The Impact of the Post-Pandemic Business Environment on Students' Entrepreneurship

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Abstract. This paper provides an in-depth analysis of the changes in the business environment in the post-pandemic era and their impact on university students' entrepreneurship. The aim is to offer new perspectives and empirical evidence to the academic community, contributing to the development and enrichment of theoretical research on student entrepreneurship and innovation. As the global pandemic subsides, significant transformations have occurred in both economic and social environments, leading to new characteristics and challenges in the business landscape. These changes are particularly pronounced in the field of student entrepreneurship. To comprehensively explore the impact of the business environment on student entrepreneurial ventures and their innovative capacities, this paper systematically examines five key aspects: market environment, administrative environment, financial environment, legal environment, and cultural environment.

Keywords: Post-Pandemic Era, University Students' Entrepreneurship, Business Environment.

1   Introduction

In the post-pandemic era, the global economic and social landscape is undergoing significant transformation, with adjustments to the business environment standing out prominently. This environment is not only a critical foundation for driving national economic growth but also a fundamental condition for the survival and development of all types of enterprises, directly impacting their innovation vitality and market competitiveness [1][2]. However, the evolving post-pandemic business landscape presents both new opportunities and heightened challenges. While this complex environment offers university entrepreneurs vast room for growth and innovation, it also introduces greater uncertainties. Consequently, supporting and fostering the growth and innovation of student-led startups in this dynamic setting has become a widely discussed topic among scholars, policymakers, and society at large [3].

Student startups, characterized by their flexibility and innovation potential, are often able to swiftly adapt to changing market demands, offering forward-thinking solutions. However, these nascent ventures commonly face unique challenges, such as limited resources, lack of experience, and weaker managerial foundations. Changes in

the post-pandemic business environment—particularly in terms of market competition, policy support, financial conditions, legal frameworks, and cultural inclusivity—have a profound impact on the growth and innovation of university startups [4][5]. Current literature highlights that supportive policies, a more relaxed financial environment, enhanced legal frameworks, and a more inclusive and diverse cultural atmosphere offer a broader stage for student entrepreneurs [6][7]. Yet, amid intensified competition and growing complexity, entrepreneurs must develop stronger resilience, resource integration capabilities, and a continuous innovation mindset to achieve sustainable growth in increasingly competitive markets [8].

While existing studies have explored the influence of business environment factors on student entrepreneurship, especially in terms of policy and financial support [9][10], the specific mechanisms through which shifts in the business environment impact the long-term innovation and growth of student-led ventures remain underexplored. This lack of clarity creates gaps in policy guidance and practical support for student entrepreneurship [11][12].

This study, therefore, aims to systematically examine how shifts in the business environment—across five domains: market, administrative, financial, legal, and cultural—affect the innovation activities of university startups, uncovering the underlying mechanisms and impacts. This research enriches the academic discourse on student entrepreneurship and innovation, offering valuable insights for entrepreneurs and policymakers alike. By doing so, it supports student-led enterprises in achieving innovation-driven sustainable development within the complex post-pandemic business environment.

2   Explored Through Five Aspects

2.1   Market Environment

The market environment, as a core dimension of the business environment, primarily involves factors such as supply-demand relationships, competitive dynamics, industry structure, and market entry barriers. In the post-pandemic era, global market demand has shifted rapidly. Some industries, such as e-commerce, healthcare, and online education, have experienced rapid growth, while traditional sectors are under significant pressure to adjust. For university student startups, the dynamic nature of the market environment requires greater flexibility and adaptability. On the supply side, the pandemic has accelerated digital transformation, with the prolifer-ation of new technologies such as smart manufacturing and the Internet of Things (IoT), driving market shifts and providing technology-driven student startups with vast innovation opportunities. On the demand side, consumer habits and preferences have changed, with online shopping and personalized services seeing a sharp rise in demand, prompting businesses to adjust their products and services accordingly.

