Dynamics of the behavior of competitiveness factors in the textile sector

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A B S T R A C T

The research studied the dynamics of the factors that determine competitiveness in the textile sector in Huancayo, Peru, given that in recent years it has been affected, with repercussions on profits, economic-financial stability, jobs, among others. Competitiveness is given by the interaction of various resources, actors and circumstances, which generate situations that could be auspicious or detrimental to the sector and other sectors. As a general perspective, Porter's Competitive Diamond Model and Action-Participatory Research have been used, combining scientific rigor with industrial practice. In applied research of non-experimental transactional design, an Attitude Scale was used as an instrument with 62 items and Likert-type answers, considering 7 latent variables. The methodological intervention was carried out on a sample of 75 sectoral experts. The factors that mainly determine the competitiveness of the textile sector are the structure, rivalry and strategy developed by the companies with a path coefficient of 0.812, the understanding of the behavior of the demand with a path value of 0.912 and the actions of the Government with an inverse relation of 0.824 for the respective path coefficient; while no relation has been established with the variable Integration or cluster.

1. Introduction

Peru is known for its textile tradition, producing several varieties of cotton and wool from South American camelids, in addition to skills in spinning, weaving, dyeing, and textile finishing. Textile exporting companies in Huancayo have increased due to the textile export potential and capacity to respond to market demands and changes. According to Laguna (2020), the textile industry has changed due to market globalization and internal structural changes; Trade Agreements and Free Trade Agreements (FTAs) have contributed to this development. However, since 2012 textile exports have been going through a recessionary period going from US$2.2 billion in sales to US$1.3 billion in 2019 (Peruvian Association of Textile Technicians, 2020) and just over US$1 billion in 2020 (Ministry of Foreign Trade and Tourism, 2020). In Huancayo, not all textile companies have been successful, some have exported for a few years and then gave up, which is why there are only 4 representative companies in this sector, with exports in volumes and amounts greater than 250,000 US dollars, making it necessary to study the characteristics that influence the competitiveness of the textile sector, in order to determine subsequent improvement actions.

The topic of sectoral competitiveness is of interest to politicians, businessmen and researchers; in Colombia, Torres (2020) based on Esser et al. (1996) evaluated the fundamentals of systemic textile competitiveness in Ibagué, recommending the promotion of industrial clusters, adequate legislation, governmental support and inter-company communication network promoted by the Ibagué Chamber of Commerce. Also, in the eagerness to know the textile dynamics in Colombia and the bases that generated its competitiveness, López et al. (2020) found that the government has a lot to do with it, given that it exercises control of contraband, in tariff policies, taxes and state purchases, especially in times of the Covid19 pandemic.
In a publication of Futuro a fondo (2020), Valentín Pich, indicated that competitiveness augurs inclusive and sustainable growth over time, providing welfare and survival, for this it is necessary to align business objectives to the Sustainable

Development Goals (SDGs), generating efficiency and competitive advantage. Gligorijević (2020) explained the reasons why the textile sector in the Republic of Serbia became a dynamic export emporium; he used the Global Trade Helpdesk methodology of the International Trade Centre (ITC), putting forward proposals for self-sustainable growth, long-term production and trade integration. Since families are the germ of micro enterprises, they have to consider their size, geography, economic capacity, etc., Muñoz et al. (2020) studied the degree of influence that entrepreneurship has on strategic planning, customers and financial management; having that planning is the most influential, innovating and improving the corporate image. Medeiros et al. (2019) studied competitiveness from a comparative and econometric perspective, used data envelopment analysis, proposing to work on commercial and systemic factors, allowing to have a holistic view when building this organizational, business and sectorial capacity. Ferrer (2018) analyzes the competitiveness factors of the wine sector in Zaragoza (Spain), finding a complementary relationship between Porter's Theory and Barney's; establishing that technology and innovation determine business performance. On the other hand, Leśniewski (2017) indicated that competitiveness is achieved through human resources, showing a behavioral-humanistic model of soft competitiveness.

