

Analysis and Solutions to Cultural Barriers in Cross-border E-commerce of Agricultural Products under the Background of Rural Revitalization: An Empirical Study Based on Reviews of Qiaqia Sunflower Seeds

Miaoke Hu

School of Languages and Media, Anhui University of Finance & Economics, Bengbu Anhui
233030, China

Abstract

Against the backdrop of the deep integration of the rural revitalization strategy and the digital economy, cross-border e-commerce of agricultural products has become an important engine for promoting agricultural modernization and increasing farmers' income. However, cultural barriers, as an implicit form of non-tariff barriers, severely restrict the in-depth expansion of Chinese agricultural products in overseas markets. This paper takes Qiaqia sunflower seeds as a typical case, using web crawling technology to obtain overseas user reviews on the Amazon platform. Employing text analysis, it identifies, classifies, and deeply analyzes the types of cultural barriers encountered in the cross-border sales of agricultural products and their causes. The study finds that cultural barriers are not only reflected in superficial differences in taste preferences, but are also deeply rooted in cognitive biases regarding product attributes, differing attitudes towards food additives, and conflicts in consumption habits. This study constructs a closed-loop analytical framework from data mining to strategy optimization, providing an empirical basis and practical solutions for overcoming the cultural dilemmas of cross-border e-commerce of agricultural products, and helping rural industries improve their cultural adaptability and competitiveness in the global market.

Keywords

Rural revitalization, agricultural products, cross-border e-commerce, cultural barriers, Chacha sunflower seeds.

1. Connotation, Function, and Current Research Status

1.1. Research Background and Connotation

Rural areas are an important carrier of Chinese civilization, and their revitalization is crucial to the foundation of national development. Since the 18th National Congress of the Communist Party of China, the country has continuously strengthened policies to benefit farmers. The 19th National Congress of the Communist Party of China formally proposed the rural revitalization strategy.^[1] Subsequently, policy documents such as the "Rural Revitalization Plan (2024-2027)" and the "Rural Revitalization Promotion Law of the People's Republic of China" were successively issued, building a solid policy and legal guarantee system for rural revitalization.^[2] In the global wave of the digital economy, cross-border e-commerce has become an innovative engine for international trade by overcoming time and space limitations and reducing transaction costs.^[3] For rural revitalization, cross-border e-commerce for agricultural products is not only a bridge connecting agricultural products with international markets, but also a key pathway to promote supply-side structural reform in agriculture, increase the added value of agricultural products, and directly boost farmers' income.^[4] Through cross-border e-commerce

platforms, farmers and agricultural enterprises can directly connect with global consumers, reduce intermediaries, and accurately grasp market demand.^[5]

However, against the backdrop of deepening globalization, cultural differences have become an invisible barrier that cannot be ignored in international agricultural trade.^[6] Cultural barriers refer to the misunderstandings, acceptance obstacles, and even market rejections that arise from significant differences between different countries and regions in areas such as language expression, food culture, consumption habits, and value orientations, leading to cross-border marketing, product design, and brand communication of agricultural products.^[7] These barriers are deeply embedded in consumers' daily lives and cognitive frameworks, making them difficult to eliminate through traditional trade policies and becoming a key bottleneck restricting the "going global" of agricultural products.

1.2. The role of the research subject: The typicality of Chacha sunflower seeds as a typical case

Among numerous agricultural products exported overseas, Chacha sunflower seeds serve as a highly representative research sample. Firstly, as a representative of Chinese roasted nuts and seeds culture, Chacha sunflower seeds embody specific dietary traditions, and their export process itself represents a transnational dissemination of cultural products.^[8] Secondly, through a "company + farmer" cooperation model, Chacha sunflower seeds have played a positive role in driving domestic agricultural planting and increasing farmers' income, making them a successful practitioner of the rural revitalization strategy in the field of agricultural industrialization. Thirdly, according to Ye Xinran's (2024) research, Chacha Foods embarked on its internationalization journey in 2008.^[9] Through strategies such as deep localization and product innovation, its products have been exported to nearly 50 countries and regions. Its rich overseas operating experience provides an excellent observation window for studying the cultural adaptability of cross-border e-commerce for agricultural products. The user reviews accumulated in overseas markets directly reflect the real feelings and attitudes of consumers from different cultural backgrounds towards Chinese agricultural products, serving as primary data for studying cultural barriers.

