Do cities compete? An analyses of the Philippine Cities and Municipalities Competitiveness Index.

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ABSTRACT

Do cities compete? A review of literature on this question reveal two contrasting views. Krugman(1996) holds that cities do not compete per se, they only strive to present the best attributes for the competitive success of industries located in them. On the other hand, Porter (1996) argues that cities do compete, for example, for a bigger share in investments and public funds. In the Philippines, this question has been lingering in our minds since about two decades ago, starting with the AIM Policy Center PCCR Project (2001-2009). Currently, the DTI handles the CMCI, which was started by the the NCC in 2011, as an annual event. The current CMCI is anchored on the competitiveness framework of Porter (2003).

This research explores answers to two questions: (1). What can the CMCI tell us about the nature of “competitiveness” among cities and towns in the Philippines? (2). How can the LGU use the CMCI data to improve its CMCI rank? The analysis is limited on two groups of LGUs – the Highly Urbanized Cities (HUC) and the Component Cities – which were analysed separately. In order to answer the first question, the inter-relationship pattern among the 40 indicators was done using 2016 and 2017 (analysed separately) score data (https://cmci.dti.gov.ph). Data were subjected to Principal Component Analysis (PCA), Exporatory Factor Analysis (EFA), and Spearman Correlation test using Stata TM. In order to answer the 2nd question, Tuguegarao City was used as the object LGU of the study. The raw CMCI data for Tuguegarao was obtained from the CMCI secretariat. First, the raw CMCI data was examined for any probable questionable statistic. Raw data with low metrics were noted and cross-referenced with the insights from the PCA and Spearman correlation test, in order to have a brief of possible areas of improvement that can be submitted to the governing and legislative bodies of Tuguegarao, through the provincial and regional DTI offices.

The results of the study are as follows:

(1). The PCA and EFA Analyses show that:

a. Factor 1, accounting for the largest variation in scores and denoting indicators that can best separate competitive cities from less-competitive ones, comprised about 10-12 indicators that are shared both by HUC and CC. Of the 10-12 indicators, about 4-5 each are under two pillars – Economic Dynamism and Government Efficiency. The rest of indicators are from the other two pillar. An

implication of the results of these tests is that, although each of the four pillars are represented by at least 1 indicator in Factor 1, the majority of the indicators come from Economic dynamism and government efficiency.

b. There are about 4-5 indicators may be subjected to removal, although that is not advisable at this time. We probably need a 5-year running data first before changing the indicators.

(2). Examination of the raw data for Tuguegarao City show that:

a. There is an immediate need to review and correct the data (which then should be reported back to CMCI). The review should include “root cause analyses” to have a more reliable dataset. CIP: time to get a building permit in minutes: 2016: 65 minutes; 2017: 548 minutes.

b. There are immediate actions that the City administrators can do.

CIP 1: The last update of the CDP was in 2001!

CIP2. Local revenue in 2017 was about 60% less than that in 2016, although collections in business and real property taxes increase by 50%. What happened?

c. There are rooms for improvement seen,

CIP: PhilHealth Coverage: Est population : 160,000: PhilHealth Coverage : 53%; Compared to Santiago City; Pop: 110,000; PhilHealth Coverage: 80%

The CMCI bureau of DTI-2 has just conducted a workshop on the analysis of CMCI data last 30-31 May 2019, participated in by LGU representatives (mostly from the planning division) and participants from 7 colleges and universities in the region. Preliminary analyses were done and work out per city/municipality with the LGU representative and the school representative for that locality. In the case of Tuguegarao, I and the LGU representative sat together in analysing the data, and hopefully a full report will be submitted to Tuguegarao by August in the Tuguegarao workshop that the LGU representative is going to organize for the city(probably in tandem with the updating of their development plans).

