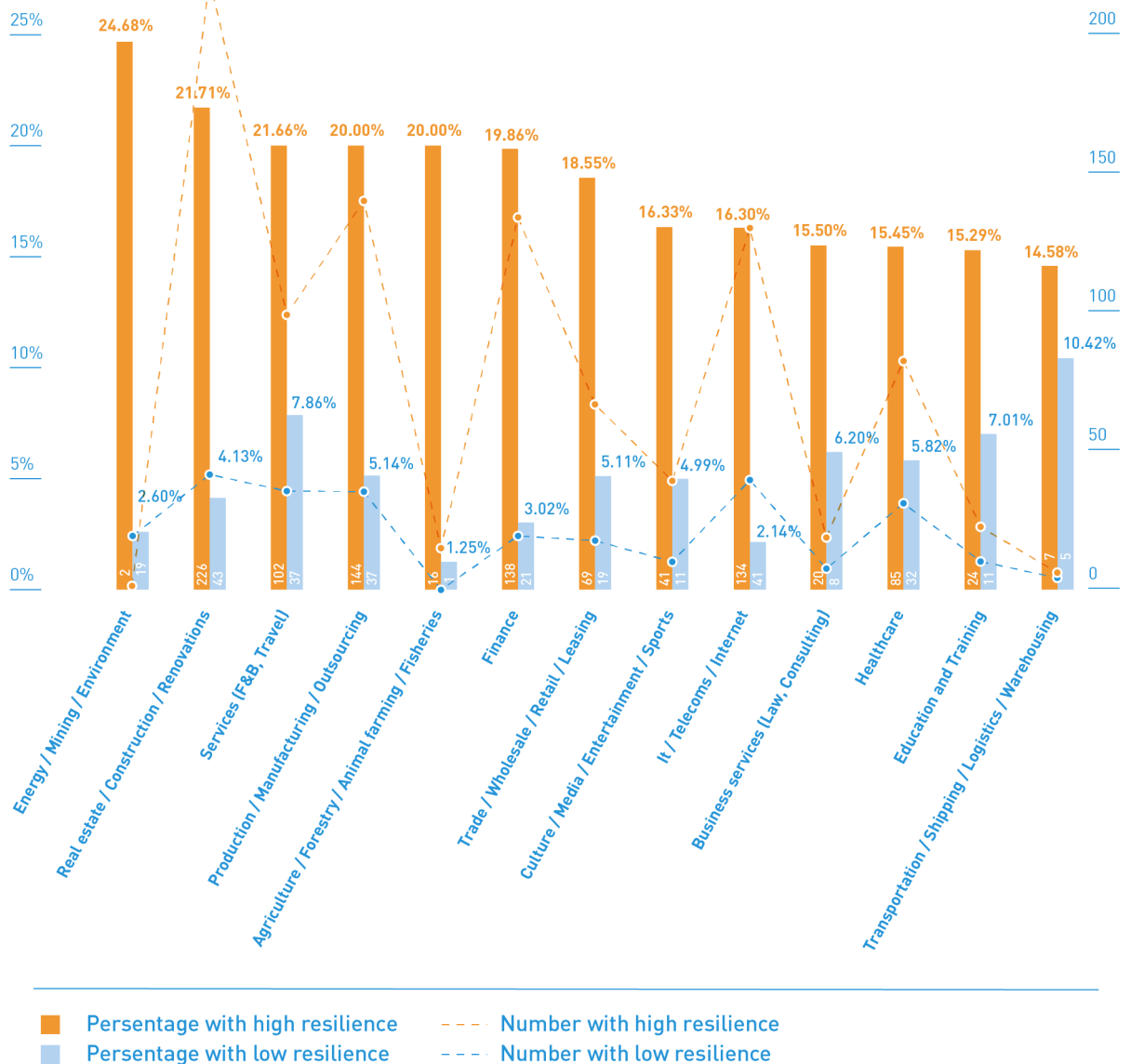
09. Top wish after the epidemic

Regarding “top wish after the epidemic”, 4,662 valid answers were compiled, categorized and analyzed. The two largest categories chosen are outdoor activities and travel (1,178 responses, or 25.27%) and work (960 responses, or 20.59%).

10. Biggest take-ways and areas of growth

Regarding “biggest take-ways and areas of growth” of the 4,446 valid answers received, the two categories with most answers are cherishing life and health (962 answers, or 21.62%) and spending time with the family (643 answers, or 14.45%).

High and Low Resilience by Industry



This part of the survey series considers the distribution and differences between high and low resilience groups, starting with a review of factors that impact personal resilience. These factors include gender, age, seniority, size of company, industry, compensation expectations, psychological state and stress management.

