"SULONG QUEZON": A Comparative Analysis of 2019 and 2020 Cities and Municipalities Competitiveness Index (CMCI) of Quezon Province

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ABSTRACT:

Tracking the Cities and Municipalities Competitiveness Index (CMCI) of a certain city and municipality will provide a relevant information on their present status and development. An underlying purpose of ranking cities and municipalities is to identify the necessary factors that a city and municipality need, determining their weaknesses to come up with better solutions and strategies for development. The ranking is obtained by summing the scores of the four main pillars-namely, economic dynamism, government efficiency, infrastructure, and resiliency.

In this study, the CMCI data from 2019 to 2020 surveys were analyzed to assess the level of competitiveness of each LGU in Quezon province using percentile rank and the GIS mapping. Percentile ranking of each pillar was obtained to compare the level of competitiveness of Quezon province across other provinces nationwide. Moreover, comparative analysis with respect to indicators was performed to evaluate the improvement of cities and municipalities to track the strengths and weaknesses of the province for policy developments and recommendations.

Keyword: Competitiveness index, local government unit, government policies

INTRODUCTION

Competitiveness through time is continuously improved and developed as to evaluating and monitoring the statuses of a region. It serves as the basis of dynamic change and remarkable performance of cities and municipalities with regards to providing quality services to people. Note that evaluation of the competitiveness is conducted to figure out the important aspects that need to be developed and improved, and to become globally competitive. In the development processes, behavioral aspects and habits are improved to come up with reliable decisions and sustainable actions. Local competitiveness strategies are developed through local and regional competitiveness in order to "generate long-term competitiveness and ensure local rejuvenation and sustainability".

Global competitiveness serves as the basis of having local and regional competitiveness. The Cities and Municipalities Competitiveness Index (CMCI) has adopted a framework which is designed in such a way that "local competitiveness affects and is affected by regional, national, and global competitiveness".

The Cities and Municipalities Competitiveness Index (CMCI) is an annual ranking of Philippine cities and municipalities. An underlying purpose of ranking cities and municipalities is to identify the necessary factors that a city and municipality need, determining their weaknesses to come up with better solutions and strategies for development. This competitiveness index ranking is developed by the National

Competitiveness Council (NCC) through the Regional Competitiveness Committees (RCCs) and is assisted by the United States Agency for International Development. It adopted the framework developed by Michael Porter, which basically considers competitiveness as more of productivity and is based on location. As defined, *productivity* is an output per unit of input. "Effectively, it attempts to measure how many final products can be produced using a limited number of inputs". In addition, location serves as an underlying source of resources and productivity as to how the country utilizes these resources. Similarly, local competitiveness can be strengthened through identifying resources of a city and a municipality and their way of utilizing these resources. Once the resources are utilized properly and products are developed, utilization of the product nationwide may be achieved and may boost the economic activity of the city or municipality. "Improving productivity allows firms, cities, municipalities, and countries to improve their standards of living and thereby give prosperity to its citizens."

The competitiveness rank of cities and municipalities is determined based on overall competitiveness score which is obtained by summing the scores of the four main pillars-namely, economic dynamism, government efficiency, infrastructure, and resiliency.

- 1. Economic Dynamism includes 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. The indicators on this pillar are size of the local economy, growth of the local economy, capacity to generate employment, cost of living, cost of doing business, financial deepening, productivity, presence of business and professional organizations, safety compliant business and local economy structure.
- 2. Government Efficiency refers to the quality and reliability of government services and support for effective and sustainable productive expansion. This pillar includes capacity of health services, capacity of school services, compliance to BPLS standards, business registration efficiency, compliance to national directives, recognition of performance, peace and order, presence of business promotion unit, capacity to generate local resources and social protection.
- 3. **Infrastructure** is the physical building blocks which connect, expand, and sustain a locality and its surrounding to enable the provision of goods and services refers to the infrastructure pillar. The indicators which measure the competitiveness level in this pillar are availability of basic utilities, accommodation capacity, financial deepening, distance to ports, education, health, information technology capacity, LGU investment, road network and transportation vehicle.
- 4. **Resiliency** is the capacity of a locality to facilitate businesses 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 businesses sustain their profits, create jobs, and increase the productivity of its people. In order for localities to be able to do this, it must be resilient in its infrastructure, governance, social and environmental systems.

