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Competitiveness Performance Assessment of the Local Government Units in Lanao Del Norte - Philippines

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ABSTRACT

The Cities and Municipalities Competitiveness Index (CMCI) survey is conducted annually to assess the competitiveness of cities and municipalities based on different indicators. The survey is done with the assistance of the Regional Competitiveness Committees (RCCs) consisting of the public and private sectors as well as academia. The College of Business Administration and Accountancy (CBAA) now known as the College of Economics, Business, and Accountancy (CEBA) has been the academic partner of DTI-Lanao del Norte in the annual conduct of the CMCI survey by assisting the 22 municipalities of Lanao del Norte. This study was conducted to assess whether the assistance provided by the academic partner of DTI-LDN has been effective and instrumental in the competitiveness performance based on the LGUs score on the different pillars measured using CMCI criteria designed by the National Competitiveness Bureau. Using the test for difference in means, the results show that there is significant improvement in the LGU overall performance and in terms of economic dynamism, government efficiency, and infrastructure. Using panel analysis, economic dynamism of the municipalities of LDN is significantly driven by government efficiency and infrastructure.
Keywords: CMCI, Competitiveness, Economic Dynamism

INTRODUCTION

Cities and Municipalities Competitiveness Index (CMCI) is an annual ranking survey conducted to assess the competitiveness of cities and municipalities across the Philippines. The conduct of CMCI aims to improve local competitiveness among participating cities and municipalities in order to attract investors (www.dti.gov.ph). Before CMCI was launched in 2011, the Philippines lacked a regular and uniform mechanism for compiling indicators that capture the performance of the local governments. This implies that there is no specific survey or data bank that generates local data except for the regional and national data. This gap gives birth to CMCI.

In the CMCI survey, LGUs are encouraged to submit data based on the indicators of the five (5) convergent pillars. Originally, the instrument included only three (3) pillars namely: Economic dynamism, Government Efficiency, and Infrastructure. In response to the need for an improved measure of competitiveness, a pillar on Resiliency was added in 2017 and the Innovation pillar which is the newest CMCI pillar was introduced in 2021. The Economic dynamism pillar seeks to capture the expansion of businesses and industries, as well as a high level of employment. While Government efficiency pillar refers to the quality and reliability of government services in providing effective and sustainable productive expansion. The Infrastructure pillar is the physical building block that connects, expands, and sustains a community and its surroundings in order to provide goods and services. Whereas Resiliency pillar demonstrates how local governments prepare their locations, businesses, and people to respond to various types of shocks and ensure long-term growth. Lastly, the Innovation pillar covers the creation

and development implementation of new products and processes or services with the aim of improving efficiency, effectiveness, and competitive advantage. Each pillar consists of ten (10) indicators, and therefore, the index provides a detailed view of the performance of an LGU.

The CMCI survey is conducted annually with the assistance of the Regional Competitiveness Committees (RCCs) consisting of the public and private sectors as well as academia. The academic partner is tasked to encourage each LGU to participate in the CMCI survey, assist the LGUs in completing the survey by tracking their progress, and help in data validation to ensure that the submitted data are timely, accurate, and reliable. Over the years, the College of Business Administration and Accountancy (CBAA) now known as the College of Economics, Business, and Accountancy (CEBA) of MSU-IIT has been tapped by the DTI-Lanao del Norte (LDN) as the academic partner in the yearly conduct of survey for the 22 LGUs (Municipalities) of LDN. At present, the academic partner, the focal team is composed of the faculty members from the Department of Economics. When the CMCI survey was launched, not all LGUs of the province of Lanao del Norte eagerly participated. A few did not bother to submit needed data and be included in the ranking. For one, LGUs did not understand how the data capture sheet (survey instrument) has to be filled up. On the other hand, they found it taxing to secure supporting documents for the validation. These made them too reluctant to get involve.

