



# New Trends and New Paths of Innovation and Entrepreneurship from the Perspective of Supply-Side Reform

Junqi Jiang \*

Chongqing Depu Foreign Language School, Chongqing,,401320, China

\*Corresponding author. Email: [ivankajiangjunqi@outlook.com](mailto:ivankajiangjunqi@outlook.com)

**Abstract.** In the new era, the supply side structural reform has further adjusted the market economy structure, resulting in a significant reduction in labour-intensive positions. On the contrary, the positions related to digital economy has increased. Under the context of supply side reform, the fields of innovation and entrepreneurship are more innovative, with younger talents and fewer start-up funds. However, the practical contradiction between supply side reform and innovation and entrepreneurship is more prominent. This article proposes the suggestions of cultivating comprehensive talents, enriching educational resources and improving guarantee mechanism to provide new paths for innovation and entrepreneurship practice in the context of supply side reform.

**Keywords:** Supply-side reform, innovation and entrepreneurship, entrepreneurship trends

## 1 Introduction

The concept of “Supply Side Structural Reform” was first proposed by China in 2015, which means that while moderately expanding total demand, efforts should be made to strengthen supply side structural reform, improve the quality and efficiency of the supply system, and enhance the driving force of sustained economic growth. Under the traditional employment model, college students tend to find a career with better welfare and stable work. This cognitive inertia leads to the lack of innovation awareness and innovation ability of college students, which has great defects in active practice and thinking. However, with the continuous progress of supply side reforms, the country's demand for innovative and practical talents is increasing, which has led to conflicts between the traditional employment model and the employment model under supply side reforms [1]. This contradiction is mainly reflected in the asymmetry between the demand in the talent market and the supply in the talent market. The supply side reform is an innovation, which requires that theory must be closely linked with practice, that the new normal must be guided by problems, that the potential of elements must be activated, that the overall planning must be considered, that reform

© The Author(s) 2024

P. Dou and K. Zhang (eds.), *Proceedings of the 2023 International Conference on Economic Management, Financial Innovation and Public Service (EMFIPS 2023)*, Advances in Economics, Business and Management Research 287,

[https://doi.org/10.2991/978-94-6463-441-9\\_16](https://doi.org/10.2991/978-94-6463-441-9_16)

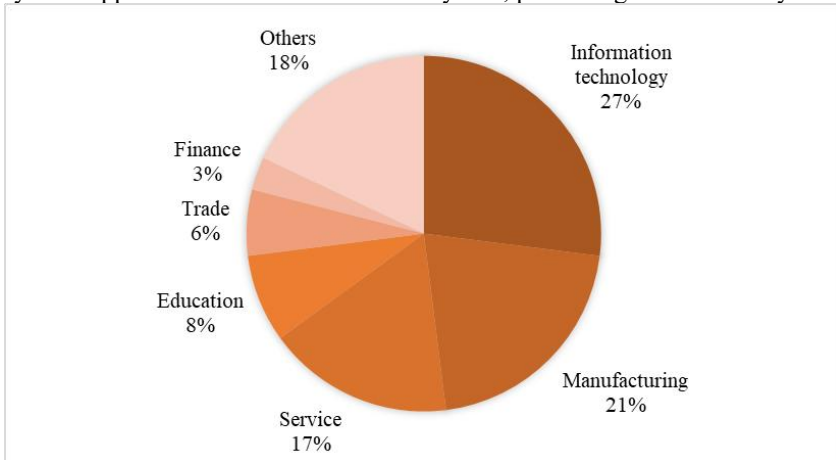
must be the core, and that modernization must be the main focus. The supply side reform emphasizes the market, attaches importance to efficiency, focuses on the long term, and emphasizes the system. It has the characteristics of innovation, coordination, green, openness, and sharing. In the context of supply side reform, we should pay attention to the complex practical dilemma of the demand for innovation and entrepreneurship education, effectively identify the true needs of educational objects, solve the contradiction between education supply and demand, and provide practical strategies for how innovation and entrepreneurship education can adapt to supply side reform. Exploring new paths for innovation and entrepreneurship in the context of supply side reform is beneficial for exploring and cultivating the innovation and entrepreneurship abilities of college students, and has positive practical significance for achieving the linkage between universities and regional economic and social development.