In 2019 and 2020 CMCI ranking, CALABARZON region remains to perform well in this ranking. As manifested in these ranking years, CALABARZON received most of the awards among regions. These indicate that the region is continuously improving its performance in delivering an efficient and effective governance and public service in the region. In addition, the province of Rizal, Laguna, Cavite and Batangas were included in Top 10 provinces in 2019 and 2020 ranking while Quezon province was left behind with 46th ranking in 2019 and 41st ranking in 2020. Hence, this study was initiated to analyze the performance of Quezon province in 2019 and 2020 ranking and come up with policy recommendations to improve its competitiveness.

Objectives of the Study

The main objective of this study is to analyze the 2019 and 2020 CMCI results of the Quezon Province by tracking its competitiveness in terms of economic dynamism, government efficiency, infrastructure and resiliency which will serve as basis for policy implementation and project development in the province.

Specifically, it aims to:

- 1. provide a geomap with regards to competitiveness of each city and municipality of Quezon using percentile ranking and with respect to economic dynamism, government efficiency, infrastructure, and resiliency;
- 2. determine the strengths and weaknesses of the Quezon Province across indicators per pillar which can help in assessing the needs for improvement in competitiveness ranking.

Significance of the Study

This study may help the province and LGUs in tracking its strengths and weaknesses to improve its CMCI ranking. The recommendations of this study may help the administrations to craft efficient policies and build projects that will benefit not just the citizens, but to have a dynamic economy, efficient government, well-developed infrastructure, and resilient province.

Scopes and Limitations

This study considers the level of competitiveness of Quezon Province by comparing its status from other provinces nationwide. The analysis of this study relies from the dataset provided by the Department of Trade and Industry (DTI) on Cities and Municipalities Competitiveness Index (CMCI). This is a preliminary analysis to come up with more comprehensive research on competitiveness index regarding its impact and contribution to local government units.

REVIEW OF RELATED LITERATURE

The annual competitiveness assessment helps the country to be aware of the new trends and developments across the globe. This is one way of developing international connections and of forming alliances to address global crisis. Competitiveness ranking is done to determine the status of the country

with respect to economy, governance, infrastructure, and resiliency. These four major factors are equally taken into consideration to maintain or improve the competitiveness index of the country.

A remarkable growth with respect to economic dynamism will enhance the country's connectivity. This connectivity increases the inter-regional direct investment and trade and is enhanced by labor migration, financial links, tourist flows and numerous political initiatives that seek to break down national barriers and to create a stronger country's consciousness (Hayter, 2000). Moreover, growth of an economy reflects the external opportunities available through trade. Trade allows a firm to develop the economies of scale to become a low-cost producer for some goods and/or the global supplier of a specialized commodity (Silvia, 2011). He also mentioned that the growth of capital would suggest greater productivity in the society and a higher standard of living as real wages will grow in line with productivity gains.

Trade or export has been helping the country to boost the economic performance. Now, since the world is currently devastated by a pandemic, the economy is affected. In fact, based on the latest report by the Philippine Statistics Authority (PSA), the gross domestic product (GDP) contracted by 16.5% in the second quarter of 2020. This happened as majority of the industry were paralyzed due to the enhanced community quarantine implemented in the large areas of Luzon and some part of Visayas and Mindanao. To cope up with the biggest drop, the response to COVID-19 should be prioritized as this is the major reason of the GDP's biggest plunge.

