

# Growing Economy: Competitive Index Review in Agusan del Sur, Philippines

Jerico D. Catipay\*, Kaye Margareth M. Caina \*\*, Cathy O. Cadusale \*\*\*

\*(University of Southeastern Philippines, Davao City, Philippines)

\*\* (University of Southeastern Philippines, Davao City, Philippines)

\*\*\* (University of Southeastern Philippines, Davao City, Philippines)

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## Abstract:

The study aimed to review some economic indicators of the province of Agusan del Sur and determine which municipality have greater value in of competitive index. The method was adopted from the Competitiveness Bureau of the Department of Trade and Industry using economic dynamism, government efficiency, infrastructure and resiliency as the core indicators. From the findings of the review, the researchers found out that top three ranking municipality that acquired the highest score in competitive index for year 2017 were Veruela that got the topmost score of 9.30 followed by 6.95 of San Francisco and 4.31 of San Luis. This competitive index is a composite of the four core economic indicators used by the Bureau. This analysis could somehow help investors to identify which municipality is more conducive to business.

**Keywords-- Competitive index, Economic dynamism, government efficiency, infrastructure, Agusan del Sur, Philippines**

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## I. INTRODUCTION

Agusan del Sur was dubbed as the “Land of Golden Opportunities”. It is the fourth largest province in the country and the second largest province in Mindanao next to Bukidnon. The province is subdivided into 13 municipalities with one newly declared city with Prosperidad as the capital town. According to the 2009 Community Based Management System (CBMS), the province has 199,584 people who make up the labor force, mostly engaged in Agriculture and Forest Sectors. This increase contributes 9.2% growth from the 2005 CBMS data.

The largest Oil Palm Plantation in the country is found in Agusan del Sur, with a total

land are of 20,000 hectares with the factories to process oil palm fresh fruits into crude palm oil and finished products. Products generated from this plantation includes veneer and match splints. Agusan del Sur has the large volume of gold deposit as evidenced by the presence of Philsaga Mining Corporation, JTC Mining Corporation and other small-scale miners. Reinforced by other commercial minerals like limestone, marble, gypsum, manganese, phosphate rock. Coal, andesite rock, chromite, quartz, white clay and aggregates.

The province is regarded as the “Food Basket of the Caraga Region”, due to its geographical location and fertile valley fertilized by the mighty river during the flooding. The province’s rice

production has the estimated capacity to feed 1.7 million people or 2.4 greater than the province's population. Rice, corn, coconut, banana, oil palm, abaca, and tropical fruit such as durian are cultivated in plantations scattered throughout the province. The province is dubbed as the Timber Capital of Mindanao. From 2008 to 2013 the province's average annual growth rate of total production of planted tree species is 19.74 %. Agusan del Sur has basically an agriculture and forestry driven economy which is the province always surplus in the production of rice and corn according to the Provincial Agriculture Office (PAO). In 2012, Falcata Production reached to 808, 891.6 m<sup>3</sup> with estimated value of Php 2.34 Billion in which 65% is transported outside the province and the remaining 35% is processed in the province.

Provincial officials and officials of the local chamber of commerce proposes newly-built plant that will address the request of different rural businesses for more enough power supply to the various progressing towns in the province, particularly in the town of San Francisco where new business infrastructures are build (The Manila Bulletin, 2016). Investors are welcome to settle down and put up their businesses in the province and avail the Tax Incentives offered by the provincial government as mandated by Provincial Ordinance No. 12 series of 1998 as amended. The Provincial Economic and Enterprise Development Office (PEEDO) will provide vital information on investment opportunities, business procedures, permit requirements, government regulations and other related documents needed by the investors for planning.

With all these resources of the province it is truly important to determine as to how municipalities perform in terms of economic aspects. The availability of these natural resources and its advantageous potentials must be evaluated as to how these things benefits the people in various municipalities. This review is somehow significant especially to those who are developers and

investors (Provincial Capitol of Agusan del Sur, 2018).

The main objective of the study was to determine the status of the economy of the province by looking into competitive index of all the municipalities. Specifically, it aimed to determine the economic dynamism, government efficiency, infrastructure and resiliency.

## **II.FRAMEWORK**

This study utilizes the suggested framework in order to assess the competitiveness through the competitive index of the municipalities/cities in the Philippines. The data associated with this index is provided by the Competitiveness Bureau of the Department of Trade and Industry. The competitive index is composed of four indicators such as economic dynamism, government efficiency, infrastructure and resiliency.