## **2 New Trends in Innovation and Entrepreneurship under the Background of Supply Side Reform**

### **2.1 New Entrepreneurial Fields**

Supply side reform refers to the use of reform methods to promote innovation in factors, structural adjustment and optimization, remove supply constraints, unleash potential, and enhance vitality, starting from improving supply quality [2]. This reform will inevitably have an impact on entrepreneurship. Supply side reform, as a key word in economic reform, has a profound impact on China's economic structure; Starting from the supply side and addressing structural issues, reforms have covered all important areas. In recent years, the overall situation of China's workforce has changed significantly compared with the previous years due to the adjustment of the industrial structure, the rise of the platform economy, and the change of youth employment concepts. Among them, the workforce of new employment forms, with new professional practitioners as an important component, continues to develop and grow. The National Federation of Trade Unions announced the results of the ninth national survey on the status of the workforce at the end of February 2023. The survey showed that the total number of employees in the country was about 402 million, of which 84 million were new forms of employment, accounting for about 20%. The employment situation continues to recover in 2023, but currently, China's employment structural problems are still prominent, and the youth unemployment rate remains high. According to the estimate of Ministry of Education, the number of college graduates in China may reach 11.58 million by 2023, and the pressure on total employment remains. In this context, new professions have become a new choice for employment and entrepreneurship for many college graduates due to their thriving market demand and relatively insufficient supply. The sampling survey results of the new vocational learning group in the New Vocational Online Learning Platform Development Report released in 2020 are shown in Figure 1. The Internet/information technology, manufacturing, and service industries have the highest number of people

learning new professions. Young people have a high level of recognition for the digital ecology profession. The flexibility and development potential of digital careers are one of the main reasons why they are popular among young people. At the same time, the development of digital careers has also provided more mobility and employment opportunities for urban and rural youth, promoting talent mobility.

