

**The Delineation of Philippine Federal
State Boundaries:
An Approach based on Hierarchies and
Sizes of Urban Centers**

Arturo G. Corpuz

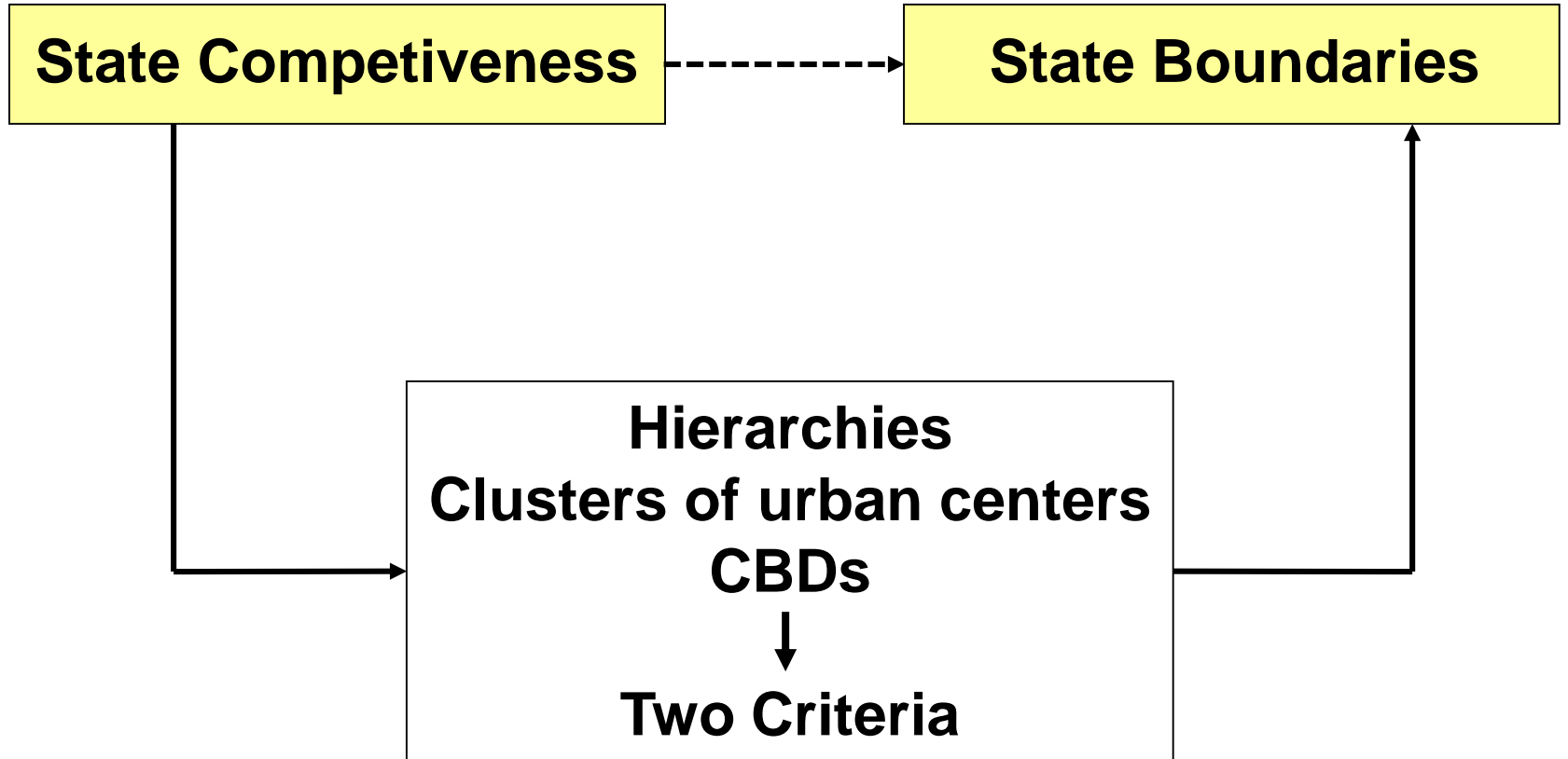
3rd Annual PIDS Public Policy Conference
September 19, 2017

Outline

- Introduction
- Hierarchy of centers and criteria
- State boundary scenarios
- Conclusion

Introduction

- Delineating state boundaries, whether purposeful or not, should be viewed as part of a larger and continuing historical process.
- Two sets of objectives: (1) efficiency; (2) equity
- Objective: define an efficiency-oriented approach to identify boundaries that enhance state competitiveness
 - An approach; technical inputs for consideration
 - State as an autonomous form of a region; competitiveness as the ability to attract leading firms
- Private sector investment perspective

