

# Competitiveness of Toraja Specialty Coffee in the Global Market: Porter's Diamond Model

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**Abstract.** From 2017 to 2020, there has been a notable increase in Indonesia's coffee exports. This expansion can be closely linked to the diplomatic efforts undertaken by the government. Research on the export competitiveness of Toraja coffee in the global market has not been widely found. The aim of this study is to understand the competitiveness of Toraja coffee in the global market based on its competitive advantages and to identify the factors that may influence the performance of Toraja coffee's export competitiveness in the global market. This research, we use Porter's Diamond Model's four dimensions to identify crucial development indicators to enhance the competitiveness of Toraja specialty coffee. The most recent data used in this study, which used secondary sources and a descriptive methodology, from 2018-2021. According to the data source of literature review which was publications from the Scopus database founded 25 document results with keywords: Toraja and coffee, processed by VOSviewer software, researchers finding that Toraja coffee relating to the competitiveness in the global market need to be explore more. The result of this research indicates that Toraja specialty coffee production is a superior product and provides the long-term well-being of the people of South Sulawesi.

## 1 Introduction

Coffee and oil were central issues [1]. The Ottoman era in Yemen, which lasted from 1538 to 1636, is when large-scale local coffee cultivation first became possible. Yemen's coffee era began around 1570. It comes to an end by 1740, when Dutch attempts to cultivate coffee in Southeast Asia were successful and coffee plants were moved from their original habitats in Yemen and the Horn of Africa to colonial plantations in other regions of the Indian Ocean and Atlantic Ocean. During Yemen's coffee age, in contrast to later times of worldwide dissemination, there was a growing demand for this relatively new good, and the region supplied beans to most of the world [2]. The beginning of globalization for the commodity of coffee cultivation by European colonialists to Asia at the end of the 17<sup>th</sup> century, and then to the Americas in the 18<sup>th</sup> century. Over the preceding four years, coffee had undergone "fundamental change" in the service of developing a coffee industry [3].

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An article about Vietnam's growing coffee industry appeared in the East German newspaper *Berliner Zeitung* in December 1986. It informed readers that the country's formerly "untouched" highland region had undergone "fundamental change" over the previous four years in order to establish a coffee industry [4]. Historically, one of the agricultural products that served as the foundation of the Dutch colonial economy in "Nusantara" was coffee. The beginning of the history can be attributed to Nicolaas Witsen, a mayor and governor of the *Vereenigde Amsterdam Oost-Indische Compagnie* (VOC). He advocated for Java Island's Dutch Colonial region, which had fertile soil, to be used for the development of coffee plants [5].

The main export from Indonesia, coffee, plays a significant role in economic activity and generates foreign cash for the nation. Because of rising domestic and foreign demand, the coffee market has a lot of potential [6]. In Indonesia, the three main coffee-producing provinces are Java, Sumatra, and Sulawesi [7]. There are many different types of specialty Arabica coffee produced in Indonesia, including Gayo coffee, Java coffee, Toraja coffee, Lintong coffee, and Bajawa coffee, as well as Robusta coffee varieties like Java Robusta and Robusta Flores [8]. Specialty coffee is referred to as a specific type of coffee because of its quality and certified production procedure [9].

Indonesia's economy is significantly supported by the agriculture (food, crops, horticulture, plantation crops livestock) and fishing sectors. The National Bruto Regional Domestic Product (GRDP), which increased significantly from 12.81 % in 2018 to 13.5% in 2019. The agriculture industry was dependable for the nation's economy's revival and highly resilient in the face of economic shocks [10]. The contribution of the agriculture, forestry, and fisheries sectors to the Tana Toraja economy still ranks the highest at 23.45 %. This sector was able to create added value of 1.78 trillion rupiah, a decrease of 26.28 % from 2016 [11]. Tana Toraja is known as one of the best coffee-producing regions in Indonesia which its coffee beans had been exported to sixteen countries after being fumigated using phosphine [12]. Coffee enthusiasts from all over the world are drawn to the Toraja people's because it has particularly distinct flavor and aroma, especially in North Toraja [13].

