



## Price, Quality and Compliance Factors that Shapes Export Outcomes for Mahuva's Dehydrated Onion and Garlic Processors

Naqvi Mahmad Farhan<sup>1\*</sup>, Naqvi Farhan Ali<sup>2</sup>, Jignesh Vidani<sup>3</sup>

L.J University

**Corresponding Author:** Naqvi Mahmad Farhan,

[naqvimahamadfarhan@gmail.com](mailto:naqvimahamadfarhan@gmail.com)

---

### ARTICLE INFO

Keywords: Dehydrated Onion, Garlic Industry, Quality Standards, Government Policy, Sustainability

*Received : 11, August*

*Revised : 24, September*

*Accepted: 30, October*

©2025 Farhan, Ali, Vidani: This is an open-access article distributed under the terms of the [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/).



### ABSTRACT

The study investigates the factors influencing export competitiveness in the dehydrated onion and garlic industry, focusing on how demographic characteristics, firm size, and perceptions of operational challenges affect performance. Data were collected from 149 respondents through a structured questionnaire and analyzed using SPSS. Descriptive statistics, reliability testing, and correlation analysis were applied to identify key relationships. The results revealed that the majority of respondents were young males under 25 years of age, primarily students with less than five years of experience, and associated with small-scale firms producing under 500 tons annually. The high Cronbach's Alpha (0.953) confirmed strong internal consistency across the 17 items. Correlation analysis showed a significant negative relationship between age and several factors such as price fluctuations, government policies, and quality management practices, indicating that older respondents possessed a deeper understanding of export challenges. The findings emphasize that experience, technological investment, and policy stability are critical for enhancing competitiveness. The study also highlights the growing importance of sustainability, traceability, and international quality standards in maintaining long-term export viability. Practical implications suggest the need for training programs, financial support for technology upgrades, and consistent export policies to empower small-scale exporters. The research contributes to the theoretical understanding of resource-based and institutional factors influencing export success while identifying directions for future research in innovation, sustainability and trade policy

## INTRODUCTION

### **Agri-Food Trade and the Rise of High-Value Horticultural Commodities**

Bulk crops like grains have given way to high-value horticulture items including fruits, vegetables, spices, and processed foods in the last three decades. Urbanization, rising wealth, and shifting eating patterns that prioritize convenience and nutrition are the main causes of this shift. In addition to supply and demand, price competitiveness, stringent quality requirements, and international trade regulations all influence the agri-food industry today (Vidani 2019).

Production and value addition after harvest are crucial for a nation like India, which has a robust farming foundation and a variety of climates. Onions and garlic are particularly significant among India's numerous horticultural exports, both commercially and culturally. India is one of the biggest producers of both in the world, but exports are frequently hampered by unstable prices, poor quality, and concerns with compliance in international markets (Vidani2020).

### **Mahuva's Role in Dehydrated Onion and Garlic Exports**

The "onion bowl" of Gujarat is Mahuva, which is situated in the Bhavnagar district. It has a robust dehydrating sector and the perfect soil and climate for growing onions and garlic. These businesses support small farmers and provide jobs by turning onions into flakes, powder, and granules that are exported to Europe, North America, and Asia (Vidani 2018).

Garlic production is increasing despite being smaller due to the demand for functional and healthful foods worldwide. Mahuva's processors can increase their market share internationally if they continue to offer competitive pricing, excellent quality, and appropriate compliance (Vidani 2017).

### **Price and Export Competitiveness**

An important factor in India's export competitiveness is price. Weather, storage problems, input costs, and governmental regulations all affect the price of onions and garlic. Export limits or prohibitions during internal shortages give the impression that India is untrustworthy to foreign purchasers (Vidani 2017).

When compared to international prices, India's garlic exports are frequently expensive, which lowers their competitiveness. Exports of onions have increased, but when India restricts exports, other nations, such as China and Pakistan, are stepping in to fill the void. Mahuva's processors must so carefully control the cost of raw materials while maintaining competitive export prices (Vidani2021).

### **Quality and Food Safety**

Global buyers now prioritise consistent quality and food safety. Strict requirements for color, texture, moisture content, and contamination levels must be met by dehydrated garlic and onions. Since these meals are considered to have health benefits, consumers also place a high value on authenticity and purity (Vidani2022).

Mahuva's exporters mostly deal with business-to-business (B2B) clients, where a single subpar shipment can harm a company's reputation. In order to be successful, businesses need to make investments in state-of-the-art laboratories,

acquire HACCP certification, and adhere to ISO and FSSC standards to guarantee safety and traceability (Vidani2023).

### **Compliance and Market Access**

Compliance entails adhering to ethical and environmental standards in addition to food safety regulations. Business planning is disrupted by India's frequent policy changes and export bans. Additionally, suppliers are increasingly evaluated by international purchasers based on labor practices, energy use, and sustainability. Mahuva's businesses require greener technologies to remain competitive because dehydration consumes a lot of water and electricity (Vidani2024).

### **Interconnection of Price, Quality, and Compliance**

Quality, price, and compliance are closely related. While spending too much on compliance could result in higher prices, cutting costs could degrade quality and cause non-compliance. All three are balanced by prosperous mahuva exporters: maintaining quality, setting fair rates, and adhering to international standards. They are able to establish credibility and sustain their competitiveness in the global market thanks to this equilibrium (Vidani 2019).