1.3. Current Status and Trends of Domestic and International Research

1.3.1. Research on cross-border e-commerce of agricultural products under the background of rural revitalization

Existing literature largely focuses on macro-policies, logistics systems, and development models. For example, He Junzhong (2025), in his study "A Study on the Growth Strategies of Start-up Cross-border E-commerce Companies under the Background of Rural Revitalization," explores the challenges faced by start-up cross-border e-commerce companies and their role in supporting farmers, proposing growth strategies in areas such as market positioning and marketing promotion. Yan Shufen and Wang Zhihe (2019), in their study "A Study on the Development Status and Strategies of Cross-border E-commerce of Agricultural Products in my country under the Background of the 'Belt and Road' Initiative," analyze the current development status of cross-border e-commerce of agricultural products in my country in terms of transaction volume, cold chain logistics, quality standards, and brand building. These studies provide a solid foundation for understanding the overall environment and common problems of cross-border e-commerce of agricultural products.

1.3.2. Research on cultural barriers and intercultural communication

The study of cultural differences in academia has a long history. Ouyang Kang (1996), in "Intercultural Barriers, Misunderstandings, and Transcendence," analyzed the phenomenon of "cultural encirclement" from multiple dimensions, including ontology, epistemology, and axiology, pointing out the deep-seated causes of cultural barriers and misunderstandings, and

advocating for the use of comparative cultural studies to transcend cultural limitations and promote cultural integration. Feng Haoqing, Zhao Tingyang, Yao Xinzhong, and Wan Renjun (2014), in "Intercultural Communication: A Dialogue Beyond Civilizational Barriers and Conflicts," conducted in-depth discussions on why intercultural communication has become a problem and the tension between tradition and modernity, providing philosophical insights into the complexity of intercultural communication. These theories provide important analytical tools for analyzing the roots and manifestations of cultural barriers.

1.3.3. Research on the overseas sales of Chacha sunflower seeds

Research on ChaCha sunflower seeds is relatively limited. Ye Xinran's (2024) "ChaCha Sunflower Seeds' Overseas Business Strategy" is currently the most directly relevant literature. This study traces ChaCha Foods' overseas expansion journey and concludes that its core strategy for success lies in "deep localization," including adjusting product flavors, building an international brand image, and educating consumers about the product category in overseas markets. This provides valuable background information for this study, but its analysis focuses on the corporate strategy level and does not adequately address the specific, micro-level cultural conflicts experienced by consumers.

1.4. Limitations of existing research and the starting point of this study

In summary, existing research has the following shortcomings: First, in terms of research perspective, it mostly focuses on common problems at the macro or meso level, lacking a systematic exploration of the micro-psychological factor of "cultural barriers" that directly affects consumer acceptance; second, in terms of research methods, it mostly relies on theoretical deduction or case descriptions, lacking empirical analysis based on first-hand consumer data and failing to fully utilize the massive user review resources of cross-border e-commerce platforms; third, in terms of research conclusions, the proposed solutions are mostly general theoretical frameworks, lacking practical solutions for specific agricultural product categories and cultural conflict points.

Therefore, this study, against the backdrop of rural revitalization, focuses on the cultural barriers in cross-border e-commerce of agricultural products. It selects Qiaqia sunflower seeds as a typical case study, taking real reviews from overseas consumers on the Amazon platform as its starting point. Employing a closed-loop research method of "data collection—review screening—theme summarization—attribution analysis—solution path," the aim is to accurately identify the types of cultural barriers, deeply analyze their causes, and construct actionable solutions to overcome them.