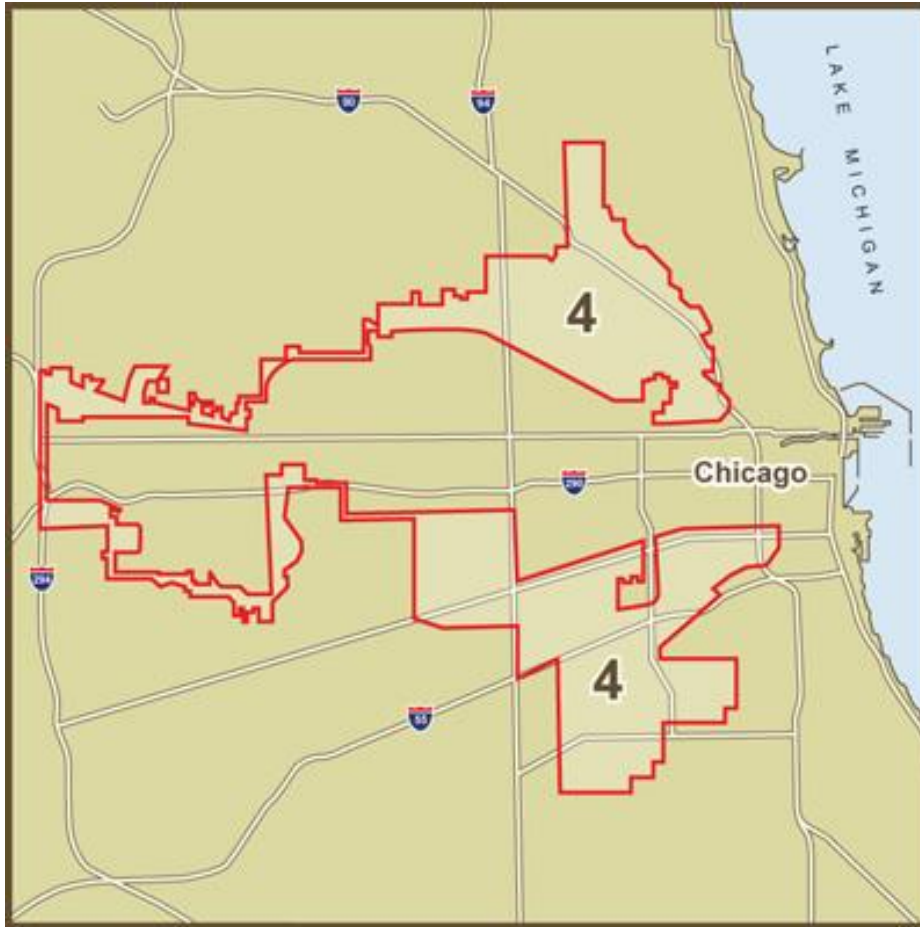


The subjective and political nature of boundaries

E.g. Objectives re Metro Manila

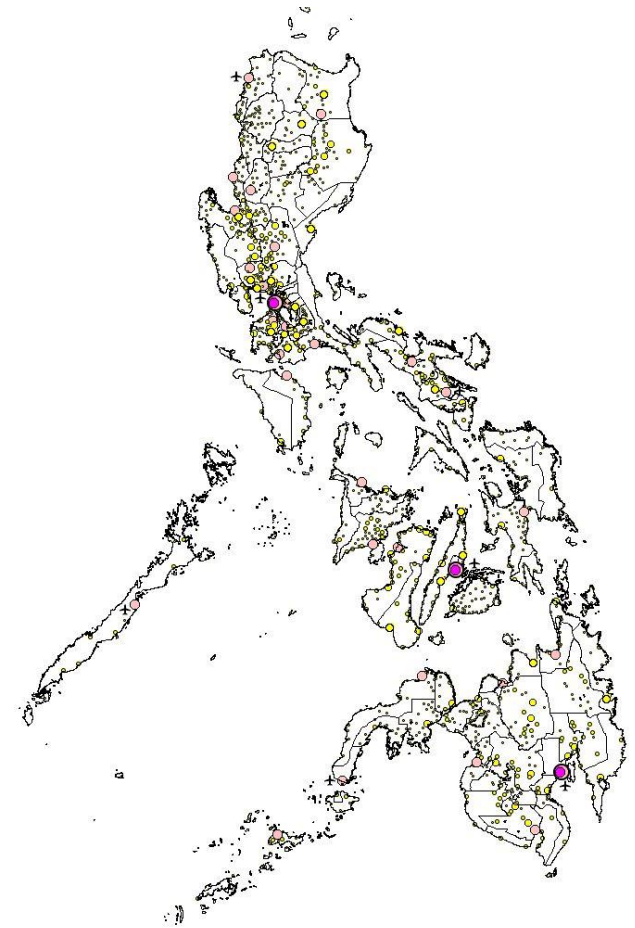
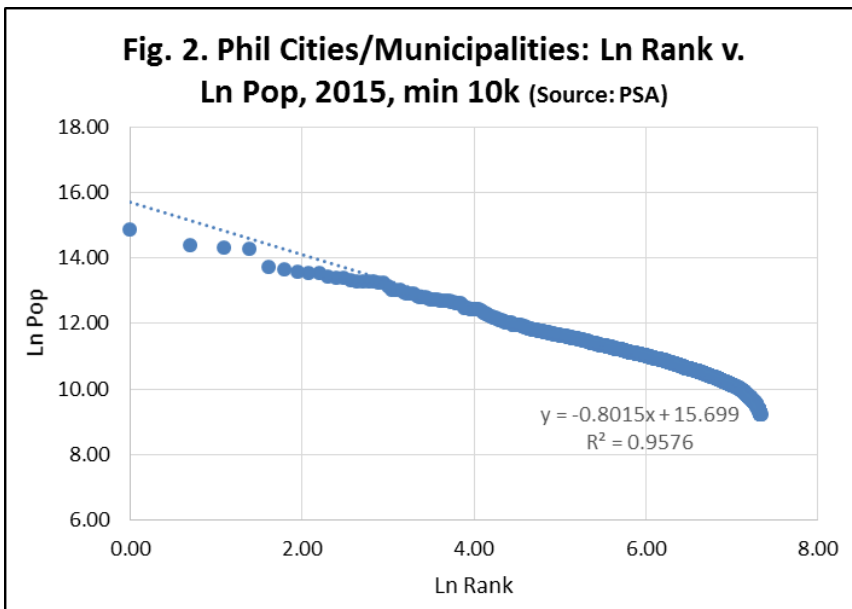
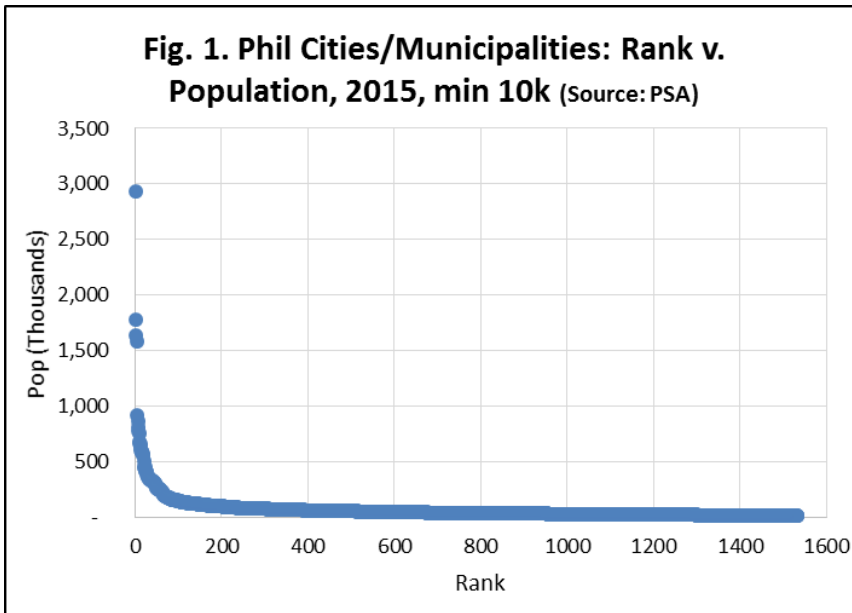
- Efficiency: merge with surrounding areas (Mega Manila)
- “Anti-imperial”: maintain boundaries or break up metropolis





