

## **Productive capabilities and international positioning of mexican blackberry exports**

Capacidades productivas y posicionamiento internacional de las exportaciones mexicanas de zarzamora

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### **Abstract**

This article examines the productive capabilities and international positioning of Mexican blackberry exports through a comparative study of firms in Los Reyes, Michoacán, and Huelva, Spain. Based on fieldwork with 15 Mexican firms and 10 Spanish firms, it evaluates price, innovation, integration, technology, distribution channels, and market orientation using Likert-scale indicators, Pearson correlations, and an exploratory PLS model. The findings show that Mexican firms record higher aggregate competitiveness and stronger market orientation, while Huelva stands out for cooperative integration. The hypothesis is supported: all six variables are positively associated with export competitiveness, although their relative weight differs by territory.

**Keywords:** blackberries; distribution channels; export competitiveness; innovation; international markets

**JEL classification:** F14; Q17; L25; O31; M16

### **Resumen**

Este artículo examina las capacidades productivas y el posicionamiento internacional de las exportaciones mexicanas de zarzamora mediante un estudio comparativo de empresas de Los Reyes, Michoacán, y Huelva, España. Con trabajo de campo aplicado a 15 empresas mexicanas y 10 españolas, se evalúan precio, innovación, integración, tecnología, canales de distribución y orientación al mercado mediante indicadores tipo Likert, correlaciones de Pearson y un modelo exploratorio PLS. Los resultados muestran mayor competitividad agregada en México y mayor integración cooperativa en Huelva. La hipótesis se confirma: las seis variables se asocian positivamente con la competitividad exportadora, aunque con distinto peso territorial.

**Palabras clave:** canales de distribución; competitividad internacional; innovación; mercados internacionales; zarzamora

**Clasificación JEL:** F14; Q17; L25; O31; M16

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## 1. Introduction

Blackberry production has become one of the most dynamic segments of the berry economy in Mexico and Spain. In Mexico, the municipality of Los Reyes, Michoacán, has historically concentrated a significant share of the country's blackberry production and has served as a platform for the international commercialization of fresh berries. In Spain, the province of Huelva has developed a specialized berry cluster in which strawberry, blueberry, raspberry and blackberry production is linked to export-oriented firms, cooperatives and commercialization networks. These two territories differ in productive organization, market integration and technological conditions, yet both participate in global markets that impose strict requirements regarding quality, logistics, price formation and timely supply (Freshuelva, 2018; Merchand, 2013; Muñoz Rodríguez & Juárez, 1995; SAGARPA, 2009; Servicio de Información Agroalimentaria y Pesquera, 2010).

The international competitiveness of exporting firms cannot be explained solely by production volume or by favorable natural conditions. It also depends on the capacity of firms to organize resources, respond to market demand, innovate, coordinate with suppliers and clients, manage distribution channels and incorporate technologies that improve efficiency. From this perspective, the exporting firm operates within a value chain in which competitiveness is shaped by both internal capabilities and external relationships. This is especially relevant in fresh agricultural exports, where perishability, phytosanitary standards, seasonality and distance to destination markets make coordination and information management decisive factors (Barney, 1991; Esser, 1996; Porter, 1985, 1990).

The case of blackberry exporters is analytically relevant because the product connects local agricultural systems with demanding international markets. In Los Reyes, the expansion of blackberry cultivation was linked to the presence of foreign and national exporting companies, as well as to technical improvements in varieties, harvest calendars and commercialization practices. In Huelva, export performance has been associated with cooperative organization, integration among producers and marketers, and the capacity to coordinate production and commercialization in a region with strong specialization in berries (Freshuelva, 2018; Merchand, 2013; Morales Arellano, 2019; SAGARPA, 2009; Sánchez, 2008).

The objective of this article is to identify and evaluate the extent to which price, innovation, integration, technology, distribution channels, and market orientation explain the international competitiveness of blackberry exporting firms in Los Reyes, Michoacán, and Huelva, Spain. The comparison is used to discuss how the productive capabilities of Mexican exporters shape their international positioning and how this positioning differs from the Spanish benchmark (Morales Arellano, 2019).