We hope that by presenting the results of our analysis, we may assist individuals and companies in their efforts to improve levels of resilience in a more targeted way. For example, we found that length of time engaging in sports and communicating with friends and family was positively correlated with high resilience. Whether for personal time management or in developing corporate care packages and training, everyone can find something of use in such findings.

We reviewed and indexed the important indicators of personal psychological conditions to generate a “recovery index”, which quantitatively presented recovery scores from the angles of gender, seniority and industry. At the intersection of gender and seniority, we found that female respondents had slightly lower recovery scores than men of the same

level, but that as seniority increased, so did the recovery index. No matter how high or low one’s score, companies should care about the mental condition of their employees, give team resilience plenty of attention, and lay a solid foundation for a performance recovery in the near future.

Regarding “biggest wishes for the end of the epidemic” and “learning and growth points”, the results show that social alienation from epidemic-prevention measures has led to a yearning for communication and relationship-building. The most frequent themes were gathering, family, and communication. Company care packages for employees should promote greater frequency and depth of team communication. Corporate cultural activities may be carried out around the themes of family and care.



We believe that in unprecedented times, the psychological recovery of employees and the reunion of teams are important challenges that companies in all industries face in the period after the immediate threat of the virus has subsided.

In analyzing the survey findings, our recommendations are as follows:

01.

Small and medium-sized enterprises have suffered most from this epidemic. Both entrepreneurs and employees of small and medium-sized enterprises show low psychological resilience levels and very high degrees of depression and anxiety. Small and medium-sized enterprises should be flexible and take advantage of their relatively flat organizational structure. Top leaders and executives need to communicate frankly with employees, express concern proactively, recoup confidence, and accumulate energy for recovery.

02.

The choices and methods of work resumption by companies and the individual's working state have a great influence on mental state. Pay cuts and layoffs should be kept to a minimum, and staff should be given clear and stable expectations. In addition to the challenges from the epidemic itself, work and family and unclear strategic direction are important stress factors. Enterprises should promptly clarify future performance goals and strategic direction adjustments to employees, spending as much energy at the top as at the bottom of their organization. Giving employees honest expectations will help them improve their sense of control.

03.

Enterprises should particularly pay attention to and care for the mental state of female, young, new, and junior staff. The survey shows that, compared with other groups, these types of employees have relatively lower levels of resilience, and very high levels of depression, anxiety and stress. Activating the leading role of high resilience groups in an organization will help to enhance the overall company resilience. Companies can, for example, empower older employees and executives (especially female executives) to communicate with other low-resilience groups.

04.

Corporate leaders and executives face a greater leadership test during the epidemic, and play a crucial role for their colleagues. In the view of most respondents, "leaders and executives personally taking charge of morale-boosting" is more effective than online and offline trainings. In the face of considerable stress, female leaders and executives show a higher level of psychological resilience than their male peers, which is essential to enhancing the resilience of the entire organization. Therefore, companies should pay more attention to, tap and stimulate the advantages of female leadership, and promote the complementary integration of the advantages of gender leadership.

05.

With COVID-19 having become a global pandemic, sources of stress have multiplied, and are unlikely to disappear any time soon. This means stress management is essential, and needs to kick in quickly and effectively. Companies should, as far as possible, balance their job satisfaction and work intensity with their employees' family needs at this time.

06.

Cultivating and maintaining positive social relationships is an important indicator of social resilience. Companies should help employees improve their ability to withstand and recover from stressful events and deal with social isolation. Companies should actively encourage and facilitate exercise and fitness among colleagues, as well as communication with family and friends. An active healthy lifestyle is key to stress management. The impact of social cohesion in time of crisis offers a rare opportunity for organizational resilience. Enterprises should encourage a caring attitude among employees by actively offering care.

07.

The epidemic has given us an important opportunity for reflection and introspection. Everyone is re-examining what is important in life and reprioritizing the essentials. Health, emotional communication, and cognitive development have become important issues for personal and organizational growth. The survey finds that concerns about career development is a stressor among respondents. Companies should actively respond to employee growth needs, choose suitable online and offline learning and training models, and plan clear career development paths with them. From an organizational perspective, companies should seize this "window of opportunity" to strategically rewind and prepare for a transformational transition once this is all over.



Conclusion

When we collected the questionnaires, no one could predict in the face of great difficulty and uncertainty, how the Chinese economy, Chinese companies and each one of us would get through.

Under the pressure of the epidemic, companies have had to make strategic adjustments, bring forward technological and business model innovations, and spawn new services and products.

The 5,835 entrepreneurs and employees surveyed here showed relatively high levels of psychological resilience, loyalty, stress resistance, and demand for learning and self-improvement opportunities. We believe it is these advantages that will fuel China's economic recovery. Every enterprise and each and every one of us can gain resilience and find areas of growth in these extraordinarily testing times.