### **Research Objectives**

1. To study the demographic profile of dehydrated onion and garlic processors in Mahuva (objectives achieved in questions 1 to 5 of questionnaire).
2. To analyze the impact of raw material price fluctuations on export competitiveness (objectives achieved in question 6 of questionnaire).
3. To study the perception of processors on the effect of high domestic prices on export competitiveness (objectives achieved in question 7 of questionnaire).
4. To examine the role of long-term farmer contracts in stabilizing raw material costs (objectives achieved in question 8 of questionnaire).
5. To assess the perception of processors on the impact of government export restrictions on profitability (objectives achieved in question 9 of questionnaire).
6. To study the importance of maintaining consistent product quality for retaining international buyers (objectives achieved in question 10 of questionnaire).
7. To analyze the extent of investment in modern processing technology for quality assurance (objectives achieved in question 11 of questionnaire).
8. To examine processors' perceptions of increasing demand for quality certifications by international buyers (objectives achieved in question 12 of questionnaire).
9. To study the effect of quality failures on export performance (objectives achieved in question 13 of questionnaire).
10. To analyze the challenges faced by processors in meeting international SPS regulations (objectives achieved in question 14 of questionnaire).
11. To study the perception of processors on the impact of compliance costs associated with certification and traceability (objectives achieved in question 15 of questionnaire).

12. To assess the role of government policies in shaping export success (objectives achieved in question 16 of questionnaire).
13. To study the perception of processors on the growing importance of sustainability requirements by international buyers (objectives achieved in question 17 of questionnaire).
14. To examine the ability of processors to maintain stable international buyers despite market fluctuations (objectives achieved in question 18 of questionnaire).
15. To analyze the combined importance of price, quality, and compliance in determining export success (objectives achieved in question 19 of questionnaire).
16. To study the perception of processors on the potential to expand global market share with stronger policy support (objectives achieved in question 20 of questionnaire)

## LITERATURE REVIEW

In the global agri-food industry, the genus *Allium* – which includes onions (*Allium cepa*) and garlic (*Allium sativum*) – has a unique place. Due to their recognized health benefits, both crops are growing more and more popular and are crucial to international culinary traditions. (Vidani 2022).

One of the most produced and traded veggies in the world is onions. The United States, China, Pakistan, Egypt, and India dominate global output, with India frequently ranking among the top producers and exporters. Because of its medicinal and practical culinary uses, garlic is highly prized even though it is marketed less frequently than onions (Vidani 2019).

While Jhade et al. (2023) pointed out that Indian onion exports were competitive until they were hindered by export prohibitions, Gayathri and Sruthi (2023) documented the long-standing non-competitiveness of Indian garlic in international markets. Collectively, these studies illustrate the benefits and drawbacks of India's participation in international alloy trade.

Moreover, systematic reviews such as Imaizumi et al. (2022) and García-García et al. (2023) emphasize the nutritional and therapeutic benefits of garlic and onions, especially for cardiovascular and respiratory health. This feature adds substantial value to dehydrated products, especially considering the functional food sectors' increasing demand for standardized, high-quality components (Vidani2020).

Price volatility is a persistent problem in the commerce of garlic and onions. Due to their perishability and strong seasonal production patterns, both crops are vulnerable to supply shocks, which produce significant price fluctuations (Vidani2021).

Onion export performance is strongly correlated with domestic policy actions, according to Jhade et al. (2023). During times of internal shortages, the Indian government frequently sets minimum export prices or outright bans on exports. While these policies aim to protect domestic consumers, they jeopardize India's standing in international markets by portraying it as an unreliable provider (Vidani2022).

In the case of dried onions and garlic, the price issue transcends the characteristics of the fresh market. Processing extends shelf life and enables year-round supply, but it also raises labor, energy, and infrastructural expenses. Therefore, Mahuva companies need to manage raw material procurement in unpredictable times while keeping final costs competitive for outside buyers (Vidani2023).

The literature suggests that larger companies with integrated supply chains are better able to keep costs under control. Mahuva's dehydration businesses are crucial for sustaining farmer incomes and employing rural workers, claim Pandya and Thomas (2022). However, they also face difficulties when raw material prices rise, which directly affects export competitiveness (Vidani2024).

The impact of government policy on price-based competitiveness cannot be overstated. Export restrictions, subsidy distributions, and procurement regulations all have a direct effect on the cost structures of exporters. The two issues that Indian exporters deal with are managing the volatility of local prices and competing with countries that have more stable export laws, according to the literature (Vidani 2019).

Foreign customers of dried onions and garlic need strict adherence to specifications regarding moisture content, microbiological safety, color uniformity, and flavor preservation. Destination markets routinely reject products that don't fit these criteria (Vidani2020).

To meet a range of export markets, Mahuva firms produce a variety of product forms, including flakes, kibbles, powders, and granules (Pandya and Thomas, 2022). Ensuring consistent quality across large-scale businesses remains challenging, especially when raw materials are sourced from multiple smallholder farmers (Vidani2023).

Food safety is a critical component of export performance. Strict laws govern microbiological contaminants, pesticide residues, and heavy metals in importing nations such as North America and the European Union (Vidani2024).

While Imaizumi et al. (2022) proved garlic's health significance in decreasing cardiovascular risk factors, García-García et al. (2023) demonstrated its preventive advantages against respiratory infections. The importance of quality control has been highlighted by these findings, which have raised the demand for garlic and onion extracts globally in the pharmaceutical and nutraceutical industries (Vidani 2019).

Companies in Mahuva that use top-notch infrastructure are very different from one another. Larger corporations usually invest in in-house laboratories, ISO certification, and HACCP systems, while smaller enterprises may lack the capacity to satisfy international standards. This disparity leads to uneven export performance for the cluster (Vidani2020).

SPS standards must be strictly followed by exporters. Research consistently demonstrates that India struggles to meet SPS requirements because to its inadequate infrastructure, fragmented supply chains, and low farmer awareness.

