Agricultural Competitiveness Based On The Pillars Of Infrastructure, Capital And Technology In South Sulawesi, Indonesia

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Abstract: Agricultural competitiveness is mentioned in various definitions, including the ability of agricultural products to dominate the market and as a form of healthy competition and life among agricultural actors. Factors driving agricultural competitiveness come from land ownership, and capital owned by farmers, both fixed capital or human capital. The study was conducted by measuring the competitiveness of agriculture between regions in South Sulawesi through 3 pillars, Infrastructure, capital and technology. The research objective is to compile an agricultural competitiveness index and map regions in South Sulawesi based on the pillars of infrastructure, capital and technology. The study uses a quantitative approach with composite index measurements and is designed using descriptive verification research type. The data comes from secondary data in 5 (five) years (2014-2018). South Sulawesi's agricultural competitiveness of the 3 pillars of infrastructure, capital and technology, has a value of 0.96, with a low level of competitiveness. Most regions in South Sulawesi have a low index of competitiveness of the technology pillars of 22 districts (91.67%), while infrastructure pillars have better conditions, ie only 14 districts (58.33%) with low competitiveness. The capital pillar provides the highest agricultural competitiveness support with an index value of 0.55 at a medium level of competitiveness. This can be seen from the level of competitiveness in the capital pillar which is 8 districts (33.33%) for each level of competitiveness, high, medium and low. Soppeng occupies the highest competitiveness index in the infrastructure pillar with a value of 0.57, the highest Enrekang in the capital pillar with an index value of 0.70 and Sidrap excels in the technology pillar with an index value of 0.53. To increase the agricultural competitiveness of South Sulawesi, it is necessary to increase the equitable distribution of agricultural development, especially in the pillars of technology, especially the distribution of the use of harvest processing machines and tractor engines. In addition, it is also necessary to increase credit to the agricultural sector.

Keywords : Agricultural Competitiveness, Capital, Infrastructure, Technology

1. INTRODUCTION

Agricultural competitiveness supports a country's economic growth. Sustainable competitiveness led to a country able to compete with other countries. The concept of agricultural competitiveness, among others, was conveyed by Cimpoies [1] which defines the ability of agricultural products to dominate the export market and as a form of healthy competition and life among the agricultural industry. Cimpoes compiles the competitiveness index of agricultural products exported by Moldova to European and non-European markets and measures the level of competitiveness between agricultural products using the RCA (Revealed Comparative Advantages) method. Gupta et.al. [2] revealed that the factors driving agricultural competitiveness stem from land use and the productive behavior of landowners. Also influenced by the form of capital, both fixed capital, namely land owned or human capital. One effort to improve competitiveness expressed by Arsal et.al [3] with a focus on cultivation as farmers in Jeneponto district, South Sulawesi, Indonesia. Farmers focus to choose maize as a superior commodity and devote their time and energy to the cultivation of maize because it has advantages and was done by trying to minimize production cost. So that maize has competitiveness and reaches potential markets. The use of production factors plays a role in increasing farmers' incomes. Karim, Rusman and Arsal [4] stated that in Eucheuma cottonii seaweed, the use of seed production factors, labor and farming experience significantly affected the increase in farmer's income. Climate factors also affect the behavior of farmers to be able to adapt in maintaining agricultural production. Kamaluddin et. al [5] reveals that small farmers are among the most sensitive to climate change adaptation in which they have to irrigate agriculture for survival. Restrictions on exports can cause a deterioration in competitiveness in international markets, as has happened with wheat, rice and cotton in India as mentioned by Narayan & Bhattacharya [6]. Besides this capital factors can also have a negative effect on cotton competitiveness, while the size of agricultural labor does not affect commodity competitiveness in the international market. Ali, Majika and Salman [7] stated that excessive exploitation in fishing and environmental contamination and sedimentation have caused a decline in fish production in the last 20 years in the lake of Tempe, South Sulawesi-Indonesia.

