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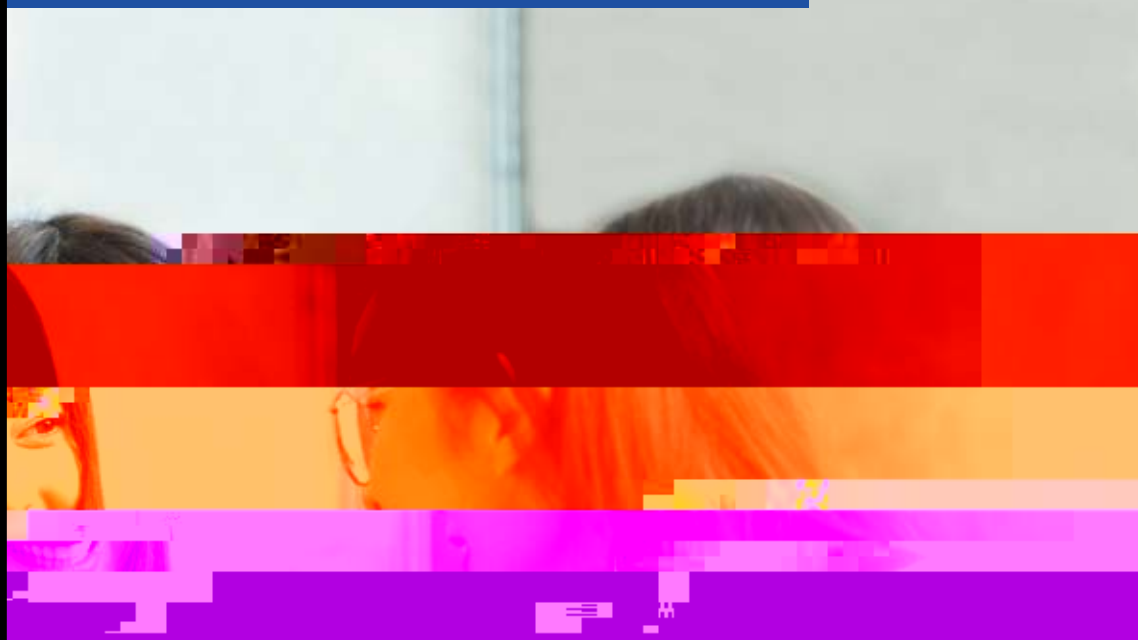
1 Innovation Survey



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We are pleased to present the CEIBS 2021 Innovation Survey. This project came together as a natural byproduct of years teaching in China. Over the past decade, there has been a notable shift from manufacturing to dreaming up innovative new products and services. In response to these trends, we launched this survey to better understand how executives define innovation and what policies and practices companies are currently engaging in to help foster innovative climates. We also hoped to glean important insights into how these trends might differ across different industries and types of companies. Finally, we wanted to gage the impact that innovation has on employ

THE RESEARCH TEAM

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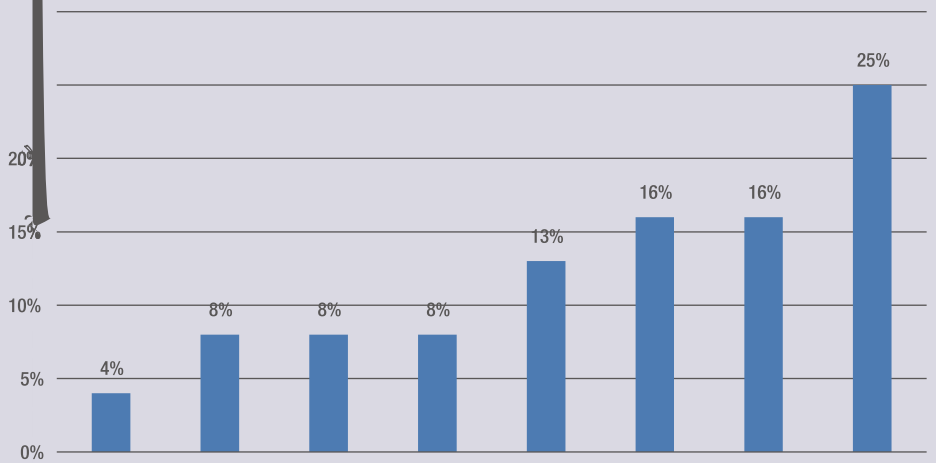
A total of 950 people reported descriptions of the companies that they work for in the 2021 CEIBS Innovation Survey. As shown in Figure 2, the Industrial sector (i.e., Manufacturing) was the most well-represented industry followed by Technology and Telecommunications, Services, and Consumer Goods, respectively. The fewest number of respondents worked in the Energy sector. Thus, the industries represented were quite varied.