- Boundaries define location.
- Location has value.
- Change in location means change in value, i.e. changes in the extent and identity of representation as well as changes in ownership or control of resources.

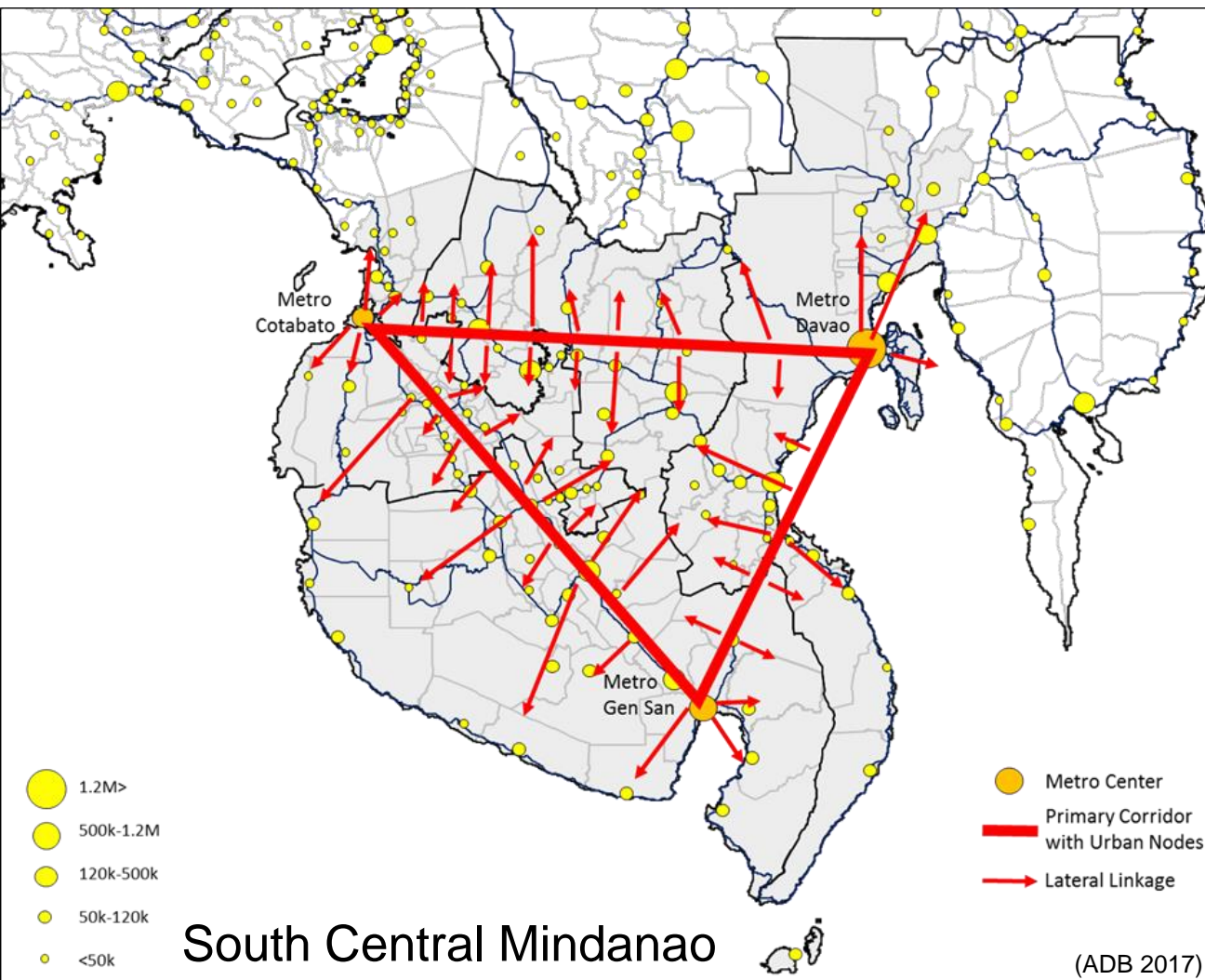
Hierarchy of Centers



- Centers of production and consumption
- Functional spatial units of a region or state