Lately, the number of participating cities and municipalities in the CMCI survey continually increased. In particular, all of the municipalities of Lanao del Norte already submitted themselves to the CMCI survey since 2015, with the assistance of the field enumerators and the academic team from MSU-IIT. This paper will be conducted to determine if the assistance provided by the academic partner has been effective and instrumental in the competitiveness performance of the concerned LGUs of Lanao del Norte.

In addition, one of the pillars of CMCI specifically Economic dynamism illustrates how attractive is the municipality to investor, hence it can be used as basis in deciding as to where to locate or put up the business. Based on the existing literatures, Government efficiency has shown to have a positive effect on economic performance (Rodrik, Subramanian and Trebbi 2004; Rodriguez-Pose and Zhang 2019). While Infrastructure pillar has a positive effect on Economic dynamism mainly because of better infrastructure reduces transaction costs, hence creates more business opportunities (Munir, Elahi, & Khan, 2018). Whereas Resiliency pillar is expected to a positive effect on productivity based on the findings of Di Falco and Chavas (2008) in agroecosystem productivity and Simonet et al (n.d.) on economic growth. With this, the team would like to determine as to how the other pillars of CMCI such as Government Efficiency, Infrastructure, and Resiliency will affect the Economic dynamism pillar of the 22 Municipalities of LDN.

RESEARCH METHOD

Data, Scope, and Limitation

The study covers the 22 Municipalities of LDN with the period from 2017 to 2021 since the pillar of resiliency was introduced in 2017. The data of each municipality were obtained from the CMCI website. Score is used over rank because the latter is highly influenced by the performance of other municipalities, hence not reflective of what the municipality does possess and does not possess. Innovation pillar was not included because it was considered in the CMCI score only starting this year.

Method of Estimation
The tests of differences between means on the score of municipalities on each CMCI pillars were performed to assess whether the assistance provided by the academic partner of DTI-LDN has been effective and instrumental in the competitiveness performance of the concerned LGUs in LDN.

The study also applied linear regression for panel data to determine the effect of government efficiency, infrastructure, and resiliency pillars on economic dynamism. The Hausman test was conducted showing panel Random Effects Model is more appropriate over Fixed Effects Model. Diagnostic tests on cross-sectional dependence, heteroskedasticity, and serial correlation were performed. The tests indicated that the model suffers from cross-sectional dependence, heteroskedasticity, and serial correlation. Thus, Panel Corrected Standard Errors estimation was used to address the foregoing econometric issues.

RESULTS

Table 1. Two-sample t- test for Overall Scores of 22 LGUs

	Overall Score			
Group	Obs	Mean	Std. Err.	Std. Dev.
2017	22	24.752	2.502	11.736
2021	22	32.428	0.828	3.885
combined	44	28.59	1.428	9.471
Diff		-7.676	2.636	
t-value		-2.912		
df		42		

Table 1 presents the difference in means of the overall score of the 22 LGUs of LDN between 2017 and 2021 and it shows that the two means are statistically significant with a t-value of -2.912. This implies that there is a substantial increase in the overall mean score of the 22 LGUs in 2021 in general compared to their overall mean score in 2017.

Table 2. Two-sample t- test for Economic Dynamism and Government Efficiency

	Economic Dynamism		Government Efficiency	
Group	Mean	Std. Dev.	Mean	Std. Dev.
2017	2.761	0.96	7.395	4.039
2021	4.719	1.337	9.354	1.614
Comb.	3.74	1.518	8.374	3.197
diff	-1.959		-1.96	
t-value	-5.584		-2.113	
df	42		42	

As shown in Table 2, the difference in the means of score for both Economic dynamism and Government Efficiency pillars between 2017 and 2021 are found to be significant with a t-value of -5.584 and -2.113, respectively. This suggests that on the average, the LGUs able to improve its score on these two pillars substantially in 2021 compared to 2017.