FIGURE 2 - WHAT IS THE MAIN INDUSTRY THAT YOUR COMPANY OPERATES IN? N=950

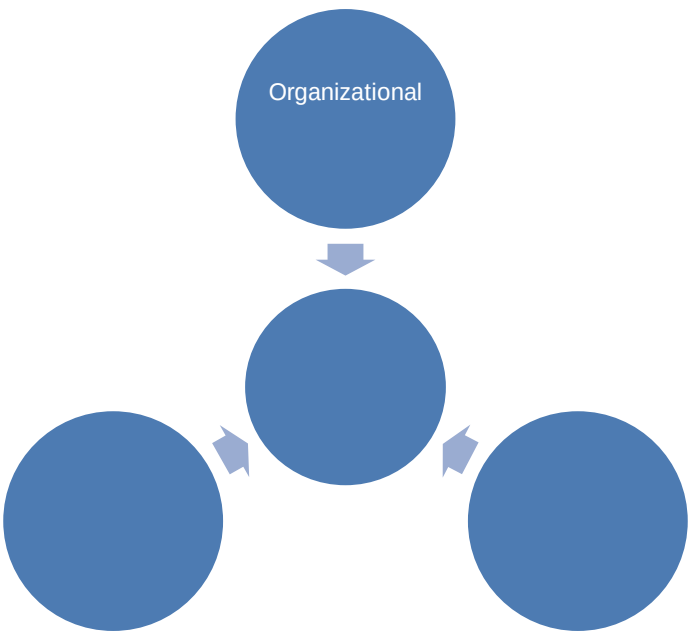


In terms of size, most respondents worked for large companies, with 79% reporting that their company had between 50 and 49,999 employees (see Figure 5 for more detail). When asked to report their company's total China sales in 2019, 63% indicated revenue that is consistent with China's official definition of large companies (300 million RMB). Specifically, 45% said that their Chinese revenue was greater than 1,200 million RMB, 18% said that it was between 300-1,199 million RMB, 24% said it was 30-299 million RMB, and 10% said that it was less than 30 million RMB. In light of this data, we conclude that small startup companies were in the extreme minority of our sample.

In the remainder of this report, we break down our key analyses by the respondent's position in the company (i.e., upper- or lower-level management), type of company, industry, and size of company (both in terms of number of employees and revenue) in order to observe any potential differences across these different categories.

One of the primary motives of the survey was to develop an innovation index to help to gage the degree to which the companies that respondents work for had developed an organizational climate that encourages innovation. To do so, we created a total of 20 items that asked them to rate the extent to which their company engaged in innovative practices across three dimensions that prior research suggests are critical for fostering innovation: (1) **organizational** policies and practices (7 items), (2) **leader** behaviors and priorities (6 items), and (3) **employee** norms and behaviors (7 items). The full list of the items used to create the innovation indices can be found in the **Appendix**. Respondents indicated the extent to which they agreed or disagreed (on a scale ranging from 1 = strongly disagree to 5 = strongly agree) that their organization was engaging in each of the innovative cultural practices. Using the numeric responses, we were able to calculate the average level of innovation perceived by the respondents and also make inferences about how these differed across different types of employees and organizations. Although there was some variability across the different indices, our overarching observations are as follows:

- All of the indices were moderately high, with ***employee norms and behaviors*** being the highest of the three sub-dimensions.
- ***Upper-level managers*** perceived more innovation than mid- and lower-level employees.
- ***Companies outside of China***, Chinese-owned companies in China, and Foreign-owned companies in China reported higher innovation, respectively.
- The ***healthcare, services, and technology and telecommunications*** industries perceived the highest levels of innovation whereas the energy, financial, and real estate & construction sectors perceived the least innovation.
- ***Smaller organizations*** reported higher levels of innovation than larger ones.