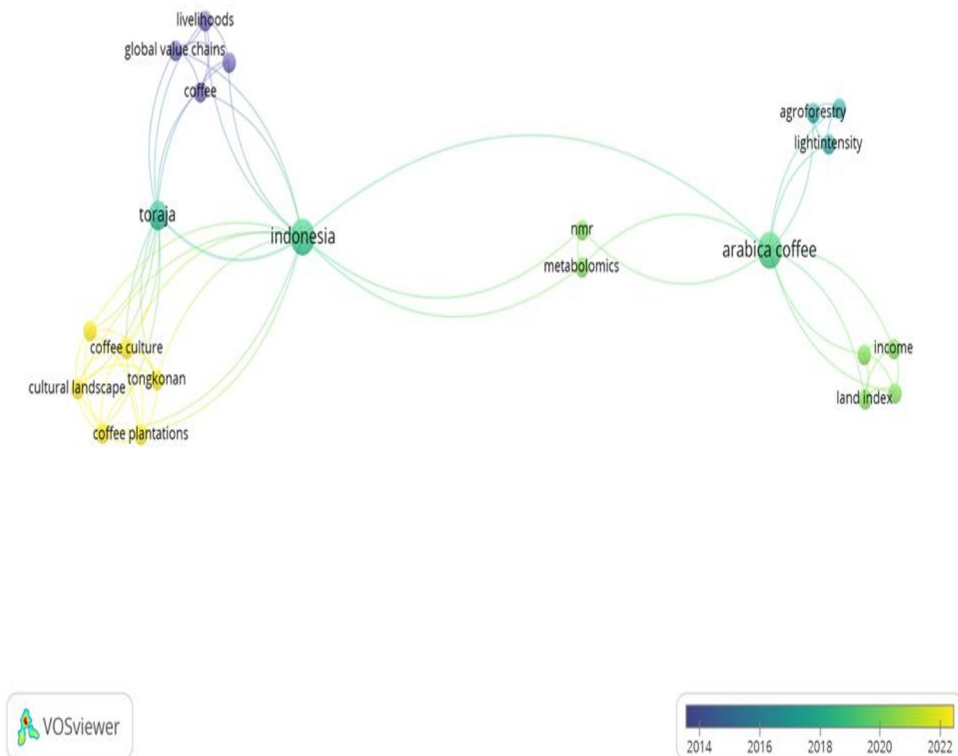
Indonesia's coffee exports have grown from 2017 to 2020. This is strongly intertwined to the government's diplomacy. In an endeavor to popularize coffee around the world, this diplomacy is referred to as "coffee diplomacy" [14]. To expand coffee exports to the United States and brand specialty coffee produced in Indonesia, the country adopted a foreign policy on coffee diplomacy [15]. The start of coffee diplomacy is the 2012 Indonesian Coffee Festival. The Indonesian government's use of coffee diplomacy has a good effect by boosting the local economy. Additionally, the government's efforts to make coffee diplomacy a success have a significant positive impact on people's livelihoods in underdeveloped regions like Tana Toraja. Based on a report by BPS-Statistics Indonesia, it can be seen that the majority of the country's coffee production is exported, with the remainder being sold domestically. The majority of Indonesia's natural coffee exports go to Europe, although it also goes to Asia, Africa, Australia, America, and other continents. The United States, Malaysia, Japan, Egypt, and Germany will be the top five importers of Indonesian natural coffee in 2020 [16].

There is a dearth of information about Toraja coffee's export competitiveness on the world market. However, each nation must specialize in order to participate in international trade and have the competitiveness necessary to capture existing markets. Research by [13] in "Strategy to Increase Selling Price of Toraja Arabica Coffee Farmers as High Value National Commodities in International Markets" shows that Toraja's Arabica coffee has potential, and farmers' contributions as producers are crucial to enhancing the effectiveness of development initiatives for the crop. Observations, however, indicate that initiatives for

strengthening human resources in rural regions, particularly in terms of the caliber and skills of farmers, are largely not performing as anticipated [17].

This research based the Diamond notion proposed by Michael E. Porter to assess the export competitiveness of Toraja coffee. The Harvard Business School's Institute for Strategy and Competitiveness was established by Porter, a well-known authority on corporate strategy and economic competition. It is a proactive economic theory as opposed to one that just predicts a nation's or region's potential competitive advantages. Other names for the Porter Diamond include the "Diamond Model" and "Porter's Diamond." An explanation of how governments can function as catalysts to strengthen a nation's position in a fiercely competitive international economic climate is provided by the Porter Diamond Model. It aims to make easier to comprehend how particular factors that nations or groups have at their disposal provide them a competitive edge. Because a traded commodity's competitiveness might occasionally fluctuate, such as when it can occasionally have strong competitiveness but then change and become uncompetitive, it is necessary to analyze the elements that can influence competitiveness performance. There are two categories of factors that can influence a commodity's export competitiveness: supply-side and demand-side factors. The supply element is impacted by domestic industry in terms of providing capital, people resources, and technology. The demand factor is made up of income, tariffs, and the tastes of the global community or destination countries [17].