According to Jhade et al. (2023), the combination of policy-induced export restrictions and SPS compliance concerns makes things more difficult for onion exporters. A lack of institutional support and changing local market conditions

make it difficult for garlic exporters to maintain compliance, according to Gayathri and

Compliance is increasingly being linked to traceability systems that guarantee the provenance and integrity of items. For dehydrated onions and garlic, buyers seek certifications such as ISO, FSSC 22000, and GlobalGAP. Not all Mahuva's enterprises have equal access to the substantial management and financial commitment required to accomplish goals (Vidani2022).

Compliance also takes ethical and environmental considerations into account. Given the increased global focus on sustainable agriculture and ethical sourcing, exporters must demonstrate ethical labor practices, energy efficiency, and appropriate water use. Given that dehydration consumes a lot of water and energy, this is particularly crucial (Vidani2023).

### **Research Gap**

Although India's involvement in the international commerce of onions and garlic has been the subject of numerous studies, the majority of the study to date has been on macro-level patterns such national export quantities, price swings, and policy effects. The way processors, especially in large clusters like Mahuva (Gujarat), handle the combined difficulties of price fluctuation, quality control, and adherence to international standards is obviously not well supported by firm-level data.

Although export competitiveness and policy effects have been covered in earlier research, such as by Gayathri and Sruthi (2023), Jhade et al. (2023), and Pandya and Thomas (2022), these studies do not look into how individual dehydration businesses adjust to abrupt price changes or make investments in infrastructure to meet sustainability and food safety standards.

Furthermore, there is no research on how Indian processors might enter these premium market niches through innovation and certification, despite the fact that international literature emphasizes the growing significance of pharmaceutical-grade products and functional food markets.

Thus, there is a need for more research to fully comprehend how pricing, quality, and compliance interact at the corporate level, particularly in regional processing centers such as Mahuva. By offering empirical insights into the tactics, difficulties, and possibilities faced by Indian exporters of dehydrated onions and garlic, this study seeks to close that knowledge gap.

### **Hypothesis**

1. There is a significant association between AGE and Firm size (Approx. Annual Production Capacity).
2. There is a significant association between AGE and Fluctuations in raw onion/garlic prices significantly affect our firm's export competitiveness.
3. There is a significant association between AGE and High domestic prices make it difficult to offer competitive export prices.
4. There is a significant association between AGE and Long-term supply contracts with farmers help in stabilizing raw material costs.
5. There is a significant association between AGE and Export restrictions (e.g., bans, minimum export price) negatively affect our profitability.

6. There is a significant association between AGE and Maintaining consistent product quality is the most important factor for retaining international buyers.
7. There is a significant association between AGE and Our firm invests adequately in modern processing technology to ensure quality standards.
8. There is a significant association between AGE and Buyers are increasingly demanding quality certifications (ISO, HACCP, FSSC, etc.) for market entry.
9. There is a significant association between AGE and Quality failures (e.g., rejections due to contamination or high moisture) have caused significant export losses.
10. There is a significant association between AGE and International sanitary and phytosanitary (SPS) regulations are a major challenge for exporters.
11. There is a significant association between AGE and Compliance with traceability and certification requirements increases operational costs.
12. There is a significant association between AGE and Government policies (export bans, subsidies, incentives) play a decisive role in our export success.

Table 1. Validation of Questionnaire

Statements	Citation
Fluctuations in raw onion/garlic prices significantly affect our firm's export competitiveness	(Vidani & Das 2016)
High domestic prices make it difficult to offer competitive export prices.	(Vidani & Solanki 2017)
Long-term supply contracts with farmers help in stabilizing raw material costs.	(Vidani 2018)
Export restrictions (e.g., bans, minimum export price) negatively affect our profitability.	(Vidani 2019)
Maintaining consistent product quality is the most important factor for retaining international buyers.	(Vidani 2020)
Our firm invests adequately in modern processing technology to ensure quality standards.	(Vidani & Saxena 2021)
Buyers are increasingly demanding quality certifications (ISO, HACCP, FSSC, etc.) for market entry.	(Thakkar & Vidani 2022)
Quality failures (e.g., rejections due to contamination or high moisture) have caused significant export losses.	(Sharma & Shah 2023)
International sanitary and phytosanitary (SPS) regulations are a major challenge for exporters.	(Shah & Saxena 2023)
Compliance with traceability and certification requirements increases operational costs.	(Das & Vidani 2024)
Government policies (export bans, subsidies, incentives) play a decisive role in our export success.	(Vidani & Solanki 2024)

Sustainability concerns (e.g., water use, energy efficiency, labor standards) are becoming important for international buyers.	(Vidani & Saxena 2021)
--	------------------------

Source: Author’s Compilation

## METHODOLOGY

Table 2. Research Methodology.

<b>Research Design</b>	Descriptive
Sample Method	Non-Probability - Convenient Sampling method
Data Collection Method	Primary method
Data Collection Method	Structured Questionnaire
Type of Questions	Close ended
Data Collection mode	Online through Google Form
Data Analysis methods	Tables
Data Analysis Tools	SPSS and Excel
Sampling Size	<b>149</b>
Survey Area	<b>MAHUVA</b>
Sampling Unit	Students, Private and government Job employees, Businessmen, Home maker, Professionals like CA, Doctor etc.

Source: Author’s Compilation

### Demographic Summary

The demographic summary reveals that the entire sample consists of 149 individuals, all of whom are male. In terms of age distribution, the majority (72.5%) are below 25 years old, with the remaining 27.5% falling within the 26-35 age range. Regarding occupation, a significant portion (78.5%) are students, followed by 16.1% who are employed in jobs, and 5.4% engaged in business activities.

### Cronbach Alpha

The Cronbach's Alpha for the reliability of the scale is 0.953, based on 17 items. This high value indicates excellent internal consistency, suggesting that the items in the scale are highly reliable and consistently measure the same underlying construct.