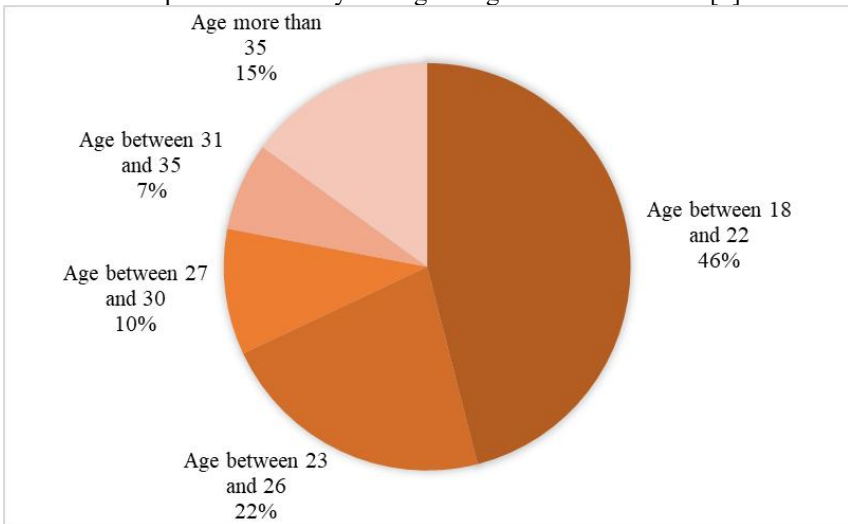


**Fig. 1.** Proportion of new vocational learning groups (figure credit: original)

## 2.2 Young Entrepreneurial Talents

The supply side structural reform aims to adjust the economic structure, achieve optimal allocation of factors, and improve the quality and quantity of economic growth. The demand side reform mainly includes the three carriages of investment, consumption, and export, while the supply side includes factors such as labor, land, capital, institutional creation, and innovation [3]. The supply side structural reform is to start from improving the supply quality, promote structural adjustment by means of reform, correct the distortion of factor allocation, expand effective supply, improve the adaptability and flexibility of the supply structure to changes in demand, improve Total factor productivity, better meet the needs of the masses, and promote sustainable and healthy economic and social development. New professions call for young entrepreneurial talents. From the perspective of age distribution, the youthfulness of innovation and entrepreneurship is prominent. The age structure is shown in Figure 2. Among the newly signed professionals in the company, the highest proportion is between the ages of 18 and 22, reaching 46%. In terms of career background, 51.3% of college students are in school, 11.8% are fresh graduates from universities, and 10.7% are unemployed after graduation. The total number of the three is 73.8%, an increase of 5.1 percentage points compared to last year. From the perspective of educational level, the proportion of young entrepreneurs with a college degree or above accounts for 90%, an increase of 4 percentage points compared to last year. According to the seventh national population census data, the proportion of the

population with education levels of junior high school, high school (including technical secondary school), college or above in China is 33.7%, 14.8%, and 15.1%, respectively. According to our survey questionnaire, the number of entrepreneurs shows an inverted U-shaped distribution as their education level increases, with only 2.5% being junior high school or below, 7.2% being high school/technical secondary school, 36.2% being junior college, 51.2% being undergraduate, and 2.9% being master's or above. The total proportion of entrepreneurs with a junior college or above education level reaches 90.3%, reflecting the generally high cultural level of entrepreneurs. The growth comes from the increase in the number of college entrepreneurship groups, reflecting the more mature cultivation of innovation awareness and entrepreneurial ability among college students in China [4].



**Fig. 2.** Age structure of entrepreneurs (figure credit: original)

### 2.3 Less Entrepreneurial Capital

Under the background of supply side reform, cultivating students' entrepreneurial ability can guide them to deeply understand the current development trend of China's market economy environment, and enable them to identify opportunities, fields, partners, and investment methods in subsequent entrepreneurial work [5]. In this context, the success rate of student entrepreneurship will be effectively improved, and the enthusiasm and initiative of entrepreneurship will also increase accordingly. As shown in Figure 3, in terms of startup funds, nearly 70% of young entrepreneurs have startup funds below 100, 000 yuan. Entrepreneurs generally have relatively low start-up funds, with 70% of entrepreneurs accounting for less than 100, 000 yuan. The proportion of entrepreneurs with entrepreneurial funds ranging from 100, 000 to 500, 000 yuan is 22%. The amount of start-up capital is related to the industry chosen for entrepreneurship. Industries such as agriculture, forestry, animal husbandry, and

fishery have low entry barriers, and require relatively little capital in the early stages of entrepreneurship. Among entrepreneurs with start-up capital less than 100,000 yuan, 37.5% are engaged in the agriculture, forestry, animal husbandry, fishery, wholesale and retail industries. In terms of funding gap for entrepreneurship initiation, nearly 60% of young entrepreneurs have a funding gap of less than 50,000 yuan, and less than 10% of them have a funding gap of more than 500,000 yuan. The start-up funding gap of entrepreneurs is concentrated in the range of less than 200,000 yuan, with entrepreneurs with a funding gap of less than 50,000 yuan accounting for 56.4%. Less than 20% have a funding gap exceeding 200,000 yuan, and less than 10% have a funding gap exceeding 500,000 yuan. Overall, the funding gap for entrepreneurship initiation is concentrated at below 200,000 yuan, which to some extent reflects the weak financial strength of most entrepreneurs, so they choose industries with lower threshold for entrepreneurship funding.