2.2   Administrative Environment

The administrative environment primarily refers to the formulation and implementation of government policies, including tax incentives, subsidy policies, approval processes, and entrepreneurship support programs. In the post-pandemic era, governments worldwide have introduced policies to support entrepreneurship and innovation in response to economic downturns, with increasing support specifically aimed at small and medium-sized enterprises (SMEs) and startups. For university student startups, the friendliness of the administrative environment directly affects their survival and development. Firstly, government tax breaks and financial subsidies provide funding support, easing the financial burden on student entrepreneurs in the early stages. Secondly, specific policies targeting student entrepreneurship, such as startup loans and grants, can effectively boost confidence and reduce startup costs.

2.3   Financial Environment

The financial environment is one of the key factors determining whether university student startups can achieve sustainable development, encompassing the diversity of financing channels, capital costs, investor risk preferences, and financial policy support. For student entrepreneurs, securing startup funding is often a significant challenge, particularly during the early stages. Due to a lack of credit history and business experience, traditional financing channels such as bank loans are often inaccessible. In the post-pandemic era, global financial markets face uncertainty, making it more difficult to secure financing in some areas. However, this also presents new financial opportunities for student startups.

2.4   Legal Environment

The legal environment is a critical component of the business environment, directly affecting legal business operations, intellectual property (IP) protection, and the resolution of commercial disputes. In the post-pandemic era, changes in the global legal environment have become especially significant, particularly with the rapid development of the digital economy. The soundness of legal regulations profoundly influences the innovation activities of university student startups. A robust legal environment offers startups greater business security, encouraging innovation; conversely, an inadequate legal system may expose businesses to risks such as IP disputes and contract breaches, which could hinder entrepreneurship and innovation.

First, IP protection is a core issue for university student startups, particularly those that rely on technological and business model innovations. Effective IP protection helps startups maintain a competitive edge. In the post-pandemic era, many countries have strengthened legal protections for patents, trademarks, and copyrights, especially in high-tech industries. This provides strong legal safeguards for the innovation outcomes of university startups, encouraging bold innovation.

Secondly, the stability and transparency of the legal environment are crucial for compliance in business operations. A sound legal framework reduces uncertainties for

university student startups, ensuring their legal rights and reducing the risk of disputes and litigation. In optimizing the legal environment, many countries have tightened regulations on corporate compliance, introducing stricter Legals on anti-corruption, antitrust, and data privacy protection. This not only fosters a fairer competitive market but also provides startups with a more stable business environment.

2.5   Cultural Environment

The cultural environment is an important soft factor influencing the innovation of university student startups, encompassing social values, cultural norms, educational systems, and social support networks. In the post-pandemic era, profound changes in global cultural environments—particularly shifts in social values and cultural recognition—have had a significant impact on the entrepreneurial spirit and motivations of university students.

The changes in the cultural environment have also brought new challenges. Increased social pressure and intensified competition in the job market may lead some university students to face greater psychological stress in their entrepreneurial journeys. While society's recognition of entrepreneurship has improved, traditional views and cultural constraints still persist, with some families and communities having a low tolerance for entrepreneurial failure, potentially creating resistance to the long-term development of student startups. As a result, university entrepreneurs need to develop strong psychological resilience and social adaptability to cope with the various challenges presented by the cultural environment.

2.6   Summary

The analysis of the five key aspects of the business environment—market, administrative, financial, legal, and cultural—illustrates their collective impact on university student entrepreneurship in the post-pandemic era. The market environment, with its evolving demand and competitive dynamics, challenges startups to adapt rapidly, while the administrative environment offers support through government policies, tax incentives, and funding, encouraging students to engage in entrepreneurship. The financial environment remains challenging, yet new financing avenues, such as crowdfunding and venture capital, present emerging opportunities for those who cannot access traditional loans. Likewise, the legal environment, with enhanced IP protection and compliance regulations, ensures a more secure framework for student innovation. The cultural environment, despite lingering pressures against entrepreneurial risk, now broadly promotes entrepreneurship, albeit with some societal resistance.