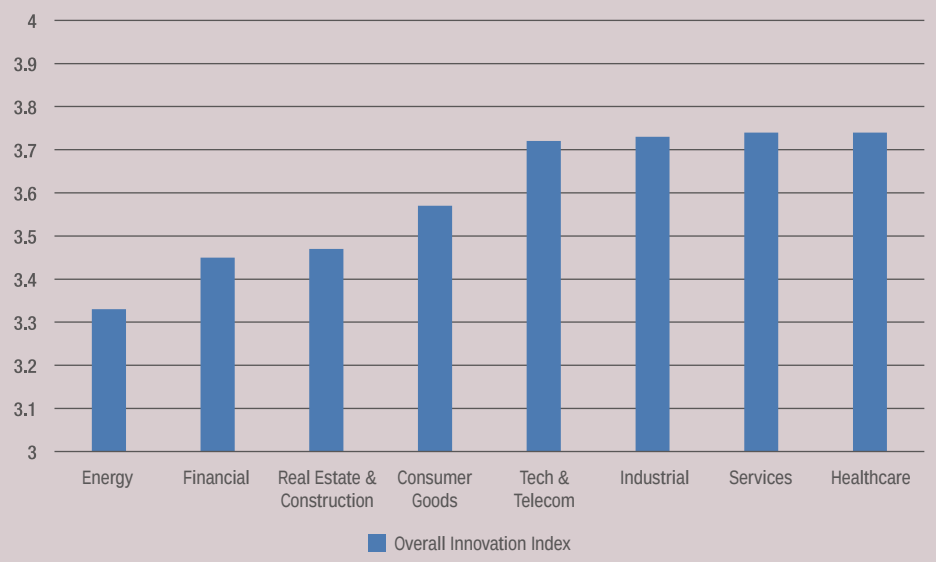
2.1 OVERALL INNOVATION INDEX

We created our **Overall Innovation Index** using existing literature and best practices in innovation, resulting in 20 items across three dimensions. As an example of these items, we asked employees whether their company leverages the latest technology, rewards innovative ideas, communicates that innovation is a priority, empowers employees to volunteer ideas, and creates a safe space where failures are tolerated and employees are able to raise concerns freely.

On average, respondents reported an average **overall innovation index of 3.66**. This indicates that most companies had moderately innovative cultures (though there was a significant amount of variability across different respondents). Of note, upper managers perceived significantly higher levels of innovation in their organization than mid- and lower-level employees (3.72 vs. 3.38). In contrast, employees working for companies located outside of China (3.75), Chinese-owned companies in China (3.68), and foreign-owned companies in China (3.56), and all reported statistically identical levels of innovation.

As illustrated in Figure 6, different industries showed significant differences in terms of innovation. Namely, respondents working in the healthcare and service industries reported the highest overall innovation (both averaging and index of 3.74), whereas those in the energy (3.33) and financial sectors (3.45) perceived the least innovation.

FIGURE 6 - OVERALL INNOVATION INDEX BY INDUSTRY. N=854



Similarly, Figure 7 shows that different sized organizations also produced statistically different innovation indices. In general, people working in smaller organizations reported higher levels

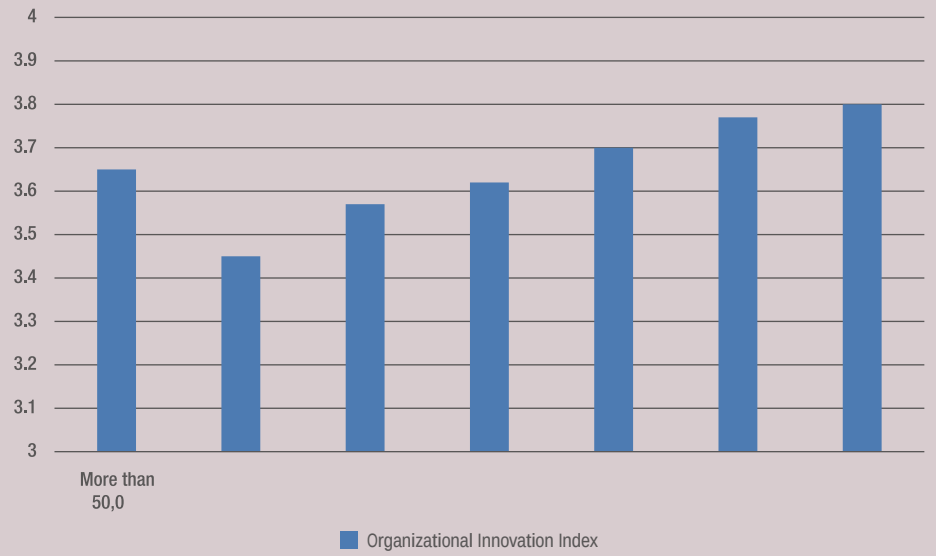
2.2 ORGANIZATIONAL INNOVATION INDEX

To better understand the differences in innovation occurring in modern organizations, we also examined the three individual sub-dimensions of the overall innovation index. First, we focused on the organizational policies and practices respondents reported. This dimension asked questions about the policies aimed at recognizing and rewarding innovation, the developmental resources provided to employees, the company technology and KPIs, the physical environment, and the company's adaptability to change.

