ABSTRACT
This paper examines the business model innovation situation, evaluation, and key factors of small snack food production enterprises in China and provides suggestions for enterprises. A questionnaire designed using the VARIM model evaluates business model innovation based on five aspects, combined with the influential role of relational resources, digital technology, and long tail theory. It is hypothesized that relational resources, digital technology, and long tail theory have a positive impact on business model innovation, and that the VARIM model assesses profitability potential. It is hypothesized that firms should utilize these factors for business model innovation to improve competitiveness and sustainability. The findings and conclusions of this paper are based on assumptions and speculations, which need to be verified and corrected by subsequent practical investigations.

Keywords: business model innovation, VARIM, snack food, questionnaire, digital technology

INTRODUCTION
Business model innovation is a multifaceted innovation involving products, processes, organizations, and marketing, focusing on how a company positions itself, interacts with customers and partners, and achieves sustainable competitive advantage. The market size of China's casual food industry is driven by consumer demand. Consumption upgrading and changes in consumer concepts have driven the industry's development, but there are problems such as low concentration and serious product homogenization. Casual food manufacturers are suitable for incremental innovation and adoption of innovative approaches, and digital technology plays a significant role in the field of corporate innovation. Enterprises need to reassess their own resources and external resources for business model innovation. Personalized demand is the trend in the casual food industry, and small casual food producers can apply the long-tail theory to quickly capture the market for customized services. The results of business model innovation for enterprise development are full of variables, and the VARIM model can be used to evaluate the profit potential of business model innovation. This paper constructs a research framework to evaluate the business model innovation of small-scale casual food manufacturers in China.

LITERATURE REVIEW
The concept of business model innovation
Business model innovation is based on the theory of dynamic capabilities and value creation by sensing opportunities, seizing them, mobilizing resources and continuously updating core competencies (Cosenz & Noto, 2018) in order to build dynamic capabilities and an open innovation process that creates value (Chesbrough, 2003). Franco et al. (2021) constructed a dynamic capacity assessment tool through a literature review. They emphasized the role of business models in shaping...
dynamic capabilities and introduced the concept of "business model innovation engines". Value creation theory emphasizes that the primary task of managers is to understand value from the customer's perspective (Ulaga et al., 2001). Firms do not only create value through the exchange of goods and services in the marketplace; rather, business relationships themselves represent a great potential for value creation (Eggert et al., 2018). Business model innovation consists of innovation in five core components: value creation, value proposition, value capture, value delivery and value communication (Rayna & Striukova, 2016). Value creation is a core element of the business model, where value is captured through mechanisms that include core competencies, key resources, governance, complementary assets, and value networks. The value proposition is another core element of the business model, offering goods and services to the market and dictating prices and delivery methods. Value capture is the ability of the business to benefit from the value created. Value delivery is the delivery of created value to customers through distribution channels. Value communication is how the company communicates with its customers and partners about its products, services and created value.

Relational resources

Relational resources in business model innovation include resources obtained from establishing and maintaining relationships with external stakeholders (Fu, 2015). In recent years, scholars have studied the mechanism of relational resources on business model innovation and concluded that business model innovation is promoted through mediating variables such as improving the absorptive, learning, and creative capacities of enterprises (Ziółkowska, 2014). Different types of relational resources have different effects on business model innovation (Story et al., 2009). Research-based on resource base theory suggests that relational resources provide scarce, valuable, irreplaceable, and hard-to-imitate resources that enhance competitive advantage and innovation (Lavie, 2006; Dyer et al., 2003). Research-based on dynamic capabilities theory suggests that relational resources provide the ability to perceive, access, integrate, transform, and utilize external resources, which facilitates business model innovation (Demil & Lecocq, 2010; Doz & Kosonen, 2010). Research-based on social network theory suggests that relational resources provide societal resources such as information, trust, and reputation, enhancing social influence and innovation (Demil et al., 2015; Zott et al., 2011). Taken together, relational resources are a key factor influencing business model innovation.