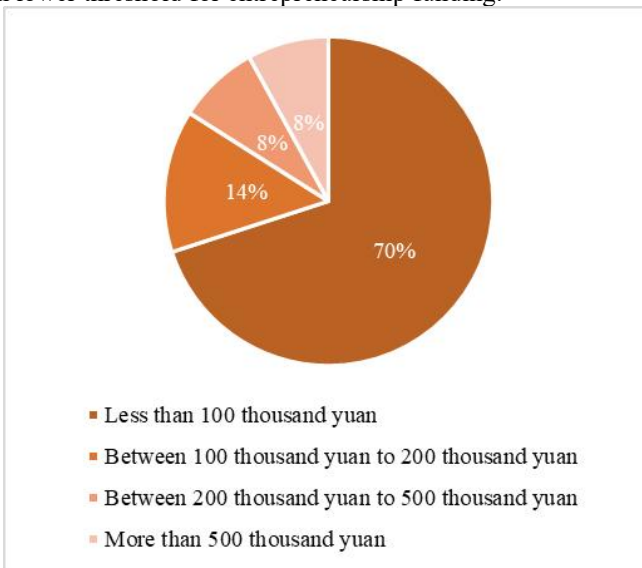


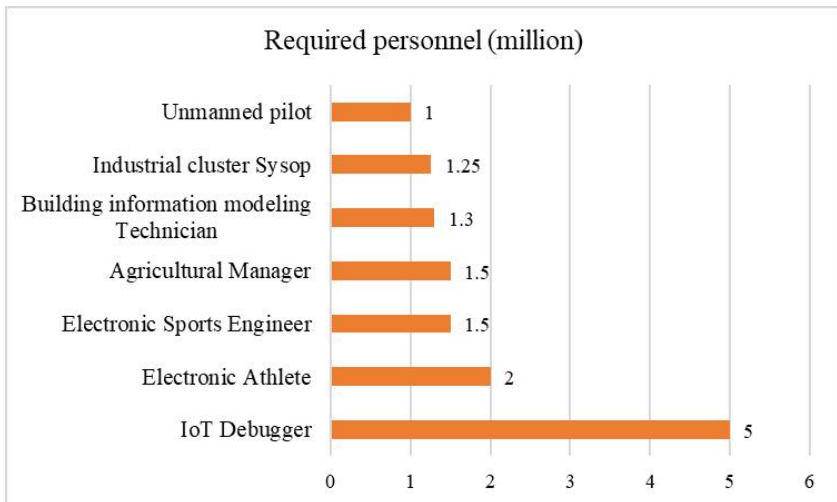
Fig. 3. Structure of entrepreneurial capital (figure credit: original)

### 3 Realistic Contradiction between Supply Side Reform and Innovation and Entrepreneurship

#### 3.1 Serious Supply-Demand Contradiction

The rapid development of the industrial internet has spawned more new formats and new modes of employment. The demand for new professions in the industry is also constantly expanding, and there is a huge talent gap in various emerging professions [6]. TSI, also known as Talent Shortage Index, is a commonly used indicator to reflect the degree of talent shortage in a certain profession. Generally speaking, when  $TSI > 1$ ,

the profession presents a talent shortage. In terms of new jobs in intelligent manufacturing, according to the Annual Talent Trend Report on Intelligent Manufacturing in 2022 released by Liepin Big data Research Institute, the TSI of intelligent networking engineers and intelligent driving system engineers reached 3.46 and 2.46 respectively, and the demand for talents in intelligent manufacturing, integrated circuit, artificial intelligence and other fields remained high. The author has reviewed the Development Report of New Vocational Online Learning Platform, which predicts the talent gap of various professions in 2025, as shown in Figure 4. The current supply-demand contradiction faced by innovation and entrepreneurship education in universities is mainly the contradiction between the education resources and services provided by the current education system that cannot meet the high-quality and diverse educational needs of educational objects, manifested as a mismatch in supply quantity, supply quality, and supply-demand structure. In recent years, although the proportion of undergraduate graduates starting businesses and entrepreneurship projects has been continuously increasing, the overall level of the mentor team, high-quality course delivery, and the construction of social practice support service systems have also been continuously improving. Some graduates with special talents or resources can successfully start businesses, overall, there is a certain gap between the goals required by the innovation driven development strategy and the actual landing rate and success rate of entrepreneurship [7].