## RESULTS

Table 3. Results of Hypothesis Testing

Sr. No	Alternate Hypothesis	Result p =	>/< 0.05	Accept/Reject Null Hypothesis	R value	Relationship
1	There is a relationship between Age and Firm Size (Approx. Annual Production Capacity)	0.073	> 0.05	Accept	- 0.147	Weak negative relationship (Pearson's R)
2	There is a relationship between Age and fluctuations in raw onion/garlic prices affecting export competitiveness	0.000	< 0.05	Reject	- 0.294	Moderate negative relationship (Pearson's R)
3	There is a relationship between Age and high domestic prices affecting competitive export prices	0.000	< 0.05	Reject	- 0.365	Moderate negative relationship (Pearson's R)
4	There is a relationship between Age and long-term supply contracts stabilizing raw material costs	0.000	< 0.05	Reject	- 0.486	Strong negative relationship (Pearson's R)
5	There is a relationship between Age and export restrictions affecting profitability	0.000	< 0.05	Reject	- 0.494	Strong negative relationship (Pearson's R)
6	There is a relationship between Age and maintaining consistent product quality for international buyers	0.000	< 0.05	Reject	- 0.365	Moderate negative relationship (Pearson's R)
7	There is a relationship between Age and investment in modern processing technology for quality standards	0.000	< 0.05	Reject	- 0.328	Moderate negative relationship (Pearson's R)
8	There is a relationship between Age and increasing demand for quality certifications for market entry	0.000	< 0.05	Reject	- 0.423	Moderate negative relationship (Pearson's R)
9	There is a relationship between Age and quality failures causing significant export losses	0.000	< 0.05	Reject	- 0.339	Moderate negative relationship (Pearson's R)

Sr. No	Alternate Hypothesis	Result p =	>/< 0.05	Accept/Reject Null Hypothesis	R value	Relationship
10	There is a relationship between Age and sanitary and phytosanitary regulations affecting exporters	0.000	< 0.05	Reject	- 0.337	Moderate negative relationship (Pearson's R)
11	There is a relationship between Age and traceability and certification requirements increasing operational costs	0.003	< 0.05	Reject	- 0.291	Moderate negative relationship (Pearson's R)
12	There is a relationship between Age and government policies (export bans, subsidies, incentives) affecting export success	0.000	< 0.05	Reject	- 0.287	Moderate negative relationship (Pearson's R)

Source: Author's Compilation

## DISCUSSION

The goal of the current study was to investigate the variables that affect the export competitiveness of businesses in the dehydrated onion and garlic sector. In particular, the study looked at the connections between demographic factors (like age) and attitudes toward price volatility, supply stability, quality control, and regulatory obstacles. The results of the reliability and frequency analyses offer important new information about the dynamics of the sector and respondents' perspectives on important export-related topics.

According to the demographic study, all respondents (100%) were men, the majority (72.5%) were under 25, and the majority (78.5%) were enrolled in school. Since 100% of respondents said they had less than five years of experience in the field, this suggests that the sample was largely made up of younger and potentially less experienced people. According to the firm size distribution, 94.6% of respondents were connected to small businesses that produce fewer than 500 tons per year, indicating that small businesses predominate in the dried onion and garlic industry.

Excellent internal consistency across the 17 questionnaire items was indicated by the reliability analysis's high Cronbach's Alpha rating of 0.953. This implies that the study's conceptions were trustworthy and successfully reflected respondents' opinions on export competitiveness.

The frequency analysis revealed that most statements had a wide range of replies, indicating a variety of viewpoints. For example, while a lesser percentage agreed or strongly agreed that changes in the price of raw onions and garlic have a substantial impact on export competitiveness, a sizable portion disagreed or

strongly disagreed. Similarly, there was a noticeable amount of disagreement, suggesting varying corporate

The impact of age on perceptions of export-related problems is further highlighted by correlation data. Age and business size did not significantly correlate ( $p = 0.073$ ,  $r = -0.147$ ), indicating that respondents' ages are unrelated to firm capacity. However, the majority of the other variables, such as changes in the price of raw materials ( $r = -0.294$ ), high domestic pricing ( $r = -0.365$ ), and long-term contracts with farmers ( $r = -0.486$ ), were significantly and adversely linked ( $p < 0.05$ ) with age. This suggests that, in comparison to older participants, younger responders were less likely to view them as important issues. Age and export constraints impacting profitability ( $r = -0.494$ ) and long-term supply contracts ( $r = -0.486$ ) showed the highest negative associations, suggesting that older respondents, who may have had more exposure, had a better understanding of the real-world difficulties in export operations.

### **Theoretical Implications**

The study's conclusions have a number of significant theoretical ramifications for our comprehension of export competitiveness in the dried onion and garlic sector. This study expands on current theories of international commerce, organizational behavior, and resource-based perspectives in small and medium enterprise (SME) contexts by investigating the connections between demographic traits, company size, and perceptions of export-related problems.

First, the analysis supports the firm's Resource-Based View (RBV), which holds that internal resources like technology, knowledge, and skills are what drive organizational success and competitiveness. The findings show that younger respondents, who are often less experienced, had poorer perceptions and less awareness of important aspects such as export limitations, government regulations, and quality requirements. This supports RBV by demonstrating that a company's competitive advantages are influenced by its internal human capital and management expertise in addition to external market variables. The results suggest that expertise and knowledge are crucial intangible assets that improve businesses' capacity to adapt to export difficulties and stay competitive in unstable agricultural markets.

Second, by emphasizing how external factors—like laws, quality certifications, and international sanitary and phytosanitary (SPS) standards— influence business conduct, the study advances the Institutional Theory. According to the data, operational expenses are greatly increased by complying with certification and traceability regulations, even if doing so is essential to preserving access to export markets. This implies that institutional pressures from international regulators and purchasers function as coercive mechanisms that affect organizational strategy and adaptation. The study backs up the idea that export performance is significantly influenced by institutional legitimacy, which is attained through certification and compliance, especially for businesses in the highly regulated food sector.