02


FINANCE:

Investor Sentiment in China at the Beginning of the Pandemic

by Professor Liu Jing

Professor of Accounting and Finance,
Associate Dean, Cheung Kong Graduate
School of Business





Even as the COVID-19 pandemic curve began to flatten in China, the global environment can be seen as a stark contrast.

Against such a solemn backdrop, investor sentiment has become relatively negative, with a pessimistic view on the future trends of both China's A-shares and housing prices, and lowered expectations of economic growth. This sentiment can also be seen in the choice of investments. In the Cheung Kong Investor Sentiment Survey (CKISS) released in May 2020, respondents showed a stronger desire to invest in conservative wealth management products and funds, and bearish on real estate and overseas investments.

The Cheung Kong Investor Sentiment Survey (CKISS), a survey of investor sentiment and expectations of China's capital market, is based on 2,500 respondents from 13 major cities of China. The findings are gathered from questionnaires on investor sentiment collected in April 2020, newly released financial reports of listed companies, and the latest macro data of both Chinese and overseas capital markets.

This report comprises of two sections:

- Section one highlights the details and findings of the questionnaires to better understand investors' views on future trends in the stock market, real estate, and other assets, as well as macro indexes such as economic growth.
- In section two, factors that trigger investor sentiment are analyzed from the macroeconomic and listed companies' perspectives.

Expectations on both stock and housing prices highlight an evident decline

Survey respondents displayed a negative attitude towards A-share prices, dragging the expected rate of return on A-share prices to the negative value for the first time. The expected rate of return in Q1 2020 is -1%, a decrease of 2.1% compared to that of the previous period. Respondents continue to be bearish towards Hong Kong stocks, with expected returns dropping to -5.8%.

Respondents' expectations on housing prices were also significantly lower than the previous period. The expected return dropped to 1.6%, a decrease of 1%, and the expected probability of a housing price crash was 25%, an increase of 6.2% compared to that of the previous period.

Although respondents were not optimistic about the recent stock market trends, investors continue to show some interest, albeit a little lower than before, to invest in stocks.

Professor Liu Jing analyzed the reason for this:

- 1** China is the first country to successfully curb and control the outbreak and restart economic activities.
- 2** The overall valuation of A-shares had hit a 20-year low, attracting investors to seize the opportunity.
- 3** The deleveraging in 2018 and 2019 helped private listed companies clear most of their financial leverage risks.
- 4** Chinese investors have become accustomed to the Sino-US trade frictions, and have changed their pessimistic attitude into a relatively optimistic expectation, holding the view that trade between China and the United States will not be significantly affected in the long run.

Overall expectation on economic fundamentals has declined, while expectations on exchange rate and inflation remain relatively stable

Respondents have lowered their expectations on economic growth. In this period, less than half of the respondents (46.8%—4.5% lower than the previous period) were confident that China's GDP growth rate will exceed 5%—the average expected GDP growth rate was only 4.8%, a decline of 0.3% compared to Q4 2019.

At the same time, respondents' overall expectations on inflation and exchange rates remain relatively stable. The expected growth rate for inflation was 3%, and the expected probability of a sharp decline in the exchange rate was 19.3%, almost the same as the previous period.

Respondents' consumption intentions remain weak on non-essential social activities

The survey showed that dining in a restaurant and shopping in a mall were the most preferred activities for respondents, selected by 43% and 49% of respondents respectively, followed by travelling on the subway or bus, and travelling by plane or train (25% and 30%, respectively). These activities are related to basic necessities of life. However, consumption intention remains weak for non-essential social activities such as staying at a hotel, extra-curricular activities, housekeeping services, and beauty care. The results demonstrate the essential role that people's psychology plays in the demand side of the economy, and that effective control of the pandemic is of paramount significance to easing people's worries and fears.

43%
of respondents indicate a reduction in living expenses

68%
indicate they will pay more attention to investing in their personal health in the future

The COVID-19 pandemic has had a negative impact on consumers' lives. As a result, only 4.8% of respondents do not believe that the pandemic has had a substantial effect on their daily life, 37.7% of respondents have indicated an obvious decrease in income, and 5.8% of respondents have lost their jobs.

We speculate that the epidemic will have an impact on consumers' attitudes towards life, specifically, paying more attention to health and being more willing to enjoy life. The survey results show that up to 67% of respondents say that they will care more about investing into their personal health in the future. Only 15% were interested in buying a new car and only 2.2% were interested in buying a bigger house. This is consistent with the respondents' pessimistic views towards the real estate market mentioned previously.

Impact of COVID-19 on the economy surpasses that of SARS and the Financial Crisis

The SARS outbreak was limited to China and its neighboring countries and regions, on a relatively small scale and for a relatively short time, affecting only 8,422 people. Also, unlike the economic structural problems faced during the Great Depression and the Financial Crisis, COVID-19 can be compared to more like that of a natural disaster. The only effective way to control the infection before a vaccine or cure is developed, is to increase testing, and ensure strict quarantine measures and lockdowns are implemented, which place heavy burdens on the economy, in particular the service sector.