The working hypothesis states that price, innovation, integration, technology, distribution channels, and market orientation are positive determinants of the international competitiveness of blackberry exporting firms. The hypothesis also assumes that these determinants do not operate with the same intensity in both territories, because each export system is embedded in different productive trajectories, organizational forms, market relations, and institutional conditions (Barney, 1991; Esser, 1996; Porter, 1985, 1990).

The article is organized into five sections. After this introduction, the second section develops the theoretical foundation on international competitiveness, competitive advantage, firm capabilities, innovation and integration. The third section explains the methodology, sample, variables and analytical procedures. The fourth section presents and discusses the results for Los Reyes and Huelva. The final section summarizes the main conclusions, implications, limitations and future research lines.

## 2. Literature Review and Theoretical Foundation

The concept of international competitiveness has been discussed from different analytical levels. At the macro level, competitiveness is linked to national conditions, trade performance, institutions, infrastructure and policy frameworks. At the meso level, it depends on sectoral structures, clusters, territorial specialization and productive linkages. At the micro level, it is expressed in firm performance, strategy, productivity, innovation and the ability to sustain participation in markets. The present article focuses on the micro and meso levels, because exporting firms are embedded in territorial value chains and must combine internal capabilities with external relationships (Chudnovsky, 1990; Esser, 1996).

Classical trade approaches emphasized comparative advantages based on factor endowments, natural resources and relative costs. However, the competitiveness of contemporary exporting firms depends increasingly on dynamic capabilities, learning, knowledge, differentiation and organizational coordination. Porter's theory of competitive advantage argues that firms and industries develop competitiveness not only through low costs but also through differentiation, segmentation, supporting industries, demand conditions and the capacity to innovate and upgrade (Porter, 1985, 1990). In the case of blackberry exports, these dimensions appear in the form of quality standards, product varieties, logistics, market knowledge and strategic relationships with buyers and suppliers.

The resource-based view complements this approach by emphasizing the role of resources and capabilities that are valuable, rare, difficult to imitate and organizationally embedded (Barney, 1991). Exporting firms may possess tangible resources, such as equipment, cooling infrastructure, transport systems and packaging facilities, but they also depend on intangible resources such as trust, reputation, market information, technical knowledge and stable relationships with producers and clients. These resources may become a source of competitive advantage when they are coordinated effectively within the value chain.

Systemic competitiveness also highlights that firms do not compete in isolation. Esser (1996) argues that competitiveness is constructed through interactions among firms, institutions, policies and social arrangements. For agro-export sectors, this implies that competitiveness is influenced by territorial organization, producer associations, public programs, innovation networks and the capacity to coordinate collective action. In this sense, competitiveness is simultaneously an individual firm result and a collective territorial process.

Innovation is a central variable in agro-industrial competitiveness. It may involve new product varieties, improvements in harvesting and post-harvest handling, packaging, logistics, market diversification, organizational changes and the introduction of technical assistance or research and development. Piñero, Jaffé, and Müller (1993) emphasize the relationship among innovation, competitiveness and agro-industrial development. In fresh berries, innovation is especially relevant because export markets reward quality, uniformity, traceability and the capacity to adjust supply to windows of high demand.

Integration is another relevant determinant. It refers to the degree of coordination among producers, marketers, suppliers, service providers, distributors and final clients. Integration may take the form of contracts, strategic alliances, cooperative organization, proximity to suppliers and stable relations with buyers. In the Spanish agricultural context, cooperative integration has been studied as an organizational mechanism that strengthens collective commercialization, reduces transaction costs and improves negotiation capacity (Fernández, 2003; Rojas, 2001; Tamayo & Piñeros, 2007). In the Mexican case, integration may operate through agreements with buyers, commercial alliances and relationships among export firms and producers, although often with a more hierarchical or firm-centered logic.

Price remains important in international competitiveness, but in agricultural commodities and fresh products it is frequently determined by global supply, demand, seasonality and exchange rates. Therefore, price should not be analyzed only as a cost variable; it also reflects the firm's ability to manage production costs, commercialization costs, market positioning and profitability. Distribution channels also matter because berries are perishable products that require timely delivery, cold-chain management, knowledge of regulations, optimization of shipments and reliable access to final markets. Finally, market orientation captures whether firms understand demand behavior, segments, profitability, sales performance and their participation in destination markets (Calderón, 2012; Porter, 1985).