The important factor for sustainable development and competitiveness called Ahmedova [8] include the interconnection between all the factors of competitiveness and require a more comprehensive support. The level of competitiveness of agricultural products by Norton [9] is influenced by factors such as distance from the world market, the development of infrastructure (especially transport), and macro-economic policies. Amri et.al [10] states that infrastructure, capital and technology become an important pillar in improving the competitiveness of Indonesia. It is still necessary to improve the quality of life and infrastructure development, in addition to macro-economic stability, government and institutional arrangements as well as the financial and business condition is getting better labor. Palei [11] and Gibbons, et.al [12] revealed that the construction of new road infrastructure provides increased accessibility, greater profits, is able to reduce freight costs and reduce transportation costs. In addition to the road, according to Zhang, et.al [13] irrigation infrastructure also played a significant role in improving agricultural competitiveness and reduce imbalances between regions. In the case of Crete

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(Greece) efficient irrigation technology has been applied in most agriculture, not even the construction of standard irrigation channels, the use of micro drip irrigation and low volume micro drip according to Udias, et.al [14] has been done for fruit crops . Increased agricultural technology led to an increase in agricultural production, helping to boost economic growth, reduce poverty, and improve the livelihoods of rural households. Pindado, et.al [15] states that require capital to develop agriculture in the form of money for owned and loans from banks / financial institutions, labor and social capital that already exist in the community However, there has been no study looking at agricultural competitiveness with the unit of analysis at the district / city level with an emphasis on more specific pillars. This study aimed to develop agricultural competitiveness index at the provincial level as a composite of the district / city, composed with a focus on the infrastructure pillar, capital and technology

2. METHODS

The study uses a quantitative approach with composite index measurements and is designed using descriptive verification research type. Lokasi penelitian ini adalah seluruh kabupaten/kota (distrik) di Sulawesi Selatan dengan melihat data dalam lima tahun dari tahun 2014 hingga 2018. The location of this research is all regencies / cities (districts) in South Sulawesi by looking at data in five years from 2014 to 2018. The data is derived from primary data (raw data) of the national socio-economic survey conducted by the Indonesian Central Bureau of Statistics (BPS). In addition, data sources also came from BPS publications, Bank Indonesia, South Sulawesi Provincial Government and from confirmation to the district / city (district) government in South Sulawesi.

Competitiveness is defined in accordance with the pillars of competitiveness include indicators of infrastructure, capital and technology. These three pillars of competitiveness indicators effectively visualized as one quadrant and contribute on an equal weight to the overall competitiveness index. Furthermore, each of the pillars of competitiveness indicators are divided into sub-indicators with equal weights in a single indicator. In assigning weights to the sub-indicators, the value can be marked + (positive) when a positive influence on the main indicators and marked - (negative) when a negative impact on the main indicators. In this study the main observational sub-indicators each consisted of: (i). Infrastructure, with sub-indicators: (a) farm road infrastructure (ratio of farm roads to agricultural land) and (b) irrigated land (ratio of irrigated rice fields to agricultural land area (ii). Technology, with sub-indicators: (a) two-wheel tractor engines and four-wheel tractor engines (ratio of tractors to agricultural land, (b) crop processing machines (ratio of harvesting machines to agricultural land) and (c) internet use (ratio of internet users to total population), (iii Capital, has sub-indicators (a) area of agricultural land (ratio of agricultural land to total land), (b) labor (ratio of agricultural labor to working population), and (c) agricultural credit (ratio of credit to the agricultural sector) to total farmers). The next step is to standardize using a formula:

$$\text{standardization value} = \frac{x_i - x_{mean}}{\text{standard deviation}}$$

x_i is the value to be standardized.

x_{mean} is the arithmetic average value of the distribution.

Standard deviation is the standard deviation of distribution.