2. Current Status and Problems

2.1. Current Status: An Empirical Analysis Based on Overseas User Reviews of ChaCha Sunflower Seeds

This study used Python web scraping technology to collect user reviews of ChaCha sunflower seeds from the Amazon platform between 2014 and 2025. The screening criteria were: (1) only three-star and below ratings were collected to focus on negative feedback; (2) reviews that did not obviously involve cultural factors (such as logistics delays, damaged packaging, incorrect shipment quantities, etc.) were removed; and (3) reviews that explicitly stated the user's Chinese identity were removed. After screening, 159 valid samples were obtained, of which 48 reviews involved cultural barriers, accounting for 30.2% of the total sample. This proportion indicates that cultural barriers do indeed constitute a significant obstacle in the overseas sales of agricultural products.

By analyzing the text of these 48 comments involving cultural barriers, three main types of cultural barriers in the overseas sales of ChaCha sunflower seeds were identified.

2.1.1. Taste Preference Barrier: The Core Conflict in the Perception of Saltiness

Among all comments involving cultural differences, taste preference differences were the most prominent, totaling 36 comments, accounting for a high 75%. The core conflict centered on differences in the perception of "saltiness." Many overseas consumers reported that the "saltiness" of Qiaqia sunflower seeds did not meet their expectations.

For example, user "Lucci" commented, "I'm from Eastern Europe, so I know sunflower seeds. The roasting level is good, but not salty. There are very few salt grains at the bottom of the bag." User "JL Williams" noted, "The title said 'Chacha sunflower seeds, roasted and salted.' When they arrived, I was very disappointed; they were unsalted and I couldn't return them." User "Tommy" commented, "I expected something salted to have some flavor, but there wasn't even an ounce of salt."

This feedback of "not salty enough" is consistent across reviews ranging from three to one star, indicating a significant gap between the "Chinese salty" standard adopted by ChaCha Sunflower Seeds—a moderate seasoning method used to enhance rather than dominate the flavor—and the expectations of overseas consumers who are accustomed to "saltiness as the dominant flavor."

2.1.2. Quality Assessment Barrier: Differences in Perception of Freshness Standards

The evaluation of product quality also revealed cultural differences in perception, with a total of 9 related comments. Overseas consumers are extremely sensitive to "freshness," and their judgment criteria differ from those of Chinese consumers.

User "Clubshred" commented, "This batch of seeds isn't as good as the batch I bought before. The seeds have almost no flavor, look a bit chewy, and seem stale." User "Vera Remizov" described them as having "the taste of very old seeds, like very old oil." The recurring keyword "stale" reflects the strict standards overseas consumers have for the freshness of nut products. In the Chinese market, consumers may pay more attention to whether the seeds are plump and whether there are any bad seeds; while in overseas markets, consumers are extremely sensitive to the "stale" taste produced by oil oxidation, which constitutes a cultural gap in quality evaluation.

2.1.3. Symbolic cognition and value gap: sensitivity to food additives

Some comments also reflected deeper conflicts in cultural symbol cognition and values, totaling three. User "Carol" directly pointed out the ingredient problem: "This contains MSG. I like the fresh taste of these seeds... but after eating a bag for three days, I started having headaches and high blood pressure." User "anonymous" criticized "artificial flavorings and artificial sweeteners. The taste is terrible."

These comments reveal significant differences in food values between the East and the West. In China's food industry, monosodium glutamate (MSG) is a widely accepted flavor enhancer; however, in Western societies, due to historical reasons and media reports, MSG has long been labeled as "unhealthy." When ChaCha sunflower seeds were sold overseas, they retained a formula that suited the tastes of domestic consumers, but this unexpectedly triggered a value crisis among overseas consumers, escalating to a cultural conflict regarding food safety perceptions and health values.