On average, respondents reported an **organizational innovation index of 3.63**, indicating a moderate level of organization innovation with lots of variability. As with the overall innovation index, upper managers perceived signi f cantly higher levellevh

Likewise, the differences in organization innovation across frm size shown in Figure 9 are not signifcantly different from one another. As with overall innovation, the general trend is that smaller organizations tend to have more innovative organizational policies and practices than larger ones.

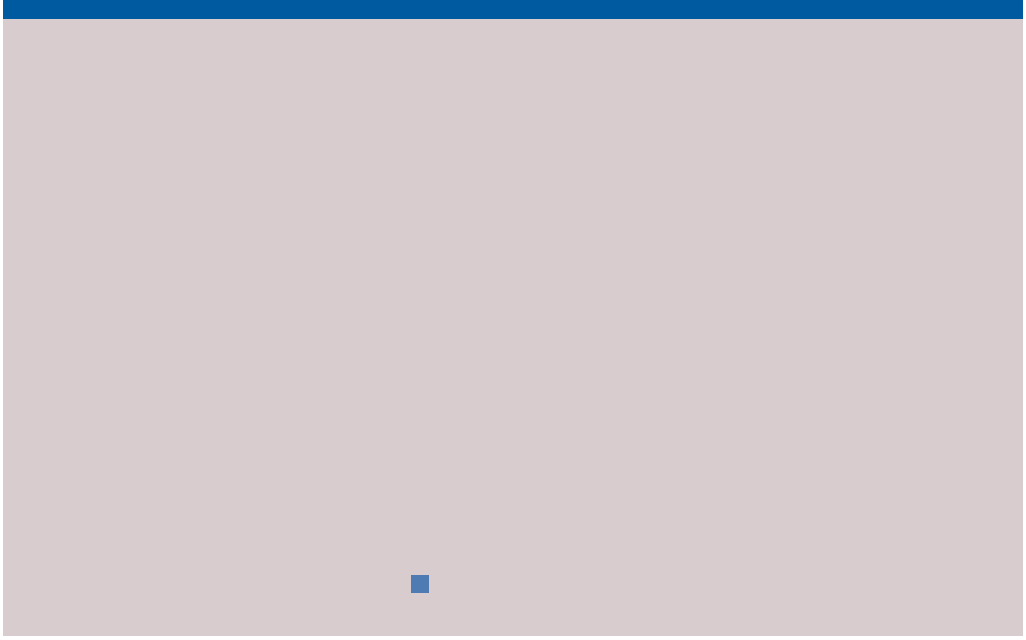
FIGURE 9 - ORGANIZATIONAL INNOVATION INDEX BY NUMBER OF EMPLOYEES. N=866



2.3

Similarly, significant differences were also found among firms of different sizes, with smaller organizations perceiving that their leaders were more innovative than larger organizations (see Figure 11).

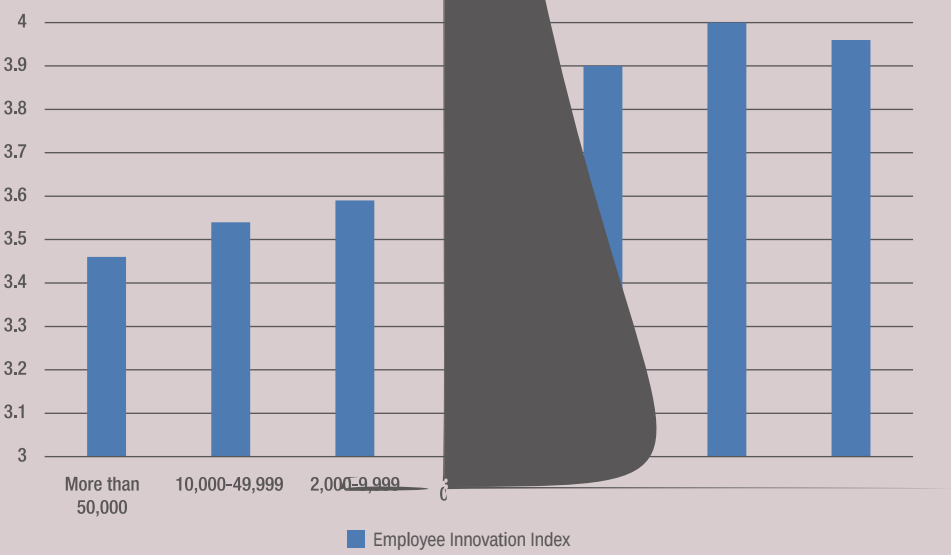
FIGURE 11 - LEADER INNOVATION INDEX BY ORGANIZATION SIZE. N=868