In Q1 of 2020, China's GDP experienced a year-on-year decline of 6.8%. Assuming that the impact of COVID-19 in China commenced after January, the economic growth in February and March actually declined by 13.2%. In the United States and France, their Q1 GDP decreased 4.95% and 5.2% year-on-year, respectively. If we assume the two countries were not impacted by COVID-19 in January and February, the economic decline in March reached 19.7% and 18.6%, respectively in these two countries.

SMEs are under severe pressure with an increased risk of unemployment

The service sector has been hit hardest by the pandemic, with the sector essentially at a standstill. This places severe pressure on SMEs. According to China's 2018 national economic census, the employment rate of SMEs in the service sector was around 70%. Among them, the employment rate of SMEs in accommodation and catering, resident and repair services, as well as culture, sport and recreation sectors surpassed 90%, however these sectors are also those hardest hit by COVID-19.

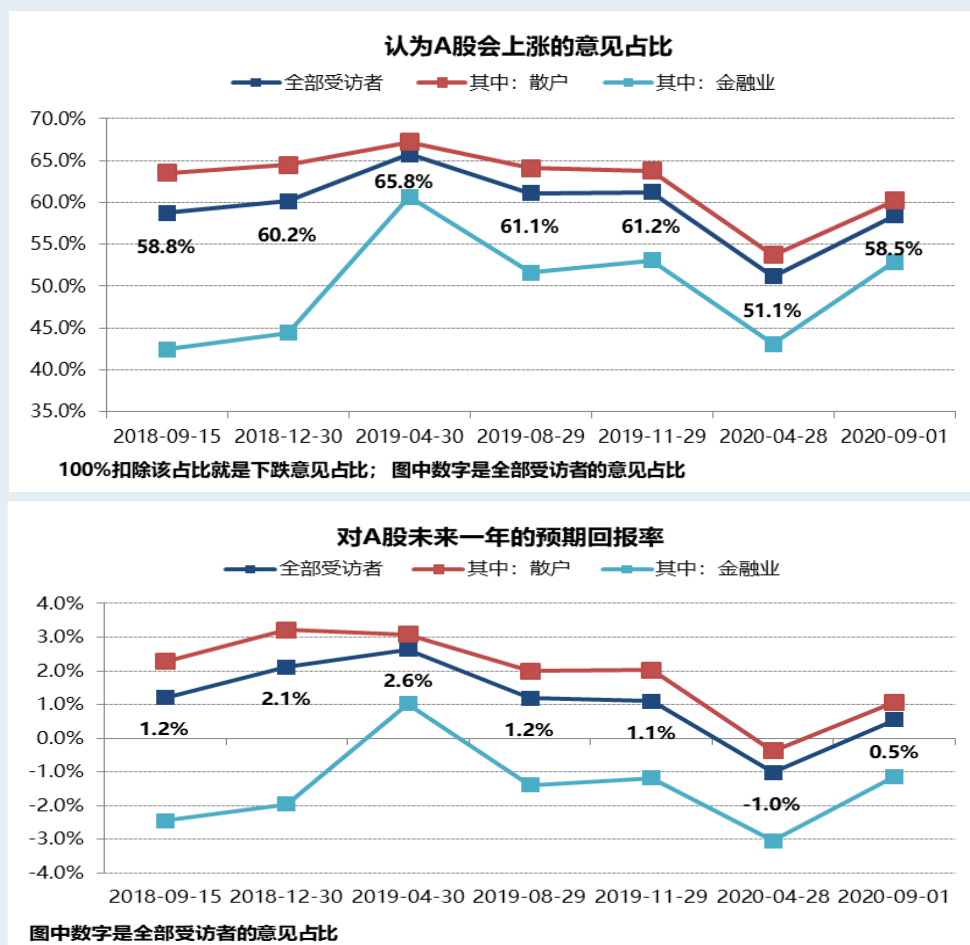
Unprecedented stimulus plans around the world and China's caution

Several European countries and the United States have implemented decisive financial stimulus programs. According to statistics from the International Monetary Fund (IMF), the financial stimulus offered by G20 countries accounted for 2.3% of their total GDP (compared to 0.5% during the Financial Crisis). More specifically, stimulus funds, excluding loan guarantees for enterprises, accounted for up to 10% of the GDP in the United States, Japan, and Germany. If loan guarantees for enterprises is included in the stimulus packages, then the packages account for 36% of GDP in Germany, and 13.5% and 19% in the United States and Japan, respectively.