Based on this theoretical framework, the article evaluates six determinants of competitiveness: price, innovation, integration, technology, distribution channels and market orientation. These variables synthesize the strategic, organizational and operational dimensions that influence the international competitiveness of blackberry exporting firms (Calderón, 2012; Delfin & Bonales, 2014; Morales Arellano, 2019).

### 3. Methodology

The research follows a comparative, descriptive and explanatory design. It compares blackberry exporting firms located in Los Reyes, Michoacán, Mexico, and Huelva, Spain. The comparison is appropriate because both territories concentrate berry export activities, but they differ in organizational models, market trajectories and productive conditions. Los Reyes represents a Mexican blackberry-exporting territory with a strong specialization in production and commercialization, while Huelva represents a Spanish berry-exporting region with a significant cooperative and integrated organizational tradition (Freshuelva, 2018; Morales Arellano, 2019; SAGARPA, 2009).

The empirical information derives from fieldwork conducted with exporting firms. In Los Reyes, 17 exporting firms were identified and the survey obtained responses from 15 firms. In Huelva, 28 blackberry-exporting firms were identified through information from Freshuelva and 10 firms answered the survey. The study therefore approximates a census attempt in the Mexican case and a comparative exploratory sample in the Spanish case. Given the small universe of exporting firms and the specialized nature of the activity, the results are interpreted as evidence for the selected cases rather than as a statistical generalization for all firms in both countries (Freshuelva, 2018; Morales Arellano, 2019).

The instrument was designed as a Likert-scale questionnaire. It measured the dependent variable, international competitiveness, and six independent variables: price, innovation, integration, technology, distribution channels and market orientation. The construction of Likert-type scales follows the logic of attitude measurement and ordinal scoring, where responses are transformed into comparable values across firms and variables (García Sánchez et al., 2011). The questionnaire included indicators related to production and commercialization costs, export price, exchange rate effects, product and process innovation, internal and external organizational improvements, alliances, technology, technical assistance, contracts, intermediaries, regulatory knowledge, logistics, market segmentation, sales behavior and international market participation.

Table 1 summarizes the variables and their main empirical dimensions. The dependent variable, competitiveness, is calculated as an aggregate score from the instrument. Each independent variable is also transformed into a score and then normalized as a percentage of its maximum possible value. This makes it possible to compare the relative development of each determinant in the two territories (Calderón, 2012; García Sánchez et al., 2011; Morales Arellano, 2019).

**Table 1.**

## Variables and empirical dimensions

Variable	Analytical meaning	Main empirical dimensions
Price	Cost and price position in export markets	Production and commercialization costs; profitability; export price; market price; competition; exchange rate
Innovation	Changes in products, processes, organization and commercialization	Varieties; production process; collection; sales; packaging; destinations; routes; delivery time; internal and external organization
Integration	Commercial relationships and coordination with other actors	Proximity to suppliers; strategic alliances with suppliers and service providers
Technology	Technical and productive capabilities	Use and modernity of machinery and equipment; technical assistance; investment in technology; knowledge of competitors
Distribution channels	Capacity to deliver the product to destination markets	Client segment; contracts; intermediaries; competition; regulations; shipment distance; lot optimization
Market orientation	Knowledge and management of destination markets	Market segment size; demand behavior; profitability; sales behavior; export market participation
International competitiveness	Aggregate performance indicator	Total score derived from the full questionnaire

Source: Author's elaboration based on the fieldwork instrument.

The analysis was carried out in three stages. First, variable scores and descriptive statistics were calculated for each case. Second, Pearson correlation coefficients were used to estimate the degree of linear association between each determinant and the competitiveness score. Third, for the Los Reyes case, an exploratory partial least squares structural equation model (PLS-SEM) was estimated to examine relationships among selected latent variables. PLS-SEM was selected because it is suitable for predictive and exploratory analysis with small samples and ordinal measures, and because it focuses on explained variance rather than on strict distributional assumptions (Chin, 1998; Hair et al., 2017; Haenlein & Kaplan, 2004; Henseler et al., 2015).