Based on the information presented in Figure 1, the literature review conducted using publications from the Scopus database, a total of 25 documents were identified using the keywords "Toraja" and "coffee." These documents were analyzed using the VOSviewer software. The researchers concluded that there is a need for further exploration of Toraja coffee's competitiveness in the global market.



**Fig. 1.** Keywords: Toraja and Coffee in the Scopus

## 2 Research Method

The most recent data used in this study, which used secondary sources and a descriptive methodology, from 2018-2021. Competitiveness of Toraja specialty coffee in the global market is evaluated using Porter's Diamond Model. Specialty coffee is coffee that grows in a specific microclimate, giving it a particular and singular flavor that is well-known throughout the world. Because of its unique processing, specialty coffee is also frequently described as being of high quality and being unique [18]. Figure 2 is utilized to apply Porter's Diamond Model's four dimensions for the purpose of identifying key development indicators aimed at improving the competitiveness of Toraja specialty coffee.

Porter came to conclusion that because diverse national features prevent countries from competing in all industries, it is essential to choose and develop their internationally competitive industry. Porter's Diamond Model is an analytical framework with a number of measurements for national or industry competitiveness [19].

The data source in this research is a secondary data source derived from the results of library research is a secondary data collection method where data is obtained, analyzed, and quoted from various sources such as books, scientific journals and research results, internet newspapers and other media related to research.

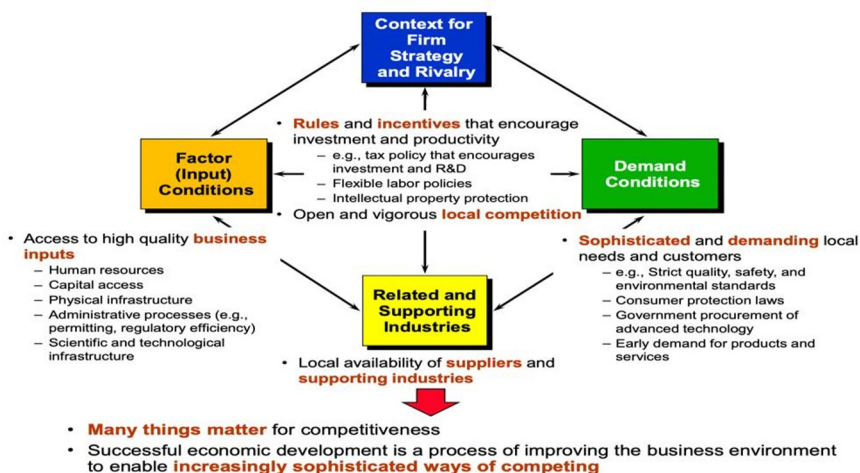


Fig. 2. The Porter Diamond Model

## 3 Results and Discussion

Several important research methods, such as the Diamond Model, are used in agricultural competitiveness analysis. These methods include the fuzzy comprehensive evaluation, SWOT analysis, principal component analysis, data envelopment analysis, cluster analysis, factor analysis, and analytic hierarchy process [20]. According to Professor Michael E. Porter's argument in *On Competition: Updated and Expanded Edition*, successful businesses are crucial to the production of wealth and employment. State compete to provide the greatest climate for doing business. The public and private sectors each play distinct but related roles in creating a prosperous economy. Efficiency in resource usage, including the use of capital, labor, and natural resources, is a key component of competitiveness. This effectiveness affects both life quality and income. Productivity increase, which is dependent on innovation in goods and procedures, is the foundation of long-term economic expansion. A state's ability to compete is as important as the industries

in which it engages. States must address significant issues like streamlining regulations, lowering unnecessary costs for businesses, coordinating training programs with regional demands, investing in useful infrastructure, assisting small businesses, enhancing educational institutions, and continuously enhancing the public education system, which is essential for progress [21].