Garrido (2017), determined the relative weight of competitive factors of small and micro enterprises in Andalucía contributing to future business decisions. Similarly, Rojas & Barreto (2016), analyzed the sectoral competitiveness conditions of arracacha in Boyacá and its influence on the development of that city, this qualitative research used Michael Porter's fundamentals such as the "five forces" and the "competitiveness diamond" to define strategies to access new markets, raise the quality of life and sustainable growth of the city. Sectoral competitiveness can also be achieved through training, innovation, market orientation and internationalization (Lajara de Camilleri, 2015). Bernasconi (2015) presents a theoretical review of strategies for generating competitiveness, from the incorporation of quality to open innovation, making changes in processes, products and services, reducing costs and increasing income. Carrasco & Gallardo (2020), in an effort to increase competitiveness in the textile sector, found that the lack of financing and low cotton production per hectare affects the progress of the exportable supply; in this study, the presence of the State was also evident. Interpersonal and inter-company relations are fundamental for the establishment of medium- and long-term commercial ties, in addition to the fact that a culture of negotiation influences business competitiveness (Pando & Burga, 2020). The globalized and hypercompetitive market demands that entrepreneurs -in any sector- have characteristics for an adequate management of their businesses; this is to possess personal entrepreneurial characteristics (Inga et al., 2020). According to Lara (2019), the construction of the competitive strategy requires being clear about the processes, resources and business factors, as well as their articulation; concluding that there is a direct relationship between the results by the use of leadership strategies in costs and differentiation; and business profitability. Relationships for sectoral strengthening, the creation of industrial clusters and associativity as strategies for competitiveness are proposed by Díaz (2019). On the other hand, Cajavilca (2018), studied the relationship between the competitive advantages of companies in Lima and their respective competitiveness, indicating that this can be individual or collective. Likewise, Cruz Castillo (2018) studied the determinants of a country's competitiveness taking productivity as a basis; considering innovation, education and health, as well as infrastructure, institutionalism, education and organizational climate as incident elements.

At the regional level, Caballero (2012) indicates that the handicraft sector (textiles, silverware, carved gourds, etc.) in Junín is a transgenerational practice developed in family businesses, mostly informal, which generates disarticulation and individual work, so it is not possible to produce a diversified supply. Indacochea et al. (2005) proposed a development model for the Mantaro Valley in which they proposed the development of strategic axes for the development of economic activities in competitive environments. They also analyzed regional competitiveness based on Michael Porter's theory, including development plans.

2. Literature review

2.1 Competitiveness Factors

There are differences between the levels of competitiveness of developing and developed countries, due to contrasts in investments in technology and innovation, infrastructure, human capital, among others that have an impact on productivity (Benites et al., 2020). Understanding as competitiveness factors the elements that make its development possible, Diaz et al. (2019) indicate innovation as one of them, due to its direct effect on exports, complementing it with private and public investment, R&D actions and government policies. The competitiveness of a sector can also be established by factors whose responsibility depends on an adequate management, which develops and articulates it properly: strategic planning, production and purchasing activities, quality assurance mechanisms, marketing processes, environmental management, human resources, environmental management, accounting and finance, and finally information systems (Saavedra, 2012). Consequently, taking into account these and other factors such as: strategies, structure and rivalry of companies, basic and advanced factors, cluster or relationship, demand conditions, government actions and chance, companies will seek to compete with more and better resources that will allow them to occupy a better position in the market, becoming competitive, innovative and profitable (Porter, 1990).