Economic Dynamism is associated with activities that create stable expansion of business and industries and higher employment. This is the concrete representation of productivity as it matches the output of the local economy with local resources. It is a combination of the entrepreneurial spirit and the financial institutions that will channel dynamism that implies that localities are the centers of economic activities. This indicator focuses on the a.) size of the local economy as measured through business registrations, capital, revenue, and permits, b.) growth of the local economy, c.) capacity to generate employment, d.) cost of living, e.) cost of doing business, f.) financial deepening, g.) productivity and h.) presence of business and professional organizations.

Government Efficiency Scores refers to the quality and reliability of government services and government support for effective and sustainable productive expansion. This indicator looks at the government as an institution that is generally not

corrupt; able to protect and enforce contracts; apply moderate and reasonable taxation and is able to regulate proactively (La Porta et al, 1999). This represents the people and culture factor that porter alluded to in understanding the process of competitiveness and making locations productive. This indicator is composed of a.) capacity of health services, b.) capacity of schools, c.) security, d.) business registration efficiency, e.) compliance to BPLS standards, f.) presence of investment promotions unit, g.) compliance to national directives for LGUs, h.) ratio of LGU collected tax to LGU revenues, i.) most competitive LGU awardee, and j.) social protection.

Infrastructure refers to the physical building blocks that connect, expand, and sustain a locality and its surroundings to enable the provision of goods and services. It involves basic inputs of production such as energy, water; interconnection of production such as transportation, roads, and communications; sustenance of production such as waster, disaster preparedness, environment sustainability and human capital formation infrastructure. This represents the idea of making productivity sustainable over time. It is divided into ten indicators such as a.) existing road network, b.) distance from municipality center to major ports, c.) Department of Tourism – accredited accommodations, d.) Availability of Basic Utilities, e.) annual investment in infrastructure, f.) connection of ICT, g.) number of public transportation vehicles, h.) health infrastructure, i.) education infrastructure and g.) number of ATM's.

Resiliency refers to the capacity of a locality to facilitate business and industries to create jobs, raise productivity, and increase the incomes of citizens over time despite of the shocks and stresses it encounters. This implies that the role of local governments is critical in ensuring a competitive environment to make business sustain their profits, create jobs, and increase the productivity of its people. In order to be able to do this, it must be resilient in tis infrastructure, governance, social and

environmental systems. This indicator focuses on the following, a.) land use plan, b.) disaster risk reduction plan, c.) annual disaster drill, d.) early warning system, e.) budget for DRRMP, f.) local risk assessments, g.) emergency infrastructure, h.) utilities, i.) employed population and f.) sanitary system.

These indicators were regarded as the contributor to the local economic development and competitiveness up to the regional, national and global levels according to the Competitiveness Bureau of the Department of Trade and Industry.

### III. METHODOLOGY

The study used the available data from the Department of Trade and Industry – Competitiveness Bureau, reviewed and interpreted based on the suggested framework. In order to compute for the index and rank the different components, they weigh each component which the competitive index ranking has a total index value of 100 this is to represent the competitiveness of the local unit as a whole. The index is composed of four components with each component represents about 25% of the index value (economic dynamism 25%, governance efficiency 25%, infrastructure 25%, and resiliency 25%). Each indicator represents 2.5%. Core component is 25% weight even if the number of indicators per component are lower or high than 10. In this index, many indicators were computed from the composite values of two or more sub-indicators.

Standardizing the computations, the Bureau follow the process of computing the components of the human development index (HDI) using the standard formula.

$$\frac{\text{Actual value } (x) - \text{Minimum value } (x)}{\text{Maximum value } (x) - \text{Minimum value } (x)}$$

There are two parameters to qualify for the ranking of the “Most Competitive Province” detailed by merging the population of all participating LGUs

under the province and should establish at least 60% of the total provincial population and there should be 90% of the total number of participating LGUs covered under a province. For those provinces which qualify the scoring is calculated as the population and income weighted average for the LGUs covered. Score of the LGUs covered are then aggregated (Competitiveness Bureau, 2018).

$$\sum_{i=1}^N w_i (LGU\ score)_i, \quad i = \text{all LGU scores in the province}$$