INTRODUCTION

Do cities compete? A review of literature on this question reveal two clarifications on this issue. Krugman(1996) holds that cities do not compete per se, they only strive to present the best attributes for the competitive success of industries located in them. On the other hand, Porter (1996) argues that cities do compete, for example, for a bigger share in investments and public funds. Before diving into details of the above issue, perhaps it would be useful to briefly look into the concept of competitiveness. Like any other concept, we can feel competition or perceived manifestations of being competitive, however though, it is so difficult to come up with one operational definition of it. It is a fair assumption to treat competition as a game, involving strategies, plans, and activities, executed towards the end goal - to win or to be the best in the group. Here competitiveness is viewed as both the way the game is played and the result of the play.

The Philippine government recognizes, if not takes for granted, being competitive is synonymous to survival, taken within the context of globalization. From political leaders in all levels of hierarchy, media commentators and analyst, businessmen and entrepreneurs, to academics of educational institutions, the term is flows freely vocally and oftentimes so passionately, that Darwin would cry enviously with lament in his grave. Our country takes the issue of competitiveness so seriously – clinging to the premise, or perhaps “hope”, that there can be room for improvement. Indeed we heed that advise to study our competitive situation and implements policies to enhance our competitiveness and avoid condemnation to a future of stagnation and marginalization (World Economic Forum, 2014).

In the 2019 IMD - World Competitiveness report, the Philippines placed 46th out of 63 countries, rising four places from 2018. A quite positive outlook, so it seems, considering that this seems to be a clear rebound from a nine-place fall in 2018. However, the 2019 rankings still shows that the Philippines as being next to last in Asia, the last being Mongolia.

In the Philippines, LGUs compete, even with each other, in as much as they have s, but differ in assets and resources. As seen in other countries, some may be more competitive in the new knowledge-intensive industries and thus to develop new strengths, while some will struggle and will need concerted policy and action (and even perhaps cooperative response from “competitor-LGU” to help them move forward (Snowdon & Stonehouse, 2006) (Sarturi, Vargas, Boaventura, & Santos, 2016) (Trainor, 2011). . .

Our economic and trade agencies religiously track reports on our country’s competitiveness, especially that of the World Economic Forum’s global competitiveness index and the IMD World Competitiveness Yearbook (WCY). The AIM Policy Center (now named as the AIM Rizalino S. Navarro Policy Center for Competitiveness) initiated the Philippine Cities Competitiveness Ranking Project (2001-2009) with the aim of assessing the competitiveness of key Philippine cities through the gathering of metrics assumed to mirror the concept and measure it. This activity was later on assumed by the National Competitiveness Council of the Philippines in 2011, with a different kind of index but adapting some of the existing parameters in the indices used by WEF, IMD, and the AIM-PCCRP. The current

Cities and Municipalities Competitiveness Index (CMCI) - anchored on the competitiveness framework of Porter (2003) is currently handled by the Department of Trade and Industry (DTI). The CMCI is the object of this current research.

This research explores answers to two questions:

(1). What can the CMCI tell us about the nature of “competitiveness” among cities in the Philippines?

(2). How can the LGU use the CMCI data to improve its CMCI rank?

METHODOLOGY

The research design is patterned after a study of the index use by the IMD World Competitiveness Yearbook (WCY). (Stevans, Neelankavil, Mendoza, & Shankar, 2012).

The analysis is limited on two groups of LGUs – the Highly Urbanized Cities (HUC) and the Component Cities – which were analysed separately. In order to answer the first question, the inter-relationship pattern among the 40 indicators was done using 2016 and 2017 (analysed separately) score data (https://cmci.dti.gov.ph). Data were subjected to Exporatory Factor Analysis (EFA) using Stata ™. Cluster Analysis using MVSP ™ was also done to see if there is a pattern similarity within each group.