2.1.1 Structure, strategy and rivalry of companies

Defined as the scheme in which companies are established, organized and managed, as well as the way in which they compete among themselves, this being the basis of their competition or rivalry. This stems from practices, customs and management

approaches common to all companies. In this sense, Porter (1990), states that the orientation and training of leaders, individual capacity and creativity, decision-making procedures, predisposition and attitude towards global activities and the relationship between managers and workers, condition the possibilities of achieving competitive advantages. It also indicates that the idiosyncrasy of a country influences the ways in which companies are organized and managed. Likewise, Martínez and Padilla (2020), mention that there is a relationship between competitiveness and innovative capacity, given that to innovate it is necessary to have good relations with customers, loyal collaborators, marketing and sales processes and adequate management practices, to achieve competitiveness it is necessary to evaluate the environment, have financial resources, maintain defined organizational structure and adequate personnel. This also requires an adequate strategic process that considers the internal and external contextual analysis, aligning capabilities and resources such as quality, innovation, production factors, human talent, etc. to build competitive advantage (Romero et al., 2020). Barrios-Hernández et al. (2019) mention that being competitive requires being in permanent evolution, and that one strategy to achieve this is the application of process management, seeking to be more efficient in the use of resources.

2.1.2 Basic and advanced factors

Another of the influential elements in the competitiveness of the companies are the conditions of the factors, that is to say, the circumstances of the environment or nation. These are the inputs required to compete in an industry or sector and include: physical resources, human resources, capital, knowledge and infrastructure. The nature of the factors depends not only on the factors themselves, but also on the level of efficiency and effectiveness with which they are used. On the other hand, competitiveness does not require factors in equal nature, dimension or depth, while classifying factors into basic and advanced, and general and specialized (Porter, 1990). According to Njoroge et al. (2016), external factors are a set of exogenous factors that relate to the organization and affect its effectiveness. On the other hand, Hitt et al. (2011) indicated that external factors are established by integration with society and these are technology, economics, politics and legal factors that are outside business control, imposing restrictions on organizational activities. The literature review identified several factors that influence business competitiveness, especially of micro and small enterprises in the context of an emerging economy. These factors are human capital, flexibility, the pace of innovation development, the size of the company, the intangible assets developed, external factors and the way in which corporate social responsibility is carried out (Tiep, 2021).

2.1.3 Integration or clusters

Porter (1990) indicates that the competitiveness of a sector is given by the presence of a set of suppliers and linked or related industries, all of which are competitive. These may have similar technologies, inputs and complementary products. These are companies with which the value chain can be coordinated or shared through manufacturing processes, production technology, distribution, sales or services. According to Jankowska (2017), in newly formed companies, clusters offer many advantages for the achievement of their competitiveness. Navarrete et al. (2009) indicate that for the success of a cluster, the relationships between the actors must be strengthened, allowing the creation of social capital, access to external financing, R&D&I efforts and infrastructure; however, care must be taken to ensure that the high cohesion with suppliers and other actors does not generate monopolistic practices. These relationships should not only occur exclusively at the business level, but also at the institutional level, which is why Barrios-Hernández et al. (2020) established that the triad formed by the university, the company and the State is an appropriate alliance for the purpose of developing R&D&I and responding to the demands of the environment.

2.1.1 Demand conditions

It is determined by the market, its size and composition, growth rate, as well as the nature of customers and their level of demand at the local, regional, national, or global level. The demand posed by customers and the market is expected to stimulate creativity, competitiveness, and innovation in the sector (Porter, 1990). In this regard, Ahmedova (2015) refers that market variations (in terms of price and demand), customer satisfaction, the location of consumers and the dynamics of the market itself, are external factors that determine the levels of competitiveness of a sector. For Buendía (2013), companies should seek to improve the quality of demand, encouraging customer preference for quality goods and services. Consequently, demand conditions expressed in access to basic services, level of market professionalism, households with internet access, regional Gross Domestic Product (GDP), among others, also define the competitiveness of a sector (Navarro et al., 2017).

2.1.2 Government

There is always a relationship between public expenditures and investments and the competitiveness of a nation's sectors. The most competitive countries are those whose expenditures in education, health, roads and highways, technologies, etc. were above the others; consequently they have equally high per capita incomes (Buendía, 2013). Furthermore, for competitiveness at the national level or in a specific sector to develop, the government must design and implement appropriate policies in order to maintain macroeconomic, political, legal and institutional stability, invest in infrastructure and basic services, promote education and define conditions that are favorable for the participation of domestic and foreign investors

and economic agents (Porter, 1990). When we speak of government, we are referring to the different levels that make up the state apparatus, at the local, regional and national levels; therefore, as stated by Salmoral et al. (2020), it is vital to strengthen governance, to give an integrating vision to state management, in strict compliance with the rules and goals. By virtue of all this, the government is an important element in the dynamics that generate competitiveness in the textile sector, so that its actions and decisions can promote or hinder investments and business actions.