After the standardization value is obtained, it is continued by measuring the weight and the direction of the competitiveness. This is done by multiplying the standardization value that has been obtained by the weight value of the sub-indicators that have been determined in the initial stages. The total value of the competitiveness index from each region will be obtained by adding up all the values from the weight of the backwardness of each sub-indicator. The next total value of competitiveness index in the score system is 0 -100. The higher the value, the better the level of competitiveness. Furthermore, to map the level of agricultural competitiveness is done by dividing into 3 categories of competitiveness, with the criteria (i) High, the value of the degree of lagging ≥ 75, (ii. Medium, the value of the degree of underdevelopment> 50 to ≤75 and (iii). Low, the value degree of underdevelopment <50.

3. RESULTS AND DISCUSSION

3.1 South Sulawesi Agricultural Competitiveness

South Sulawesi's agricultural competitiveness from the pillars of infrastructure, technology and capital are presented in Table 1. The results of the study show the value of the agricultural competitiveness index for the three pillars is 0.96, with a low level of competitiveness. High agricultural competitiveness is in Sidrap 1.60, Pinrang 1.44 and Wajo 1.42. While Soppeng 1.33, Bulukumba 1.16, Palopo 1,15, Toraja Utara 1,15 and Jeneponto 1,15 are areas of medium competitiveness. All other regions have low competitiveness, reaching 66.67% or 16 out of 24 districts in South Sulawesi. This result is different from Indonesia's agricultural competitiveness reported by Dermoredjo [16] which shows that South Sulawesi's agricultural competitiveness is ranked 8th of all provinces in Indonesia and is in quadrant 1 (one) as an area that has regional competitiveness at the same time agricultural competitiveness. The difference occurs because the level of comparison carried out is different, between the national levels between provinces and districts within the province. To further increase the competitiveness of South Sulawesi at the national level, it is necessary to increase the competitiveness index in the district which is still low.

***Table 1**. South Sulawesi's agricultural competitiveness infrastructure, technology and capital pillars*

Number	District	Infrastructure	Technology	Capital	Total Index	Backwardness	Competitiveness
1	Sidrap	0.40	0.53	0.66	1.60	100.00	High
2	Pinrang	0.47	0.29	0.69	1.44	82.63	High
3	Wajo	0.25	0.53	0.64	1.42	79.56	High
4	Soppeng	0.57	0.24	0.52	1.33	69.98	Medium
5	Bulukumba	0.41	0.14	0.61	1.16	50.40	Medium
6	Palopo	0.57	0.23	0.36	1.15	50.31	Medium
7	Toraja Utara	0.44	0.09	0.62	1.15	50.08	Medium
8	Jeneponto	0.48	0.05	0.63	1.15	50.04	Medium
9	Takalar	0.50	0.07	0.54	1.11	45.35	Low
10	Enrekang	0.21	0.14	0.70	1.04	37.77	Low
11	Sinjai	0.36	0.07	0.60	1.04	37.46	Low
12	Gowa	0.34	0.18	0.51	1.03	36.12	Low
13	Makassar	0.25	0.27	0.51	1.03	35.84	Low
14	Bantaeng	0.34	0.08	0.58	1.01	33.70	Low
15	Luwu	0.26	0.08	0.66	1.00	33.50	Low
16	Maros	0.31	0.19	0.48	0.98	30.63	Low
17	Bone	0.28	0.10	0.59	0.97	29.34	Low
18	Barru	0.17	0.18	0.56	0.91	23.43	Low
19	Tana Toraja	0.15	0.08	0.66	0.89	20.69	Low
20	Pangkep	0.22	0.11	0.52	0.85	16.13	Low
21	Luwu Timur	0.16	0.16	0.51	0.83	14.11	Low
22	Pare-Pare	0.12	0.23	0.48	0.83	13.91	Low
23	Luwu utara	0.14	0.10	0.58	0.81	11.84	Low
24	Selayar	0.11	0.06	0.54	0.70	0.00	Low
	South Sulawesi	0.27	0.15	0.55	0.96	28.68	Low

Source: Data processed

Of the 3 pillars forming agricultural competitiveness observed, the average South Sulawesi agriculture index was highest at the capital pillar of 0.55 followed by the infrastructure pillar of 0.27, and the lowest at the technology pillar of 0.15. The highest competitiveness index is in a different district for each indicator. Sidrap occupies the highest position for the ratio of irrigation to agricultural land and the ratio of harvest processing machines (combine harvester). Makassar's highest utilization
internet by farmers and the ratio of bank credit to farmers. Land for agriculture is highest in Pinrang, farmer labor in TanaToraja, farmer roads in Takalar and tractors in Wajo (Figure 1).