The PLS model is interpreted with caution because of the small sample size and the exploratory character of the study. It is used as a complementary tool to identify possible patterns among variables, not as definitive causal proof. The comparative discussion relies mainly on normalized scores, descriptive statistics and correlation coefficients, while the PLS results provide an additional reading of the Mexican case (Hair et al., 2017; Henseler et al., 2015).

#### 4. Results and Discussion

The comparative evidence shows that the Mexican firms in Los Reyes reached a total competitiveness score of 2,411 out of a possible 3,300 points, equivalent to 73.1%. The Spanish firms in Huelva reached 1,515 out of 2,200 points, equivalent to 68.9%. Although both cases fall within a competitive range, Los Reyes shows a slightly higher aggregate score. This result should be interpreted together with the internal composition of competitiveness, because each territory exhibits different strengths and weaknesses.

Table 2.

## Sample and aggregate competitiveness by case

Case	Identified firms	Surveyed firms	Maximum possible score	Observed score	Competitiveness (%)
Los Reyes, Michoacán, Mexico	17	15	3,300	2,411	73.1
Huelva, Spain	28	10	2,200	1,515	68.9

Source: Author's elaboration based on fieldwork data.

In Los Reyes, the highest normalized scores correspond to market orientation (81.0%), distribution channels (80.6%) and integration (79.6%). These results indicate that exporting firms have relatively strong knowledge of their markets, distribution mechanisms and relations with suppliers or commercial actors. Nevertheless, the lowest scores correspond to technology (64.8%), price (67.2%) and innovation (69.8%). This suggests that competitiveness in Los Reyes does not depend only on the current market position of firms; it also requires strengthening technological capabilities, cost management and systematic innovation.

In Huelva, the strongest variable is integration (80.0%), followed by distribution channels (74.0%), price (72.8%) and market orientation (72.25%). The weakest variables are innovation (59.5%) and technology (62.4%). The result reflects a pattern in which cooperative organization and collective commercialization are central features of the Spanish case. The strength of integration is consistent with the regional presence of producer-marketer organizations and cooperative arrangements. However, the lower innovation and technology scores indicate that the sector may need additional upgrading to reinforce long-term competitiveness.

Table 3.

## Normalized variable scores by case

Variable	Los Reyes (%)	Huelva (%)	Comparative reading
Price	67.2	72.8	Huelva reports a stronger perceived price position.
Innovation	69.8	59.5	Los Reyes shows a higher innovation score.
Integration	79.6	80.0	Both cases are strong; Huelva is slightly higher.
Technology	64.8	62.4	Technology is the weakest area in both cases.
Distribution channels	80.6	74.0	Los Reyes reports stronger distribution-channel scores.
Market orientation	81.0	72.25	Los Reyes reports stronger market-orientation scores.
International competitiveness	73.1	68.9	Los Reyes shows a higher aggregate competitiveness score.

Source: Author's elaboration based on fieldwork data.

The correlation analysis offers a deeper reading of the determinants associated with competitiveness. In Los Reyes, innovation and technology show the strongest correlation with competitiveness, each with a coefficient of 0.950. Distribution channels (0.838), price (0.814), integration (0.788) and market orientation (0.740) also show positive and strong associations. These results suggest that the firms' competitive position is closely linked to their capacity to innovate and use technology, even though the normalized scores for these variables are not the highest. In other words, innovation and technology are not the most developed dimensions in Los Reyes, but they are the dimensions most strongly associated with competitiveness.

In Huelva, technology has the highest correlation with competitiveness (0.842), followed by integration (0.810), market orientation (0.720), price (0.610), distribution channels (0.463) and innovation (0.431). This pattern confirms that integration is a central source of competitiveness in Huelva, but it also reveals that technology may be a decisive lever for improvement. The lower correlation between innovation and competitiveness may reflect the relatively recent incorporation of blackberry production within a broader berry system, where cooperative commercialization and production coordination have been more visible than product or process innovation.