2.1.3 Chance

Belanová (2014) states that a quality external environment facilitates long-term sustainable economic growth and is a basic premise for business operations to develop and increase the country's competitiveness on an international scale. In their operating process, companies are affected by the external environment, specifically by structural factors, which are not controlled by the company, but which, being in its sphere of influence, have a significant impact on its competitiveness (Laplane, 1996). Díaz et al. (2021) refer that the nature of the context in which the companies of an industry compete is dynamic and is defined by the conjugation of external and internal factors, so that it is not possible to determine their behavior, and it is necessary to develop the capacity to react to these events. Consequently, business and sectoral competitiveness must be approached from the perspective of complexity, since due to its polycausal and systemic nature, its scope is based on the relationship between internal and external factors (Cabrera-Martínez et al., 2012).

2.2 Competitiveness

Enright et al. (1994) indicate that business competitiveness is given by the capacity of a company to provide goods and services in better conditions of efficiency and effectiveness than its competitors. It has also been used to refer to companies, countries or regions that can respond to the demands of the market or environment in which they participate. They usually offer products and services with quality and added value, have high productivity and profit margins that allow them to reinvest and continue to grow (Millán-García & Gómez Díaz, 2018). For Porter (1985), competitiveness is defined as the ability of a company to manufacture and sell goods and services under better conditions than its competitors. These conditions can be quality, price, presentation or market opportunity. Precisely, these conditions become differentiating elements or comparative advantages, which when properly used can generate a better relative position in the market, this is called competitive advantage (Porter, 1990). Another approach to competitiveness is presented by Coriat (2010), who, based on the experiences of Japan, France, the United States and Germany, indicates that competitiveness is not exclusively a question of costs, but also of situations and non-cost factors, through which he explains the complexity of competitiveness and how to achieve it.

3. Research model and hypotheses

Based on the theoretical criteria established by Porter (1990), the following dimensions and indicators have been considered for the variable competitiveness factors:

a) Structure, strategy and rivalry: Composed of the indicators: Formalization, Functions, Nature of the company, Business model, Cost strategies, Differentiation strategies, Certifications Management capacity; all identified with the nomenclature: E.

b) Basic and advanced factors: Indicated by: Skilled labor, geographical position, culture, creative and entrepreneurial idiosyncrasy, textile tradition, business knowledge, export knowledge and capacity, investment, technology, land and air access and finally financing. All of them are represented by FB for basic factors and FA for advanced factors, which are considered as one.

c) Integration or clusters: Consider the following indicators: Sectoral organization, Trust and shared vision, Production chain, Export chain, University-Company Articulation, State-Company Articulation. These indicators are represented by the nemonic CL.

d) Demand conditions: Represented and indicated by: Demand, Purchasing Capacity and Tastes and Preferences; all grouped under the nomenclature D.

e) Government: Indicated by: Government sectoral promotion, Central stability. Represented by G.

f) Chance: Comprised by: Unforeseen events, Unforeseen situations, is represented by A.

For the dependent variable Competitiveness, the following indicators were established: Prices, Sales, Market share and Quality of products; represented by the mnemonic C.