2.2. Problems in Development

2.2.1. The structural contradiction between product standardization and cultural adaptability

The success of ChaCha sunflower seeds in the Chinese market stems from standardized production processes and consistent product quality. However, when this "standardization" enters overseas markets, it creates a structural contradiction with the "cultural adaptation" needs of local consumers. For example, the word "Salted" on the product packaging means "a

moderate amount of salt to enhance flavor" in the Chinese context, but overseas consumers interpret it as "salt as the dominant flavor." This mismatch between encoding and decoding directly leads to disappointing experiences for consumers who feel the product doesn't match the description.

2.2.2. The Dilemma of Identifying and Quantifying Implicit Cultural Conflicts

The subtle nature of cultural barriers makes them difficult to identify precisely using traditional market research methods. Of the 159 original reviews, only 48 involved cultural barriers, but cultural conflicts are often intertwined with other factors or expressed indirectly. For example, user "Kat Mckibben's" review expressed both complaints about the physical discomfort caused by "sweeteners" and a fondness for the product's "addiction." Such complex reviews require researchers to possess cross-cultural sensitivity to extract the specific manifestations of cultural factors from the text.

2.2.3. The Complexity of Attribution Analysis

Cultural barriers arise from a complex interplay of factors, including language, tradition, and habits. Take the complaint of "not salty enough" as an example; it stems from at least three layers of cultural causes: first, a mismatch between product descriptions and consumer expectations due to language barriers; second, differing evaluation criteria shaped by dietary traditions; and third, a misaligned frame of reference caused by conflicting consumption habits, comparing the flavor of sunflower seeds to familiar flavors like popcorn or barbecue.

2.2.4. Fragmentation of Cracking Strategies

Currently, many companies going global adopt a piecemeal approach: for feedback that something is "not salty enough," they simply add more salt; for feedback that the packaging is "difficult to understand," they make minor translation changes. However, cultural barriers are a systemic problem involving multiple aspects such as product design, marketing communication, and brand positioning. The fragmentation of existing solutions stems from the lack of a systematic cultural adaptation plan that spans the entire product lifecycle.

3. Optimization Strategies

Based on empirical analysis, this study constructs a systematic optimization strategy that links "product-communication-system" in three dimensions to help agricultural product export enterprises achieve a leap from "cultural conflict" to "cultural adaptation".

3.1. Product Dimension: Refined Improvements Based on Cultural Perception Differences

3.1.1. Flavor Classification Strategy

To address the issue of insufficient saltiness, a flavor grading strategy was implemented, launching a dual-line product series in overseas markets: an "international version" and an "original version." The "international version," targeting the mass-market overseas market, moderately adjusts the seasoning intensity so that the saltiness is clearly perceptible upon first consumption. The "original version," aimed at consumers with a deep understanding of Asian food, emphasizes the cultural attribute of "authentic Chinese flavor." This strategy deepens localization from "flavor adjustment" to "flavor grading," simultaneously satisfying the adaptation needs of the mass market and the curiosity of niche markets.

3.1.2. Reshaping Freshness Standards

To address the "stale" issue, optimizations are being made at both the production and supply chain ends: on the production end, baking processes are being optimized to reduce the risk of oil oxidation; on the packaging end, quality control of vacuum packaging is being strengthened;

and on the supply chain end, a "short-cycle" delivery mechanism is being established for overseas markets to ensure the shortest possible product turnover time.

3.1.3. Ingredient transparency and localization improvements

For sensitive ingredients such as MSG, a two-pronged strategy of "ingredient transparency" and "formulation localization" is adopted. All ingredients are clearly and completely listed on the packaging of products sold overseas; for overseas markets with strong aversion to MSG, an "MSG-free" version is launched, using natural flavor enhancers as a substitute, responding to cultural differences at the core value level.

3.2. Communication Dimension: Precise Communication Overcoming Symbolic Misunderstandings and Cognitive Biases

3.2.1. Semantic calibration of product description

The shift from literal translation to interpretive translation involves using more explanatory language in product descriptions for overseas markets. For example, for "pecan-flavored" sunflower seeds, the emphasis is on "Pecan Flavor"; for "coconut-flavored" sunflower seeds, the emphasis is on "Sweet Coconut Flavor," helping consumers establish accurate taste expectations in advance and avoiding the disappointment of "products not matching descriptions."