The government efficiency has been tested as this pandemic continues to challenge the country. Effective governance plays an important factor to maintain the balance of the economic dynamism and resiliency. Moreover, government effectiveness is clearly associated with countries' economic and social growth. It also reflects that public organizations and their personnel perform the actions and procedures of their mission well, that is, in accordance with social well-being (Frias-Aceituno, 2013). Thus, in countries with lower economic development, attention to political constraints is necessary.

There is a strong evidence that government efficiency declines with the level of spending, and that, at least in education, there is not even a significant relationship between performance and spending. Throwing money at problems, particularly in the education and health sectors often fails to yield the expected improvement in public services if not bolstered by efficiency-increasing policies. Also, improving the economic growth and financial development leads to an efficient government (Hauner and Kyobe, 2008).

This study will focus on the competitiveness evaluation of Quezon Province as its performance in competitiveness is still a long way to become one of the most competitive provinces in the country. In fact, Quezon province is left behind among provinces in CALABARZON region. Moreover, majority of the third to six class municipalities are still below the top 50% municipalities nationwide based on 2019 CMCI rankings, and the sole highly urbanized city, Lucena City, is still part of the least competitive highly-urbanized cities in the country. Through scientific analysis and evaluation, each municipality will be assessed across different indicators of competitiveness to find out some areas of concerns that brought the province down the line.

METHODOLOGY

This study utilized descriptive methods to analyze the 2019 and 2020 CMCI results. The CMCI scores per pillar and indicators of each local government unit (LGU), used for the analysis, were obtained

from cmci.dti.gov.ph page. Percentile rank was used to determine the nationwide ranking of each LGU in Quezon province. The formula for percentile is given as follows:

Percentile =
$$\frac{\text{number of values below } X + 0.5}{n} \cdot 100\%$$

where n denotes the total number of LGU in each classification. In addition, Geographic Information System (GIS) was applied to track the level of competitiveness of each LGU with respect to their location.

RESULTS AND DISCUSSION

The competitiveness ranking is conducted annually to evaluate the performances of different cities and municipalities in the country. In this way, the capacity of each local government unit will be assessed and measured across indicators to find out the aspects that need to be prioritized and be given attention. In this section, the results and discussion of the analysis of 2019 and 2020 CMCI results of Quezon province based on the database available from the Department of Trade and Industry (DTI) will be presented. The figure below shows the competitiveness performances of cities and municipalities from 2019 to 2020 Cities and Municipalities Competitiveness Index (CMCI) ranking. In this figure, the lighter color represents the cities and municipalities that are above 50th percentile and the darker color are those cities and municipalities which fall below 50th percentile.

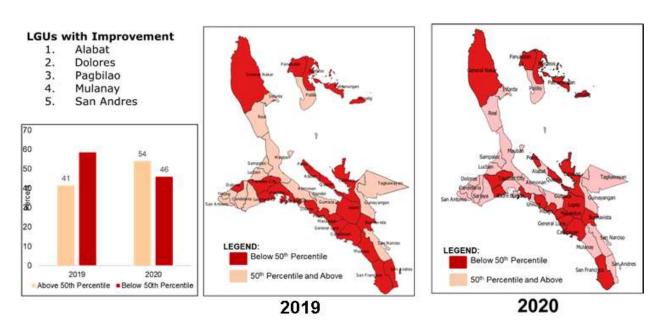


Figure 1. Overall 2019 and 2020 CMCI Percentile Ranking of Quezon Province

Figure 1 shows that 54% or a total of 22 LGUs ranked above 50th percentile while 46% or 19 LGUs ranked below the 50th percentile of participating LGUs nationwide in 2020 CMCI ranking. This indicates an improvement from the previous year where only 41% of its LGUs ranked 50th percentile and above. This

improvement can be supported by the fact that the province improved its ranking from 46th in 2019 to 41st in 2020. Moreover, the GIS maps show that 5 municipalities –Alabat, Dolores, Pagbilao, Mulanay and San Andres have improved its percentile ranking from 2019 to 2020.