**Fig. 4.** Personnel needed of each career in 2025 (figure credit: original) Deficient Education Resource

The noncompetitive and nonexclusive characteristics of educational public services result in a supply quantity of educational products and services provided through the education supply side far less than the Pareto optimal state. The mechanism for cultivating innovative and entrepreneurial talents cannot be fully and effectively

supplied, and there is still room for improvement in the quality of education supply [8]. Due to the general lack of industry practical experience and relatively single knowledge structure among the innovation and entrepreneurship teaching staff in universities, they are unable to effectively carry out innovation and entrepreneurship courses; At the same time, due to inadequate construction of practical platforms, lagging behind in the construction of school enterprise cooperation networks and service support systems, the quality of talent cultivation is not high and cannot meet the needs of employers. Therefore, how to enhance the adaptability and flexibility of education supply, improve the level of educational technology to adapt to the construction of the future education system, further optimize education supply, and provide higher quality, more accurate, more diverse, and more effective education supply is an important issue that urgently needs to be solved. The teaching mode is mostly imitating and following the trend, focusing on theoretical teaching, venue construction, and innovation and entrepreneurship planning, without paying attention to the practice of students' innovative thinking and the implementation of entrepreneurial abilities. Therefore, we should explore the use of regional Cultural resource management, develop a regional innovation and entrepreneurship education system, and provide more sophisticated entrepreneurial help and support for different levels and types of college students' innovation and entrepreneurship groups to better meet their personalized needs and effectively promote the precision of entrepreneurship and innovation education [9].

### **3.2 Incomplete Supporting Mechanism**

The good operation and effectiveness of innovation and entrepreneurship education require comprehensive measures to support it. The construction and use of entrepreneurship guidance service centres and entrepreneurship incubation bases can effectively reflect the guarantee level of innovation and entrepreneurship education. They can provide full tracking, guidance, and assistance for students' entrepreneurial practice activities, and are also the interface between theory and practice, schools, and society. However, in practice, many universities have not attached great importance to this work, or have not built entrepreneurship guidance service centres at all, resulting in only a very small number of students being able to benefit, and the popularity rate of the platform is too low. The concept of new professions covers a wide range of industries, and the professional characteristics and content of different new professions are also different. New professions in fields such as cutting-edge technology and enterprise management are more easily accepted by the public due to factors such as closer proximity to traditional professional office models and generally higher educational levels of practitioners. Among them, new professions such as artificial intelligence technology talents and digital managers are often labelled as elite by the public, and are widely recognized and respected. On the contrary, some new professions in the fields of entertainment and life services are far from traditional work models, and their social acceptance and recognition are not high. In the eyes of many people, jobs with uncertain working hours and locations have unstable income and uncertain prospects, which are not the best career choices.

It cannot be ignored that currently, some new career practitioners are suffering from varying degrees of occupational discrimination, making it difficult to gain social respect and recognition, and lacking a sense of happiness and achievement in their careers [10].