**Table 4.**

Pearson correlations between determinants and international competitiveness

Determinant	Los Reyes	Huelva	Interpretation
Price	0.814	0.610	Strong association in both cases, higher in Los Reyes.
Innovation	0.950	0.431	Very strong association in Los Reyes; moderate in Huelva.
Integration	0.788	0.810	Strong in both cases; slightly stronger in Huelva.
Technology	0.950	0.842	The strongest determinant in Huelva and one of the strongest in Los Reyes.
Distribution channels	0.838	0.463	High in Los Reyes; moderate in Huelva.
Market orientation	0.740	0.720	Strong and similar in both cases.

Source: Author's elaboration based on fieldwork data.

The comparative interpretation is therefore not simply that one territory is more competitive than the other. Rather, the two cases display different competitive configurations. Los Reyes appears to be more strongly associated with innovation and technology as potential drivers of competitiveness, whereas Huelva relies more visibly on integration and cooperative organization. Both territories show that price matters, but neither case can rely exclusively on price because export prices are influenced by international supply and demand, destination markets and exchange rate conditions.

The PLS-SEM exploratory model for Los Reyes offers additional insights. In the structural model, innovation shows positive coefficients toward price (0.639) and integration (0.631), while its coefficient toward market orientation is low (0.062). Distribution channels show a strong coefficient toward market orientation (0.751), but weaker coefficients toward price (0.301) and integration (0.227). The model's explained variance is reported as 0.845 for price, 0.631 for integration and 0.652 for market orientation. These results support the idea that innovation strengthens internal commercial conditions and relations, whereas distribution channels are more directly connected to market performance.

Table 5.

## Exploratory PLS-SEM results for Los Reyes

Relationship or endogenous construct	Coefficient / R <sup>2</sup>	Reading
Innovation → Price	0.639	Innovation is positively associated with price-related performance.
Innovation → Integration	0.631	Innovation contributes to integration and organizational relationships.
Innovation → Market orientation	0.062	Innovation has little direct relation with market orientation in the model.
Distribution channels → Price	0.301	Distribution channels have a limited relation with price.
Distribution channels → Integration	0.227	Distribution channels have a limited relation with integration.
Distribution channels → Market orientation	0.751	Distribution channels strongly explain market orientation.
R <sup>2</sup> Price	0.845	High explained variance.
R <sup>2</sup> Integration	0.631	Moderate-high explained variance.
R <sup>2</sup> Market orientation	0.652	Moderate-high explained variance.

Source: Author's elaboration based on the exploratory PLS-SEM model from fieldwork data.

From a strategic perspective, the Mexican case should prioritize technological upgrading, systematic innovation and better cost management without losing its strengths in market knowledge and distribution. Firms in Los Reyes have developed capacity to reach international markets, but the correlation evidence suggests that future competitiveness will depend on incorporating more technology, improving production and commercialization processes, and using innovation as a continuous practice rather than as an occasional response to market pressure.

The Spanish case suggests a different strategic path. Huelva's firms should maintain their strength in integration, cooperative organization and distribution, but they should also strengthen technology and innovation. The cooperative model appears to generate a collective advantage because it allows firms and producers to share capacities, coordinate supply and improve bargaining conditions. Nevertheless, if technological and innovation capabilities remain underdeveloped, the region may face limits in productivity, differentiation and adaptation to new market requirements.

These findings are consistent with theoretical approaches that understand competitiveness as a multidimensional phenomenon. Porter's framework helps explain why cost leadership, differentiation and segmentation are relevant, but the comparative evidence shows that these strategies are mediated by territorial organization and firm capabilities. The resource-based view explains why intangible resources such as trust, alliances and market knowledge matter. Systemic competitiveness helps clarify why firm performance depends on relationships among producers, exporters, institutions and markets. The blackberry export sector is therefore a useful case for observing how micro-level capabilities and meso-level arrangements interact in global agricultural trade (Barney, 1991; Esser, 1996; Porter, 1985, 1990).