In comparison, China's stimulus package accounted for only 2% of its GDP. China's cautiousness may be a result of its lessons learned from its previous stimulus package, which led to a heavy deleveraging burden for many years, and may also be attributed to the relatively high household savings rate. In our opinion, as the impact of the pandemic continues, the Chinese government will have no choice but to intensify demand-side stimulus strategies, to protect a large number of SMEs from going bankrupt.

Investors continue to hold on to gold and are optimistic on the A-shares market

Compared with Q4 of 2019, Q1 of 2020 brought global investors a once-in-a-century challenge. Uncertainties will also only increase over the next decade. Therefore, this survey recommends that investors increase their gold holdings to mitigate or avoid potential risks. Furthermore, A-shares and the Hong Kong stock market have a good price-performance ratio, and may perform better if the government enhances its stimulus plan. In particular, technology driven sectors, such as information technology (IT), internet and cloud computing, are promising, and have indirectly proved their robustness during the pandemic.



About the Cheung Kong Investor Sentiment Survey (CKISS)

The Cheung Kong Investor Sentiment Survey (CKISS) is a survey on investor sentiment and expectations in the capital market, co-sponsored by Cheung Kong Graduate School of Business' (CKGSB) Center for Investment Research and the Business Scholars Program.

It is led by Liu Jing, CKGSB Professor of Accounting and Finance and Associate Dean, and CKGSB researcher Chen Hongya. The first survey was conducted in January 2018 and targeted over 60 outstanding entrepreneurs. In August 2018, the survey expanded its scope, and was entrusted to third-party companies to be conducted in 13 major cities of China. CKISS is conducted on a quarterly basis with approximately 2,500 valid samples, including 1,900 samples from individual investors and 600 from financial industry practitioners.

03

ECONOMY:

Increased Demand Motivates Online Education Innovation

by Professor Zhong Ling

Assistant Professor of Economics,
Cheung Kong Graduate School of
Business





School shutdown by the COVID-19 pandemic has affected millions of learners in over 100 countries, but it has not shut down the desire to learn.

Many educational programs have gone online amid the coronavirus pandemic, tremendously expanding the market for online education. It provides students and parents with an opportunity to observe a full spectrum of education quality. The cost of online education, however, is fairly similar under government intervention. As a result, students who know what good teaching is like will be more demanding and have higher expectations of their on- or offline instructors than before.

This sudden change in the education market structure generates interesting economic implications. School quality does not matter so much at this point as resources from within and outside of the schools are both available to the students. This means the price premiums that parents have paid for houses in good primary and secondary school districts might not pay off. A good teacher's one-time lecture may provide higher level of social gains by benefiting many more than 50 students once it is recorded and is available for unlimited replay by the general public. Despite these externalities of online education, what is the effect of a sharply increased demand for online education on this industry?

Many educators and researchers, including myself, have been thinking and debating about how the internet may increase the efficiency and quality of education. I want to discuss three aspects of the future of online education based on my understanding of the economics of education and recent observations of people's short-term solution towards moving traditional classrooms online.

Industrializing the online education



What does it take to offer a good online course?

One must be familiar with the students' academic background, know the course material, prepare, teach, interact with the students, evaluate their work, record grades, and tackle technical challenges.

Adam Smith would be very disappointed if he knew that this diverse set of tasks belongs to one man, and that there are hundreds of millions of this kind of multi-tasking man on earth in this modern economy. Unlike producing offline education, which is limited by class size, online education can be more efficient via teamwork with specialized team members, each taking care of their teaching task in which they have a comparative advantage.



Existing online education platforms show some preliminary features of industrialized online education.

The Massive Open Online Courses platforms of many prestigious universities and companies have their own websites, in which instructors are only responsible for presenting the course material, while other staff market the course, interact with students and take care of technical issues.

The next step in the industrialization of the online education industry is to further break down the teacher's task. Ideally, the “producer” of online course material is a group of production units consisting of course designer, lecture notes or slides provider, on-camera instructor and other essential roles. Then the outputs of these online education material production companies are purchased by customers – education service companies that provide education material and services to students.

Personalizing knowledge, teaching style and learners



Personalization is more than choosing subjects, courses and knowledge points for the student – it is also about choosing the right teaching style.

In offline teaching, the teacher chooses one single teaching style to optimize the average of students' learning experiences. Online education platforms allow students to study the same topic but with different learning approaches and depth. Students who have had online lectures, one-on-one tutoring and still want to learn more may find a 10-minute discussion at a professor's virtual office hour incredibly beneficial. Students who prefer social learning may need an active virtual community with good peers than an amazing teacher.

Integrating the components



Online platforms such as Canvas and Blackboard form a natural oligopoly with high entry costs and rigid consumers, while the online education industry has much lower entry costs and tends to be a competitive market.

In the case of China, where education resource producers find having their own platform is a profitable marketing strategy and have access to cheap technical support, online education organizations rarely share platforms. This results in a huge administrative cost on the learner's end – unintegrated educational resource is as inefficient a geographically discrete university campus.