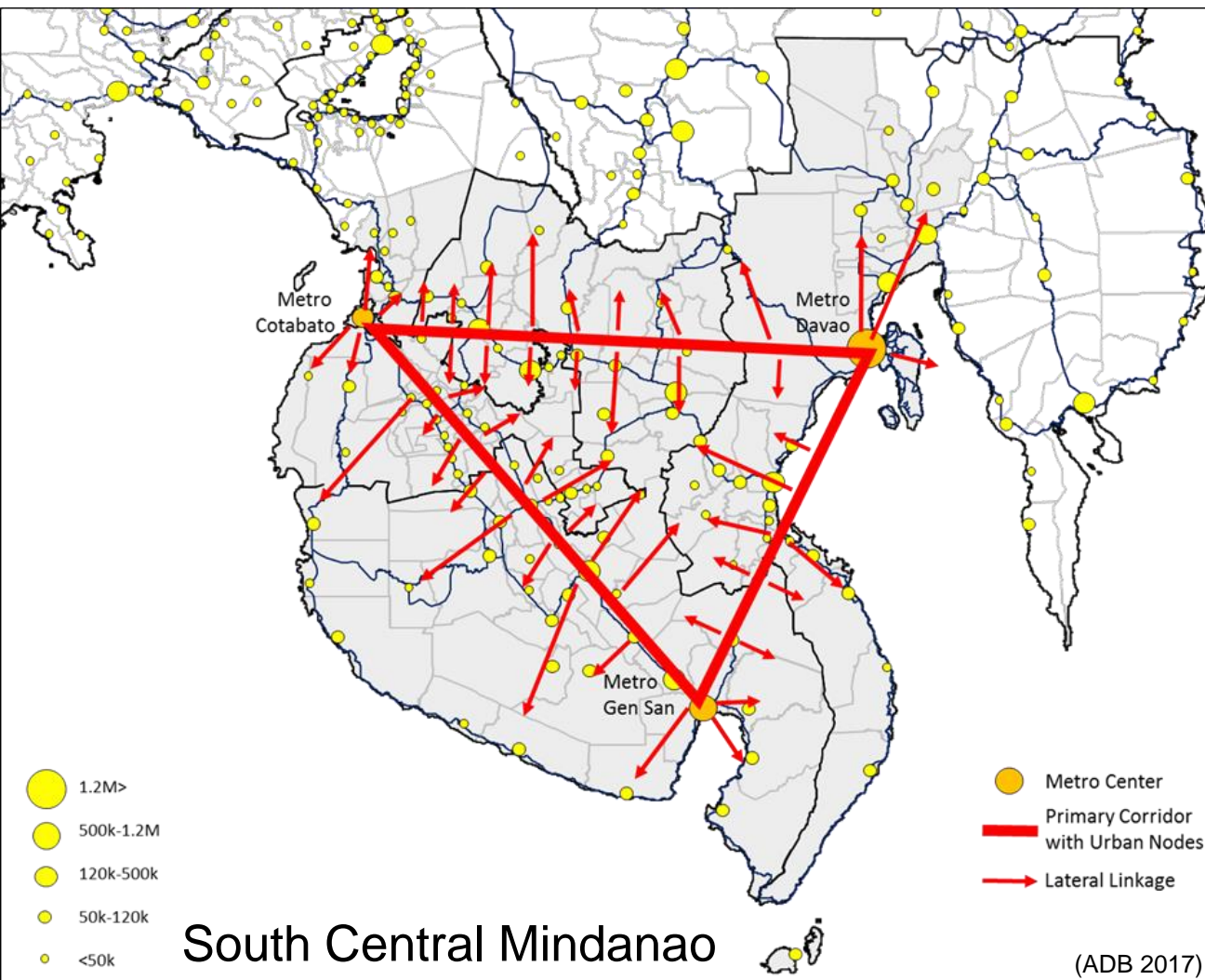
Metropolitan Centers

- Largest cities.
- Anchor the region's economic geography.
- The larger and more complex they are, the stronger and more diverse the region: scale and level of services, economic base and employment opportunities.
- Serve as external linkages to markets and employment outside the region.