**Table 1.** Production of Toraja Coffe by Subdistrict and Type of Crops in Tana Toraja Regency (ton), 2018-2021.

Subdistric	Coffee			
	2018	2019	2020	2021
Bonggakaradeng	484,00	1777,00	155,48	158,47
Simbuang	7333,00	629,00	164,22	177,10
Rano	478,00	423,00	96,20	98,05
Mappak	672,00	723,00	131,58	144,48
Mengkendek	1365,00	1238,00	263,41	278,88
Gandangbatu Sillanan	1735,00	1757,60	558,45	635,10
Sangalla	213,00	156,00	36,72	38,16
Sangalla Selatan	211,00	234,00	65,00	66,25
Sangalla Utara	215,00	203,60	45,24	46,11
Makale	223,00	79,50	12,75	13,25
Makale Selatan	497,00	594,00	178,08	194,88
Makale Utara	94,00	67,20	12,24	12,72
Saluputti	805,00	938,00	264,55	266,75
Bittuang	1841,00	1979,90	499,89	510,40
Rembon	686,00	880,00	239,22	261,00
Masanda	1048,00	1028,00	335,58	348,74
Malembong Balepe	671,00	374,00	97,20	100,65
Rantetayo	358,00	276,00	42,33	43,99
Kurra	453,00	289,90	168,72	172,84
<i>Tana Toraja</i>	<i>12782,00</i>	<i>13647,70</i>	<i>3366,86</i>	<i>3567,82</i>

Note: Adapted from BPS – Statistics of Tana Toraja Regency (Tana Toraja Regency in Figures, 2021).

Table 1 provides information about the amount of Toraja coffee produced in different subdistricts within Tana Toraja Regency over a four-year period, from 2018 to 2021. In 2018, the highest coffee production was in the subdistrict of Simbuang, with 7,333 tons, followed by Bittuang with 1,841 tons. Tana Toraja Regency as a whole produced 12,782 tons of coffee this year. In 2019, Bittuang had the highest production at 1,979.90 tons, followed by Gandangbatu Sillanan at 1,757.60 tons. The overall production in the regency increased 13,647.70 tons.

In 2020, Gandangbatu Sillanan lead with 558.45 tons, following Bittuang as the top producer with 499.89 tons. In 2021, Gandangbatu Sillanan continued to lead wiyh 635.10 tons, and Bittuang was second with 510.40 tons. The total coffee production for Tana Toraja Regency in 2020 and 2021 was extremly decrease with 3,366.86 and 3,567.82 tons.

### **3.1 Factor Conditions**

Factor conditions include advantages in broad production resources, including labor, capital, infrastructure, and natural resources, as well as differentiated specialist resources, such skilled labor and location. Porter explained that the number of resources that each nation has access to, such as land, labor, and capital, varies. From an industry perspective, Porter divides these elements into five major categories: Human resources are the first resource, followed by natural resources, science and technology resources, financial resources, and infrastructure. He claims that the proportions of the mix of factors vary greatly by industry and that nations do better in those industries where the national mix of factors complements the desired mix [22].

#### **3.1.1 Human Resources**

The primary players in Arabica coffee production are what determine the agricultural success of coffee. According to studies on the productivity of Arabica coffee in North Toraja, the characteristics of coffee growers in the area include productive age groups and educational levels between 7-9 years [23]. Coffee entrepreneurs also still rely on farmers' businesses in Tana Toraja district considering the characteristics of specialty coffee that must grow in specific environmental conditions. However, the application of farming by farmers has not been optimal because specialty coffee has not been widely understood. So, the main problem faced by farmers is the lack of guidance and counseling on the management of coffee farming which results in farmers managing the farm with limited knowledge and skills.

Most of the coffee plantations are smallholder plantations, which is 95%. However, the average land ownership of farmers is less than 1 ha [24]. Other causes of low coffee productivity are among others because the plants are old, damaged and unproductive and farmers do not know how to process quality coffee where coffee farmers only do fast dry and peel coffee beans without certain standards. Ignorance of farmers resulted in the selling price of coffee received by farmers was low and many responded by changing coffee plants to horticultural crops. Coffee is an important source of income for some Toraja farmers. Coffee plantations are not only owned by small farmers, but also several private plantations in Tana Toraja also grow Arabica coffee and provide employment for more than 5,500 people. Now there are several cooperative institutions such as the Toraja Coffee Farmers Association (PPKT), workshops held by Canada-Indonesia Trade and Private Sector Assistance (TPSA), Toraja Coffee Farmers' Cooperative (KOPINTA), 1000 Hidayah SMEs and others to improve the quality of coffee farmers on sustainable coffee production and processing (making their farms more environmentally friendly) and empowering smallholders to improve the productivity and quality of Toraja Arabica such as holding a Q grader program, business accounting training and roasting technique training.