Technological complications are more costly to children than to adults, implying that producing online education resource for adults would generate larger marginal return than for children.

It would lead to unequal investment and development in online education resource for children. Luckily, some companies are moving towards integrating multiple online education components on one platform.

Schools in real life provide knowledge and opportunity for young people to socialize. However, we have not seen the contribution of online education programs to this end. Social skills are more important than ever as automation, which is largely promoted because of the pandemic, reshapes the labor demand towards jobs that require interaction with people.

Online education will not replace schools. It has aided learning in the past few months due to the coronavirus. The role of traditional education in shaping the character of the young generations is irreplaceable.

04

BUSINESS:

China's Betting Big on the Latest Live Streaming E-commerce Boom

by Professor Teng Bingsheng

Professor of Strategic Management,
Associate Dean, Cheung Kong Graduate
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“ China’s Betting Big on the Latest Live Streaming E-commerce Boom

In these unprecedented times, the impact of the COVID-19 pandemic has been truly wide-ranging. Its effects have been felt by all kinds of enterprises, ranging from culture and tourism to fashion and consumer goods. In order to survive these difficult times and fierce competition, enterprises have been forced to evolve from the traditional offline marketing model and innovate. As a result, many have ventured into selling products online through live streaming platforms. Whilst China’s online economy has already transformed and evolved through various stages, from teleshopping, e-commerce portals, mobile e-commerce and social e-commerce, the ultimate goal of modern business now is to enable consumers to shop anytime and anywhere. With this in mind, the next wave and evolution that could lead to an exponential growth in business is live streaming e-commerce.

Whilst teleshopping has existed for decades, why is it that consumers are now choosing to spend more money on live streaming platforms?

Historically, China has fiercely protected its traditional craftsmanship industry in order to preserve its intangible cultural heritage. Despite this, the industry has failed to gain popularity. Today, with the increase of live streaming platforms, artists are able to showcase their talents and gain huge followings with the touch of a button.

Live streaming is driven by three major consumption areas:

1st Home

As a result of the COVID-19 outbreak, live streaming services have seen a rapid rise with online business soaring, resulting in “retaliatory consumption (the idea that consumers will indulge in shopping once cities open up after lockdown, to make up for the lost consumption during the outbreak).”

2nd Communication

The guidance and feedback provided on live streaming platforms satisfies consumers’ need for communication whilst shopping. It helps consumers to better understand the product’s performance, reduces the decision-making time and delivers an overall improved shopping experience. If we deconstruct live streaming e-commerce by the “tripartite model” of responsible consumption through “people, product and place,” consumers transform from active consumption to passive consumption.

3rd Environment

With the improvement in supply chains, the government is promoting live streaming e-commerce as an effective way to unlock consumption potential, especially given the limitations of movement due to COVID-19. With the development of cutting-edge technologies like 5G and VR, live streaming is an effective way to achieve this goal. Currently, China has over 900 million netizens, with almost 560 million live streaming users, this speaks volumes to the critical role that live streaming now plays in the modern economy.

It is vital to increase efficiency in the tripartite model of responsible consumption:

1st People efficiency

Businesses need to create live stream talents like “Viya” (a renowned live streaming e-commerce influencer). This reduces costs such as labor and investments in offline events, whilst increasing efficiency, as live streaming only requires a smartphone. Live streaming e-commerce has the ability to shift business scenarios online, and hence is not limited by time and space as traditional offline marketing events are. Even after the pandemic, live streaming will remain an essential service for commercial brands. Companies must devise long-term plans for operations and client maintenance by forming an interaction and conversion mechanism, so as to increase their customer retention rate and conversion rate.

2nd Product efficiency

In order to ensure product quality, the supply chain is incredibly important. Increasing product efficiency means finding an accurate entry point and targeting the consumer’s true needs. Whilst online celebrities are able to promote products and sales using their popularity, an overdependence on this causes a lack of continuity. This method triggers compulsive consumption, which makes it complicated for merchants to brand their businesses. Live streaming must also guarantee authenticity, but the over use of beautifying technologies and over promotion by streamers may be misleading for consumers, leading to more goods being returned. High fees (for platforms, MCN agencies, and live streaming services) and high refund rates are the major reasons for the reluctance of merchants to accept live streaming e-commerce.

3rd Place efficiency

Live streaming as a systemic mechanism depends on the platforms used. As the live streaming sector and its underlying cloud computing technology are being established, a user’s shopping experience is also established. There are four key elements behind a successful e-commerce event – building momentum, teamwork, price advantage and a solid fan base foundation.

Having entered a new era, traditional enterprises must proactively seek change. In order to survive, enterprises must accept the influence of live streaming e-commerce and adjust their business models accordingly.