#### **4 New Paths for Innovation and Entrepreneurship in the Context of Supply Sidecultivate Comprehensive Talents**

The supply side structural reform should build an innovation driven growth model to achieve dual growth of economic aggregate and economic quality. We should focus on implementing the innovation driven development strategy and prioritize innovation as the primary driving force for national economic and social development in supply side reform [11]. Comprehensive quality refers to the ability to solve both internal and external professional problems, including not only the application of professional knowledge to solve practical problems, but also interpersonal communication skills, learning abilities, and other essential abilities in human development. With the progress of supply side reform, more and more challenges are waiting to be faced and more problems are waiting to be solved. In the process of solving practical problems, a person's professional literacy is only one aspect, and good psychological quality, extensive knowledge, and a spirit of perseverance and hard work are essential. With the development of the country, the Demographic dividend begins to disappear, and the requirements for technology will be strengthened. New technologies not only need people to master and control, but also need people to constantly develop. Whether it is the mastery or development of new technologies, this requires high-end talents not only to have proficient professional skills and strong learning ability, but also to have good psychological tolerance and coordination ability, which reflects the comprehensive quality of people. Therefore, college students must have excellent comprehensive qualities in order to find their own place among future high-end talents. In the supply side reform, the country is committed to improving the quality and efficiency of supply. In order to stand out in competition, enterprises need to continuously innovate to have core competitiveness. Both the improvement of national competitiveness on the international stage and the improvement of enterprise competitiveness in the market cannot be separated from the improvement of talent competitiveness. For individuals, competitiveness includes many aspects such as their professional ability, learning ability, innovation ability, and interpersonal communication ability.

##### **4.1 Enrich Educational Resources**

Universities can carry out various forms of employment and entrepreneurship activities tailored to the characteristics of college students, and then cooperate with campus broadcasting to strengthen the promotion of employment and entrepreneurship knowledge. Through promotion, students can cultivate their professional ethics awareness and attitude, prepare them to enter the workplace at any time, and have a correct understanding of the activities organized by the school from



an ideological perspective, further improving their ideological awareness. For students who want to engage in the service industry in the future, it is necessary for schools to cultivate their communication skills and service attitude, in order to ensure that they can maintain a positive attitude in their future work, adapt to different work environments, and be able to cleverly cope with different difficulties and setbacks. Universities should create favourable conditions for employment and entrepreneurship education for college students, such as working closely with enterprises, inviting experts to give speeches, sharing employment experiences and workplace cases, and guiding students to establish correct workplace thinking and cognition. From the perspective of education supply side reform, the cultivation of employment and entrepreneurship abilities of college students places more emphasis on their basic work abilities, so college students need more internship opportunities. However, schools alone cannot provide students with more internship opportunities. The country should establish a stable and comprehensive employment training system for graduates, providing practical protection for the interests of college graduates. At the same time, the government should play an active role in creating a platform for student employment training, striving to build a bridge between enterprises and schools, and encouraging college students to start their own businesses through reasonable mechanisms. Enterprises should actively enter the campus and discover intelligent and ambitious students through campus recruitment, contributing to the cultivation of high-quality and versatile talents. Universities should establish comprehensive internship assessment standards, encourage students to boldly seek employment, strive to create a good employment atmosphere in the school, and enhance the employment and entrepreneurship abilities of college students [12].

#### **4.2 Improve Guarantee Mechanism**

At present, the necessary supporting measures and regulations for college students' entrepreneurship and employment have not been fully implemented by relevant departments. This requires the state and government departments at all levels to continuously formulate corresponding policies to optimize the entrepreneurial and employment environment for college students. We should continuously open up financing channels and provide economic resource support for college students' entrepreneurship. Government departments should also continuously strengthen their service awareness, simplify the procedures and procedures required for college students' employment and entrepreneurship, and provide more convenient services, thereby providing a good atmosphere for college students' employment and entrepreneurship. Universities should collaborate with governments, enterprises, venture capitalists, and alumni to actively expand funding channels through the establishment of innovation and entrepreneurship education funds, and plan and use them reasonably to improve the efficiency of fund utilization. Secondly, strengthen the construction and management of entrepreneurship guidance service centres. Universities should realize that the cultivation of any ability is not achieved overnight. The effectiveness of new entrepreneurship education is certainly not limited to the classroom, but due to the limitations of the safety, curriculum, comprehensive quality,

and professional skills of college students, the most suitable entrepreneurial practice activities for them should also be on campus. We should arrange for teachers to track and guide students with strong entrepreneurial intentions, provide them with information, answer questions, and truly become an interface between the school and society. For the innovation and entrepreneurship projects with commercial value emerging from the campus entrepreneurship incubation base, colleges and universities should actively cooperate with the government and enterprises to help students create Private label and provide continuous follow-up, guidance and assistance in the business process.