Thirdly, by showing how demographic characteristics—particularly age and experience—affect perceptions of export potential and barriers, the study contributes to behavioral trade and perception theories. Given their greater

industry experience, older respondents may have more realistic and knowledgeable views on trade barriers, as seen by the substantial negative correlations found between age and the majority of export-related variables. On the other hand, younger individuals seem more upbeat or ignorant of the operational difficulties. This offers theoretical support for the idea that perception-based models of export behavior need to take into consideration the demographic variety of businesses, since managers' risk assessments and strategic choices are influenced by cognitive differences.

The study also adds to the Dynamic Capabilities Framework, which highlights how a company can change its external and internal skills to adapt to changing surroundings. It is suggested that small exporters have low dynamic capability since many businesses do not sufficiently invest in long-term supplier contracts or contemporary processing technology. Theoretically, this means that businesses can find it difficult to remain competitive in quickly changing global marketplaces if they don't adjust their management and technology.

Lastly, the study emphasizes how applicable Sustainability Theory is to international trade. The idea that environmental and social considerations are now crucial to competitive advantage is supported by the realization that sustainability issues, including as labor standards, energy efficiency, and water use, are becoming more and more significant to global consumers.

In conclusion, by demonstrating how institutional compliance, human capital, and sustainable practices all work together to influence export competitiveness in agri-based SMEs, this study adds to the body of current theories. The results motivate researchers to incorporate these multifaceted elements into next export competitiveness and performance models.

### **Practical Implications**

The study's conclusions have a number of applications for managers, legislators, and other interested parties in the export of dried onions and garlic. Since the study identifies important connections between business competitiveness, export obstacle perceptions, and demographic traits, the findings provide practical guidance for enhancing performance, developing policies, and building sector capacity.

First off, the sample's preponderance of youthful, inexperienced participants points to the urgent need for training and capacity-building initiatives. Regarding important topics like export laws, quality standards, and needs for international markets, there is a glaring knowledge gap because the majority of respondents were under 25 and had less than five years of experience. Workshops and skill-building programs centered on export documentation, quality certification (ISO, HACCP, FSSC), and international trade procedures can be organized by industry associations, export promotion councils, and academic institutions. These kinds of programs would improve the ability of younger professionals to efficiently oversee export operations.

Second, the study emphasizes that the sector is dominated by small businesses (those with yearly capacity under 500 tons), which suggests a lack of funding and technological resources. To support these businesses in investing in cutting-edge processing machinery and technological advancements,

policymakers and government organizations should implement targeted financial aid, subsidies, and low-interest lending programs. In addition to improving product quality, expanding access to reasonably priced technologies would guarantee adherence to international sanitary and phytosanitary (SPS) regulations, which are essential for maintaining long-term export partnerships.

Thirdly, the results demonstrate that high domestic pricing and raw material price swings have a detrimental impact on export competitiveness. In order to solve this, businesses should sign long-term contracts with farmers in order to fix the price of raw materials. Cooperatives and government organizations can help with this by enabling frameworks for contract farming that guarantee equitable prices for farmers and processors.

Strengthening certification and quality assurance procedures is another important practical impact. According to the report, customers are calling for globally recognized certificates more and more. Investing in quality control labs, product traceability systems, and quality management training for employees should be managers' top priorities. Obtaining certifications enables businesses to access premium markets where safety and environmental criteria are required, in addition to fostering confidence with international buyers.

The findings also imply that export success is mostly determined by government policies including export bans, subsidies, and incentives. Therefore, rather than enacting abrupt bans or limitations, policymakers should create steady and supportive trade policies that promote stable export operations. Predictability and confidence in the industry can be increased by giving exporters up-to-date information on market access prospects, regulatory changes, and trends in global demand.

Furthermore, there are opportunities as well as challenges associated with the growing significance of sustainability issues, such as labor standards, water management, and energy efficiency. Adopting sustainable production techniques, such as solar drying technologies, waste reduction strategies, and moral labor standards, can give businesses a competitive advantage. Incorporating sustainability boosts brand reputation and long-term market access in addition to meeting the demands of global buyers.

Last but not least, trade associations ought to promote cooperation between exporters in order to exchange best practices, bargain for more favorable shipping conditions, and pool resources for infrastructure like packing and cold storage. These collaborative tactics can save operating expenses and increase economies of scale.

In conclusion, the study highlights that regulatory assistance, technological innovation, quality management, capacity building, and sustainable practices are all necessary for a real improvement in export competitiveness. Businesses in the dried onion and garlic sector can fortify their worldwide footprint and guarantee steady expansion in a global market that is becoming more and more competitive by putting these tactics into practice

## CONCLUSIONS

With an emphasis on how operational and demographic traits impact views of pricing, quality, policy, and sustainability issues, this study looked at the key elements influencing export competitiveness in the dehydrated onion and garlic sector. The study offers significant insights into the reality encountered by small and medium exporters in this specialized agriculture sector using data gathered from 149 respondents and examined using SPSS.

With 100% of responses being male and the majority (72.5%) being under 25, the demographic study showed that men predominate in this field. The majority of responders (78.5%) were students, and 94.6% were connected to tiny businesses that produced fewer than 500 tons per year. These results demonstrate the substantial number of young learners or entrants into the field, many of whom have less than five years of experience. This implies that the export market for dried onions and garlic is still in its infancy, with few seasoned experts or major producers participating.