#### **3.1.2 Natural Resources**

The Toraja coffee beans are grown in South Sulawesi's highland regions. For coffee to thrive, the highland region about 1700 masl has good nutrition. An Arabica coffee variety that grows at an elevation of more than 600 meters above sea level is the well-known Toraja coffee. Tana Toraja's geographical setting and the soil's texture both contribute to the growth of the coffee plant. Robusta coffee makes up 30% and arabica coffee makes up 70% of Toraja coffee. While Arabica coffee grows at hight of 800-1200 meters above sea levels, Robusta coffee thrives in relatively lower lowlands at an altitude of 300-500 meters. Toraja coffee beans' unique blend of sour and bitter flavors has earned it the moniker "The

Queen of Coffee.” Toraja Arabica coffee is classified as a single origin product under the category of Specialty Coffee, while Toraja Robusta coffee is classified under the level of Fina Robusta. Specialty Toraja coffee is grown in the Toraja development area (Tana Toraja Regency, North Toraja Regency, and Enrekang Regency). South Sulawesi has a unique agro-climate, which makes the region’s distinctive flavors in the region’s coffee stand out. In addition, the available land to produce Toraja Arabica coffee is 18,178 ha, meaning that if this land is optimally intervened, the minimum production potential will be 1,243 kg/ha per year or the maximum potential is 1,798 kh/ha per year [25]. Toraja Arabica specialty coffee production is a superior product and promises the welfare of the people of South Sulawesi in a sustainable manner.

### *3.1.3 Science and Technology Resources*

Given how well-liked Toraja coffee has become globally, fresh innovations are required to develop high-quality Toraja coffee products with a dash of useful technology to boost the competitiveness of the domestic coffee sector. In spite of worries about the effects of climate change on Arabica coffee growing globally, especially the expansion of Toraja coffee in South Sulawesi, innovative agricultural technology provides an alternative to guarantee the availability of specialty coffee at client request. The performance of farming institutions, the use of planting materials, fertilizer, insect control, and harvesting are all examples of how technology can be applied.

An important aspect of using technology in the coffee industry is also reliance on microbiology and fermentation processes to develop the specific characteristics of the coffee bean in relation to the coffee variety, the processes used, and the drying and storage conditions. Fermentation technology intervention is usually carried out in the post-harvest wet process of coffee beans where the peeled coffee beans will be immersed in a fermentation tank so that yeast and bacteria ferment lenders containing sugar so that they can change the taste and aroma characteristics of the coffee beans. Fermentation technology on coffee beans assisted by ohmic heating can increase the cupping score of coffee beans from Enrekang and Toraja in the Sulawesi highlands with the quality attribute cup-test score with an average score of 85.713 (higher than the Indonesian civet coffee cup test score) based on the SCAA assessment [26]. Toraja Coffee has promise, according to an analysis of its agricultural prospects in the global market for North Toraja Arabica coffee. At the Expo 2016 event, the Specialty Coffee Association of America (SCAA) rated seventeen varieties of Indonesian specialty coffee as the best coffee from all of Indonesia’s coffee-producing areas. Seventeen specialty coffees from Indonesia passed curation with a cupping score of at least 83.5, according to the Caswells Coffee Institute, a coffee curator. The role of coffee development research institutes with related institutions must provide support in the form of information on the use of good technology and in accordance with consumer preferences to farmers.

Another innovation was developed by the Agency for the Assessment and Application of Technology (BPPT) through the Center for Biotechnology to disseminate Coffee Seed Propagation Technology through the Ex Vitro method (vegetative plant propagation technology) to increase the productivity of Toraja Coffee to seed breeders, extension workers and coffee farmers [27]. Then Toraja farmers started using high-yielding coffee varieties such as Komasti, As2k, Andungsari I. There are so many ways to improve the quality of Toraja coffee production. In 2018, the application of Toraja Arabica coffee production technology was still minimal and all production processes were carried out manually and not measured as recommended. The reality on the ground reveals that farmers do not use organic fertilizers, weeds are controlled manually, pest control on coffee plants

still uses insecticides that can increase residues in coffee beans, harvests are carried out every one or two weeks and coffee plant productivity is not optimal [23].