## 5 Conclusions

At present, China is seeking new breakthroughs and attempting to resolve the contradiction between overcapacity and unreasonable industrial structure. The supply side reform in the new era is an important policy tool for transforming the social economy and adapting to the development of the times. In the process, the employment trend and employment structure of college graduates have become disconnected from market demand. The contradiction between talent supply and demand, the scarcity of educational resources, and the backwardness of supporting mechanisms are becoming increasingly prominent. In the education process of contemporary college students in our country, we should pay attention to the diversification of teaching methods, further enrich educational resources, improve guarantee mechanisms, optimize professional structure, cultivate comprehensive talents, and improve students' innovation and entrepreneurship abilities to cope with the fierce employment market.

## References

1. Hakala H, O'Shea G, Farny S, et al. Re - storing the business, innovation and entrepreneurial ecosystem concepts: The model-narrative review method[J]. *International Journal of Management Reviews*, 2020, 22(1): 10-32.
2. Cunningham J A, Lehmann E E, Menter M, et al. The impact of university focused technology transfer policies on regional innovation and entrepreneurship[J]. *The Journal of Technology Transfer*, 2019, 44: 1451-1475.
3. Lounsbury M, Cornelissen J, Granqvist N, et al. Culture, innovation and entrepreneurship[J]. *Innovation*, 2019, 21(1): 1-12.
4. Asemokha A, Musona J, Torkkeli L, et al. Business model innovation and entrepreneurial orientation relationships in SMEs: Implications for international performance[J]. *Journal of International Entrepreneurship*, 2019, 17: 425-453.
5. Shcherbak V, Arabuli S. Methodology and technology of Hackathon ecosystem to engage university faculty and students in innovation and entrepreneurship in the context of reducing the impact of the Covid-19 pandemic[J]. *Management*, 2021, 33(1): 105-114.
6. Zhou J, Qi J, Shi X. The Innovation of Entrepreneurship Education for Intangible Cultural Heritage Inheritance from the Perspective of Entrepreneurial Psychology[J]. *Frontiers in Psychology*, 2022, 13: 721219.

7. Tih S H, Hussain W M H W, Hashim N M H N. Innovation and entrepreneurship bootcamp: A descriptive study assessing the effectiveness of entrepreneurship education[J]. *International Journal of Business and Globalisation*, 2019, 22(2): 240-257.
8. Leonidou E, Christofi M, Vrontis D, et al. An integrative framework of stakeholder engagement for innovation management and entrepreneurship development[J]. *Journal of Business Research*, 2020, 119: 245-258.
9. Bouncken R, Ratzmann M, Barwinski R, et al. Coworking spaces: Empowerment for entrepreneurship and innovation in the digital and sharing economy[J]. *Journal of Business Research*, 2020, 114: 102-110.
10. Satalkina L, Steiner G. Digital entrepreneurship and its role in innovation systems: A systematic literature review as a basis for future research avenues for sustainable transitions[J]. *Sustainability*, 2020, 12(7): 2764.
11. Ndofirepi T M. Relationship between entrepreneurship education and entrepreneurial goal intentions: psychological traits as mediators[J]. *Journal of Innovation and Entrepreneurship*, 2020, 9(1): 1-20.
12. Bouncken R B, Kraus S. Entrepreneurial ecosystems in an interconnected world: emergence, governance and digitalization[J]. *Review of Managerial Science*, 2022, 16(1): 1-14.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