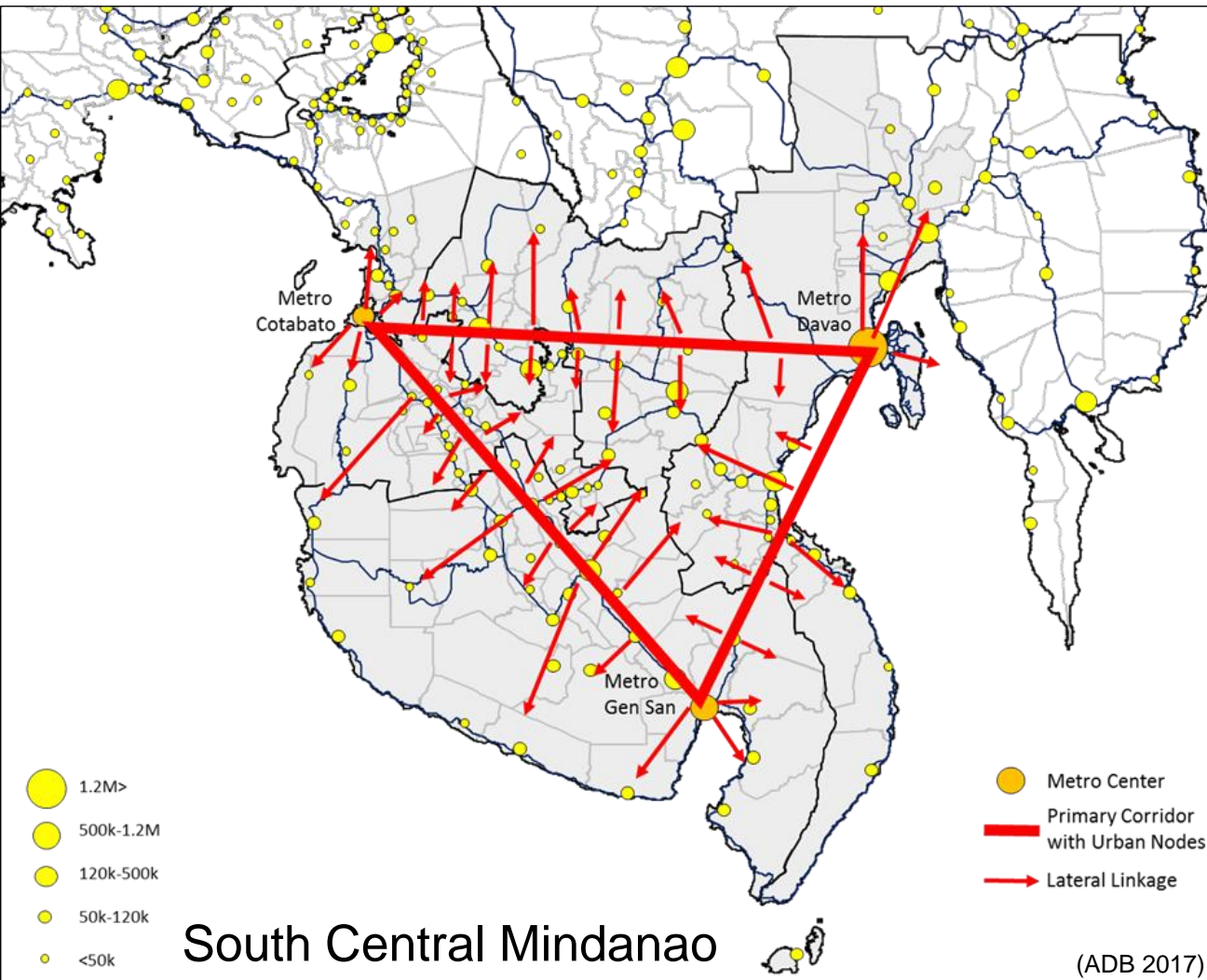


Primary Corridors

- Connect metro areas and carry the largest volumes of people and goods within the region. The less friction (physical and institutional) within the corridors, the more efficient and productive the regional economy.
- Production and service capabilities of the corridors depend on the number, size and efficiency of the urban centers along each corridor.



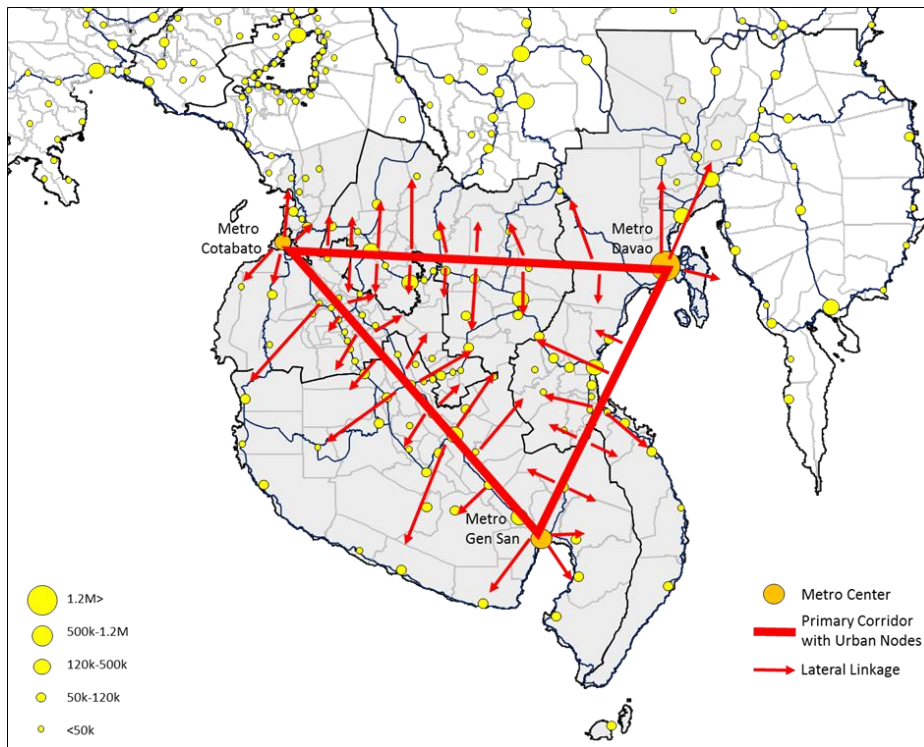
Lateral Linkages



- The longer the lateral linkages extend from the corridor—the “fatter” the corridors—the larger the area and population that benefits from the region’s activities.