### **3.1.4 Financial Resources**

Toraja Coffee's origin is one of Indonesia's top coffee-production areas and a source of foreign exchange, but farmers, who are the industry's primary players, still face a number of challenges when trying to develop the region's agribusiness, including a lack of knowledge and effective management, weak farmer institutions, restricted access to capital, and proficiency with low-tech and post-harvest techniques. With all the restrictions in the production foundation, such as limited human and capital resources, climatic and environmental factors, and cultural limitations, even one member of the coffee farmers organization, the Toraja Coffee Farmers' Cooperative (PPKT), is still attempting to establish itself as a professional business entity.

Due to limited access to capital to harvest Toraja coffee, the results of a field survey by Bank Indonesia revealed that coffee farmers generally finance their coffee cultivation business with their own capital or borrow funds from non-formal institutions near them. Rarely do they take the initiative to borrow capital from banks because they think that banking administration is very inconvenient, and they are careful to make loans from banks. In addition, they also do not refuse funds from investors in the form of companies or individuals which are considered relatively easier than banks. In addition, adequate capital in the world of coffee plantations, especially coffee MSMEs because there is assistance from agricultural extension workers which is an organizational initiative to attract sources of capital for the sustainability of the coffee business, where capital has a significant effect on specialty coffee production. Apart from capital, the sustainability of coffee plantation businesses by people or firms is a crucial issue and an effective and efficient strategy for agricultural ecology intensification [28].

One of the leading investors is the company Key Coffee Inc. from Japan, who has experience in the specialty coffee trade since 1920, is interested in developing investment in Indonesia by adding Toraja Coffee cultivation land. Toraja Coffee being the top brand of Key Coffee with sales that continue to increase is a great opportunity for them to be able to meet market demand. Toraja coffee that has been imported so far has met 2 of the 8 requirements set by the Japanese government, namely, raw material quality control and traceability [29]. To encourage orderly trade and control the quality of Toraja Coffee, in addition to adding land, Key Coffee collaborated with the Jember Coffee and Cocoa Research Center and held a Key Coffee Award. In an effort to increase coffee productivity, the ministry through the district's superior product program has distributed a lot of assistance and intensive coaching to coffee farmers. In addition, the Ministry of Agriculture encourages coffee farmers to participate in utilizing the People's Business Program (KUR) for agricultural purposes.

### **3.1.5 Infrastructure**

Various infrastructures must be built to support connecting roads, supporting facilities for on-farm production, harvest and post-harvest facilities, an institution for the dissemination of information and technology as well as affordable market access to production areas. It is hoped that the element of synergy will strengthen each other between coffee development areas, especially for those who are involved in the coffee marketing chain and other derivative productions, along with the marketing chain or the provision of supporting infrastructure for the coffee business so that the successful development of Toraja Coffee, especially Toraja Arabica Coffee is achieved.



The topography of the Tana Toraja and North Toraja regions, which tend to be undulating to mountainous, makes farmers build coffee plantations in areas that are slightly sloping to very sloping. Therefore, conservation measures are needed to maintain soil fertility and avoid erosion and landslides. In addition, the sloping land condition becomes an obstacle in the transportation and distribution of production facilities and coffee plant products. Some other obstacles are coffee products are vulnerable to storage period, pest and disease attacks, difficult to obtain facilities and infrastructure at affordable prices, and transportation infrastructure has not yet reached coffee production centers [30]. To overcome this, the attention and policies of the provincial government and the two Toraja regencies must be more partial and meet the needs of farmers.

It should be noted that some areas in the Tana Toraja and North Toraja areas are remote areas where farmers need infrastructure. For example, the Lembang community in Dewata village, Mappak sub-district, Tana Toraja Regency which is far from a power source, limited knowledge of coffee management and infrastructure facilities do not limit their efforts to produce quality ground coffee under the guidance of a university study program. Given the potential for the production of raw coffee beans, the village reaches 100 tons per year through the Lembang Dewata Regional Head program, it is able to achieve village independence [31].