2.4 EMPLOYEE INNOVTOIYNINNDEX

Likewise, employees working in smaller orga ons perceived signi cantly more innovative norms than those in larger organizations (see F 13).

FIGURE 13 - EMPLOYEE INNOVATION INDEX BY ZATION SIZE. N=868



2.5 OUTCO

2.5.2 TURNOVER INTENTIONS

Second, we conducted a similar series of analyses to determine whether or not the innovation

To better understand if the importance of these dimensions different across different levels of employees or organizational types, we created a series of graphs breaking down the answers to this question across various dimensions. As expected, Figure 17 shows that mid- and lower-level employees tended to endorse the idea that empowering management practices were more critical for creating an innovative culture than did upper-level managers. Upper-level managers, in contrast, were more likely to perceive that organization-wide policies and actions were more critical.

In terms of organization type, we found that foreign-owned frms located in China were more likely to endorse empowering management practices than their Chinese-owned counterparts or frms located outside of China (see Figure 18).

FIGURE 18 - *BY TYPE OF COMPANY.* PLEASE SELECT THE TOP 3 MOST IMPORTANT FEATURES OF AN INNOVATIVE CULTURE. N=890

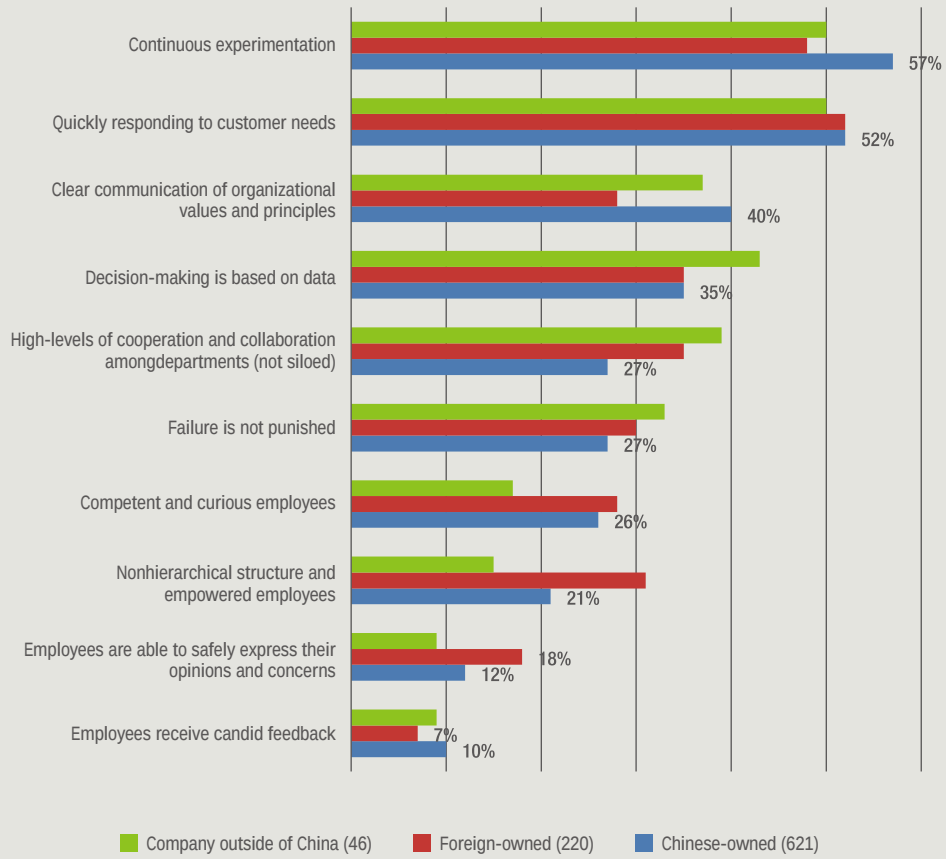
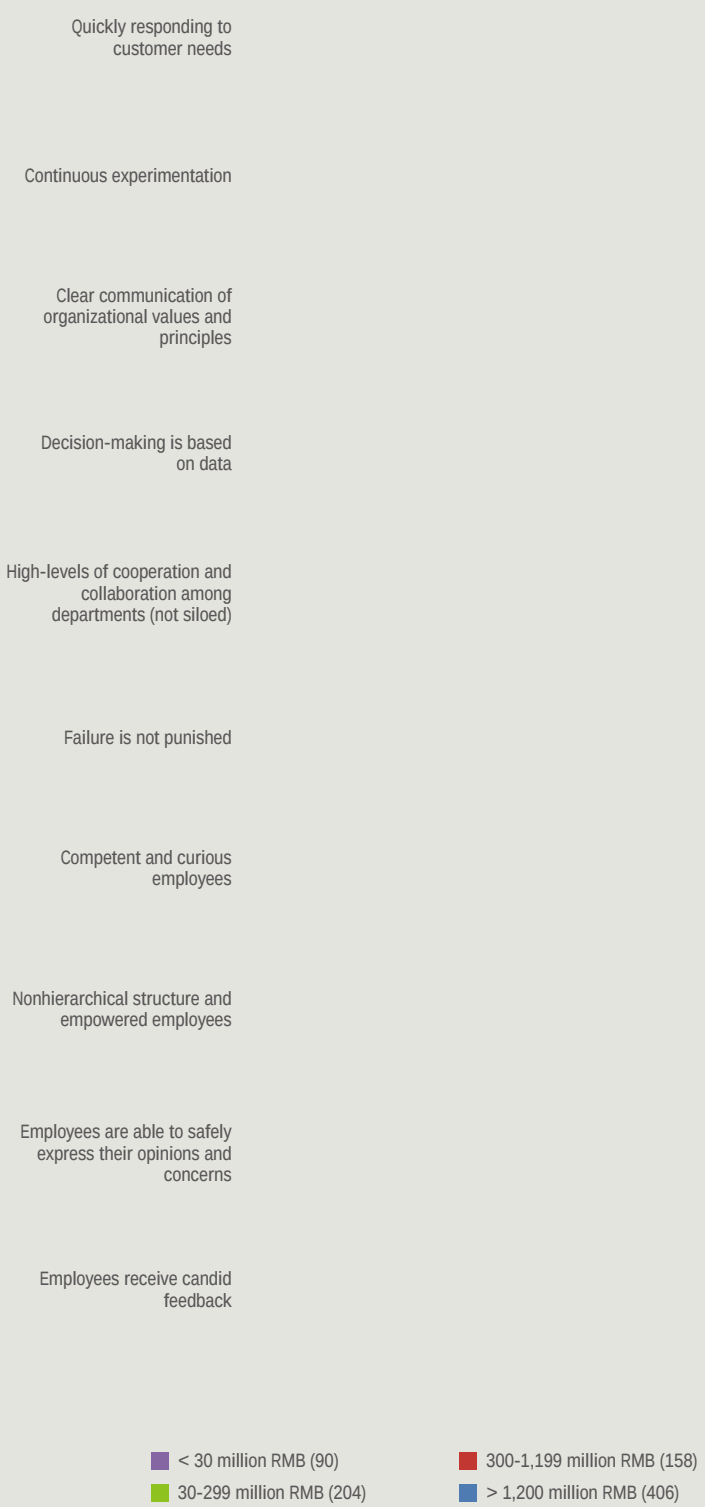


Figure 19 shows that there were also some slight differences in innovative culture features across industries, including that real estate and construction companies were comparatively more likely to value continuous experimentation and clearly communicating core values, whereas those working in the healthcare sector prioritized hiring high-quality employees that could quickly respond to patient needs. The energy industry valued objective, data-driven decisions and not punishing failure, whereas financial sector employees were more likely to think that providing candid feedback to employees was the most important feature of an innovative culture. People working in the real estate and construction industries were comparatively much less likely to think that failure forgiveness is important, whereas the technology and telecommunications industry were comparatively less likely to believe that cooperation across departments was critical for innovative cultures.