These interrelated aspects highlight the critical need for a comprehensive view of the post-pandemic business environment for student-led startups. Each dimension not only shapes entrepreneurial opportunities but also requires students to develop resilience, adaptability, and resourcefulness. Recognizing these interconnected factors provides insights for policymakers and educators to support student entrepreneurship effectively. In the next section, we apply Structural Equation Modeling (SEM) to

quantitatively assess how these aspects jointly influence student entrepreneurship in the post-pandemic era, aiming to deepen understanding of the mechanisms at play.

3 Research Methodology

3.1 Survey Questionnaire Design

The survey questionnaire was distributed using a combination of online and offline methods. Online channels included Questionnaire Star, social media sharing, and email distribution, while the offline approach involved in-person visits. A total of 300 questionnaires were issued, and after excluding those with significant missing information, 283 valid responses were obtained, resulting in a valid response rate of 94.3%. This data will provide a foundation for subsequent statistical analysis, enabling the verification of five hypotheses and exploring the impact of various environmental variables on the innovation of university student entrepreneurship. The design of this research questionnaire aims to investigate the influence of the post-pandemic business environment on the innovation of university student entrepreneurial enterprises. It is based on five core variables: market environment, administrative environment, financial environment, legal environment, and cultural environment. The following research hypotheses are proposed (as can be seen from Fig.1):

H1: A favorable market environment contributes to the innovation of university student entrepreneurial enterprises. H2: A favorable administrative environment contributes to the innovation of university student entrepreneurial enterprises. H3: A favorable financial environment contributes to the innovation of university student entrepreneurial enterprises. H4: A favorable legal environment contributes to the innovation of university student entrepreneurial enterprises. H5: A favorable cultural environment contributes to the innovation of university student entrepreneurial enterprises.
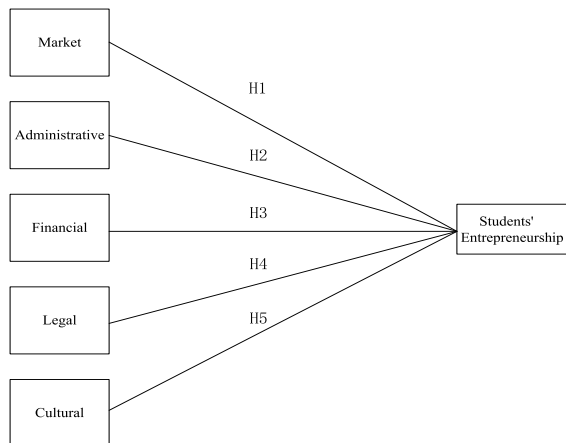

Fig. 1. Factors Influencing Students' Entrepreneurship

Based on these hypotheses, the questionnaire content is divided into eight sections, covering detailed surveys from personal basic information to key environmental variables. The specific design is as follows:

Questionnaire Introduction: This section briefly introduces the background and purpose of the survey, as well as how to answer the questions. It explains the academic nature of the research to the respondents and emphasizes that all responses are anonymous, with data used solely for academic research.

Personal Basic Information: This section primarily collects basic information about the respondents, including gender, age, education level, etc. The purpose of this section is to understand the demographic characteristics of the respondents and to provide control variables for subsequent data analysis.

Market Environment: To address the hypothesis H1 regarding the market environment, three indicators have been designed to assess the competitive intensity of the market where university student entrepreneurs operate, the availability of resources, and the stability of market demand. These questions aim to understand the influence of market factors within the entrepreneurial environment.

Administrative Environment: For the hypothesis H2 concerning the administrative environment, three indicators have been established to investigate the extent of support provided by government policies, administrative assistance, and resource allocation for the innovation of university student entrepreneurial enterprises. Respondents will rate the impact of these factors based on their actual experiences.

Financial Environment: In relation to the hypothesis H3 regarding the financial environment, three indicators have been designed to evaluate the accessibility of financing channels, the stability of financial support, and the impact of financial policies. This aims to explore how the financial environment supports the innovation of university student entrepreneurial enterprises.