From these, the following conceptual model and hypotheses are established, as shown in Fig. 1:
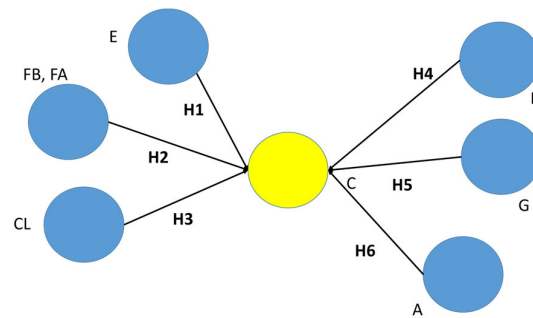
Fig. 1. Conceptual model and hypotheses

HE1: The structure, strategy and rivalry (E) developed by textile companies in Huancayo province influence their competitiveness (C).
HE2: The basic and advanced factors (FB and FA) of the textile sector in Huancayo province influence competitiveness (C).
HE3: There is a relationship between the integration or cluster (CL) of the textile sector in Huancayo province in the form of clusters and its competitiveness (C).
HE4: Understanding and acting on demand conditions (D) has an effect on the competitiveness (C) of the textile sector in the province of Huancayo.
HE5: The actions of the Central, Regional and Local Government (G) influence the competitiveness (C) of the textile enterprises in the province of Huancayo.
HE6: Chance or chance (A) influences the competitiveness (C) of textile enterprises in the province of Huancayo.

4. Research Method

The study was based on the scientific, inferential and deductive method. Considering that the aim is to calculate the causal relationship existing between the study variables, the type of research is applied and of an explanatory level. The research design considered is non-experimental and cross-sectional.

4.1 Population and sample

The population is made up of 85 experts who know the situation of the textile sector; it is made up of textile businessmen, consultants, academics, employees of the sector at the state level, among others.
The sample is circumscribed to a group of textile entrepreneurs, consultants, facilitators and professionals equally knowledgeable about the productive and commercial dynamics of the sector. According to Martínez & Fierro (2018) for 6 relationships in the structural model, a minimum of 75 observations of the sample corresponds; complying the present study with this recommendation.

4.2 Data collection instrument

The questionnaire was designed and delivered through the Google Forms platform because of the limitations due to the pandemic. The instrument consists of 6 items for the competitiveness variable, while for the Competitiveness Factors, these have been distributed as follows: 6 for Structure, strategy and rivalry, 5 for Basic factors, 8 for Advanced factors, 7 for Integration or clusters, 5 for Demand, 3 for Government and 4 for Chance. The instrument has been validated through the Delphi methodology and reliability was determined by means of Cronbach's Alpha coefficient.

5. Results

5.1. Evaluation of the Measurement Model

The Table 1 shows the reflective measurement analysis of the model, which is based on the calculation of the reliability and validity of the measurement scales. In relation to reliability, the proposed scale expresses its internal consistency by means of Cronbach's Alpha value (from 0.684 to 0.793) and composite reliability (from 0.808 to 0.864). Convergent validity shows to what extent the indicators represent the variable (Henseler et al., 2009), in this case, the values of the average variance extracted (AVE) are greater than 0.663, which means that each variable in the model explains at least 66.3% of the variance expressed in the indicators. Discriminant validity shows to what extent a variable is different from the others (Hair el al., 2017), for the corresponding calculation the Fornell-Larcker criterion was used taking into consideration that the AVE must be greater than the square of the correlation with any other construct. In all cases, the assumption was met.

Table 1
Results of the Evaluation of the Measurement Model

Variables	Cronbach's alpha	Composite reliability	Factor loadings (rank)	Average Extracted Variance (AVE)	Discriminant Validity
E	0.976	0.978	0.832 – 0.950	0.805	0.897
FB-FA	0.980	0.982	0.783 – 0.942	0.772	0.879
CL	0.931	0.945	0.792 – 0.922	0.710	0.843
D	0.967	0.973	0.815 – 0.932	0.819	0.905
G	0.972	0.979	0.883 – 0.959	0.902	0.950
A	0.846	0.887	0.815 – 0.932	0.663	0.814
C	0.916	0.934	0.737 – 0.928	0.704	0.839

The value of the coefficient of determination allows testing a hypothesis or predicting future results, expressing the quality of the model and the possibility of its replicability (Steel & Torrie, 1960). As shown in Fig. 2, the R2 value is 0.50, showing that the model presented allows predicting the behavior of the Competitiveness (C) variable.
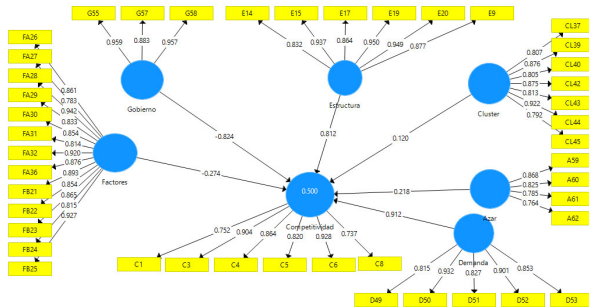

Fig. 2. Results of the hypothesized model with structural equations.