### 3.2 Demand Conditions

Traditionally, this factor has been used to describe a local market's size. Whether there is a great demand for homes or not, the competitive edge could be established. Due to the increased demand, businesses are under pressure to fulfill greater standards, which include improving quality, production performance, and technology [32]. The presence of domestic consumer demand for a specific industry's product or service can give rise to the development of a national competitive advantage, as per the aspects of the diamond framework. While he acknowledges that the size and growth of the domestic market are crucial factors in shaping an industry, he emphasizes that the competitive advantage is driven by discerning and demanding customers. These customers exert additional pressure on local businesses to continuously innovate and elevate the standards for quality, features, and services, thereby enhancing their competitiveness on a global scale.

**Table 2.** Total Toraja Coffee Production

Year	Total Toraja coffee production (tons)		Toraja coffee export data (kg)
	Arabica coffee	Robusta coffee	
2017	259.60	550.00	624,400.00
2018	396.20	687.50	686,600.00
2019	487.30	765.30	686,400.00

Note: North Toraja Agriculture and Trade Office, 2019

Table 2 above shows that Toraja coffee exports in 2017-2018 increased until they became constant in 2019 before the pandemic finally took place. In this period of time, it is evident that the demand in the domestic and international markets is very high due to the role of coffee diplomacy. For this reason, producers must increase their coffee production by buying some coffee from local farmers. Specialty coffee does have a high price, no wonder the demand is always increasing, but Indonesian marketing is experiencing demand dependence. It is estimated that 60-80% of Indonesian Arabica coffee exports are sold to a single buyer, namely Starbucks Coffee [33]. When the corona virus pandemic hit, the export value of Toraja coffee in 2020 decreased, but Specialty Toraja coffee was highly

valued by coffee consumers in Germany, the European Union and in other countries. The first export of Boyolali, Toraja and Flores coffee to Germany as much as 1.5 tons is a sign of quality and sustainable coffee exports and intensive coffee diplomacy carried out since 2020 [34]. The challenge of the specialty coffee trend during the pandemic is experiencing a drastic decline where the pandemic keeps people's need for caffeine high, but the ability to buy specialty coffee is decreasing. Shipments for many exports were delayed as well as domestic demand.

### **3.3 Related and Supporting Industries**

Porter highlights the significance of related and supporting actors by asserting that the existence of globally competitive supplier industries aids in the establishment of a competitive industry. Possessing a solid supply chain competitive base suggests a potential advantage in the manufacturing sector. He adds that these supplier sectors enable quick, efficient, and preferred access to inputs. He observe that related industries, which are those that share some characteristics, can yield similar advantages. Related industries frequently collaborate and occasionally even create partnerships [19]. An efficient value chain can create value and be a vital component of an industry's competitive advantage. In order to better serve consumers, the sector can analyze the value chain and determine how each activity contributes to that value in a variety of ways. A value chain activity's increased added value and cost effectiveness can boost the industry's competitiveness [35].

In general, the related industries and supporting industries coffee production are in the cultivation of superior seeds because with superior seeds it will produce the best production and production infrastructure in processing. In the procurement of superior seeds, the Indonesian Coffee and Cocoa Research Center has produced clones / superior varieties of coffee plants as contained in the Points of Resources of Science and Technology and officially determined by the government through a decree of the Minister of Agriculture or the Director General of Plantations. Companies that have seed source gardens are generally found throughout Indonesia. According to AEKI, there are many different levels of the domestic coffee industry, ranging from small business units that operate locally to massive global coffee enterprises like PT. The goods produced fill both the home and international markets in addition to those for domestic coffee consumption [36].

In order to boost coffee production, PT Sulotco Jaya Abadi is one of the businesses that continues to provide coaching and advice for farmers in the area through partnerships. Farmers in the area still have the option to work alone without PT Sulotco Jaya Abadi, though. One business that consistently raises coffee production, especially arabica coffee, is PT Sulotco Jaya Abadi.

Related and supporting industries for the development of Toraja Coffee are not only focused on production infrastructure, technology, and company support. Uniquely, the coffee culture in Tana Toraja is interrelated to support the popularity of Toraja Coffee. In fact, because of the natural surroundings and the hidden value connected to the Tongkonan, toraja coffee has emerged as one of Indonesia and the world's most extraordinary coffees. Tongkonan vernacular architecture, with its function as ancestral home, and the coffee culture, which creates a valuable product on which the Toraja people rely, have a strong link [37].