05

ENVIRONMENT:

How Can China's Delivery Industry be Greener

by Professor Zhu Rui

Professor of Marketing, Associate Dean,
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How Can China's Delivery Industry be Greener?



China's delivery industry has seen rapid growth rates in the last few years, exacerbated and propelled by its e-commerce economy.

The total volume of express deliveries rose from 1.51 billion packages in 2008 to 63.52 billion packages in 2019, surpassing the United States, Japan, and advanced European economies combined. This accounts for more than 50% of global total deliveries, with e-commerce packages accounting for over 75%. In 2019, at the time of the Double Eleven (Single's Day) shopping festival in China, the first 100 million packages were delivered in 2.4 days. Six years ago, it would have taken 9 days to deliver. This increase in speed reflects the Chinese express delivery enterprises' common goal to "be faster and meet the deadline". It is also a key factor that consumers consider when looking at safe and low-cost express delivery services.

However, the industry's rapid growth and substantial improvement in delivery punctuality have led to high environmental and social costs.

According to the *Characteristics and Management of China's Express Packaging Waste* report, in 2018, China's delivery industry consumed 8.3733 million tons of paper packaging materials (excluding the tracking label paper), and 851,800 tons of plastic packaging materials. Carbon emissions during the entire process from production to waste disposal of express packages surged from 611,500 tons in 2010, to 13.031 million tons in 2018, requiring 710 million trees to neutralize. Without effective environmental protection policies, the figure is estimated to reach 57.061 million tons by 2025.

Embracing Green Logistics and Its Related Problems in China

Aggressive market competition and increasingly prominent environmental and social issues have forced express delivery enterprises to explore ways to balance interests and responsibilities.

5 main areas of green logistics:

According to the Report on the Green Development of the National Delivery Business (2018-2019)



Green packaging



Green warehousing



Green transport



Green recycling



Green management

At present, green packaging and green recycling, such as the “Recyclable Delivery Box Plan”, are the most widely used means among China’s express delivery companies as they are relatively easier to implement. In terms of green warehousing and green management, large domestic logistics companies, such as JD Logistics and Suning Logistics, are leveraging big data in their unmanned warehouses and intelligent logistics. In 2017, JD Logistics implemented the world’s first full-process unmanned warehouse, leading to a 10-fold increase in efficiency. Similarly, Suning Logistics is expected to save RMB30 million annually by applying big data technology to optimize its transportation routes.

Despite these advancements, green logistics still faces numerous challenges in China, one being that green packaging is not popular. Although industry giants have adopted green packaging to

some extent, its actual application rate is quite low compared to the overall business volume. Taking SF Express as an example, its business volume rose to 4.831 billion packages in 2019, but only 15 million of the packages used recyclable boxes, accounting for 0.3% of the total business volume. The recovery rate of packaging boxes is also low. The volume of packages from the express delivery business in 2019 reached 63.52 billion packages, yet the number of packages recycled by express delivery enterprises nationwide was only 200 million, accounting for only 0.3% of the total volume. The overall recovery rate of packaging waste in China overall is low at less than 20%. Especially when comparing this to the recovery rate of express packaging in Japan, which is as high as 95%, and the recovery rate of corrugated paper, the main packaging material in the United States, which can be as high as 93%.



One of the major reasons for the lack of adoption and advancement in green logistics is that the concept itself is not popular among consumers despite being emphasized by logistics enterprises in China. As a result, the efforts of green logistics in China are mostly reflected in logistics enterprises using recyclable express boxes.

Furthermore, there is a lack of environmental awareness among Chinese consumers and people involved in the delivery industry. Consumers focus more on faster deliveries and packaging quality when evaluating the service of express delivery companies, than on the environmental impact of faster deliveries and excessive packaging. Similarly, employees in the delivery industry have limited awareness of the environmental impact. Given that there are more than 3 million employees in China's delivery industry, bolstering the environmental awareness of employees is critical for express delivery enterprises to promote environmental protection measures.

In order to advance green logistics in China, appropriate corporate codes of conduct and social policies and regulations need to be formulated. At present, most domestic express delivery enterprises have not defined clear carbon emission targets, nor have they formulated green logistic codes of conduct for their employees to practice. There is also no evaluation mechanism for green logistics in companies. Current domestic regulations on green logistics are little more than guidelines or advisory provisions. Most of these provisions are not legally enforceable and are too vague for enterprises to follow or for governments to supervise.

Enterprises need to be innovative in practicing green logistics

It is completely viable for large enterprises to apply green logistics to solve problems on a large scale in a profitable way. Companies such as delivery services and e-commerce platforms need to find ways to optimize their packaging and recycling so as to make the circular economy a reality. DHL, for example, has helped realize its own goals and its customers' environmental protection objectives through its GoGreen project. Specific measures of this project include providing customers with carbon emission calculation reports, carbon neutral services, customized green logistics solutions, and other services that support customers' green choices. By 2025, DHL hopes to increase revenues from green solutions to 50% of its total sales, making it the primary source of revenue, and creating a competitive edge as it goes green.