Finally, Figures 20 and 21 show the imp
Though the answers were largely similar
organizations (both in terms of number
facing and were comparatively more li
customer needs. Larger organizations,
consistency in their communication, c
departments and the clear disseminatio

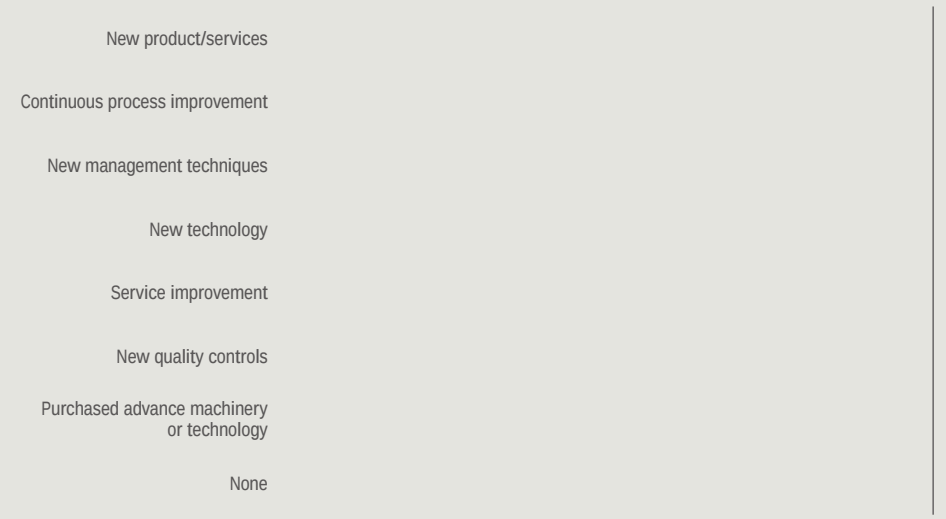
FIGURE 20 - *BY NUMBER OF EMPLOYE*
FEATURES OF AN INNOVATIVE CULTURE

FIGURE 21 - *BY CHINA SALES REVENUE.* PLEASE SELECT THE TOP 3 MOST IMPORTANT FEATURES OF AN INNOVATIVE CULTURE. N=858



Although these answers provided us an understanding of what respondents believed a hypothetical innovative culture might look like, we also wanted to get a sense of the current innovation practices occurring in organizations today. To assess this, we asked respondents to select all the different types of innovation that their company introduced in the last three years. As shown in Figure 22, the majority of respondents reported that their company introduced internally driven innovation including the introduction of new products or services and engaging in continuous process-based improvements. In contrast, purchasing advanced machinery or technology from outside vendors was comparatively less popular.

FIGURE 22 - WHAT TYPES OF INNOVATION DID YOUR COMPANY INTRODUCE IN THE LAST THREE YEARS (CHECK ALL THAT APPLY)? N=909



We also provided an opportunity for respondents to indicate other innovations not included in our list. Though few people provided these, most of the answers focused on creating new processes, channels, business models, and structural improvement in the company. One respondent also indicated that he or she was actually hired to act as an innovative force for the company, but was meeting signi f cant resistance in achieving this objective:

When broken down across different types of employees and organizations, we can see that upper management was more aware of new management techniques, quality controls, and machinery/ technology purchases than were lower- and mid-level employees (see Figure 23).

Finally, Figures 26 and 27 show that the size of the frm also impacted innovative practices in

SECTION 4

MOTIVES FOR INNOVATION

In h s n , s u h un v h s ns h h n n v n s v ss n h n ns. s s h s n ns h v h n n v n s n h n n s u n , n h s n ss v us s :

- U vs. L -L v M n n
- T C n
- In us
- C n S

The fnal goal of the survey was to determine the percentage of respondents that felt that innovation was a key differentiator in their business. Stated alternatively, we wanted to know whether people thought innovation was important for the success of their organization and, if so, why. As shown in Figure 28, an overwhelming 806 (96%) of people responding to this question agreed that a culture of innovation is critical for the success of their organization.

FIGURE 28 - DO YOU THINK THAT HAVING A CULTURE OF INNOULTURE OOR 610 0 0 10 9R ORGANIZ

Though the high rate of agreement that innovation is vital is not surprising given the title of the survey, we were most intrigued to better understand the minority of people who believed that innovation was not a key factor contributing to their organization's success. To that end, we frst present a snapshot summary of the characteristics of respondents who believed that innovation was not critical for the success of their organization.