Where:  $w = 0.5x + 0.5y$

$$x = \frac{LGU\ Population}{Total\ Provincial\ Population}$$

$$y = \frac{LGU\ Income}{Total\ Provincial\ Income}$$

LGU	LGU Population	% to Total Population	Population weight (0.5)	LGU Revenue	% to Total Revenue	Revenue weight (0.5)	Total LGU Weight	LGU Overall Score	Provincial Score
LGU1	28,063	0.16	0.08	1,321,628	0.04	0.02	0.10	11.122440	1.1635
LGU2	19,393	0.11	0.06	1,506,319	0.05	0.03	0.08	27.020065	2.2259
LGU3	35,779	0.21	0.10	2,702,841	0.09	0.05	0.15	23.132299	3.4858
LGU4	20,669	0.12	0.06	2,008,968	0.07	0.03	0.09	16.122988	1.5263
LGU5	66,951	0.39	0.20	21,848,648	0.74	0.37	0.57	26.048935	14.7867
<b>Total</b>	<b>170,855</b>	<b>0.5</b>	<b>0.5</b>	<b>29,388,405</b>	<b>0.5</b>	<b>1.00</b>	<b>1.00</b>	<b>23.1883</b>	<b>23.1883</b>

**PROVINCIAL SCORE**

Source: Competitiveness Bureau – Department of Trade and Industry

#### IV. RESULTS AND DISCUSSION

##### I. Economic Situation Provincial Level

This section will show how the province of Agusan del Sur performs in terms of production and local economy expansion in contrast to the other provinces in the region.

###### i. Level of Production

The province of Agusan del Sur ranked 4<sup>th</sup> in the region and contributed Php 11,857,704,682.15 that is 14% of the total gross sales of registered firms in the Caraga Region.

Butuan City is the highest contributor while Dinagat Island as the lowest.

Table 1. Level of Production 2016  
 (income @ invoice values received for goods and services)

	Gross Sales of Registered Firms
Butuan City	Php 23,660,088,574.70
Surigao del Norte	23,452,835,844.72
Agusan del Norte	13,017,323,652.70
<b>Agusan del Sur</b>	<b>11,857,704,682.15</b> <b>14%</b>
Surigao del Sur	6,867,561,619.80
Dinagat Islands	3,208,954,765.53
<b>Caraga Total</b>	<b>Php82,064,469,139.60</b>

Source: CMCI 2017

###### ii. Expansion of Local Economy

The province of Agusan del Sur ranked 3<sup>rd</sup> in the region and contributed Php 586,623,801.94 that is 18% of the total capitalization of new businesses in the region. Surigao del Norte has the highest capitalization while Dinagat Island has lowest.

Table 2. New Investment 2016

	Total Capitalization of New Businesses
Surigao del Norte	Php 1,034,403,874.35
Surigao del Sur	642,496,429.98
<b>Agusan del Sur</b>	<b>586,623,801.94</b> <b>18%</b>
Agusan del Norte	512,421,253.00
Butuan City	367,715,483.00
Dibagat Islands	66,814,322.00
<b>Caraga Total</b>	<b>Php 3,216,475,164.27</b>

Source: CMCI 2017

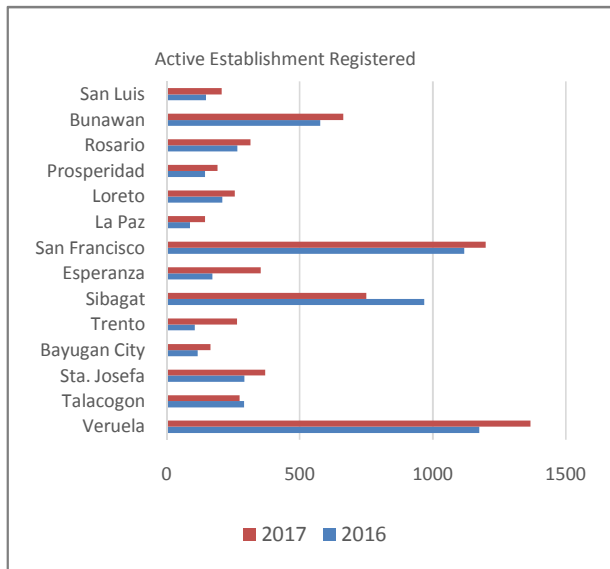
##### II. Economic Situation Municipal Level

Below are the data presented by municipality, showing 2016 to 2017 performances.