In order to answer the 2nd question, Tuguegarao City was used as the object LGU of the study. The raw CMCI data for Tuguegarao was obtained from the CMCI secretariat. First, the raw CMCI data was examined for any probable questionable statistic. Raw data with low metrics were noted and cross-referenced with the insights from the PCA and Spearman correlation test, in order to have a brief of possible areas of improvement that can be submitted to the governing and legislative bodies of Tuguegarao, through the provincial and regional DTI offices.

Results and Discussion

The results of the study are as follows:

(1). The Exploratory Factor Analyses (Table 1) show that:

a. Factor 1, accounting for the largest variation in scores and denoting indicators that can best separate competitive cities from less-competitive ones, comprised about 10-12 indicators that are shared both by HUC and CC. Of the 10-12 indicators, about 4-5 each are under two pillars – Economic Dynamism and Government Efficiency. The rest of indicators are from the other two pillar. An implication of the results of these tests is that, although each of the four pillars are represented by at least 1 indicator in Factor 1, the majority of the indicators come from Economic dynamism and government efficiency.

b. The variables in Factor ! to 11 accounts for about 80% of the variation in values. The variables in these factors can used as a guide by the LGU to prioritize which weak characteristics to improve in the condition of limited funds and resource – better ROI in terms of higher scores.

c. There are about 4-5 indicators may be subjected to removal, although that is not advisable at this time. We probably need a 5-year running data first before changing the indicators.

(2). Cluster analyses of HUC for 2018 data show that:

a. Quezon City and Manila – the top 2 – are a class clearly different from the rest.

b. We expect Pasay and Davao to be group together, being No 3 & 4 ; but Davao paired with Cebu (9) and Pasay grouped with Makati(6) and Pasig (9) :

c. Cagayan de Oro (9) and wells as Bacolod (13) each stand unique

d. Iloilo (9) and Baguio (21) are a pair possessing similar characteristics though Baguio is 11 ranks below; suggesting on a positive note that Baguio could rise higher with Iloilo as a model to bridge the gap in their differences.

e. All the rest have group together at the level of about 3.5 Euclidian distance, showing in general, the difference between the top 10 from the rest of the pack (with the exception of Baguio and Iloilo, and Muntinlupa that joined the pack).

f. We are still processing the data for CCs and the municipalities/

(2). Examination of the raw data for Tuguegarao City show that:

a. There is an immediate need to review and correct the data (which then should be reported back to CMCI). The review should include “root cause analyses” to have a more reliable dataset. CIP: time to get a building permit in minutes: 2016: 65 minutes; 2017: 548 minutes.

b. There are immediate actions that the City administrators can do.

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Policy Implications/Recommendations of the Study;

1. To DTI-CMCI Secretariat/Data handlers/Data gatherer-encoders

It is obvious that despite the efforts of DTI-CMCI and the partner institutions in gathering and encoding the data, questionable data still exist. This indicates that we still have to do more work to ensure accuracy of data gathering and care in handling to lessen if not eliminate data errors. Perhaps a computer software/program incorporating AI and machine learning could be developed that can detect or flag-down possible data errors.

Raw data used in the ranking must also be sent back to the LGU concerned for validation and database addition purposes.

2. To RCCs

Institutionalize an initiative for an academe-LGU-DTI (preferably with a MOA), partnership in the storage, handling, and analysis of data. In the case of RCC in Region 2, academe-LGU partnerships have been forged, and capacity-building workshops on the storage, handling, and analysis of data have been held in the last two years.

Key personnel, of regional DTI and partner academic institutions, must be provided training in data processing and use of statistical/analytical tools needed to offer the LGus the best possible strategies for their development plans.

The CMCI bureau of DTI-2 has just conducted a workshop on the analysis of CMCI data last 30-31 May 2019, participated in by LGU representatives (mostly from the planning division) and participants from 7 colleges and universities in the region. Preliminary analyses were done and work out per city/municipality with the LGU representative and the school representative for that locality. In the case of Tuguegarao, I and the LGU representative sat together in analysing the data, and hopefully a full report will be submitted to Tuguegarao by August in the Tuguegarao workshop that the LGU representative is going to organize for the city(probably in tandem with the updating of their development plans).