In addition, most municipalities with darker color lie on the central and northern part of the province including the Polilio group of islands. This implies that improvement of the overall CMCI ranking of these LGUs should be considered. It was observed that LGUs adjacent to and nearby Lucena City, Tayabas City and other provinces in the region performed well in 2020 ranking.

Economic Dynamism

Economic Dynamism refers to the rate and change of direction of economy. This involves activities like the rate of new business information, the frequency of labor market turn-over, and the geographic mobility of the workforce. In this pillar, the capacity of a community is evaluated to find out if it has enough resources to support the entire people in the area. This leads to point out that a municipality with dynamic economy is more resilient and well-capacitated to provide the needs of the people when hit by unexpected crisis.

Figure 2 presents the status of each local government unit from 2019 to 2020 CMCI rankings. As to the map, darker color dominates the 2019 map which shows that majority of cities and municipalities in Quezon are below the top 50% of local government units nationwide.

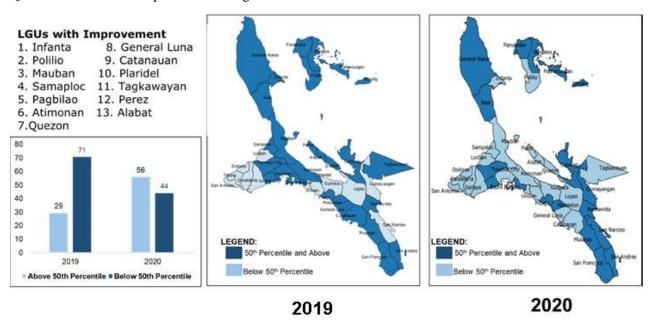


Figure 2. Percentile Ranking of Cities and Municipalities of the Province in Economic Dynamism Pillar

Based on the figure, a 27 percentage-point increase from 29% to 56% highlighted a remarkable performance of the province in economic dynamism. There were 13 municipalities gain improvement from 2019 competitiveness rankings, and most of which were first and fifth class municipalities with 6 and 4,

respectively. However, notice that most of the LGUs on southeasternmost and northernmost part of the province including the Polilio group of islands ranked below 50th percentile; hence, the provincial government may provide livelihood projects which can contribute to the economic advancement of these locale.

The improvement on this pillar was also down tracked to indicators that measure dynamic economy as shown in Figure 3. The result below highlighted the overall economic dynamism competitiveness of the province by combining the performances of all local government units.



Figure 3. Average Scores of each Indicator in Economic Dynamism of Quezon Province

The graph shows all the indicators improved its scores from 2019 to 2020 except for safety compliance business. Moreover, a significant increase was recorded in local economy growth. Though most of the indicators increased its scores from 2019 to 2020, the province still needs to improve its local economy size, presence of business and professional organizations, productivity and increase in employment. These mentioned factors will determine the capability and readiness of cities and municipalities in times of economic crisis, calamities, epidemic, and pandemic to ensure their stability.

Government Efficiency

Efficient government is visible through actions by actively addressing different areas of concerns and introducing new practices in various areas of public service. Efficiency in government can be a result of proper spending and budget allocations to different projects that will benefit the people. Moreover, efficiency is about doing more for less. Maintaining or improving the quality service is the heart of an efficient government. Producing these services, it involves maximizing outputs such as the volume of services provided, minimizing inputs such as the number of resources or amount of capital.

Figure 4 shows that the province made a slight advancement in government efficiency pillar - from 41% in 2019 to 49% in 2020 of number of LGUs which fell above 50th percentile. This increase was performed by Pagbilao, Atimonan, San Narciso, and San Andres. Moreover, the provincial administrator should focus on the central part and the northern most part including Polilio group of islands in improving its government efficiency since most of the LGUs in these area fell below 50th percentile.