###### i. Active Establishments

Data in graph 1 shows that Veruela has the most registered active establishments of 1,175 during 2016 followed by San Francisco with 1,118 establishments, Sibagat with 968 establishments, Bunawan with 578 establishments and Sta. Josefa with 292 establishments. This is rank is maintained during 2017 having Veruela that has the most registered active establishments of 1,363 establishments, San Francisco with 1,199 establishments, Sibagat with 751 establishments, Bunawan with 664 establishments, and Sta. Josefa with 370 establishments. These active establishments contribute to the gross sales of goods and sales all year round.

Graph 1: Active Establishments Registered for 2016 and 2017

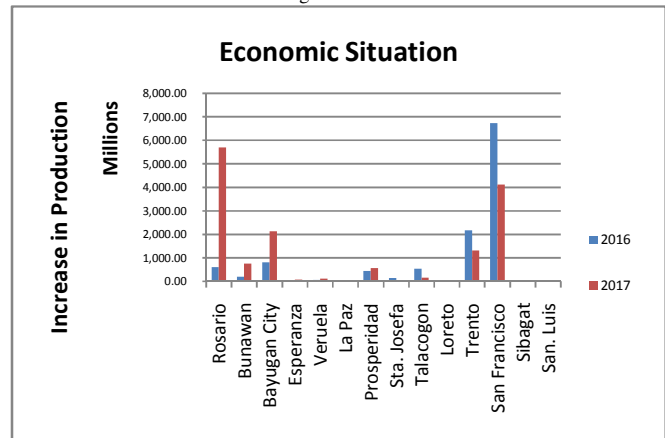


ii. *Level of Production*

Presented in graph 2 are the increase in production based on income at values received for goods and services per municipality in Agusan del Sur Province. The municipalities that has huge increase in production are Rosario with the percentage of 844.45%; Bunawan with 297.39%; Bayugan City with 162.29%; Esperanza with 87.75%; Veruela with 80.02%; La Paz with 38.60%; and Prosperidad with 25.94% increase from year 2016 to 2017 respectively. Meanwhile, the

subsequent cities decrease in production are Sta. Josefa with -96.28%; Talacogon with -70.08%; Loreto with -57.34%; Trento with -31.59%; San Francisco with -38.70%; Sibagat with -4.20; San Luis with -3.47% from year 2016-2017. This means, Municipality of Rosario has the biggest increase while Sta. Josefa has the greatest decrease in terms of production in the province of Agusan del Sur from year 2016 to year 2017.

Graph 2. Production increased based on income at values received for goods and services in Agusan del Sur Province.



III. *Municipal Ranking in Competitive Index*

Shown in table 3 are the ranking per municipality on Economic Dynamism. As presented the top-ranking municipality are San Francisco which got the highest score of 4.83 followed by 4.57 of Trento and 4.51 of Talacogon. This means, the municipalities/cities have larger degree of human capital, education for various forms of entrepreneurship [1], meanwhile the lowest ranking three municipality are San Luis that got 3.93 followed by 3.90 of Sibagat and 3.49 of La Paz. This means, the role of economic institutions and policy in entrepreneurship are show to be uncertain, moreover firm entry and firm growth relationship needs further study and examination (Elert,2014).



Table 3. 2017 Ranking based on Score per Municipality in Economic Dynamism

Economic Dynamism	Score in Year 2017	Ranking
San Francisco	4.83	1
Trento	4.57	2
Prosperidad	4.51	3
Talacogon	4.38	4
Loreto	4.38	5
Sta. Josefa	4.28	6
Rosario	4.27	7
Bunawan	4.15	8
Bayugan City	4.12	9
Esperanza	3.93	10
Veruela	3.93	11
San. Luis	3.93	12
Sibagat	3.90	13
La Paz	3.49	14

Presented in table 4 are the ranking per municipality on Government Efficiency. It exhibited the top-ranking municipality that has efficient government that supports the business were San Luis acquired the topmost score of 11.57 followed by 11.28 of Trento and 11.05 of Veruela. While the lowermost ranking among the fourteen municipalities were La Paz that got 8.30 followed by 7.94 of Loreto and 7.92 of Esperanza. Updating the processes of government’s way of collecting revenue from the state budget and redistribution based on the government’s principle of performance and efficiency will determined the effect on economic situation (Trimath, 2011).

