







If the effect is insignificant, the P value will appear to be greater than or equal to 0.05. Based on Table II, the essential variables determining Sago industries' competitiveness are factor conditions, demand factors, supporting related industries, the government's participation, and chance. The result shows from the analysis were factor condition, demand condition, supporting related industry, firm structure, the role of government and chances, all original values of the sample (path coefficient) positive, and significant, except the firm structure, strategi dan rivalry, where path coefficient positive and insignificant.

## B. Discussion

The community-managed Sago agroindustry business in Meranti needs improvement. The results revealed that the condition of these factors has a significant and positive effect on the ability of the Sago agroindustry products of the Meranti community to compete. This factor determines the competitiveness of Sago agroindustry products. A factor condition is a condition that describes a country's position in the elements of production (inputs needed to compete) in an industry. Features in the Sago agroindustry include physical or natural, human, scientific, capital, and infrastructure resources.

Physical or natural resources in the agro-industrial are related to the source of raw materials. Sago agroindustry requires raw materials. The raw material for the Sago agroindustry business was Sago palm. Sago palm resulted from Sago stem; Sago stems cut to a length of about 110 cm. If appropriately managed, Meranti Islands can produce high-quality raw materials (Sago palm) in high quantities. Sago comes in three varieties: thorny, non-thorny (Sago Load), and a rare thorny kind (Sangka Sago). However, the type of Sago that is widely used is thorn Sago; its distribution is wider because pests of wild boars, monkeys, and langurs damage other kinds of sapling or young Sago. The dry starch production per tree is 226.34 kg, carbohydrate content 88.19%, and the moisture content 10.36%, with one Sago thorn stem containing 8.5 Sago palm. Under Selat Panjang Meranti, Sago thorns have been made available as a national high-yielding cultivar. Guaranteed quality and quantity of Sago raw materials can increase the competitiveness of the Sago agroindustry [26].

The raw material for the Sago agroindustry business comes from the Meranti area. In the Meranti Islands, Sago plantations may be found in every area. The owner of the Sago refinery and his family also own a Sago plantation. The raw material (Sago palm) is the basic ingredient processed by the Sago refinery in Meranti to produce dried Sago flour. Agribusiness organizations use production contracts more often to synchronize their supply chains because they need a regular supply of quality agricultural raw materials [27]. In the Sago agroindustry, around the Sago refinery, there are people's Sago plantations. The existence of this plantation will meet the needs of raw materials in production.

Processing Sago palm into Sago flour requires much water. Water is essential and needed by humans for plants, drinking, industrial support, and ecosystems [28]. The Meranti Sago agroindustry water resources are obtained from water sources around the refinery. The Sago refinery was located near the coast in a riverside area. The existence of rivers around the

Sago refinery can support Sago agroindustry activities, especially as a means of transportation. Raw materials (Sago palm) before processing are stored along the river near the refinery so as not to be damaged. The process starts with transporting Sago palm from its stockpile in the river to the refinery, which is then processed to produce Sago flour.

Sago processing requires quite a lot of water, and the Sago palm was peeled and grated, watered, and accommodated in a tank filled with water. Water was also used to extract Sago starch, which separates the trash from Sago starch. So that the garbage does not drift into the reservoir, a filter cloth is used. The swimming pool can store up to 30 tons of Sago starch. Next, washing is carried out, and the drying stage is to reduce the moisture content and speed up drying using a rotary vacuum machine. The next step is drying. The drying of Sago starch carried out by the people's Sago business in Meranti Islands Regency varies, which traditionally uses sunlight for 2-3 days, depending on the weather. Drying with a burning oven utilizes solid waste (Sago skin) that is burned, and the work floor is made of zinc or cement to transmit heat. Some entrepreneurs also carry out the combined method. That is, the result obtained with sunlight and an oven is better. Drying can also be done with flash dryers, dryers used in industry through evaporation to dry wet materials, with faster drying time. Increasing the competitiveness of the Sago agro-industrial can be done by improving technology. The use of better technology, with quality raw materials, in addition to increasing productivity. The competitiveness of Sago flour products is determined by the quality and quality they possess. Natural resources will be the basis of product competitiveness in the international market if it gets a touch of technology from entrepreneurs.