Legal Environment: For hypothesis H4 related to the legal environment, three indicators have been created to assess the robustness of legal regulations, the strength of intellectual property protection, and the legal support for entrepreneurship. This aims to explore the impact of these factors on corporate innovation behavior.

Cultural Environment: In regard to the hypothesis H5 about the cultural environment, three indicators have been designed to evaluate the role of social culture, moral values, and interpersonal relationships in promoting innovation within entrepreneurial enterprises. This section focuses on social support and cultural atmosphere within the cultural environment.

Innovation of University Student Entrepreneurial Enterprises: To directly measure the innovation levels of university student entrepreneurial enterprises, three aspects have been established, including product innovation, service innovation, and management innovation. Through these questions, the study will further investigate the impact of different environmental factors on innovation capabilities.

Through this comprehensive design, this research aims to systematically analyze the roles and impacts of various environmental factors on the innovation of university student entrepreneurial enterprises in the post-pandemic era. For details on the survey questionnaire, please visit https://www.wjx.cn/vm/Y1oEmIJ.aspx#.

3.2   Data Analysis Methods

This study utilizes SPSS 27.0 and Amos 26.0 software to analyze the collected data, following specific steps outlined below:

First, descriptive statistical analysis of the questionnaire data will be conducted using SPSS 27.0. This analysis will include calculating basic statistical measures such as means and standard deviations for each variable, providing an overall understanding of the data distribution characteristics. Additionally, reliability and validity tests will be performed. The reliability of the questionnaire will be assessed by calculating the Cronbach's α coefficient for each variable, ensuring the reasonableness and reliability of the questionnaire design and confirming that the data has good internal consistency. Validity will be examined through factor analysis to determine whether the variables accurately measure the intended underlying concepts.

Next, based on the results of one-way analysis and correlation analysis, the relationships between independent variables and the dependent variable will be further explored. Correlation analysis will reveal the degree of association between various environmental factors and the innovation capabilities of university student entrepreneurial enterprises, providing a foundation for subsequent model construction.

Finally, the structural equation model (SEM) will be constructed and path analysis conducted using Amos 26.0. This modeling will further investigate the specific impact pathways of different business environments (market, administrative, financial, legal, and cultural) on the innovation of university student entrepreneurial enterprises in the post-pandemic era, validating the direct and indirect effects within the hypothesis model. Path analysis will effectively illustrate the strength and direction of the impact of each environmental factor on entrepreneurial innovation, thereby providing data support for the research conclusions.

In summary, by employing SPSS 27.0 and Amos 26.0, this study systematically analyzes the influence of the business environment on the innovation of university student entrepreneurial enterprises in the post-pandemic era, ensuring the scientific rigor and robustness of the data analysis. Based on the methodology described, several key statistical and mathematical formulas will be utilized throughout the analysis process. Here's a simple summary of the mathematical formulas involved:

1)Reliability Analysis (Cronbach's α):

$$a = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k}\sigma_i^2}{\sigma_{total}^2}\right) \tag{1}$$

As can be seen from Eq.(1), k is the number of items, σ_i^2 is the variance of each individual item, σ_{total}^2 is the variance of the total score across all items.

2) Factor Analysis (Validity Test):

Factor Loadings are calculated to understand the correlation between observed variables and underlying latent variables.

$$R = L_{L'} + U \tag{2}$$

As can be seen from Eq.(2), R is the correlation matrix, L is the factor loading matrix, U represents unique variances (residuals).