(Srivastera 2011, Brunner 2013)

- Enhance urban-rural integration as well as agriculture-industry-service linkages.



In general, the regional economy benefits:

- as the size, economic diversity and external linkages of its largest center increases,
- as the corridors of the hierarchy become more efficient in terms of transportation and logistics, and
- as the number of urban centers and their lateral linkages within the corridors increase.

- No a priori reason for a state to have a full hierarchy of centers within its boundaries, as long as it has a metro center-anchor, e.g. city-states.
- What should be the size of the metro center-anchor so that it will support state competitiveness?

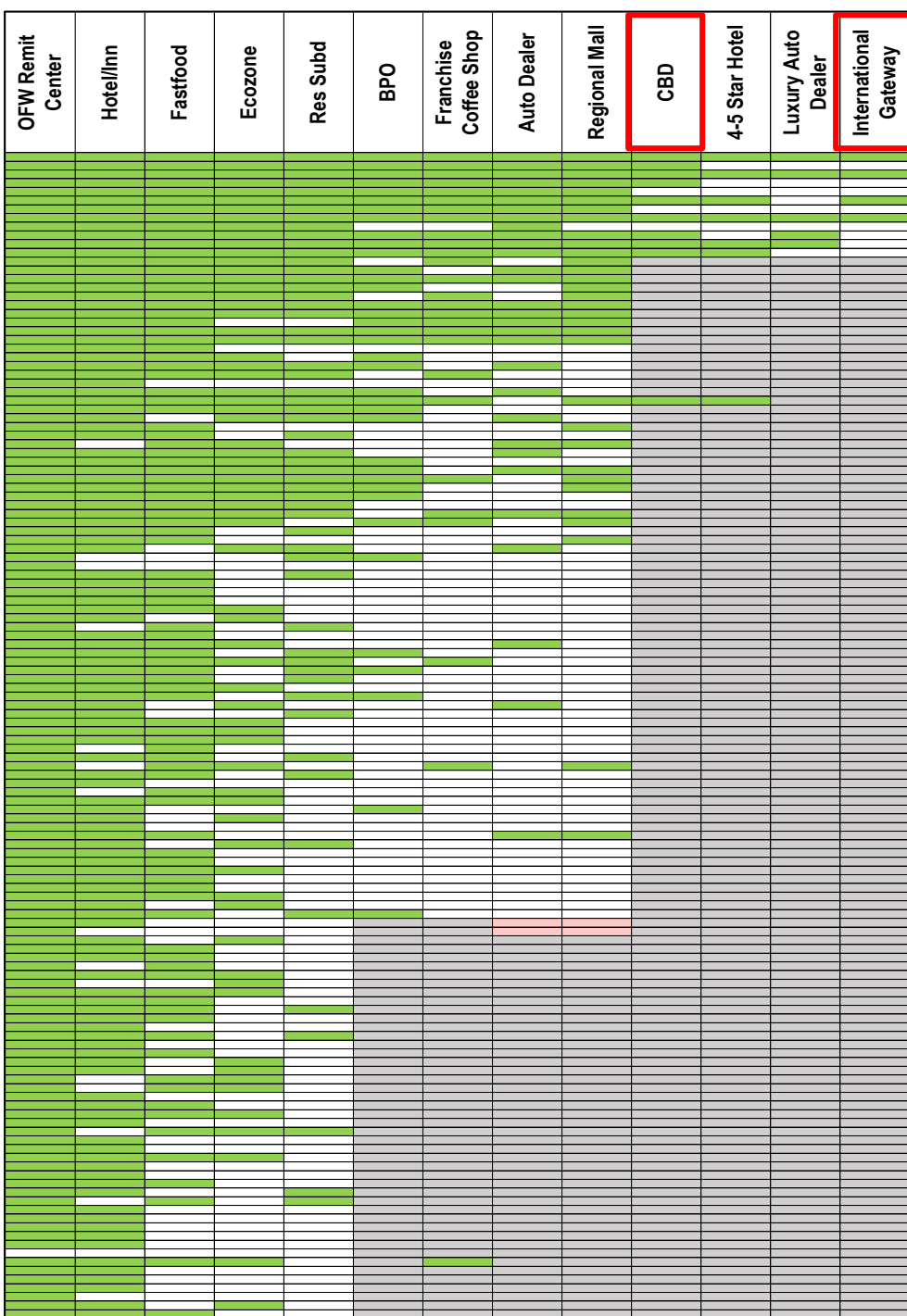
Criteria 1

What should be the size of the metro center-anchor so that it will support state competitiveness?

Size should be sufficient to allow:

Indicator/criteria	Population ("market size")
1. A purpose built CBD* (indicator of the presence of leading firms, which usually operate or also cater to external markets)	700,000
2. International airport/port (a requirement of the CBD)	1,200,000

*CBD: minimum of regional scale retail, residential/hotel, office (traditional and/or BPO)



2015
Population

---- 13.0M } M Manila, M Dasmaringas, M Cebu,
M Calamba, M Antipolo, M Davao,
M Malolos, M Angeles

---- 1.2M }
---- 700k } Zamboanga City, M Cagayan de Oro,
M Bacolod, M Iloilo

---- 400k } M Lipa

---- 200k } Ormoc

---- 150k } Trece Martires

---- 130k } Calapan

Table 3. Presence/Absence of Selected Indicators in Centers with min 100k Pop, 2015

(Prepared with the assistance of N. Casanova and S. Silva-Mazon using the ff sources: IT-BPAP, DOT, PDIC, CAAP, PEZA, LBC, Cebuana Lhuillier, Toyota, Honda, BMW, Jollibee, Starbucks, SM, ALI. August 2017)