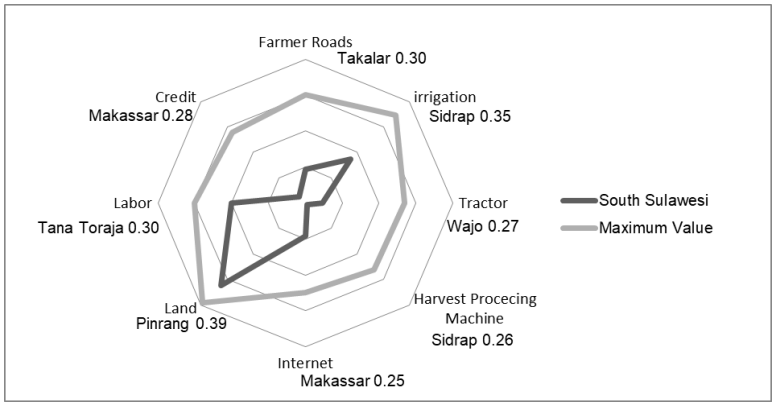

***Figure 1.** South Sulawesi Agricultural Competitiveness Web to the maximum point*

The lowest average from the maximum point is in the ratio of the availability of harvest processing machines (combine harvester) and credit from banks. Both of these indicators have the highest inequality between districts compared to the other indicators. While the index of agricultural land use ratio has the lowest inequality. Thus almost all regions in South Sulawesi have used land for agriculture, including in the administrative cities of Makassar, Pare-Pare and Palopo.

However, increasing agricultural competitiveness has not been done evenly in all aspects for the 3 pillars of competitiveness observed.

3.2 Agricultural Competitiveness Based on Infrastructure Pillars

The level of agricultural competitiveness of the infrastructure pillars of Sulawesi Sulawesi is at low competitiveness with a competitiveness index value of 0.27 (Table 2). Distribution of the level of competitiveness of the infrastructure pillar, consisting of 5 districts with high competitiveness, 5 districts of medium competitiveness and 14 districts of low competitiveness. The highest index was in Soppeng at 0.570, followed by Palopo 0.567 and Takalar 0.503. The lowest index in Selayar with a value of 0.110. The four districts with high competitiveness are supported by high competitiveness in each of the indicators observed both farm roads and irrigated land. Based on the description of the results of the study, it can be seen that the district with good agricultural infrastructure will have a good level of competitiveness. The high farm road infrastructure in Takalar with an index value of 0.302, supported by the ratio of irrigation channels built with an index value of 0.200, makes Takalar have a high level of competitiveness.