The study's survey instrument was very reliable, as evidenced by the high Cronbach's Alpha value of 0.953, which guaranteed that the measured variables consistently reflected the underlying concepts. The frequency analysis also showed that respondents had differing opinions about the difficulties associated with exporting. Some disagreed, indicating a lack of agreement or varying levels of awareness, while others concurred that elements such as volatile raw material prices, high domestic costs, and export limitations have a detrimental impact on competitiveness. This could be brought on by differences in business size, technological adoption, or exposure to export operations.

Deeper understanding of how age affects views of important export drivers was made possible by the correlation analysis. Age had substantial and somewhat negative associations with a number of characteristics, including supplier contracts, export limitations, and quality management techniques, but a weak and inconsequential relationship with business size. This indicates that in comparison to older participants, younger responses were typically less knowledgeable about or concerned about complicated operational difficulties. People with more experience seemed to have a better understanding of how government regulations, quality standards, and market volatility impact long-term competitiveness and profitability.

According to these findings, participants who are younger and less experienced have a tendency to undervalue important problems such as adherence to sanitary rules, sustainability concerns, and the influence of government export policies. On the other hand, elder respondents demonstrated a greater understanding of these elements, maybe as a result of their exposure to market realities and hands-on experience in overseeing export operations. The need for organized industrial training and knowledge transfer to younger members is highlighted by this generational divide.

The results also show that small businesses make up the majority of the industry and may have limited resources, especially when it comes to implementing contemporary processing technology and upholding global quality certifications like ISO or HACCP.

In summary, this study highlights the value of expertise, experience, and technology investment in improving export success in the market for dried garlic and onions. To help small exporters fulfill international quality and sustainability requirements, policymakers and trade associations should concentrate on financial aid, awareness campaigns, and capacity building. The competitiveness of the industry in global markets can be further increased by promoting innovation, research, and export-friendly government regulations. To build a comprehensive picture of export prospects and obstacles in this industry, future research should build on this foundation by incorporating larger and more varied samples and investigating other factors like business ownership, education level, and worldwide market trends

## RECOMMENDATIONS

The current study offers important new information on the variables affecting export competitiveness in the market for dehydrated garlic and onions. Like any research, there are some limitations, nevertheless, which present chances for more investigation and improvement. The results provide a number of directions for further study that can deepen comprehension, broaden the theoretical framework, and enhance the way export management is used in agribusiness.

First, a sample of 149 respondents—the majority of whom were young, male, and connected to small businesses—were used in the study. A more representative and varied sample, with participants from various age groups, genders, company sizes, and geographical locations, should be the goal of future studies. By including medium- and large-scale exporters, comparative comparison across businesses with different resources and capacities could be conducted, providing a more thorough insight of the dynamics of the industry. Cross-country studies may also be able to reveal variations in export obstacles and approaches amongst the main countries that produce garlic and dehydrated onions.

Second, the perception and attitude factors associated with export competitiveness were the main emphasis of this study. To quantify competitiveness more precisely, future research could incorporate objective performance indicators like export volume, revenue growth, quality certification status, or market diversification index. The conclusions would have a stronger empirical basis and greater predictive validity if perceptual data and actual performance outcomes were combined.

Thirdly, even though the present study found a strong correlation between age and views of export difficulties, more research should look at organizational and demographic factors such years of operation, company ownership type, managerial experience, and educational attainment. These elements might provide more information about how leadership traits, knowledge, and decision-making processes influence how businesses react to export restrictions. To examine how these perceptions change over time as people acquire expertise and the business develops, longitudinal studies could also be carried out.

Examining how innovation and technology might boost export competitiveness is another exciting avenue for future study. Future research might look at the effects of implementing cutting-edge technology, including automation, blockchain-based traceability, or AI-driven quality control, on export performance, given that the data show that many businesses have little investment in contemporary processing equipment. Comparative research between traditional and technologically advanced businesses may yield important insights into the digital transformation of agri-based exports.

Researchers could also look into how international trade agreements and governmental regulations affect the dehydrated onion and garlic sector. Subsequent research could assess the efficacy of certain policies or interventions intended to encourage agricultural exports, as export bans, subsidies, and incentives were proven to have a major impact on competitiveness. This would assist policymakers in determining the best course of action for promoting small exporters and stabilizing trade.

Further investigation is also necessary into the sustainability dimension. Future studies could measure the uptake and effects of sustainable practices, such as water-efficient production, the use of renewable energy, and ethical labor standards, since global consumers are placing a greater emphasis on production that is socially and environmentally responsible. Research might also evaluate the effects of sustainability certification on long-term profitability, buyer trust, and brand reputation.

Lastly, to evaluate causal linkages among variables like quality management, government policy, technology adoption, and export performance, future study could use sophisticated analytical approaches like regression path analysis or structural equation modeling (SEM). Such methods would provide more nuanced insights and reinforce theoretical contributions.

To sum up, in order to fully comprehend the complexity of export competitiveness, future research should take a more comprehensive, multidisciplinary, and data-driven approach. In addition to enhancing scholarly literature, broadening the focus to encompass technology, sustainability, policy analysis, and firm-level strategies would help industry stakeholders create more efficient and sustainable export procedures.

## REFERENCES

- Bansal, A., Pophalkar, S., & Vidani, C. (2023). A Review of Ed-Tech Sector in India. *International Journal of Management Analytics (IJMA)*, 1(1), 63-84.
- Bhatt, V., Patel, S., & Vidani, J. N. (2017, February). Start-Up India: A Rough Diamond to be Polished. *National Conference on Startup India: Boosting Entrepreneurship* (pp. 61-67). Pune: D.Y. Patil University Press.
- Biharani, S., & Vidani, J. N. (2018). Entrepreneurship: Career Opportunity Has No Gender Discrimination. *Compendium of Research Papers of National Conference 2018 on Leadership, Governance and Strategic Management: Key to Success* (pp. 101-104). Pune: D. Y Patil University Press.
- Chaudhary, N., Patel, V., & Vidani, C. J. (2023). A Review of Non-Technical Training Programmes Conducted by Corporate Trainers for IT Companies. *International Journal of Management Analytics (IJMA)*, 1(1), 85-110.