3.2.2. Localization of Consumption Scenarios

Transform the Chinese cultural practice of "eating sunflower seeds" into a familiar scenario for overseas consumers, such as "healthy snack," "outdoor companion," and "office snack." Emphasize the health benefits of sunflower seeds, such as their high content of vitamin E and unsaturated fatty acids, promote small, portable packaging, and share fun videos on social media about "how to eat sunflower seeds," turning this uniquely Chinese way of eating into a novel cultural experience.

3.2.3. Positive Communication of Cultural Values

Regarding the MSG controversy, we adopted a positive approach of communication and public education. We published scientific information about MSG on our overseas website and social media platforms, cited safety assessments from authoritative studies, clarified historical misunderstandings, and explained the tradition and rationale of MSG in Asian food culture, resolving value conflicts through honest and open communication.

3.3. System Dimension: Building a Data-Driven Closed Loop for Cultural Barrier Identification and Response

3.3.1. Establish a regular monitoring mechanism for overseas user reviews

Using user reviews from overseas e-commerce platforms as the most important source of market intelligence, a routine monitoring mechanism has been established: setting keyword alerts and monitoring keywords such as "stale," "not salty," and "MSG" in real time; establishing a cultural barrier classification system to categorize and label the monitored reviews; and tracking user profiles to analyze the differences in cultural barrier performance among consumers from different regions and cultural backgrounds.

3.3.2. Establishing a cross-cultural product testing and iteration process

Before a product enters an overseas market, establish a cross-cultural product testing process: conduct small-scale trial sales to collect detailed feedback from trial users; conduct focus group interviews to uncover potential cultural misunderstandings; and conduct A/B testing to select the version of the communication content that is most understood and accepted by the target market.

3.3.3. Establish an evaluation index system for the effectiveness of "cultural adaptation".

Establish a scientific evaluation indicator system: monitor changes in the proportion of negative comments related to cultural barriers; conduct sentiment analysis on keywords such as "salty," "fresh," and "flavor"; assess consumer loyalty through the frequency of expressions such as "buy again" and "recommend"; and construct a comprehensive index to quantify the degree of cultural fit, providing feedback for strategy optimization.

3.3.4. Integrate rural revitalization resources and build a support system for "cultural export".

Integrate various resources of the rural revitalization strategy: collaborate with universities to conduct overseas market culture research and obtain professional cross-cultural analysis support; collaborate with industry associations to formulate "cultural adaptation standards" for agricultural products going overseas; and collaborate with local governments to apply for special support for "rural revitalization + cross-border e-commerce" and obtain support in terms of policies, funds, and talent.

4. Conclusion

This study, against the backdrop of the rural revitalization strategy, focuses on the cultural barriers in cross-border e-commerce of agricultural products. Using ChaCha sunflower seeds as a typical case study, and based on an empirical analysis of 159 overseas user reviews on the Amazon platform, the following main conclusions are drawn:

First, cultural barriers are an invisible obstacle that cannot be ignored in the development of cross-border e-commerce for agricultural products, and their manifestations are multidimensional and complex. The cultural barriers in the overseas sales of Chacha sunflower seeds encompass multiple levels, including taste preference barriers (accounting for 75%), quality evaluation barriers, and conflicts between symbolic cognition and values. The core contradiction of the taste preference barrier lies in the difference in perception of "saltiness"; the quality evaluation barrier is reflected in different understandings of "freshness"; and the conflict between symbolic cognition and values manifests in differing attitudes towards food additives such as MSG. This finding confirms Ouyang Kang's (1996) theoretical judgment that "cultural barriers arise from differences in epistemology and axiology."