***Table 2**. Agricultural Competitiveness of South Sulawesi Infrastructure Pillars*

Number	District	Farmer Roads	Irrigation	Infrastructure Index	Backwardness	Competitiveness
1	Soppeng	0.236	0.334	0.570	100.00	High
2	Palopo	0.293	0.274	0.567	99.39	High
3	Takalar	0.302	0.200	0.503	85.32	High
4	Jeneponto	0.238	0.239	0.476	79.55	High
5	Pinrang	0.134	0.334	0.468	77.77	High
6	Toraja Utara	0.281	0.162	0.443	72.26	Medium
7	Bulukumba	0.133	0.275	0.408	64.78	Medium
8	Sidrap	0.056	0.348	0.404	63.89	Medium
9	Sinjai	0.131	0.232	0.363	54.89	Medium
10	Bantaeng	0.057	0.285	0.342	50.47	Medium
11	Gowa	0.102	0.234	0.336	48.99	Low
12	Maros	0.111	0.197	0.307	42.83	Low
13	Bone	0.092	0.186	0.278	36.41	Low
14	Luwu	0.081	0.182	0.263	33.22	Low
15	Wajo	0.056	0.198	0.253	31.08	Low
16	Makassar	0.037	0.215	0.252	30.78	Low
17	Pangkep	0.048	0.170	0.218	23.36	Low
18	Enrekang	0.128	0.083	0.211	21.81	Low
19	Barru	0.060	0.109	0.168	12.60	Low
20	Luwu Timur	0.043	0.113	0.155	9.77	Low
21	Tana Toraja	0.080	0.073	0.153	9.25	Low
22	Luwu utara	0.052	0.084	0.135	5.40	Low
23	Pare-Pare	0.037	0.082	0.118	1.70	Low
24	Selayar	0.041	0.069	0.110	0.00	Low
	South Sulawesi	0.094	0.173	0.267	33.96	Low

Source: Data processed.

Similarly, Soppeng, irrigation competitiveness index ranks second with a value below Sidrap 0.334, backed by the value of the competitiveness index of the ratio of farmers with a 0.236 index. Different conditions experienced by Sidrap, despite having the highest irrigation index, but the construction of farm roads is still low, making the Sidrap infrastructure index only at a moderate level of competitiveness. The results are consistent with research Edeme, et.al [17] which states that agricultural productivity is closely influenced by infrastructure. Areas that are well-developed infrastructure have a close relationship with agricultural productivity in the area.

3.3 Agricultural Competitiveness Based on Capital Pillars

Competitiveness of the agricultural pillar of South Sulawesi capital are presented in Table 3. The level of competitiveness throughout the district capital pillar evenly spread between high, medium and low each 8 district. Competitiveness index Enrekang highest in the capital with a value of 0.70 and the lowest in Palopo with niai index 0.36. Average index of competitiveness pillar of South Sulawesi capital to be at a moderate level with a value of 0.55. Index of credit from banks and financial institutions in the agricultural sector has the lowest value of all the indicators were observed. One that affects competitiveness in the capital pillar is the availability of land for agriculture. The wider agricultural land will provide a better opportunity to increase production compared to narrower land. This has led to an increase in the position of competitiveness of land factors. Pinrang has the highest land competitiveness index of all districts with a value of 0.39 and the lowest in Makassar of 0.14. This means that the most effective land use is in Pinrang.

***Table. 3**. South Sulawesi Agricultural Competitiveness Capital Pillar*

Number	District	Land	Labor	Credit	Capital Index	Backwardness	Competitiveness
1	Enrekang	0.38	0.28	0.04	0.70	100.00	High
2	Pinrang	0.39	0.22	0.08	0.69	97.01	High
3	Sidrap	0.35	0.21	0.10	0.66	89.99	High
4	Luwu	0.37	0.26	0.02	0.66	88.40	High
5	Tana Toraja	0.35	0.30	0.01	0.66	87.92	High
6	Wajo	0.37	0.22	0.05	0.64	82.36	High
7	Jeneponto	0.38	0.24	0.01	0.63	79.78	High
8	Toraja Utara	0.33	0.28	0.01	0.62	78.06	High
9	Bulukumba	0.37	0.23	0.01	0.61	74.78	Medium
10	Sinjai	0.32	0.27	0.01	0.60	72.77	Medium
11	Bone	0.33	0.25	0.01	0.59	67.62	Medium
12	Bantaeng	0.34	0.23	0.01	0.58	66.51	Medium
13	Luwu utara	0.30	0.26	0.02	0.58	64.79	Medium
14	Barru	0.36	0.19	0.02	0.56	60.84	Medium
15	Selayar	0.33	0.20	0.01	0.54	53.25	Medium
16	Takalar	0.33	0.20	0.01	0.54	53.15	Medium
17	Pangkep	0.34	0.17	0.01	0.52	48.93	Low
18	Soppeng	0.27	0.23	0.02	0.52	47.45	Low
19	Luwu Timur	0.26	0.23	0.03	0.51	46.45	Low
20	Gowa	0.31	0.18	0.02	0.51	44.71	Low
21	Makassar	0.14	0.08	0.28	0.51	43.71	Low
22	Maros	0.32	0.16	0.01	0.48	37.73	Low
23	Pare-Pare	0.31	0.09	0.08	0.48	35.87	Low
24	Palopo	0.20	0.12	0.03	0.36	-	Low
	South Sulawesi	0.32	0.20	0.02	0.55	56.46	Medium