3. To the LGU of Tuguegarao and the rest of the country,
   Institutionalize and provide for the following:
   a. Designated LGU office and personnel in charge of CMCI matters, including data validation
   b. Include DTI and partner academe/institution in the formulation of the LGU development strategies that incorporate CMCI findings.
   c. Do an annual post-ranking data analysis and produce a brief on the state of its competitiveness standing for the use of stakeholders. Such data analysis and information materials must be produce in print and available for viewing in the LGU website.

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4. To the present researchers, prepare a full report (this paper is still a rough draft) to be submitted to DTI / CMCI, and one specifically to the mayor of Tuguegarao, coursed through and endorse by the provincial and regional DTI, with an expression of our availability to start a CMCI database in the towns and as resource persons in the towns' crafting of development plans.

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Table 1

Highly Urbanized Cities (HUC)		Component Cities (CC)	
2018	2017	2018	2017
FACTOR 1	FACTOR 1	FACTOR 1	FACTOR 1
Health	Health	Health	Health
Education	Education	Education	Education
Transportation Vehicles	ATM	Transportation Vehicles	ATM
Financial Technology Capacity		Financial Technology Capacity	Transportation
Local Economy Structure	Financial Institutions	Local Economy Structure	Financial Institutions
Safety Compliant Business	Local Economy Size	Safety Compliant Business	Local Economy Size

Financial Deepening	Capacity of Health Services	Increase in Employment	Capacity of Health Services
Presence of Business and Professional Organizations	Social Protection	Financial Deepening	
Capacity of Health Services	Business Registration Efficiency	Capacity of Health Services	
Social Protection		Social Protection	
Emergency Infrastructure		Employed Population	
Employed Population			
FACTOR 2	FACTOR 2	FACTOR 2	FACTOR 2
Local Economy Size	Jobs	Capacity of School Services	Jobs
Increase in Employment	Cost of Doing Business	Recognition of Performance	Cost of Doing Business

Accommodation Capacity			Compliance to Nat'l Directives
FACTOR 3	FACTOR 3	FACTOR 3	FACTOR 3
Productivity	Most Competitive LGU awardee	Presence of Investment Promotion Unit	Police to Population
Capacity of School Services	Transportation	Business Registration Efficiency	Business Groups
Recognition of Performance		Sanitary System	Accommodations
FACTOR 4	FACTOR 4	FACTOR 4	FACTOR 4
Budget for DRRMP	Accommodations	Peace and Order	Availability of Utilities
Sanitary System	Connection to ICT	Accommodation Capacity	

Compliance to National Directives	Business Groups		
Availability of Basic Utilities			
FACTOR 5	FACTOR 5	FACTOR 5	FACTOR 5
Cost of Living	Infrastructure Investment	Compliance to National Directives	Local Economy Growth
Capacity to Generate Local Resource	Cost of Living	Disaster Risk Reduction Plan	Productivity
	LGU collected tax : LGU revenues	Local Risk Assessments	
	Road Network		
FACTOR 6	FACTOR 6	FACTOR 6	FACTOR 6
Land Use Plan	Productivity	Distance to Ports	LGU collected tax : LGU revenues

Disaster Risk Reduction Plan	Presence of Investment Promo Unit	Emergency Infrastructure	
Local Risk Assessments	Compliance to BPLS standards		
FACTOR 7	FACTOR 7	FACTOR 7	FACTOR 7
Presence of Investment Promotion Unit	Availability of Utilities	Availability of Basic Utilities	Cost of Living
		Utilities	Infrastructure Investment
FACTOR 8	FACTOR 8	FACTOR 8	FACTOR 8
Peace and Order	Distance to Ports	Cost of Doing Business	Capacity of Schools
Distance to Ports		LGU Investment	
		Annual Disaster Drill	
		Budget for DRRMP	
FACTOR 9	FACTOR 9	FACTOR 9	FACTOR 9
Local Economy Growth		Road Network	Road Network