Human resources in the Sago agro-industrial are generally obtained from around the Meranti Islands Regency and Java Island. The number of workers working in each factory ranges from 15 to 39 people. The education level of the workers was primary school at 22.58%, junior high school at 32.26%, senior high school at 41.94%, and university at 3.23%. Workers from Java Island dominated the labor force of the factory. They have been skilled in Sago processing activities such as palm stripping, splitting, and stirring Sago, while administrative personnel is dominated by local labor.

The people's Sago refinery in the Meranti Islands still uses simple technology and is semi-mechanical [15]. They still use old, modified equipment, so the products produced are not optimal. Therefore, the availability of science and technology resources such as universities, research institutions, and other knowledge sources must be optimized, which can support increased competitiveness. The Meranti district government provides research institutes and universities opportunities to research Sago.

Capital resources in the Sago agro-industrial are related to the availability of capital, the origin of money. Capital is one of the factors of production that can affect the products produced. The Sago agro-industrial business in Meranti Islands is mostly a heritage business, and its capital also comes from individual capital. However, some refinery owners obtain money by borrowing from existing financial institutions. Agroindustry uses business capital loans to purchase manufacturing equipment, raw material inventories, and marketing costs [29].

Furthermore, infrastructure resources in the Sago agro-industrial business are more directed at economic infrastructure, namely the physical infrastructure needed to support Sago agro-industrial activities, including transportation, telecommunication, and energy infrastructure. Sago agro-industrial activities in Meranti utilize more rivers. The river is used to store stocks of raw materials (Sago palm) so that damage does not occur. The location of the Sago refinery in Meranti is on the edge of the river, so water transportation will facilitate the transportation of raw materials and product distribution. Production of Sago (Sago flour) is transported by ship to the port.

Infrastructure has an essential role in Sago agro-industrial activity. The existence of infrastructure in an area, quality, and quantity can be influenced by geographical conditions, demographics, and social conditions [30]. The availability of an effective and efficient transportation network and other supporting facilities, such as telecommunication and energy, will facilitate transactions between buyers and resellers—the infrastructure system in everyday life. Inadequate road conditions and limited land transportation should concern the government.

The infrastructure to support the Sago agro-industrial business seems to be lacking. In terms of the existence of infrastructure can help trade cheaper and easier to increase competitiveness. According to Malisan et al. [8], seaports and airports are infrastructures the government supports to maintain competitiveness in Korea. However, in archipelagic areas, such as Meranti, water transportation is the dominant transportation used by the community. Optimal utilization of water transportation for the Sago agroindustry is expected to increase the competitiveness of Sago agroindustry products.

To increase the competitiveness of Sago agro-industrial products in the Meranti Islands, optimal utilization of condition factors owned by the region ultimately still requires government policy. The government does not directly affect efforts to increase the industry's competitiveness but involves the determining factors of competitiveness. The government's role is to facilitate efforts to encourage companies in the industry to improve and improve competitiveness. The government can influence the accessibility of business actors to various resources through its policies, such as natural resources, human resources, capital formation, science and technology resources, information, setting product quality standards, and other related policies. Therefore, managing this potential will enhance the nation's position as a successful Sago producer worldwide [31].

#### IV. CONCLUSIONS

The study's findings offer hints about Diamond Poter elements (conditional variables, demand variables, supporting industries, firm structure, rivalry, government roles, and opportunities) that can be relied upon to increase the competitiveness of the Sago agroindustry in the Meranti Islands Regency. The factors determining competitiveness most are condition factors, including physical/natural, human, scientific, capital, and infrastructure resources. The competitiveness of Sago agro-industrial can be improved by optimizing the utilization of this resource.

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