Second, the causes of cultural barriers are systemic, resulting from the interplay of multiple factors, including language barriers, dietary traditions, consumption habits, and value differences. Behind the seemingly minor complaint of "not salty enough" lies a complex web of cultural causes, such as a mismatch between product descriptions and expectations due to language barriers, differing evaluation criteria shaped by dietary traditions, and a misaligned frame of reference caused by conflicting consumption habits. Overcoming cultural barriers requires a systematic and comprehensive approach.

Third, breaking down cultural barriers requires constructing a systematic optimization framework that links "product, communication, and system." At the product level, this involves implementing flavor grading strategies, reshaping freshness standards, increasing ingredient transparency, and localizing improvements. At the communication level, it involves promoting semantic calibration of product descriptions, localizing consumption scenarios, and positive communication of cultural values. At the system level, it involves establishing a routine monitoring mechanism for overseas user reviews, a cross-cultural product testing and iteration process, and an evaluation index system for "cultural adaptation" effectiveness. Furthermore, it involves integrating rural revitalization resources to build a support system for "cultural export."

Fourth, the methodological framework of this study has universal reference value for cross-border e-commerce of agricultural products in the context of rural revitalization. The closed-loop research method of "data collection - comment screening - theme summarization - attribution analysis - solution path" transforms abstract cultural barriers into observable and quantifiable variables, which can help enterprises obtain high-value market insights at a lower cost even in the absence of a professional cross-cultural research team.

Fifth, this study has limitations, including a single sample source, limited identity verification, and a single analytical method. Future research could expand the sample to cover more agricultural product categories and cross-border e-commerce platforms; introduce cross-cultural experimental research methods; and combine in-depth interviews with overseas consumers to explore the psychological mechanisms and cultural logic behind cultural barriers.

In the context of the deep integration of rural revitalization and the digital economy, the cultural barriers in cross-border e-commerce of agricultural products present both challenges and opportunities. Only by deeply understanding the complexity of cultural differences, systematically identifying the specific manifestations of cultural barriers, accurately analyzing their underlying causes, and constructing an optimized framework that links products, communication, and systems in a three-dimensional manner, can Chinese agricultural products truly overcome cultural barriers and gain a competitive advantage in the global market. This study, using ChaCha sunflower seeds as a starting point, not only provides specific suggestions for ChaCha Foods' overseas operations but also offers a methodology and practical guide for cross-border e-commerce enterprises of agricultural products in the context of rural revitalization.

Acknowledgements

This work is supported by Innovation and Entrepreneurship Training Project for College Students of Anhui University of Finance and Economics in 2025, Project number: 202510378100.

References

- [1] He Junzhong. Research on the growth strategies of newly established cross-border e-commerce companies under the background of rural revitalization [J]. *Fujian Light Textile*, 2025(4).
- [2] Fan Yawen. Research on the high-quality development of cross-border e-commerce of agricultural products from the perspective of digital villages [J]. *Agricultural Economics*, 2023(12).
- [3] Yan Shufen, Wang Zhihe. Research on the current situation and strategies of cross-border e-commerce of agricultural products in my country under the background of "Belt and Road" [J]. *E-commerce*, 2019(6).
- [4] Ouyang Kang. Cross-cultural barriers, misunderstandings and their transcendence [J]. *Philosophical Trends*, 1997 (2).
- [5] Liu Zhen. Breaking down cultural barriers to promote discourse change [J]. *China Press*, 2024(19).
- [6] Ye Xinran. The overseas business experience of Chacha sunflower seeds [J]. *China Small and Medium Enterprises*, 2024(5).
- [7] Chen Xi, Liu Baisong. The "going out" and "integrating" of Chinese culture – starting from the overseas communication journey of Chacha [J]. *International Public Relations*, 2022(5).
- [8] Wang Dan. Differences between Chinese and Western cultures can be cleverly integrated to eliminate barriers [J]. *China Teaching Reference*, 2014(31).
- [9] Xia Man. Exploration of cross-border e-commerce marketing strategies for agricultural products under the perspective of rural revitalization [J]. *National Circulation Economy*, 2023(17).