Digital technology

The digital economy is leading changes and innovations in various industries, and digital technology, as its core element, influences the paths of value proposition, value transfer and value acquisition of business model innovation through mechanisms such as reducing the threshold and cost of business model innovation, enhancing the motivation of innovation, and expanding the innovation space (Osterwalder et al., 2010; Teece, 2010; Zott et al., 2011). Digital technology includes the internet, big data, artificial intelligence, the internet of things, blockchain and so on, through digital technology can improve the ability of enterprises to obtain market information and so on, increase the efficiency of enterprises to expand the market and so on (Chesbrough, 2010; Amit & Zott, 2012; Foss & Saebi, 2017). In addition, digital technology affects value proposition, value delivery and value capture of business model innovation in different ways. Digital technologies can influence value propositions by, firstly, improving the performance, quality and safety of products or services, e.g., artificial intelligence can improve the accuracy and efficiency of medical diagnosis; secondly, reducing the cost, price and risk of products or services, e.g., cloud computing can reduce the information technology inputs and maintenance costs of firms; and, thirdly, increasing the diversity, personalization and customization of products or services, e.g., big data can provide personalized recommendations and offers based on customer preferences and behaviors; and fourthly, creating new features, experiences and value of a product or service, e.g. virtual reality can provide customers with immersive entertainment and educational experiences (Bharadwaj et al., 2013; Lusch & Nambisan, 2015). Digital technologies can impact value delivery by, first, increasing channel reach, efficiency and interactivity, e.g., e-commerce allows customers to shop and pay from anywhere at any time; second, increasing relationship stability, loyalty and satisfaction, e.g., social media allows customers to communicate and share with businesses and other customers; and, third,
increasing activity coordination, flexibility and innovation, for example, the Internet of Things allows firms to monitor and adjust the operational status and quality of products or services in real-time (Zott & Amit, 2010; Teece, 2018). Digital technologies can affect value capture by first, increasing the diversity, flexibility, and sustainability of revenue sources, e.g., the platform economy allows firms to derive revenues from commissions, advertising, and other sources from a variety of sources; second, reducing the fixedness, complexity, and uncertainty of cost structures, e.g., the sharing economy allows firms to utilize idle resources to reduce asset inputs and operating costs; and, third, altering the profit model's logic, structure and distribution, e.g. the subscription economy allows firms to shift from one-off transactions to long-term relationships with fees based on usage (Baden-Fuller & Haefliger, 2013; Casadesus-Masanell & Zhu, 2013).

Long-tail theory

The long-tail theory refers to the idea that non-popular products or services customers together can form a large market that rivals the popular market (Anderson, 2008). In the internet era, the diversification and personalization of consumer needs and the use of digital technologies by firms to reduce costs and increase efficiency have made the long-tail theory a key factor in business model innovation (Rochet et al., 2003). Long-tail theory can facilitate business model innovation based on platform or network effects, as well as value-based innovation or blue ocean strategies (Pisano et al., 2014). Enterprises should use the long-tail theory to guide business model innovation and choose appropriate strategies according to different contexts strategies and methods.

VARIM model

Business model innovation is a strategic choice of a firm to meet the demand created by changing its products or services, revenue sources, partners, and cost structure to achieve competitive advantage and high profitability. However, business model innovation is not always successful, and some companies fail due to lack of market, customer or competitor understanding, reliance on existing models, and lack of implementation and evaluation mechanisms (Clauss, 2017). Successful business models need to fulfill the following five elements:
1. Value: the value provided to customers or other stakeholders, e.g., functional, emotional, social value.
2. Adaptability: the ability of the business model to adapt to changes in the market environment and customer needs, such as opportunity identification, threat response, and change prediction.
3. Rareness: characteristics or advantages that are different from competitors, such as product differentiation, resource uniqueness, and relationship network advantages.
4. Inimitability: the ability to prevent or delay imitation or substitution by competitors, e.g., patent protection, intellectual and technological complexity, and cultural and institutional barriers.
5. Monetization: the ability to convert value into revenue and profit, e.g., pricing strategy, revenue streams, cost structure, margins, etc.

The VARIM model proposed by Afuah Allan (2014) analyses and scores and compares the business model innovations of Apple, Amazon, Netflix, etc. The feasibility of the VARIM model has been tested in practice. The feasibility of VARIM model has been tested in practice, but there is still a gap in the research on business model innovation of snack food production enterprises. The purpose of this paper is to combine the impact of relational resources, digital technology and long-tail theory on the business model innovation of small snack food production enterprises in China, to design a questionnaire for evaluating the impact of business model innovation of small snack food production enterprises in China by using the VARIM model, and to establish a set of evaluation framework research models.
METHODOLOGY

This paper examines the business model innovation of small snack food production enterprises in China, choosing small enterprises that meet the criteria in Henan, Hubei, and Sichuan provinces as case studies. The industries in which these firms operate are highly competitive and fast-changing, requiring constant innovation to adapt to the market and environment. They face challenges such as resources, technology, and consumer demand, but also share common opportunities. The research method is based on the VARIM model, which designs questionnaires from five aspects, combines the influence of other factors, collects the business model innovation situation and evaluation of enterprises, and conducts empirical analysis. This paper only designed a valid questionnaire and did not involve the specific implementation and empirical analysis process.