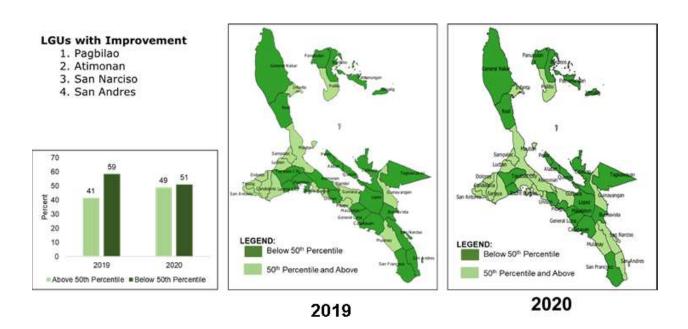


Figure 4. Percentile Ranking of Cities and Municipalities of the Province in Government Efficiency Pillar

Performance of Quezon Province as to government efficiency was downscaled to ten indicators, and its showed strength to 4 out of 10 indicators, namely, compliance to BPLS Standards, business registration efficiency, compliance to national directives, and presence of investment promotion unit, as shown in Figure 5.

To drive efficiency at the higher level, better service is always part of the satisfaction standards. However, allocating funds and finding more resources to capacitate the needs are more significant. The capacity of a local government unit is always evaluated and measured through scientific evaluations and analysis, and from the result above, there are still six common indicators for government efficiency which made the province less competitive than majority of the provinces nationwide.

The health services of the province, with recent performance score of 0.12, are way far from becoming one of the top 50% provinces in the country. Additional health service providers are good recommendation with the installation of additional health centers and hospitals since the result only implied that number health service providers to number of individuals in the province is not yet enough ratio in

times of health crisis. Moreover, an initiative of offering a medical school in Southern Luzon State University the soonest possible will surely end the scarcity of health professionals in the province.

The province of Quezon has more to address in economic dynamism to make it more competitive and maintaining its compliance to implementing rules and standards.

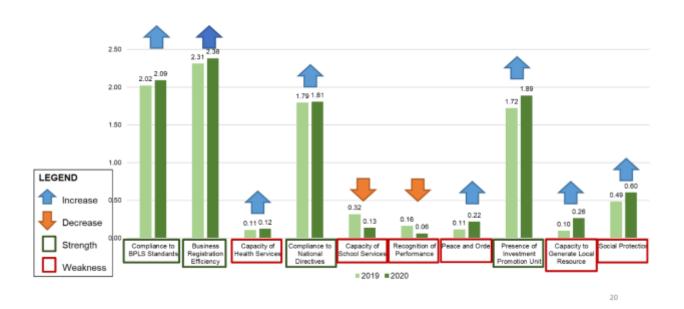


Figure 5. Average Scores of each Indicator in Government Efficiency of Quezon Province

Infrastructure

Well-developed infrastructure helps in developing economic performance and enabling globalization. This opens more business opportunities and investments. Infrastructure is as well a main driver to boost trade and industry as the improvement in infrastructure (i.e., the road network, air transport, railways, ports, and logistics) have contributed to the increase of trade flows. Moreover, the presence of information and communications technology have showed significant impact to trade, as the number of telephone lines, mobile phones, broadband access, internet users, and internet servers are found to have positive effect on trades-both for exports and imports. This indicates that direct communications through the help of emerging technologies have greater contribution to access globalization (Ismail, N.W and Mahyideen, J.M., 2015).

With respect to infrastructure, 12 out of 41 cities and municipalities of Quezon fall above 50th percentile rank, while the remaining 29 cities and municipalities are below the top 50% of local government units nationwide. This shows that 50% of the cities and municipalities nationwide is outperformed by Infanta, Mauban, Real, Tagkawayan, Alabat, Quezon, Sampaloc, Gumaca, Lucban, Sariaya, Candelaria, and San Antonio. With 12 percentage-point increase from 29% in 2019 CMCI findings, the municipalities of Pagbilao, Tiaong, Calauag, Guinayangan, and Polillo joined the top 50% of municipalities in the country with respect to infrastructure development in the recent 2020 CMCI survey rankings. As presented in the GIS Map, infrastructure development should be considered both in northernmost and southeasternmost of Quezon.