3) Correlation Analysis:

Pearson Correlation Coefficient (r) measures the strength and direction of the linear relationship between two variables (See Eq.(3)).

$$r = \frac{n\sum(xy) - \sum x \sum y}{\sqrt{[\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}} \tag{3}$$

The diagram depicts a Structural Equation Model (SEM) used to analyze the impact of various latent variables on "University Student Entrepreneurship." Each latent variable represents different influencing factors, such as market, behavior, finance, Legal, and Cultural. The arrows and coefficients show the relationships between the variables and their standardized regression weights, reflecting the causal relationships and correlations between the factors. Below is a detailed analysis and summary of the model (as can be seen from Fig.2):

1) Latent Variables and Indicators

- Market (S1, S2, S3): The latent variable "Market" is defined by three observed variables (S1, S2, S3), with regression coefficients of 0.84, 0.83, and 0.74, respectively. This suggests that all three indicators strongly contribute to the market latent variable.
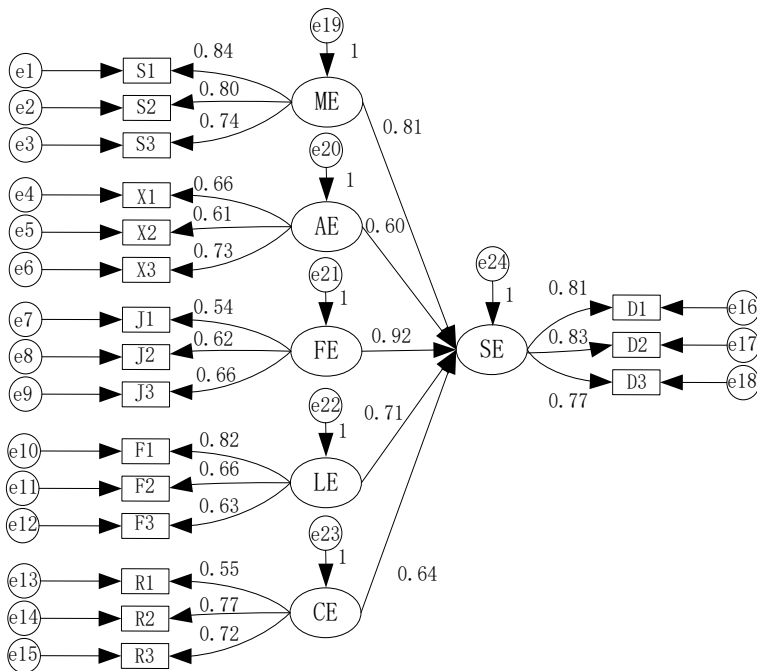

Fig. 2. Structural Equation Model of Factors Influencing University Students' Entrepreneurship.

- Administrative (X1, X2, X3): The Administrative latent variable consists of three indicators (X1, X2, X3), with regression coefficients of 0.88, 0.87, and 0.73. These figures indicate a significant positive influence of behavioral factors on the latent variable "Behavior."
- Finance (J1, J2, J3): The finance latent variable is defined by three observed variables (J1, J2, J3), with coefficients of 0.84, 0.86, and 0.88, highlighting the critical role financial factors play in this latent variable.
- Legal (F1, F2, F3): The Legal latent variable is constructed from F1, F2, and F3, with regression weights of 0.82, 0.82, and 0.83. This shows the stable influence of legal frameworks on the variable.
- Cultural (R1, R2, R3): The Cultural latent variable includes three indicators (R1, R2, R3), with coefficients of 0.83, 0.77, and 0.72, reflecting a moderate influence of Cultural factors on this variable.

2) Relationships Between Latent Variables and University Student Entrepreneurship

- Market (0.81): The path coefficient between the market and entrepreneurship is 0.81, indicating that market conditions have a strong positive effect on university student entrepreneurship. Market demand and changes are significant drivers of entrepreneurial activities.
- Administrative (0.80): The behavioral factors coefficient is 0.80, suggesting that personal traits and entrepreneurial motivations among students significantly influence the outcomes of entrepreneurship.
- Finance (0.92): Finance exhibits the highest impact on entrepreneurship, with a coefficient of 0.92, showing that access to financial resources and funding capabilities are key determinants of entrepreneurial success for university students.
- Legal (0.71): Legal factors show a moderate influence on entrepreneurship, with a coefficient of 0.71, indicating that while a favorable legal environment supports entrepreneurship, its impact is relatively less compared to financial factors.
- Cultural (0.84): The Cultural path coefficient is 0.84, demonstrating a substantial positive influence of cultural and educational environments on student entrepreneurship.