Source: Data processed.

In the study of Paudel et.al [18] in Nepal, it was shown that land use is always related to farmers' perceptions. Socio-economic factors are the main factors that drive land use. The greater the population, will encourage farmers to further increase their production, one of the steps taken is to increase the area of land. In addition, government policy is an important indicator in land use. Another indicator of capital competitiveness is labor. The highest labor to agricultural land ratios are in Tana Toraja, North Toraja, Enrekang and Sinjai (Table 3). The higher the ratio of labor to land will increase the index of agricultural competitiveness. However, labor is not enough, must be supported by other factors such as the availability of agricultural land. In this case, Enrekang is superior to Tana Toraja and North Toraja because of better land availability. The role of labor in shaping competitiveness is expressed by Hong-qing, Fei, & Yao-yang [17]. The large farmer workforce population provides various opportunities, including increasing competitiveness. To influence the way farmers manage agriculture, policymakers need to understand the behavior of farmers and their perception of agriculture. So to maximize the workforce of farmers, not only related to the amount but also related to socio-technical changes experienced by farmers. Yunus et. al [19] revealed that sociotechnical changes encourage increased agricultural production while also creating a gap between the rich and South Sulawesi agriculture competitiveness of technology pillars is presented in Table 4. Technology pillars are formed from indicators of the use of tractor engine technology, the use poor in the village and potentially disrupting the social viability of agribusinessCapital for farmers' cultivation is not only obtained from their own capital but also from third party loans such as banking / financial institutions. The bank is very careful about its prudence, including from government political intervention. Banking is very selective in providing loans to maintain the level of health. Healthy banks according to Cui et.al [20] will encourage more of their growing borrowers to continue to have more cash by making loans to banks. Smooth and well-performing borrowers will continue to be encouraged to have cash. This is the reason why regions with good borrower character will continue to receive loans from banks. Masciandaro & Volpicella, [21] mentioned that caution also applies to all central banks, including the American central bank (Fed / Federal Reserve System) and European central banks (ECB-Europe Central Bank). The results showed the value of the credit ratio index channeled to the highest agricultural sector in Makassar, but the low value of other capital indices namely agricultural land and labor in the agricultural sector led to the position of Makassar's competitiveness at a low level with a value of 0.51, occupying 21st out of 24 districts.

3.4 Agricultural Competitiveness Based on Technology Pillars

of a combine harvester crop processing machine and the use of internet technology by farmers.