### **3.4 Firm Strategy, Structure, and Rivalry**

Competition within a sector is crucial in determining national competitive advantage [19]. Business is driven to expand abroad because of the fierce domestic rivalry as local markets restrict their expansion. Furthermore, severe local rivalry pushes businesses to increase

their level of innovation, quality, and efficiency, enabling them to match or even surpass worldwide standards. He also highlights regional differences in management ideology, arguing that these viewpoints have a considerable impact on how strategies are created and how organizations are organized [19].

Toraja Coffee's fame was then exploited by the Key Coffee Inc. company. from Japan by registering the Mark "Toarco Toraja" with registration number 75884722 in Japan On January 14, 1977. The mark not only displays the word "Toraja" but also the traditional house of Toraja as a brand background. This happens because there is no national law that regulates geographical indications and indications of origin when the Toraja Coffee Mark is registered by Key Coffee Inc. in 1977 in Japan. But actually, Toraja Coffee can be protected as an Indication of Origin product through international agreements and national laws that were born before and after the registration of the Toraja Coffee Mark by the Key Coffee Inc. company in 1977 in Japan. For instance, the Paris Convention (1883), the Madrid Agreement (1891), the Lisbon Agreement (1958), the TRIPs Agreement (1994), the Law Number 15 of 2001 concerning Trademarks, and the Government Regulation Number 51 of 2007 concerning Geographical Indications, which regulates with regard to the protection of the indication of the place of origin products. Toraja Coffee a product with an indication of origin that comes from Tana Toraja Regency and North Toraja Regency, and thus be legally protected by the state (Indonesia) [39]. This is why the regional considerations contribute to the reputation for quality and certain traits as well as great economic value and benefits [40].

In the vision of the industrial development plan of South Sulawesi Province in 2018-2038 is to make the industrial sector the pillar of the leading economy of South Sulawesi. Cocoa, coffee, and passion fruit are province of South Sulawesi's top three industrial products from 2018 to 2038. The province's industrial development programs from 2018 to 20138 include those for industrial technology development and use. Programs for the development and use of innovation and creativity, programs for the empowerment of small and medium-sized businesses, programs for the financing and provision of resources, programs for the standardization and development of supporting infrastructure, programs the provision and distribution of natural resources, programs for the development of industrial information systems, programs for the development and management of environmental resources, programs for the provision of land for industry, programs for the development and utilization [41].

## **4 Conclusion**

Toraja coffee is one of the most well-liked Indonesian coffees among coffee lovers worldwide. It has been successful in breaking into the global market thanks to its distinctive flavour. An assessment of the agricultural potential of North Toraja Arabica coffee in the global market suggests that Toraja Coffee holds significant potential. During the Expo 2016 event, the Specialty Coffee Association of America (SCAA) evaluated seventeen different Indonesian specialty coffee varieties and recognized them as the finest coffees originating from all coffee-producing regions in Indonesia. These seventeen specialty coffees from Indonesia successfully underwent curation, achieving a cupping score of at least 83.5, as reported by the Caswells Coffee Institute, a reputable coffee evaluator [42]. Both Toraja Arabica and Toraja Specialty coffee meet the strict SCAA criteria for the selection.

Decision-makers and corporate executives can utilize the Porter Diamond Model to design economic development strategies and better understand the competitive position of any location. The four points represent the four related requirements. Porter contends that important factors are involved in determining national comparative advantage. Associated supporting industries, firm strategy, structure, competitiveness, demand conditions, and

element conditions make up these four components. While Toraja Robusta coffee is categorized as a level of Fine Robusta, Toraja Arabica coffee is classified as a single-origin product under the category of Specialty Coffee.

Specialty Toraja coffee is grown in the Toraja development area (Tana Toraja Regency, North Toraja Regency, and Enrekang Regency). South Sulawesi has a unique agro-climate, which makes the region's distinctive flavors and high-quality coffee production stand out. There are now several cooperative organizations, such as the Toraja Coffee Farmers Association (PPKT), workshops held by the Canada-Indonesia Trade and Private Sector Assistance (TPSA), the Toraja Coffee Farmers' Cooperative (KOPINTA), 1,000 Hidayah SMEs, and others, that aim to improve the quality of coffee farmers by promoting sustainable coffee production and processing (making their farms eco-friendlier) and empowering smallholders to increase the price of their coffee.

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