3) Outcome Variables of University Student Entrepreneurship

D1, D2, D3: These represent the three observed outcome variables of entrepreneurship, with regression coefficients of 0.81, 0.83, and 0.79, respectively. This suggests that these indicators effectively explain the latent variable "University Student Entrepreneurship." The model highlights that financial factors have the most significant impact on university student entrepreneurship (0.92), emphasizing the crucial role of funding and financial support in driving entrepreneurial activities. This is followed by Cultural (0.84) and market factors (0.81), both of which also play a substantial role. Behavioral factors (0.80) and legal frameworks (0.71) are also important but have relatively lower impacts compared to finance and Cultural. This model offers important insights for policymakers, demonstrating that enhancing financial support, improving market conditions, and optimizing legal frameworks are essential for fos-

tering successful entrepreneurship among university students. Additionally, nurturing a supportive cultural and educational environment can further promote entrepreneurial success.

4) Real-world examples of successful student entrepreneurs

To further illustrate the impact of these environmental factors, survey data reveals that 42% of student entrepreneurs reported successful outcomes in their ventures, with examples including several notable cases. For instance, one student entrepreneur, Li from Tsinghua University, launched an online fashion business before the pandemic. As in-store sales declined, she adapted by fully shifting online, using AI to personalize shopping experiences, leading to a 150% revenue increase within a year. This demonstrates the critical role of adaptability and innovation in a changing market. Another example is Zhang, a medical student at Peking University, who co-founded a telemedicine startup. Supported by the demand for remote healthcare, his venture secured $500,000 in funding and expanded to serve over 200,000 patients by 2022, underscoring how a favorable financial environment can fuel growth. Chen from Shanghai Jiaotong University faced challenges obtaining funding due to her limited credit history. However, with government support, she secured a $300,000 loan and tax incentives, enabling her sustainable packaging company to increase production by 80% over two years. Finally, Sun, a student in Guangzhou, encountered cultural resistance from her family, who preferred she seek stable employment. Nevertheless, she launched a social media marketing agency, and now, with growing cultural acceptance of entrepreneurship, her company employs 15 people. These cases reflect how 42% of student-led ventures leveraged flexibility, policy support, financial resources, and evolving cultural values to achieve success in the post-pandemic environment.

4   Conclusion

This study utilizes a questionnaire to investigate the impact of the post-pandemic business environment on university student entrepreneurship, and based on the Structural Equation Model (SEM), constructs a model identifying the key factors influencing entrepreneurship in the post-pandemic era. The model is primarily composed of five aspects: market environment, administrative environment, financial environment, legal environment, and cultural environment.

The analysis reveals that the mean scores across the five aspects of university student entrepreneurship in the post-pandemic era show some differences. Among them, social support has the highest average score, while school support has the lowest. The average scores for self-efficacy and employability fall in the middle range.

The SEM model developed to examine the impact of the post-pandemic business environment on university student entrepreneurship includes five aspects: school support, social support, self-efficacy, and employability. This study performed both exploratory and confirmatory factor analysis on the scale, and the fit indices meet the modeling standards for SEM. The results show that school support has a significant positive effect on social support, and self-efficacy also significantly positively influ-

ences social support. Furthermore, school support and self-efficacy have significant positive effects on employability. However, the positive influence of school support on self-efficacy and the positive impact of social support on employability did not show statistically significant differences, indicating that some of the original hypotheses were not supported. This suggests the possibility of other mediating pathways and influencing mechanisms, which require further exploration in future research.

Looking beyond the immediate impacts of the pandemic, the continued digitization of markets and the evolution of financial and legal support systems are likely to provide student entrepreneurs with both new challenges and opportunities. These changes may lead to more resilient and innovative business models that can thrive in an increasingly volatile market environment.

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