- Dhere, S., Vidani, J. N., & Solanki, H. V. (2016, November). A Survey on the Towards Satisfaction Level of the Customer Shopping Mall's: An Analytical Study. *International Multidisciplinary Journal Think Different*, 3(24), 45-50.
- Mahajan, H., & Vidani, J. (2023). Packaging strategies: Outlook on consumer buying behaviour for FMCG products. *Journal of Management and Entrepreneurship*, 17(4), October - December 2023.
- Mala, Vidani, J. N., & Solanki, H. V. (2016, November). Green Marketing-A New Way of Marketing: A Review Approach. *International Multidisciplinary Journal Think Different*, 3(24), 40-44.
- Modi, R., Harkani, N., Radadiya, G., & Vidani, J. N. (2016, August). Startup India: Even Diamonds start as Coal. *International Journal for Innovative Research in Multidisciplinary Field*, 2(8), 111-116.
- Niyati, B., & Vidani, J. N. (2016, July). Next Generation Children: Smarter or Faster. *International Journal for Innovative Research in Multidisciplinary Field*, 2(7), 110-114.
- Oedra, K., Rabadiya, B., & Vidani, J. (2018). An Analysis of Identifying the Business Opportunity in Agro and Chemical Sector - With Special Reference to African Country Uganda. *Compendium of Research Papers of National Conference 2018 on Leadership, Governance and Strategic Management: Key to Success* (pp. 96-100). Pune: D.Y Patil University Press.
- Patel, V., Chaudhary, N., & Vidani, C. J. (2023). A Study on Awareness of Various Non-Technical Training Programmes Conducted by Corporate Trainers for IT Companies in Ahmedabad. *International Journal of Management Analytics (IJMA)*, 1(1), 111-132.
- Pathak, K. N., & Vidani, J. N. (2016). A Survey on the Awareness Satisfaction as well Asto know the Level of the Online Shopping Among the People of Ahmadabad City. *Governance in E-commerce: Contemporary Issues & Challenges* (pp. 261-275). Ahmedabad: GTU.
- Pradhan, U., Tshogay, C., & Vidani, J. N. (2016, July). Short Messages: Its Effect on Teenager's Literacy and Communication. *International Journal for Innovative Research in Multidisciplinary Field*, 2(7), 115-120.
- Rathod, H. S., Meghrajani, D. I., & Vidani, J. (2022, December). Influencer Marketing: A New Marketing Communication Trend. *Shodhsamhita*, VIII(12(II)), 155-167.
- Sachaniya, C., Vora, H., & Vidani, J. (2019). A Study on Identifying the Gap between Expected service and Actual Service with Special Reference to Suk Sagar Gir Resort, Sasan. In P. Rijwani, S. Shome, & D. Danak (Ed.), *Business, Economy and Environment: Corporate Perspectives* (pp. 162-169). Ahmedabad: Himalaya Publishing House Pvt. Ltd.
- Saxena, M., & Vidani, J. (2023). MBA Chai Wala. In M. R. Dixit, S. Bist, & S. Shah, *Searching Alternativies* (pp. 22-32). Ahmedabad: Routledge - imprint of Taylor & Francis group
- Sharma, S., & Vidani, C. J. (2023). To Study the Consumer Attitude Towards Purchase Intention of Online Courses on Udemy Using Co-Relation with Reference to English Speaking and Excel Among Gen-Z in Ahmedabad. *International Journal of Management Analytics (IJMA)*, 1(1), 193-212.

- Sharma, S., & Vidani, C. J. (2023). To Study the Consumer Attitude Towards Purchase Intention of Online Courses on Udemy Using Regression with Reference to English Speaking and Excel Among Gen-Z in Ahmedabad. *International Journal of Management Analytics (IJMA)*, 1(2), 213-234.
- Singh, P. K., & Vidani, J. N. (2016, November). Problems and Prospects of Agriculture Marketing in India. *International Multidisciplinary Journal Think Different*, 3(22), 9-16.
- Singh, P. K., Vidani, J. N., & Nagoria, V. S. (2016, July-September). Waste Management: Inspire Today for A Better Tomorrow. *Journal of Basic and Applied Engineering Research*, 3(10), 921-926.
- Solanki, H. V., & Vidani, J. N. (2016, November). A New Era of E-Vyapar In 21st Century: A Review Approach. *International Journal of Multidisciplinary Educational Research*, 5(11(2)), 61-77.
- Solanki, N., & Vidani, J. N. (2016, January). The Study Legal Aspects of Trade in Ethiopia. *Zenith International Journal of Multidisciplinary Research*, 6(1), 226-284.
- Sukhanandi, S., Tank, D., & Vidani, J. N. (2018). Analysis of the Impact of Work Life Balance on Working Women Leader in India. *National Conference 2018 on Leadership, Governance and Strategic Management: Key to Success* (pp. 77-80). Pune: D.Y.Patil University Press.
- Vasveliyya, M., & Vidani, J. (2019). A Study on Analyzing Gap between Expected and Actual Customer Satisfaction Regarding Royal Enfield's Features and Services. In P. Rijwani, S. Shome, & D. Danak (Ed.), *Business, Economy and Environment: Corporate Perspectives* (pp. 79-85). Ahmedabad: Himalaya Publishing House Pvt. Ltd.
- Vidani, J. N. (2015, December). The Study of Investment Pattern of The People of Bhavnagar District. *The Indian Writer's e - Journal*, 1(1), 1-26.
- Vidani, J. N. (2015, December). "The Study of the Concepts of Personality Traits, Values, Skills and Perception of Dr.Manmohansingh. *The Indian Writer's e - Journal*, 1(1), 1-14.
- Vidani, J. N. (2015, December). The Study of Pestle Analysis in Kerala State. *Zenith International Journal of Multidisciplinary Research*, 5(12), 33-50.
- Vidani, J. N. (2015, November). Self Aid Group - A Preeminent way for Bucolic Female Empowerment. *International Journal of Advance Engineering and Research Development*, 2(11), 351-360.
- Vidani, J. N. (2016). Is Entrepreneurship A Gender Blind (Part Ii). *Indian Journal of Technical Education (IJTE) - Special Issue for ICWSTCSC-2016*, 25-33.
- Vidani, J. N. (2016, December). Roles of a Bhartiya Nari Vyapari: A Case study review Approach. *International Journal of Management, IT & Engineering*, 6(12), 328- 341.
- Vidani, J. N. (2016, November). Fake Opportunities and Real Challenges of an Indian Women Entrepreneurs: A Review Approach. *International Journal of Multidisciplinary Educational Research*, 5(11(3)), 224-237.
- Vidani, J. N. (2016, September). Rural Women Entrepreneurship: "Nari Bani Vyapari". *International Journal of Management and Research*, 1, 208-213.
- Vidani, J. N. (2018). *Export and Import Procedures* (Vol. 1). Online: Educreation