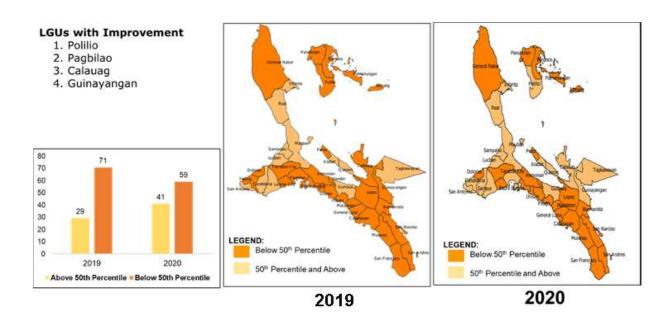


Figure 6. Percentile Ranking of Cities and Municipalities of the Province in Infrastructure Pillar

Looking at the different indicators that constitute infrastructure, the province has scored better in only 2 out of 10 indicators (i.e., availability of basic utilities and distance to ports) leaving other indicators behind, which made the province less competitive in infrastructure compared to other provinces nationwide. The province has still to embrace infrastructure development to build more connections and easy access on trade and industries- road network, better internet connectivity, etc. Though development has to deal more time, a constant improvement leads to a lifetime change. Different initiatives have started along with major projects of the provincial government to boost tourism industries and to indulge more on business investments.

As reported in 2018, construction of the bridge connecting Lopez to Quezon had been started and was seen to shorten the travel time to Quezon province's Pacific shoreline and islands town of Perez and Alabat. Once completed, the Lopez to Quezon bridge would be the province's longest bridge spanning to some 800 meters. This bridge infrastructure will benefit not only the townfolks and spur economic development in the town but also redound to benefit the province's eastern districts.

Recently, the Governor-elect Danilo Suarez, Sr., eyed infrastructure and tourism growth in Quezon. In this way, the government geared to start an all-out effort for the economic development in the province. He stated that tourism is a major strategy particularly in the Northern part of Quezon such as the Polillo group of islands, comprising the towns of Polillo, Burdeos, Patnanungan, Panukulan, and Jomalig. He planned to strengthen the northern cluster to realize the tourism potential of the mainland towns of Real, Infanta, and General Nakar. He added that he will also look into funding allocations for roads, bridges and ports for the province in pursuit of the realization of Quezon as the next frontier of development in Luzon. He also stressed out the need for 24/7 electricity supply in the province, specifically its island towns, to initiate new development plans with long-lasting domestic, as well as national benefits.



Average Score of each Indicator in Infrastructure Pillar of Quezon Province

Figure 7. Average Scores of each Indicator in Infrastructure of Quezon Province

Resiliency

The resilience pillar is a new addition of the main pillars of competitiveness. The very timely consideration of assessing the level of resilience has set a new direction of building competitive cities and municipalities. Resilience has been defined in a variety of ways and in different contexts. According to Moberg and Simonsen (2014) and cited by Lesaca (2018), resilience is the "capacity to deal with changes, shocks, and stresses while at the same time growing and developing. It is about tolerance and adopting to the effects brought about by such shocks and stresses". Being resilient leads to finding adaptive strategies that secure the needs of the community to not be paralyzed in times of crisis. It also ensures that cities or municipalities can easily overcome the challenges brought about by unexpected crisis and bring back everything to normal the soonest time.