A more detailed reading of the results indicates that the aggregate score should not be interpreted as a simple ranking of one territory above the other. The higher competitiveness score of Los Reyes reflects accumulated commercial experience, stronger market orientation, and the capacity of firms to respond to

international demand. Nevertheless, the same evidence also shows that the Mexican case is not free from structural weaknesses. Technology and price obtain lower normalized scores, which suggests that part of the international positioning of Mexican blackberry exports still depends on commercial agility and established distribution relations rather than on a fully consolidated process of technological upgrading.

This distinction is important because productive capabilities and market positioning are not identical. Productive capabilities refer to the set of organizational, technical, logistical, and learning capacities that allow firms to produce, handle, pack, transport, and negotiate the product under international requirements. Market positioning refers to the way in which these capabilities become visible in destination markets through reliability, quality, delivery times, reputation, buyer relations, and participation in profitable segments. The Mexican firms show a favorable position in the aggregate indicator, but the results reveal that their future competitiveness will depend on the transformation of commercial experience into stronger technological and organizational capabilities.

The Mexican case shows a particularly relevant contrast between variable scores and correlation coefficients. Market orientation, distribution channels, and integration are the best evaluated variables in normalized terms, but innovation and technology present the strongest correlations with competitiveness. This means that the variables with the greatest explanatory association are not necessarily those with the highest current level of development. In practical terms, innovation and technology behave as strategic bottlenecks: they are highly connected to competitiveness, yet they are not the areas where firms report their highest performance. Therefore, improvements in post-harvest handling, quality control, cold-chain management, varietal adaptation, information systems, traceability, and commercial innovation could generate relevant gains in competitiveness if they are incorporated systematically.

Distribution channels also require a careful interpretation. Their high score in Los Reyes suggests that firms know how to place the product in international markets and that they have developed channels to reach buyers and intermediaries. However, a high distribution score does not automatically mean greater value capture. When distribution depends excessively on intermediaries, firms may preserve market access while losing bargaining power. This result suggests that Mexican exporters should not only maintain their current channels but also strengthen direct commercial relations, contractual stability, market intelligence, and differentiation strategies that allow them to move from access to positioning.

The Huelva case provides a useful comparative benchmark because its main strength is integration. Cooperative and collective forms of organization appear to support coordination among producers, marketers, and exporters. This finding is consistent with the literature on systemic competitiveness and cooperative integration, which emphasizes that firms compete through networks and territorial arrangements, not only through individual strategies (Esser, 1996; Fernández, 2003; Tamayo & Piñeros, 2007). Huelva reports a lower aggregate competitiveness score than Los Reyes, but its integration pattern suggests a more collective form of competitiveness, in which cooperation may compensate for weaknesses in innovation and technology.

The comparison also shows that price is relevant but insufficient. In both territories, price is positively associated with competitiveness, although it is strongly conditioned by international supply, destination-market demand, seasonality, exchange rates, logistics, and buyer standards. For this reason, a strategy based exclusively on price would be fragile. The productive and commercial challenge is to reduce costs and improve margins without sacrificing quality, traceability, delivery reliability, or compliance with international standards. In this sense, price must be understood as the result of a broader system of capabilities rather than as an isolated determinant (Chudnovsky, 1990; Porter, 1985).

The exploratory PLS model reinforces this interpretation by showing that innovation is positively related to price and integration, while distribution channels have a strong effect on market orientation. These relationships suggest that competitiveness is built through chains of effects. Innovation may improve productive organization and cost conditions; better organization may strengthen integration; and more reliable distribution channels may improve the firm's knowledge of markets and buyers. The exclusion of technology from the final PLS model should not be interpreted as evidence that technology is irrelevant. Rather, the field data did not provide sufficient variance for that construct in the Mexican case, which itself is an important empirical signal: firms may share similar perceptions or similar limitations regarding technological development (Chin, 1998; Hair et al., 2017).

These findings have clear managerial implications for Mexican blackberry exporters. First, firms should preserve their current strengths in market orientation and distribution, because these variables explain the ability to remain connected with international demand. Second, they should convert those strengths into innovation capabilities, including new varieties, differentiated packaging, improved processes, quality certification, and market information systems. Third, they should strengthen integration not only through commercial agreements with buyers but also through closer relations with producers, suppliers, service providers, and institutions. Such integration can reduce transaction costs and increase the stability of supply in a product that is highly sensitive to perishability and timing (Fernández, 2003; Rojas, 2001; Tamayo & Piñeros, 2007).