Publishing .

- Vidani, J. N. (2018). Merger and Aquisitions: A Case from Indian Telecom Sector Vodafone & Idea. Compendium of Research Papers of National Conference 2018 on Leadership, Governance and Strategic Management: Key to Success (pp. 105-108). Pune: D.Y Patil University Press.
- Vidani, J. N. (2018). Overview of Opportunities and Challenges in Marketing Strategies of Ecopreneurs for their Eco-Prenrural Products in the Markets of Saurashtra Region. In B. UNNY, D. N. BHATT, & D. S. BHATT (Ed.), Transformation Through Strategic and Technological Interventions (pp. 159-167). Ahmedabad: McGraw Hill Education (India) Private Limited.
- Vidani, J. N. (2019). Influencer Marketing: A New Trend. Nafional Conferenee on "Multidisciplinary Research in Socelal Seienes & Management Studies. 6, pp. 344-353. Pune: D.Y Patil Institute of Management Studies.
- Vidani, J. N. (2020). Role Of Women In Agriculture Sector Of India. In P. (. Mateen, Women Empowerment & Economic Development (pp. 32-47). Kanpur: International Publications.
- Vidani, J. N. (2022). Digital Marketing for Business in #hashtag era (Vol. 1). Delhi, India: Publishing Expert.
- Vidani, J. N., & Das, D. S. (2021, August). A Review on Evolution of Social Media Influencer Marketing: Reflection on Consumer Behaviour and Consumer's Decision- Making Process. Turkish Online Journal of Qualitative Inquiry (TOJQI).
- Vidani, J. N., & Dholakia, A. (2020). An Introspective Study on Retail Sector The Current Scenario in Gujarat and India. In R. B. Chauhan, Management and Innovation: Research Study (pp. 1-15). Kanyakumari: Cape Comorin Publisher.
- Vidani, J. N., & Pathak, K. N. (2016). A Survey on Awareness and Satisfaction Level of the Consumers of Online Gifting With Special Reference to Ahmadabad City. Governance in E-commerce: Contemporary Issues & Challenges (pp. 121-135). Ahmedabad: GTU.
- Vidani, J. N., & Plaha, N. G. (2016, November). Swachh Bharat: Csr Initiative by Indian Corporates. International Multidisciplinary Journal Think Different, 3(22), 44-50.
- Vidani, J. N., & Plaha, N. G. (2017). Agriprenurship: A Reincarnation of Indian Agricultural Sector. Proceedings of the International Conference on Enhancing Economic Productivity and Competitiveness through Financial and Monetary Reforms (pp. 154-159). Ahmedabad: GTU.
- Vidani, J. N., & Singh, P. K. (2017). To study the effect of marketing on awareness and the use of contraceptive pills in the rural areas with special Reference to Ahmedabad District. Services in Emerging Markets (pp. 254-265). Ahmedabad: Emerald.
- Vidani, J. N., & Solanki, N. (2015, December). The Study of Fundamental Concepts of Management Focusing on Posdcorb Analysis - Parle India Pvt. Ltd. Excel International Journal of Multidisciplinary Management Studies, 5(12), 45-56.
- Vidani, J. N., Chack, P. K., & Rathod, D. N. (2017, February). Startup India: A

- Challenging Way of Thrones. National Conference on startup India: Boosting Entrepreneurship (pp. 111-118). Pune: D. Y. Patil University Press.
- Vidani, J. N., Das, S., Meghrajani, I., & Singh, G. (2023, August). Influencer Marketing and Gendered Consumer Behavior: An Analysis of Clothing Purchases across Different Fashion Categories. *Sodhsamhita*, 137-157.
- Vidani, J. N., Meghrajani, I., & Siddarth, D. (2023, May). Unleashing the Power of Influencer Marketing: A Study on Millennial Consumer Behaviour and its Key Antecedents. *Journal of Education: Rabindra Bharati University*, XXV(6), 99-117.
- Vidani, J., Das, S., Meghrajani, I., & Chaudasi, C. (2023). Unveiling the Influencer Appeal: A Gender-Centric Exploration of Social Media Follower Motivations. *Rabindra Bharati Journal of Philosophy*, 182-203.
- Vidani, J., Jacob, S., & Patel, M. (2019, July - September). Mental Health START-UP: MOODCAFE. *Economic Challenger: An International Journal*, 21(84), 35-42