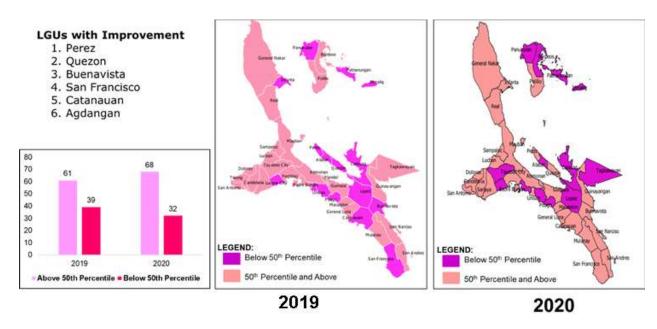


Figure 8. Percentile Ranking of Cities and Municipalities of the Province in Resiliency Pillar

As the Philippines is one of the top countries in the world at risk of climate-related disasters, Quezon Province is one of the provinces with worst experience. In fact, as Typhoon Glenda lambasted the Philippines in 2014, disaster officials considered Quezon province as the worst-hit with 10 casualties. Most were killed by toppled trees, walls and posts and by drowning. Another devastating typhoon Tisoy in 2019 challenged the people of Quezon as 32 municipalities were under Signal number 3. There were 13,206 families comprising of 27, 618 individuals evacuated from various towns of the province; however, there were no reported casualties (*Source: https: www.quezon.gov.ph*). Moreover, the Philippines is currently facing a pandemic which is identified as Corona-Virus Disease 2019 (CoViD-19). As of the record, there were at least 1.6 million individuals in the Philippines affected by the said disease and at least 17,000 of whom are from Quezon province (*Source: https://doh.gov.ph*). The government together with its constituents has been doing their best to mitigate the cases and to find the cure of the deadly disease. However, vaccination is already conducted to different areas in the country to provide protection against the virus and to lessen the number of cases.

Both disaster-related phenomenon and health-related challenges have tested the resilience of the Philippine government and the people. The level of resilience would be high enough if the level of preparedness is as well heightened.

As shown in Figure 8 above, Quezon province has shown a better performance in Resiliency as there are 25 out 41 cities and municipalities fall above 50th percentile rank based on the 2019 CMCI survey rankings. This means that these 25 cities and municipalities of Quezon are more resilient compared to 50% of the cities and municipalities nationwide. This number is even improved as 7 percentage-point increase from 61% in 2019 CMCI survey has brought the province to have remarkable performance in resiliency based on 2020 CMCI findings. As can be seen in the GIS map, the light color dominates the whole graph

and the remaining municipalities which fall below the top 50% performing cities and municipalities are mostly from the central part of Quezon including some areas in Polillo group of islands.

The Southern Luzon State University (SLSU) has also its initiative to maintaining and improving the resiliency of Quezon. In early 2014, CERT is formulated and is organized by volunteered faculty members of SLSU to conduct seminars and trainings on disaster preparedness to different local government units in the province.

Considering the different indicators that measure resiliency level, Quezon province got a very promising standing to almost all of the indicators as there are 7 out of 10 indicators with highly competitive scores. This challenged the province to maintain its level of resilience and also looked into consideration of developing adaptive capacities and strategies in times of disasters or health crisis.

Based on the section 21 of RA No.10121, the Local Risk Reduction Management Fund will be provided with the amount not less than five percent (5%) of the estimated revenue from regular sources to support disaster risk management activities such as pre-disaster preparedness programs including training, purchase of disaster response and rescue equipment, supplies and medicines, and other disaster-related concerns. This means that budget for DRRMP has guidelines to follow and disbursement of funds is under policies set by the Department of Budget and Management.

Emergency infrastructure is also a challenge of Quezon province and it might be an implication of few hospitals and health centers available in the province. Disaster-related trainings and incentivized workshops on disaster-related activities would be an answer to encourage additional volunteers to be trained and be part of the rescue teams.



Figure 9. Average Scores of each Indicator in Resiliency Pillar of Quezon Province

CONCLUSION AND RECOMMENDATION

This section presents the conclusions and recommendations based on the results and discussions of the study.