---- 100k } Manolo Fortich

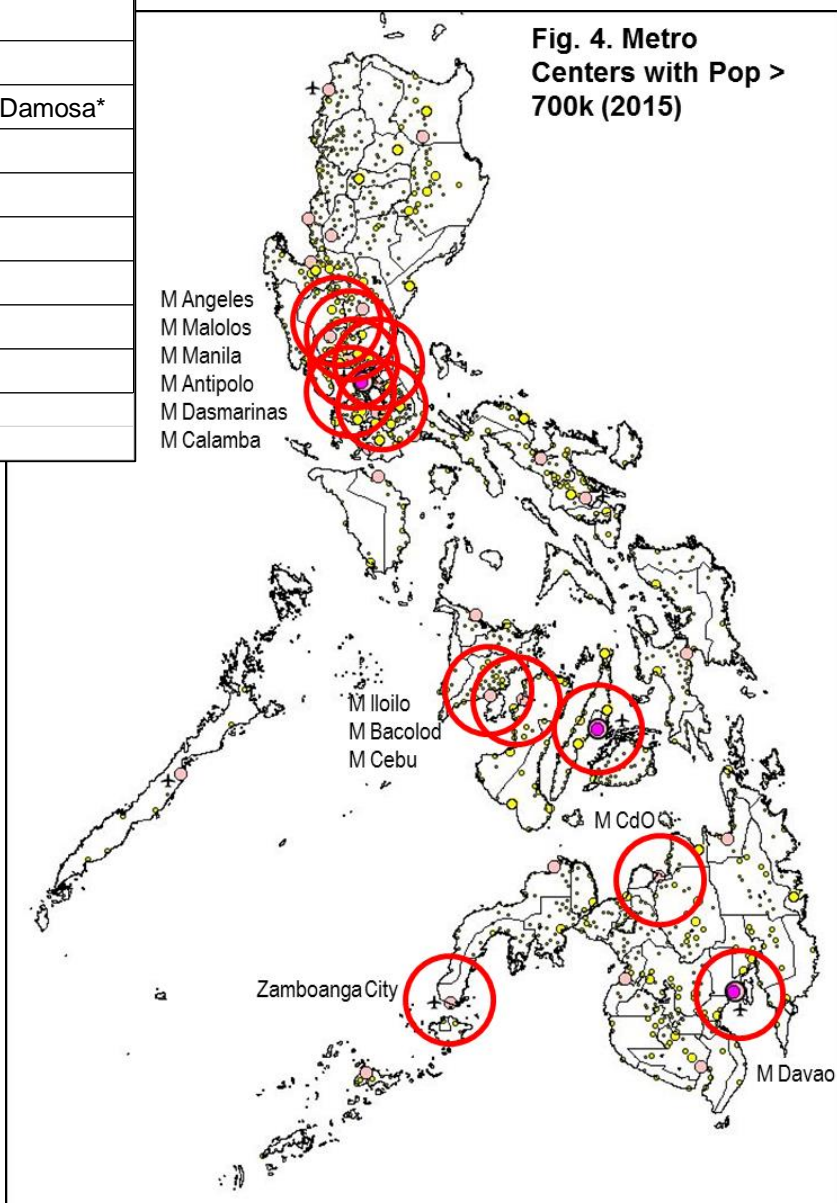
Table 4. Metro Centers with Population > 700k (2015)

Rank	Metro Area	Pop 2015	CBD
1	Metro Manila	12,877,253	Makati, BGC, Ortigas, Alabang, Eastwood, MOA, Vertis
2	Metro Dasmariñas	2,546,728	Vistacity, Evocity,* Vermosa,* Alabang West*
3	Metro Cebu	2,526,798	Cebu BP, AITP, SRP, Mactan Newtown, Gatewalk*
4	Metro Calamba	2,028,535	Nuvali, Greenfield, Eton City*
5	Metro Antipolo	1,871,130	
6	Metro Davao	1,737,114	Abreeza, SM Lanang, Davao Park,* Landco*, Damosa*
7	Metro Malolos	1,600,089	
8	Metro Angeles	1,328,032	Clark, Marquee, Alviera,* Nepo Center*
9	Zamboanga City	861,799	
10	Metro Cagayan de Oro	810,603	Centero, Limketkai, Pueblo BP*
11	Metro Bacolod	791,019	Northpoint, Capitolyo, Goldenfield*
12	Metro Iloilo	713,091	Iloilo BP, Atria