Table 4. 2017 Ranking based on Score per Municipality in Government Efficiency

Ranking in Government Efficiency	Year 2017	Ranking
San. Luis	11.57	1
Trento	11.28	2
Veruela	11.05	3
Bayugan City	10.99	4
Bunawan	10.83	5
Rosario	10.09	6
Sibagat	9.4	7
Prosperidad	8.94	8
Talacogon	8.84	9
San Francisco	8.59	10
Sta. Josefa	8.42	11
La Paz	8.3	12
Loreto	7.94	13
Esperanza	7.92	14

Presented in table 5 are the ranking per municipality on Infrastructure. It displays the top three ranking municipality that has best component in infrastructure in businesses for year 2017, those were Bayugan City that got the highest score of 7.56 followed by 7.09 of Sta. Josefa and 6.81 of Veruela. This means, their infrastructure components such as energy, transportation and water have positive impact on their run economic growth (Center for Democracy Technology,2002). At the same time the lowermost ranking among the fourteen municipalities were San Luis that got 4.45 followed by 3.32 of Bunawan and 2.46 of Rosario.

Table 5. 2017 Ranking based on Score per Municipality in Infrastructure

Ranking in Infrastructure	Year 2017	Ranking
Bayugan City	7.56	1
Sta. Josefa	7.09	2
Veruela	6.81	3
Sibagat	6.46	4
San Francisco	6.46	5
Loreto	6.27	6
Prosperidad	5.97	7
La Paz	5.66	8
Esperanza	5.32	9
Trento	4.86	10
Talacogon	4.79	11
San. Luis	4.45	12
Bunawan	3.32	13
Rosario	2.46	14

Presented in table 6 are the ranking per municipality on resiliency. It displays the top three ranking municipality that has best component in resiliency in businesses for year 2017, those were Veruela that got the highest score of 17.892 followed by 16.352 of Talacogon and 16.22 of Sta. Josefa. This top three municipalities could relatively ensure a competitive environment to make business sustain their profits, create jobs, and increase the productivity of its people compared to other municipalities (Competitiveness Bureau,2018). At the same time the lowermost ranking among the fourteen municipalities were Rosario that got 13.678 followed by 13.5 of Bunawan and 12.646 of San Luis.

Table 6. 2017 Ranking based on Score per Municipality in Resiliency

Ranking in Resiliency	Year 2017	Ranking
Veruela	17.892	1
Talacogon	16.352	2
Sta. Josefa	16.22	3
Bayugan City	15.783	4
Trento	15.692	5
Sibagat	15.67	6
Esperanza	15.526	7
San Francisco	15.402	8
La Paz	15.367	9
Loreto	15.227	10
Prosperidad	15.121	11
Rosario	13.678	12
Bunawan	13.5	13
San Luis	12.646	14

Presented in table 7 are the overall ranking per municipality on the three competitive indices of Agusan del Sur which are Economic Dynamism, Government Efficiency and Infrastructure. It shows the top three ranking municipality that acquired the highest score for year 2017. Those were Veruela that got the topmost score of 9.30 followed by 6.95 of San Francisco and 4.31 of San Luis. In contrast, the lowermost ranking among the fourteen municipalities were Rosario that got 1.40 score followed by 0.49 of Talacogon and 0.05 of Sibagat.

Table 7. Overall Ranking based on Score per Municipality in Competitive Index

Overall Ranking	Year 2017	Ranking
Veruela	9.30	1
San Francisco	6.95	2
San. Luis	4.31	3
Esperanza	3.69	4
Bayugan City	3.53	5
La Paz	3.19	6
Sta. Josefa	3.01	7
Loreto	2.34	8
Prosperidad	2.22	9
Bunawan	2.04	10
Trento	1.78	11
Rosario	1.40	12
Talacogon	0.49	13
Sibagat	0.05	14

## V. CONCLUSION

The review of the competitive index in terms of economic dynamism, government efficiency, and resiliency of the Agusan del Sur, Philippines, the researchers found out that there is a growing economy in the province. Top three ranking municipality that acquired the highest score in competitive index for year 2017 were Veruela that got the topmost score of 9.30 followed by 6.95 of San Francisco and 4.31 of San Luis. However, the lowermost ranking among the fourteen municipalities were Rosario that got 1.40 score followed by 0.49 of Talacogon and 0.05 of Sibagat. On the other hand, Municipality of Rosario has the biggest increase with the percentage of 844.45 while Sta. Josefa has the greatest decrease with the percentage of -38.70 in terms of production in the province of Agusan del Sur from year 2016 to year 2017.

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