5.2. Evaluation of the Structural Model

After verifying the reliability and the measurement model, we sought to test the relationships between the corresponding constructs or latent variables. The hypotheses were tested by evaluating the paths or path coefficients (see Fig. 2) and their respective significance levels. For bootstrapping, 5000 subsamples were considered with a significance level of 0.05 for each of the path coefficients. The estimated path of the PLS analysis is shown in Fig. 3.
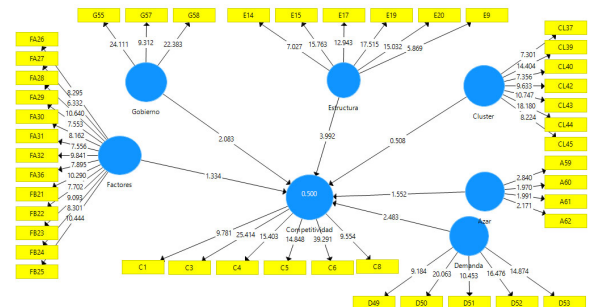

Fig. 3. Modeling of competitiveness and competitiveness factor

Considering that 5 specific relationships have a p-value of less than 0.05, the proposed hypotheses H1, H2, H4, H5 and H6 are accepted, while H3 is rejected for having a p-value of 0.624 as shown in Table 2.

Table 2
Results of the structural model analysis

Hypothesis	Simple mean	Standard deviation	Value Path Beta	Statistic t Student	p value	Decision
H1: E → C	0.746	0.203	0.812	3.992	0.000	Accepted
H2: FB-FA → C	-0.217	0.205	-0.274	1.334	0.038	Accepted
H3: CL → C	0.217	0.237	0.120	0.508	0.624	Rejected
H4: D → C	0.815	0.367	0.912	2.483	0.007	Accepted
H5: G → C	-0.819	0.396	-0.824	2.083	0.030	Accepted
H6: A → C	0.181	0.140	0.218	1.552	0.016	Accepted

5. Discussion of Results

Based on the results obtained, a description is made regarding the influence of the structure, strategy and rivalry of the companies; basic and advanced factors; integration or cluster; demand conditions; government and chance on the competitiveness of textile companies in the province of Huancayo.

Regarding the relationship Structure, Strategy and Rivalry of the companies → Competitiveness

The study found that structure, strategy and rivalry have a significant positive influence on competitiveness (path = 0.812, p = 0.00). Business formalization includes having legal status, being registered with the corresponding tax authorities, issuing payment receipts, having municipal authorizations, and complying with regulations. Being formalized contributes to competitiveness; unfortunately, as a result of the pandemic, formalization has decreased by up to 2.1% in 2020 in relation to the previous year, making them vulnerable and without access to economic reactivation bonds promoted by the Government (ComexPerú, 2021). The family nature of the companies promotes adequate intra-company relations, creating an adequate work climate. Family businesses build bonds with common objectives thanks to their consanguinity factors (Maldonado et al., 2020). As Carrasco et al. (2021) point out, the development of strategies for customer loyalty is fundamental for business improvement. Finally, the presence of foreign competitors requires entrepreneurs to improve the conduct of their businesses from the management, production and market perspectives.