Table 3. Two-sample t- test for Infrastructure and Resiliency

	Infrastructure		Resiliency	
Group	Mean	Std. Dev.	Mean	Std. Dev.
2017	4.414	1.548	10.511	6.221
2021	5.407	1.114	12.924	1.32

combined	4.91	1.424	11.718	4.609
Diff	-0.992		-2.412	
t-value	-2.441		-1.779	
Df	42		42	

Similarly, there is a significant difference in means of the score of LGUs for the infrastructure pillar with a t-value of -2.441. This implies that LGUs able to significantly improve its performance for this pillar in 2021 compared to 2017. For the resiliency pillar, the difference between the means equivalent to -2.412 indicate that there is an improvement in the score of LGUs in 2021 compared in 2017, however, the data shows that there is not enough statistical evidence that the improvement is significant.

Table 4. PCSE Regression Result on the effect of Government Efficiency, Infrastructure, and Resiliency on Economic Dynamism, 2017-2021

Variable	Coefficient
Government Efficiency	0.199***
Infrastructure	0.475***
Resiliency	-0.013
Constant	-0.082
N	110
Number of groups	22
Number of periods	5

Level of significance: 1% ***, 5%**, 10% *

Table 4 shows the result of the regression. It has a total of 110 observations for all 22 Municipalities for a duration of 5 years from 2017 to 2021. The result of the regression presented in Table 6 shows that both scores in government efficiency and infrastructure pillar are significant at 1% level. Both coefficients are positive indicating a positive effect on Economic dynamism score. This implies that an increase in the scores of municipalities in both government efficiency and infrastructure pillars will improve their economic dynamism score. The effect of government efficiency on economic dynamism is similar to the findings of D'lonsod et. al (2019) and Rodriguez-Pose and Zhang (2019) that an efficient government provides quality and reliable services hence promotes economic activity that increases productivity and producing quality output.

DISCUSSION

The effect of government efficiency on economic dynamism is similar to the findings of D'lonsod et. al (2019) and Rodriguez-Pose and Zhang (2019) that an efficient government provides quality and reliable services hence promotes economic activity that increases productivity and producing quality output. While the effect of infrastructure on economic dynamism is consistent with the findings of Elahi and Khan, 2018. D'lonsod et. al 2019; Rodriguez-Pose and Zhang 2019 where good infrastructure causes a positive impact in the economy and people's lives because it makes doing business cheaper and easy thus improving productivity.

However, the effect of resiliency on economic dynamism was found to be insignificant which is consistent with the findings of D'lonsod et. al (2019) on their study on the drivers of economic dynamism of all cities in the Philippines. But, the absence of a statistically significant does not absolutely mean that the resiliency variable has no effect on economic dynamism.

CONCLUSION

One of the objectives of this study is to determine whether the team as the academic partner of DTI-LDN in helping the LGUs within LDN in completing the survey in submitting timely, accurate, and reliable data has been effective and instrumental in their competitiveness performance in terms of their score on different pillars. Using the test for difference in means, the results suggested that LGUs able to significantly improve its performance based on the overall score, and scores on the following pillars: economic dynamism, government efficiency, and infrastructure. This implies that the academic partner has been effective in terms of assisting the LGUs in filling-up the local data capture sheets and ensuring the accuracy and timeliness of submission.

In addition, this study seeks to analyze the drivers of economic dynamism using panel data analysis. Results pointed out that both government efficiency and infrastructure pillars are significant in influencing economic dynamism. Hence, the LGUs must seek to improve their performance on the indicators used for these pillars as an increase in the score of each indicator will have a significant increase in the score of economic dynamism. This will make municipalities create a more-business friendly environment, hence attracting more investors.

Lastly, the resiliency pillar turned out not statistically significant in influencing economic dynamism, however, it does not conclude that the absence of its effect is absolute. Based on this result, the researchers recommend to the CMCI Competitiveness Bureau to review and enhance the indicators used in measuring resiliency to effectively measure and capture resiliency.

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