E-commerce platforms can also promote the development and application of green logistics through business model innovation. For example, in 2008 Amazon launched the Frustration-Free Packaging Program (FFP), which aims to encourage merchants to redesign and simplify packaging to be

greener. To help businesses meet the requirements of the FFP program, Amazon has collaborated with large brands to redesign packaging, so that products can be transported in their original packaging without Amazon providing outer packaging boxes. This innovative business model reduces carbon emissions and transport costs for customers. Since the launch of FFP, Amazon has reduced its packaging materials by 665,000 tons, with 1.18 billion cartons having been replaced by recyclable or original packaging. In terms of packaging recycling, Loop, an American recycling shopping platform, has tried to solve the problem of express packaging recycling by collecting deposits and conducting door-to-door recycling programs. When consumers buy products with recyclable packaging on Loop, they pay a deposit ranging from 25 cents to 47 dollars depending on the item, and are able to procure products with recyclable packaging and express boxes. After receiving the package, the packaging is returned to the express box, which is then collected by UPS delivery at their doorstep.



We have mentioned above a few examples of innovative solutions from companies, however we believe there is much more potential for improvement in this field. Most importantly, these enterprises are not only implementing green measures, but are also endeavoring to engage their consumers, suppliers, and customers to go green, using innovative methods. These are all worth emulating by Chinese enterprises.

The environmental awareness of the society needs to be improved

In 2007, the management team of Mars Inc., one of the top ten food companies globally, raised a far-sighted question— “What is the appropriate level of profitability?” The reason why this question was raised is that the pursuit of profit alone has led to several adverse environmental and social impacts.

The fact that this question was raised 13 years ago is commendable. This question compels enterprises to pursue a path of mutual benefit. The following question is also worth considering in the delivery industry. “What kind of express service is optimal? How do we achieve both fast and cheap delivery that is sustainable?” Consequently, society needs to enhance its environmental awareness and keep the conversation going so that enterprises are motivated to consider energy conservation and emission reduction when formulating their strategies, and consumers are encouraged to be more aware of environmental protection.

In addition, the environmental awareness of employees in delivery companies also plays a vital role in developing green logistics. At present, over 3 million people are employed in China’s delivery industry. To advance the green delivery industry, it is vital that delivery companies help their employees foster an awareness on energy conservation and environmental protection through more training. Several well-known express delivery enterprises

in other countries have begun improving the environmental awareness and related skills of their staff through internal training and professional certification. DHL, for instance, has 550,000 employees worldwide and believes that employees play a vital role in protecting the environment. DHL plans to have 80% of its employees trained as GoGreen-certified experts by 2025, to ensure that they can actively participate in environmental and climate protection activities.

Industry associations should also play a larger role in improving environmental awareness. Industry associations are able to perfectly bridge government and enterprise. They are able to support the government in formulating standardized policies and promote green logistics, supervise and evaluate express enterprises in their performance and contributions to green logistics, create an ecosystem of green logistics among delivery enterprises, and promote green logistics in China through forums and exhibitions.

The government needs to improve laws and regulations to assist green logistics

China has not yet formulated thorough regulations or solutions for green logistics, whilst other major countries are making steady advancements.

The United States, for instance, has adopted tax reduction or exemption policies for recycling and packaging enterprises. To encourage enterprises to recycle old packaging, state governments in the United States are reducing or exempting taxes for companies that recycle packaging.

Germany has done so by implementing punitive measures. Germany's new packaging law—German Packaging Act (VerpackG) came into effect on January 1st, 2019. The Act states that if a packaged product enters the German market and becomes a waste in the hands of consumers, the packaging manufacturers, distributors, and retailers are all responsible. The Act implements an extended producer responsibility system and brings important participants in the packaging life

cycle into the prescribed framework. Germany has formulated a unique “dual system” of waste collection and has established a packaging waste recycling system based on its existing domestic waste recycling system. This has ensured that Germany's comprehensive recycling rate of package waste has remained above 75% in recent years.

Similarly, Japan has performed quite well in green packaging. Japan has formulated and implemented the Containers and Packaging Recycling Law, and has also been developing a robust recycling system with numerous local recycling stations. The Japanese collection and transportation system regularly collects and transports packaging waste that has already been categorized by consumers to a special recycling station for recycling and re-manufacturing. This system enables Japan to maintain its recycling rate of express packaging at around 95%.



These examples highlight that government is indispensable in developing green logistics. Governments should regulate and supervise industry players such as logistics companies, upstream manufacturing enterprises and e-commerce platforms with incentives or punitive policies to make the delivery industry greener.



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