4.1. WHO THINKS INNOVATION IS RELATIVELY UNIMPORTANT?

The majority of these respondents worked for Chinese-owned companies in China (70%), though 19% worked in Foreign-owned companies in China, and 12% worked in companies outside of China. Of the Chinese-owned companies, 80% worked for private companies, 17% worked for state-owned companies, and 3% worked for a hybrid or mixed-ownership company. Additionally, we found that middle- and lower-level managers (as compared to upper-level managers) were slightly more likely to suggest that innovation was not a critical factor for success.

"In China, connections (RenMai/Guanxi) are the most important factors."

– Respondent# 6, Real Estate and Construction Industry

"At different stages innovation is not always the company's top priority, nor is it necessarily suitable for the company at that time."

– Respondent # 7, Technology and Telecommunications Industry

"Small businesses rely mainly on the boss's ability and vision, and the corporate culture is just about the boss's style."

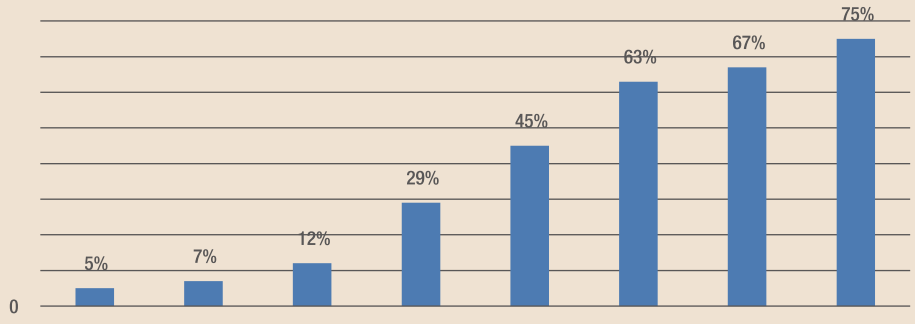
– Respondent # 8, Manufacturing Industry

"Survival is more important."

– Respondent # 9, Services Industry

For those who agreed that innovative cultures are important, we asked them to select the Top 3 reasons why they believed this was the case using a series of options we generated after reviewing the extant literature on the topic. Figure 29 depicts the percentage of people who chose a given option as one of their Top 3 supporting reasons. As seen here, respondents believed the primary advantages of an innovative climate were to get a first-mover advantage in their industry, to respond to changing consumer demands, or to respond to accelerated technology change, respectively. In contrast, global concerns including expanding to other markets, complying with government policies, and competing with international firms were seen as comparatively less important.

FIGURE 29 - PLEASE SELECT THE TOP 3 MOST IMPORTANT REASONS WHY YOU THINK HAVING AN INNOVATIVE CULTURE IS IMPORTANT FOR YOUR COMPANY. N=926



We also gave the respondents the option to select ‘Other’ and provide additional reasons why

In terms of type of company, Figure 31 shows that companies outside of China were comparatively more preoccupied with retaining top talent and gaining a frst-mover advantage whereas foreign-owned companies in China were more concerned with responding to intense international competition. Chinese-owned companies, in contrast, were primarily concerned with domestic competition. Changing technology and consumer demands appeared to be universal drivers of innovation across different company types and ownership structures.

Regarding innovation priorities across industries, Figure 32 reveals several interesting distinctions. For example, despite not prioritizing innovation as much compared to other industries, companies in the Energy sector were much more likely to leverage innovative cultures to expand to foreign

Finally, Figures 33 and 34 display the impact of different size frms, which was largely muted. Firms with more employees were slightly more apt to focus on the more global benefts of changing consumer and technology trends, whereas employees at frms reporting different amounts of income reported largely similar answers to describe why they believed innovative cultures to be important.

FIGURE 34 - *BY CHINA SALES REVENUE.* P

APPENDIX

INNOVATION INDEX DIMENSIONS AND ITEMS

Organizational Policies and Practices

1. There are procedures in place to capture, select, implement, and reward innovative ideas.
2. My company devotes lots of resources to employee development and learning.
3. My company uses the latest technology to optimize the flow of information.
4. My company objectives and KPI (key performance indicators) include innovation.
5. My organization is very responsive to the changes in the external environment.
6. The physical environment of my company encourages innovation.
7. Our work spaces are designed to allow for easy and frequent communication among employees.

Leaders Behaviors and Priorities

1. Top leaders in my company are strongly committed to innovation.
2. Our company's vision/strategy reflects the importance of innovation and continuously changes according to the environment and customer's needs.
3. Top executives visibly communicate innovation as a priority.
4. Top executives hold managers accountable for driving innovation.
5. Managers regularly communicate key organizational values and principles.
6.