Finally, the comparative approach clarifies the scope of the hypothesis. The evidence supports the hypothesis in a directional sense because all six variables show positive associations with competitiveness. However, the results also refine the hypothesis by demonstrating that competitiveness is not generated by the same combination of variables in both territories. Los Reyes depends more strongly on innovation, technology, distribution, price, and market orientation, while Huelva shows the centrality of technology and integration. This differentiated pattern confirms that competitiveness is multidimensional and territorially embedded, as proposed by firm-capability and systemic competitiveness approaches (Barney, 1991; Porter, 1985, 1990; Esser, 1996).

## 5. Conclusions

The objective of this article was fulfilled by identifying and evaluating the extent to which price, innovation, integration, technology, distribution channels, and market orientation explain the international competitiveness of blackberry exporting firms in Los Reyes, Michoacán, and Huelva, Spain. The comparative evidence allowed the study to determine both the level of aggregate competitiveness in each territory and the specific variables that are most strongly associated with export performance. In this sense, the analysis contributes to understanding how productive capabilities shape the international positioning of Mexican blackberry exports.

The working hypothesis is supported. The results show that the six variables considered in the study are positively associated with the competitiveness of blackberry exporting firms. Nevertheless, the evidence also shows that the determinants do not have the same weight in both territories. In Los Reyes, innovation and technology present the strongest correlation with competitiveness, followed by distribution channels, price, and market orientation. In Huelva, technology and integration show the strongest association. Therefore, the hypothesis is confirmed in its general direction, but it must be interpreted in a differentiated way: competitiveness depends on the interaction of several variables, and the hierarchy of those variables is shaped by the productive and institutional characteristics of each export system.

For the Mexican case, the findings indicate that Los Reyes has achieved a favorable international position based on market orientation, distribution channels, and accumulated experience in blackberry commercialization. However, the variables that show the greatest association with competitiveness are precisely innovation and technology, which indicates that future gains depend on strengthening productive and organizational upgrading. The Mexican export sector cannot rely only on volume, commercial experience, or access to buyers; it must reinforce innovation, traceability, post-harvest management, logistics, and technological adoption to sustain its position in increasingly demanding international markets.

The Spanish case contributes an important comparative lesson. Huelva reports a lower aggregate competitiveness score than Los Reyes, but its strongest variable is integration. Cooperative organization and the articulation between producers and exporters appear to function as a territorial capability that supports competitiveness. This evidence suggests that Mexican exporters could benefit from stronger collective arrangements, strategic alliances, producer-exporter coordination, and institutional mechanisms that reduce fragmentation in the value chain.

The study also confirms that price is not sufficient to explain international competitiveness. Although price is relevant in both cases, it is conditioned by international markets and must be supported by quality, reliability, distribution, innovation, and integration. The results therefore reinforce the idea that competitiveness in agro-export sectors is multidimensional. Firms compete not only through cost conditions, but also through the capacity to organize resources, innovate, coordinate networks, understand markets, and comply with international requirements.

The article has limitations that should be considered. The fieldwork is based on a specialized and relatively small number of firms, particularly in Huelva. The analysis is cross-sectional and reflects the conditions observed during the fieldwork period. In addition, the PLS model is exploratory and should be interpreted as a tool for identifying relationships rather than as definitive causal evidence. Future research could update the fieldwork, incorporate additional export regions, compare more recent market conditions, and include variables related to certification, sustainability, logistics infrastructure, financing, labor conditions, and digital traceability.

Despite these limitations, the article offers a useful contribution for the analysis of agro-export competitiveness. It shows that Mexican blackberry exports have an important international position, but that this position will be more sustainable if it is supported by stronger productive capabilities. The central conclusion is that competitiveness is not generated by a single factor. It emerges from the combination of innovation, technology, integration, distribution, price conditions, and market orientation. The degree to which these elements are coordinated determines the capacity of firms to preserve and improve their participation in international markets.

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