Regarding the relationship between Basic and Advanced Factors → Competitiveness

Similarly, the study indicates that basic and advanced factors exert a moderate negative influence on competitiveness (path = -0.274, p = 0.038). The digital transformation, virtualization of the economy, interconnection and internet; are making information and knowledge base elements for the creation and use of resources or basic factors (García & Godínez, 2015). On the other hand, the high levels of business competition require that physical and tangible elements be replaced by the capacity to process information, the ability to solve problems and to meet the demands of the dynamic and changing market, the latter being considered as advanced factors in Porter's approach. According to Schwab (2016), the trained and skilled workforce will be more important than the availability of capital, since it promotes growth, development, innovation and competitiveness. This same appreciation is held by Cruz Castillo (2018) who states that the infrastructure developed by companies has an impact on their own competitiveness. Given that in the present study, the factors have been considered as one and since the relationship value is negative, it is recommended to treat them separately.

Regarding the relationship between Cluster → Competitiveness

The research also shows that integration or clustering has no influence on competitiveness (path = -0.120, p = 0.624). Although the relationship is not proven, theoretically clusters generate value chains and systems, i.e. grouping of joint activities for the benefit of consumers and producers (García Saltos et al., 2016). The relationship, communication and business union favor cooperation and sectoral continuity; geographic proximity and physical proximity are shown to be less or no determinants of such purpose. The competitiveness of a company or sector can be achieved in different ways, since this is defined as the capacity to add value (Pérez Luyo, 2020). Schwab (2016) indicates that the ease of access, low costs and geographic neutrality of digital media make more interactivity possible, transcending physical, social, economic, political, ideological and even religious boundaries.

Regarding the relationship between Demand → Competitiveness

The study shows that demand conditions have a very significant positive influence on competitiveness (path = 0.912, p = 0.007). If the market is informed, demanding and critical of the products offered, companies will be obliged to improve their production processes, designs, colors and quality of goods and services; anticipating the needs of customers, improving their marketing processes. Navarro Silva et al. (2018) mention that quality is a strategy to improve internally and externally, having the customer, their needs and expectations as the center.
Currently, Peruvian companies, including textile companies, use digital media such as social networks: Facebook, Instagram and Tik Tok, instant messaging applications: WhatsApp, WhatsApp Business and Telegram, video services such as YouTube and Vimeo (Diario Gestión, 2021); adapting to e-commerce spaces for the sale of their products.

Regarding the relationship between Government → Competitiveness

The study showed that government actions have a very significant negative influence on competitiveness (path = -0.824, p = 0.030). The relationship shown in the research reflects what happened during the pandemic year (2020), the Government's efforts have been focused on addressing health issues, public investment was concentrated in medical care material, hospital infrastructure, health professionals, oxygen plants, bonuses and subsidies, among others (Peruvian Institute of Economics, 2020). Governmental decisions for economic reactivation and safeguarding of companies were oriented to the Reactiva Peru Program, in the face of the impact of the pandemic (COFIDE, 2020). The level of scope of this state support was insufficient

to maintain normal business operations, given that the health crisis was complicated by the political instability experienced by the country in November 2020, thus justifying the negative relationship that the government has maintained with the competitiveness of the sector, and strategies for growth and sustainability should be developed (Peruvian Institute of Economics, 2021). Torres (2020) indicates that government support is transcendent to the sectors in social, economic, legal, political, and internal and external security aspects. López et al. (2020) point out that the government should control smuggling, improve tariff rates and taxes.

Regarding the relationship between Chance → Competitiveness

Finally, the research shows that Chance presents a moderate positive influence on competitiveness (path = 0.218, p = 0.016). Typical chance phenomena for the textile sector in Huancayo are landslides, citizen insecurity, frost and droughts, rise of the dollar, etc. with manageable and known effects. The covid19 pandemic was a complex element of chance with impacts on the national and world economy. Weller (2020) indicates that the aforementioned health crisis has changed productive structures and labor conditions, with effects on productivity. Also the conjuncture at the country level is part of chance and has an impact on companies and sectors (Cabrera-Martínez et al., 2012).

This work provides a valid and reliable tool to evaluate the factors that determine the competitiveness of a sector, through an Attitude Scale, considering the dimensions and indicators based on Michael Porter's Competitive Diamond and thus define specific strategic actions.

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