Conducting a questionnaire involves the following key steps:
1. A questionnaire involving three sections was developed based on theories and classifications related to business model innovation and the VARIM model. The first section covers basic information about the enterprise, including its name, size, industry, and location. The second section details the specifics of the business model innovation, such as whether there has been any business model innovation, the type, scope, frequency, and duration of the innovation, and so on. The third section is about the evaluation of the business model innovation, including the enterprise's satisfaction, recognition and impact of the innovation, as well as the evaluation based on the VARIM model.

2. Determining the form and format of the questionnaire is also an important aspect. Depending on the content and structure of the questionnaire, a suitable form and format is selected. In this paper, self-administered and multiple-choice questionnaires were mainly used to facilitate completion and statistical analysis by the respondents.

3. At the stage of specifying the sample and number of questionnaires, it is necessary to make a suitable choice according to the research objectives and objects. In this paper, the non-probability sampling method is used to select qualified small snack food production enterprises as questionnaire samples by searching the Internet, interviewing experts, and analyzing cases. After the survey, a total of 30 small casual food production enterprises in Henan, Hubei and Sichuan provinces were selected as samples, and 10 questionnaires were issued to each enterprise, totaling 300 copies were distributed.

4. It is equally important to determine how the questionnaires are to be distributed and returned. Depending on the number and type of samples, appropriate distribution and collection methods are chosen to increase the coverage and recovery rate of the questionnaire. Web-based distribution involves sending a link or attachment to the surveyed company's managers and employees via email or WeChat. For on-site visits, paper questionnaires are delivered to managers and employees in person or by proxy at the office or production site of the surveyed company.

5. Organizing and analyzing the collected data is the final crucial step. The data are cleaned and screened according to the content and structure of the questionnaire. Data cleaning mainly includes checking the completeness, validity, consistency, and accuracy of the questionnaire and excluding invalid or incorrect data. Data analysis is mainly carried out using statistical analysis software such as SPSS, Excel, etc. for descriptive statistics, correlation analysis and regression analysis to verify the hypotheses and draw the corresponding conclusions.

The research framework of this paper can be summarized as follows: the key factors affecting business model innovation, namely relational resources, digital technology, and the long tail theory, are used as independent variables, with business model innovation as the dependent variable, and the VARIM model is used to assess the effect of the independent variables on the dependent variable. The research framework of this paper is shown in Figure 1:
Questionnaire design

The questionnaire in this paper is designed to explore the business model innovation situation and evaluation results of small snack food production enterprises in China, with the key influencing factors being relational resources, digital technology, and long tail theory. The questionnaire design follows the principles of simplicity, precision, focus, completeness, neutrality, and acceptability, and avoids sensitive, leading, repetitive, similar, and ambiguous questions, while taking into account respondents' characteristics and interests. The questionnaire process included determining the content structure, writing questions and options, determining code numbers, reviewing the test results, and revising and refining. The questionnaire is based on the VARIM model, combining relational resources, digital technology, and long-tail theory, and designing questions from five aspects: value, adaptability, scarcity, inimitability, and monetization, to understand value creation innovation, value proposition innovation, and other business model innovation activities. The questionnaire is based on multiple-choice questions, supplemented by fill-in-the-blanks questions, with fewer narrative questions. Multiple choice questions are divided into single and multiple choice, providing sufficient and non-repeated options with options such as other or don't know. Fill-in-the-blank questions are used to collect basic information and opinions and suggestions. The preliminary design of the questionnaire is shown below:

Questionnaire on Business Model Innovation for small snack food production enterprises

Part I: Basic Information

1. The name of your business is (fill-in-the-blank): _____________

2. Which of the following industries does your business belong to (single choice):
   A. pastries
   B. biscuits
   C. puffed food
   D. nuts
   E. food preserved in sugar or honey
   F. Other (specify) _____________

3. Which of the following ranges does the number of employees in your organization fall into (single choice)?
   A. Less than 20
   B. 20-300 persons
   C. 300-1000 persons
   D. 1000 persons
4. Which of the following ranges does your business's average annual operating income fall into (single choice):
   A. Less than 3 million Yuan
   B. 3-20 million Yuan
   C. 20-40 million Yuan
   D. Over 40 million Yuan

5. Which of the following provinces is your business located in (single choice):
   A. He'nan
   B. Hubei
   C. Sichuan
   D. Other (specify)____________________

6. The position you hold in the business is (fill-in-the-blank)____________________

Part II: Business model innovation situation

6. Has your organization undertaken any business model innovation (single choice):
   A. be
   B. clogged
   C. I don't know.