Information Technology Capacity		Information Technology Capacity	
FACTOR 10		FACTOR 10	FACTOR 10
Compliance to Business Permits and Licensing System (BPLS) Standards		Local Economy Size	Distance to Ports
		Local Economy Growth	
Factor 11		Factor 11	
LGU Investment		Land Use Plan	
		FACTOR 12	
		Compliance to Business Permits and Licensing System (BPLS) Standards	

		FACTOR 13	
		Early Warning System	
NEGATIVE FACTORS (DO NOT MATTER)	NEGATIVE FACTORS (DO NOT MATTER)	NEGATIVE FACTORS (DO NOT MATTER)	NEGATIVE FACTORS (DO NOT MATTER)
Utilities	local economy growth	Cost of Living	Business registration efficiency
Cost of Doing Business	capacity of schools	Productivity	Compliance to BPLS standards
Business Registration Efficiency	police to population	Presence of Business and Professional Organizations	Presence of Investment Promo unit
Road Network	Compliance to nat'l directives for LGU	Capacity to Generate Local Resource	Most competitive LGU awardee
			Social Protection
			Connection to ICT

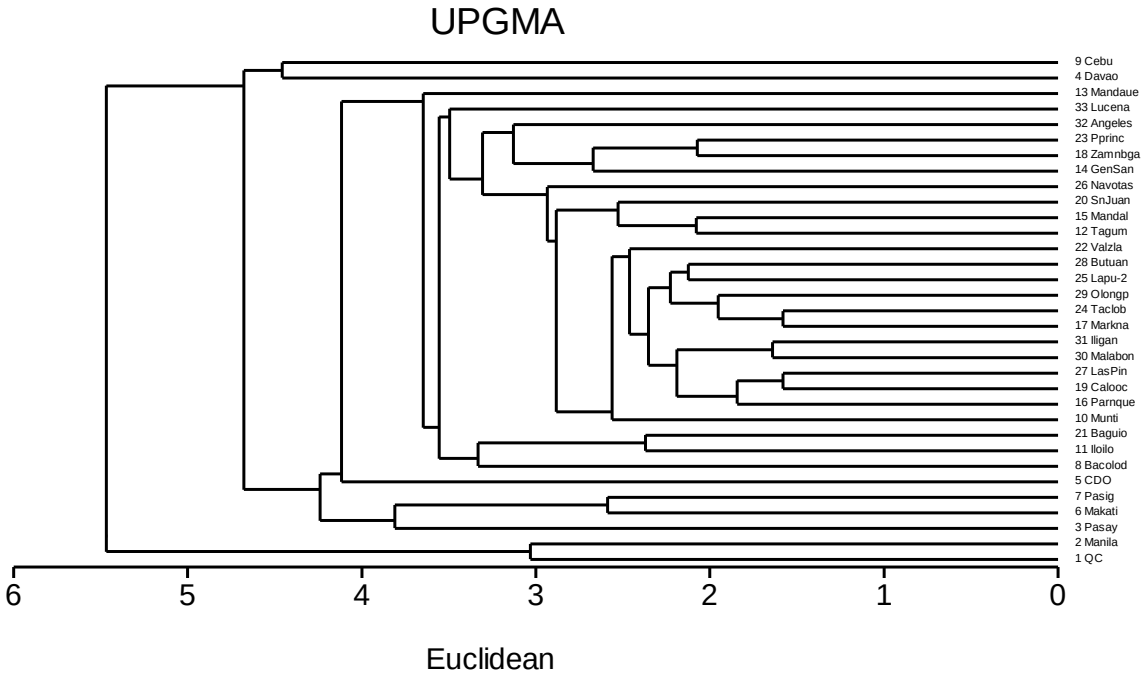

Figure 1a. HUC 2018