Table 4. *Agricultural competitiveness based on technology pillars*

Number	District	Tractor	Harvester Crop Preocessing	Internet	Technology Index	Backwardness	Competitiveness
1	Sidrap	0.14	0.26	0.13	0.53	100.00	High
2	Wajo	0.27	0.15	0.11	0.53	98.64	High
3	Pinrang	0.09	0.09	0.10	0.29	49.84	Low
4	Makassar	0.01	0.01	0.25	0.27	45.21	Low
5	Soppeng	0.08	0.05	0.11	0.24	40.14	Low
6	Pare-Pare	0.01	0.01	0.21	0.23	37.70	Low
7	Palopo	0.01	0.02	0.20	0.23	37.61	Low
8	Maros	0.05	0.02	0.12	0.19	28.37	Low
9	Gowa	0.06	0.03	0.10	0.18	27.79	Low
10	Barru	0.06	0.03	0.09	0.18	27.49	Low
11	Luwu Timur	0.04	0.02	0.10	0.16	23.03	Low
12	Bulukumba	0.04	0.01	0.08	0.14	18.17	Low
13	Enrekang	0.06	0.02	0.06	0.14	17.85	Low
14	Pangkep	0.01	0.02	0.08	0.11	12.16	Low
15	Bone	0.02	0.02	0.07	0.10	11.13	Low
16	Luwu utara	0.05	0.02	0.03	0.10	10.12	Low
17	Toraja Utara	0.01	0.01	0.07	0.09	8.19	Low
18	Luwu	0.01	0.01	0.06	0.08	7.27	Low
19	Bantaeng	0.01	0.01	0.06	0.08	6.64	Low
20	Tana Toraja	0.02	0.01	0.05	0.08	6.64	Low
21	Sinjai	0.01	0.01	0.05	0.07	5.02	Low
22	Takalar	0.01	0.02	0.04	0.07	4.54	Low
23	Selayar	0.01	0.02	0.03	0.06	1.45	Low
24	Jeneponto	0.01	0.01	0.02	0.05	-	Low
	South Sulawesi	0.05	0.01	0.09	0.15	20.03	Low

Source: Data processed.

The level of agricultural competitiveness of all districts in South Sulawesi based on the technology pillar is presented in Table 4. Most of the regions in South Sulawesi have a low technological competitiveness namely 22 districts (91.67%). Only 2 districts have high competitiveness of Sidrap and Wajo with an index value of 0.53 each. The high index of total competitiveness based on technology pillars in Sidrap and Wajo is supported by the use of combined harvester crop processing machines and the use of tractor engines in both districts. Makassar, Pare-Pare and Palopo, ranked in the top 10 based on the ranking of the technological pillar competitiveness due to the support of high internet technology usage, where the highest index in Makassar was 0.25, followed by Pare-Pare 0.21 and Palopo 0.20 . The lowest in technology is Jeneponto with an index value of 0.05 and Selayar 0.06. South Sulawesi's average competitiveness index of 0.15 is at a low levelThe use of technology in agriculture is growing at this time. In addition to the use of tractor engines, both 2-wheel and 4-wheel tractors, the use of crop processing machines, there are also several other technologies such as fertilizer technology, drip irrigation and the use of internet information technology and portable cellular terminals. Hu, et.al. [22] mentioned that the expansion mode of agricultural technology is able to increase the level of technical adoption of farmers of various ages and with different scale of operations. The direct effect of the expansion mode of new agricultural technologies with the use of the internet significantly increases the rate of adoption of soil testing and formulation of fertilizer technology, and water-saving irrigation technology. With this condition, regions that utilize technology well will have better competitiveness.

4. CONCLUSION

South Sulawesi's agricultural competitiveness from the pillars of infrastructure, technology and capital, has a competitiveness index value of 0.55, with a low level of competitiveness. Most regions in South Sulawesi have low technological pillar competitiveness index, namely 22 districts (91.67%), while infrastructure pillars have better conditions, ie only 14 districts (58.33%) with low competitiveness. The capital pillar provides the highest agricultural competitiveness support with an index value of 0.55 at a medium level of competitiveness. This can be seen from the level of competitiveness in the capital pillar which is 8 districts (33.33%) for each level of competitiveness, high, medium and low. Soppeng occupies the highest competitiveness index in the infrastructure pillar with a value of 0.57, the highest Enrekang in the capital pillar with an index value of 0.70 and Sidrap excels in the technology pillar with an index value of 0.53. To increase the agricultural competitiveness of South Sulawesi, it is necessary to increase the equitable distribution of agricultural development, especially in the pillars of technology, especially the distribution of the use of harvest processing machines and tractor engines. In addition, it is also necessary to increase credit to the agricultural sector.

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