7. If you answered yes, which of the following types of business model innovations does your organization undertake? (Multiple choice):
   A. Value-creating innovations, i.e., changing the use value of a product or service to provide a more valuable solution.
   B. Value proposition innovation, i.e., a change in the price or delivery of a product or service that enhances the consumer experience.
   C. Value delivery innovation, i.e., a change in the way a product or service is delivered that improves the efficiency of delivery or experience.
   D. Value capture innovation, i.e., a change in the revenue stream or cost structure of a product or service that improves profitability or competitiveness.
   E. Value communication innovation, i.e., a change in the way a product or service is communicated that increases brand awareness or loyalty.
   F. Other (specify)____________________

8. If your answer is yes, which of the following aspects of business model innovation does your organization undertake (multiple choice):
   A. Relational resources, i.e., using the network of relationships with stakeholders to obtain additional information, resources, and support.
   B. Digital technology, i.e. the use of computers, networks, mobile devices, and other technological means to achieve informatization, intelligence and internalization.
   C. Long tail theory, i.e. using the Internet platform to satisfy consumers' personalized and diversified needs, creating a market characterized by a concentrated head and a fragmented tail.
   D. Other (specify)____________________

9. If your answer is yes, what is the scope of business model innovation in your organization (single choice):
   A. entire enterprise
   B. Selected products or services
   C. Selected sectors or processes
   D. Other (specify)____________________
10. If your answer is yes, how often does your organization undertake business model innovation (single choice):
A. More than once a year
B. Once a year
C. Every two years
D. More than once every three years
E. unscheduled

11. If you answered yes, when was the last time your organization made a business model innovation? (Single choice):
A. 2023 onwards
B. 2022
C. 2021
D. By 2020

**Part III: Evaluation of business model innovation**

12. If your organization has carried out business model innovation, how satisfied are you with it? (Single choice):
A. extremely happy
B. more satisfied
C. Generally satisfactory
D. not very satisfactory
E. Very dissatisfied

13. If your organization has carried out business model innovation, how well do you recognize business model innovation? (Single choice):
A. It's very much recognized.
B. relatively speaking.
C. General recognition
D. Not really.
E. Strongly disapproves.

14. If you already understand the VARIM model, please answer the following questions based on your organization's actual situation (single choice):

15. How has the company's market share changed after implementing business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

16. What are the changes in the benefits provided to customers relative to competitors after implementing business model innovations?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

17. How has the company's reputation and image changed after implementing the business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

18. How has the number and diversity of new products or services offered by the company changed as a result of implementing the business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

19. How have the new products changed in terms of revenue for the company after the implementation of the business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

20. How has the company's ability to provide valuable products or services to customers changed in terms of flexibility after implementing business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower
21. How did the implementation of business model innovation change the extent to which the company's revenue level was higher than that of its competitors or closed the gap between competitors?
A. significantly higher B. slightly higher C. no change D. slightly lower E. significantly lower

22. How has the degree of differentiation of the company's products or services from its competitors changed after implementing business model innovation?
A. significantly higher B. slightly higher C. no change D. slightly lower E. significantly lower

23. How has the number of competitors with substitute products changed after implementing the business model innovation?
A. Significant decrease B. Slight decrease C. No change D. Slight increase E. Significant increase

24. How has the amount of intellectual property owned by the company changed after the implementation of the business model innovation?
A. significantly higher B. slightly higher C. no change D. slightly lower E. significantly lower

25. How has the implementation of business model innovation changed the number of resources the company has that are difficult for competitors to access?
A. significantly higher B. slightly higher C. no change D. slightly lower E. significantly lower

26. How has the implementation of business model innovation changed the number of business activities that the company can carry out and that are difficult for competitors to carry out?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

27. How has the number of revenue sources of the company changed after the implementation of the business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

28. How has the number of customers with a high willingness to pay for the products or services offered by the company changed after the implementation of the business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

29. How has the company's return on capital changed after implementing business model innovation?
A. Significantly higher B. Slightly higher C. No change D. Slightly lower E. Significantly lower

CONCLUSION AND RECOMMENDATIONS

This paper explores the significance and impact of business model innovation on small-scale casual food production enterprises in China and finds that business model innovation can help enterprises cope with changes in market competition and consumer demand, enhance core competitiveness, and achieve sustained growth and development, as well as help to realize a balance between value creation and value capture, and to improve profitability and efficiency. There are some limitations and shortcomings in this paper, and further field surveys and data analyses are needed to expand the research objects and samples and enhance the universality and representativeness of the study. Based on the results of the study, the government should strengthen the regulation and supervision of the snack food industry and provide policy support and incentives, and enterprises should formulate clear business model innovation strategies and target plans, and make full use of resources, digital technology, and other influencing factors to carry out innovation activities to improve performance.
REFERENCES