A. Conclusion

- 1) Majority of LGUs in Quezon province are above 50th percentile rank in 2020 competitiveness index nationwide as compared to 2019 CMCI result
- 2) The province showed better level of resiliency; however, most of the LGUs in Quezon fall below the 50th percentile rank in terms of government efficiency and infrastructure.
- 3) Based on the GIS mapping, it was noted that proximity of the LGU to Lucena, Tayabas, Laguna and Batangas may contribute to the CMCI ranking; however further studies should be conducted to support this claim.

B. Recommendation

Based on the conclusions of the study, the following recommendations per pillar and indicator were drawn:

Economic Dynamism

Establishment of industrial park, economic zone and agri-tourism sites may be considered by the provincial administrators to increase the employment, financial deepening and productivity. The province may also offer technical and vocational courses, with equal opportunities for men and women, to lessen unemployed individuals. Encourage more financial and microfinance institutions to establish branches to increase financial deepening. Academe and private institution may help registered firms and businesses to conduct marketing and advertising trainings and seminar-workshops to improve the gross sales and productivity. The province may support and allocate funds on agri-business initiatives which may help the economic dynamism.

Government Efficiency

Updating and reviewing the Comprehensive Development Plan (CDP) of each LGU may be considered as one of the compliance measures to national directives. Each LGU should also be reminded on the compliance with the BPLS Standards to provide more efficient and effective management and processing new business. The province should look into the number of policemen/law enforcers assigned to each LGU.

Infrastructure

Additional ports maybe constructed to boost trade, industry and tourism in the province. The province should look into the problems and factors affecting the poor service of providing basic utilities - water, electricity and somehow provide an alternative solution on these hindrances to mitigate basic utilities concerns. If budget may allow, constructions of new hospitals with complete equipment maybe considered

to improve health services in the province. Administrators should examine the feasibility of satellite-based connectivity to have a better internet and mobile connection.

Resiliency

Remind some LGUs to have an office that will manage and monitor its Comprehensive Land Use Plan (CLUP). Additional funds may be allocated for DRRMP. More trainings for responders maybe conducted to make the province more resilient in dealing with the negative impact of environmental hazards. The LGU should continue strengthening and capacitating

REFERENCES

- [1] Alcayna T, Bolletino V, Dy P, Vinck P (2016). Resilience and Disaster Trends in the Philippines: Opportunities for National and Local Capacity Building. PLOS Currents Disasters. First edition. doi: 10.1371/currents.dis.4a0bc960866e53bd6357ac135d740846
- [2] Belen, Gideon (2018). DPWH starts building Quezon's longest bridge. Retrieved from PTV News
- [4] Brooks, N., et.al (2005). The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation. Elsevier Ltd. doi: 10.1016/j.gloenvcha.2004.12.006
- [5] Congressional Policy and Budget Research Department (2019). 2018 Economic Performance and 2019 Economic Prospects
- [6] Department of Trade and Industry (2019). Cities and Municipalities Competitiveness Index Ranking. Retrieved from www.dti.gov.ph
- [7] Lesaca, Bertrand Alexander (2018). Assessing Disaster Resilience of Household Access to Water for Domestic Use in Select Philippine Rural Municipalities Chapter 1. Retrieved from https://www.researchgate.net/publication/326478912
- [8] Manila Standard (2019). Governor-Elect Suarez Eyes Infrastructure, Tourism Growth in Quezon. Retrieved from https://www.manilastandard.net/home-design/commercial/296099/governor-elect-suarez-eyes-infrastructure-tourism-growth-in-quezon.html
- [9] Prior, Chris (2015). "Competitive Governments". Retrieved from

http://www.competitivegovernment.

- [10] Porter, Michael (2018). Competitive Advantage: Creating and Sustaining Superior Performance. Retrieved from https://blog.12min.com/competitiveadvantage
- [11] Torrisi, Gianpierro (2009). Public Infrastructure: definition, classification, and measurement issues. Retrieved from https://www.researchgate.net/publication/23935428
- [12] Villamejor-Mendoza, Maria Fe (2020). Competitive Cities: Implications for better public service, Policy Design and Practice, DOI:10.1080/25741292.2020.1832741