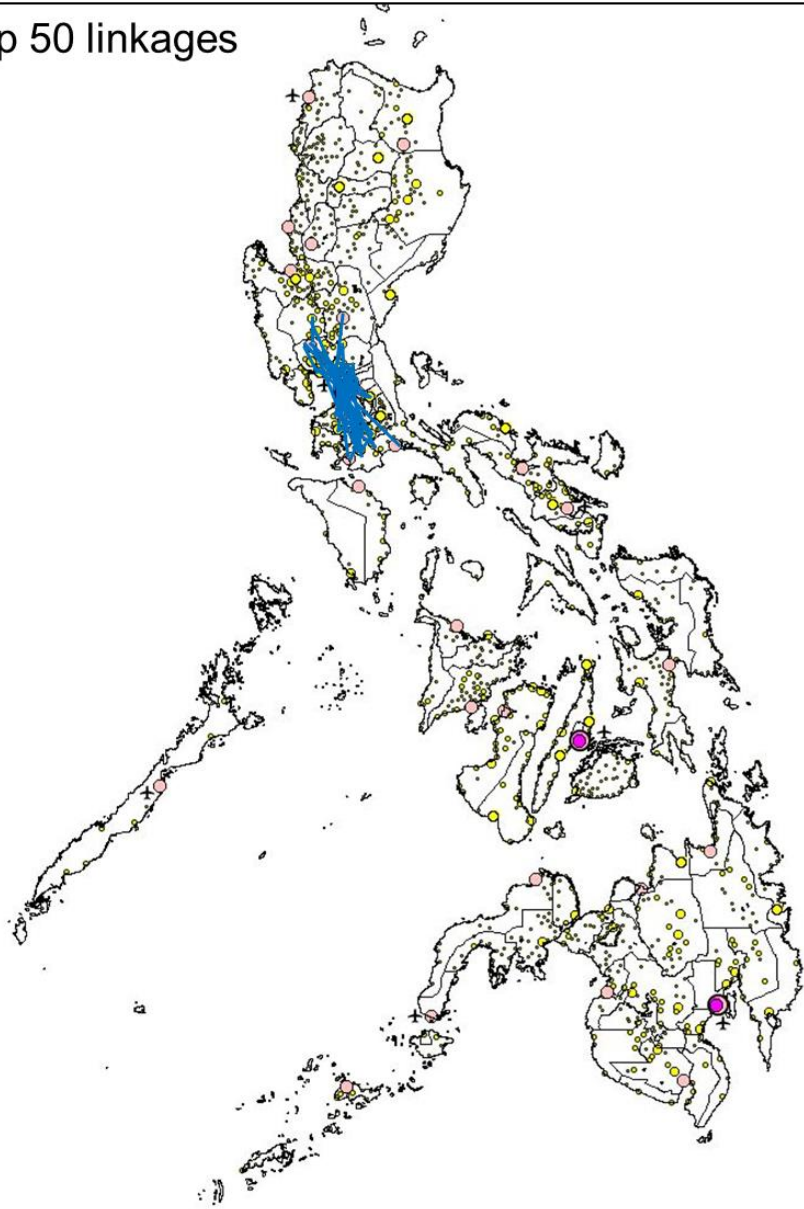
Source of population data: PSA

*Emerging CBD (lacking office or retail or residential/hotel)

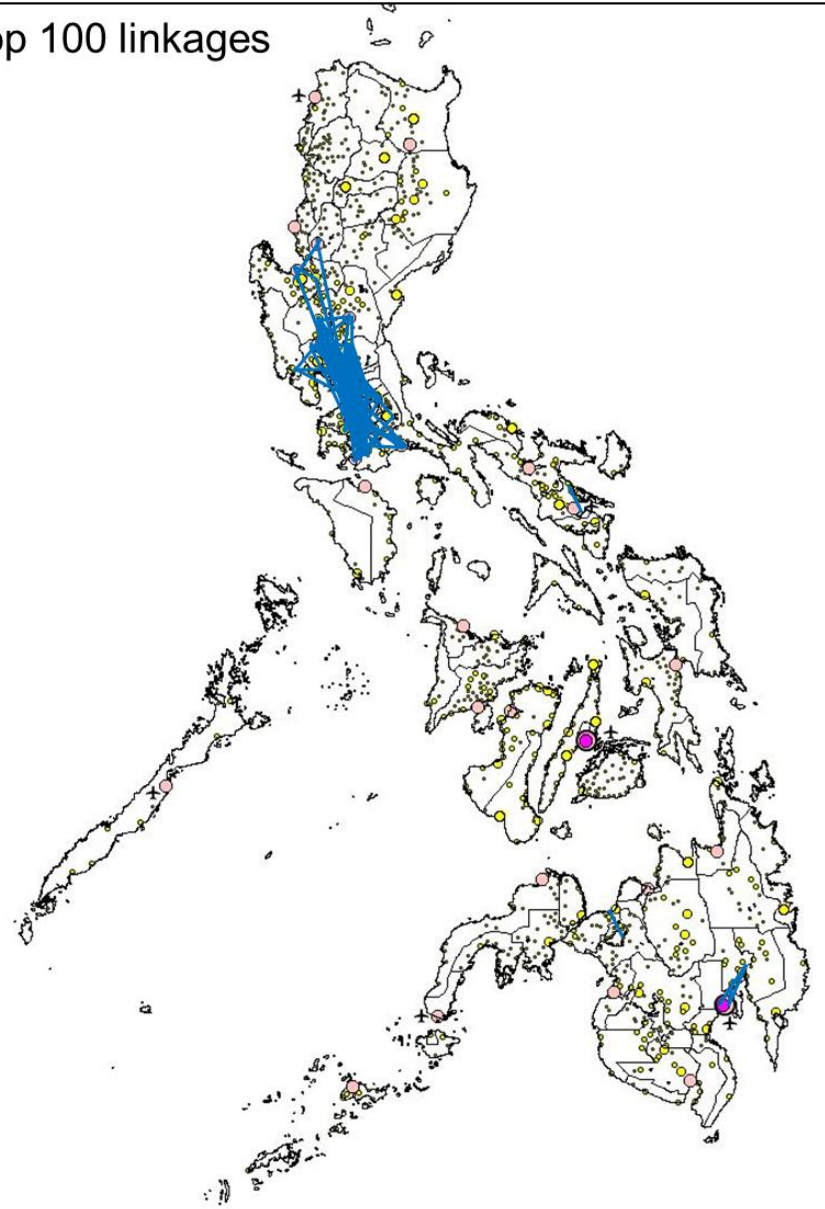
Fig. 4. Metro Centers with Pop > 700k (2015)

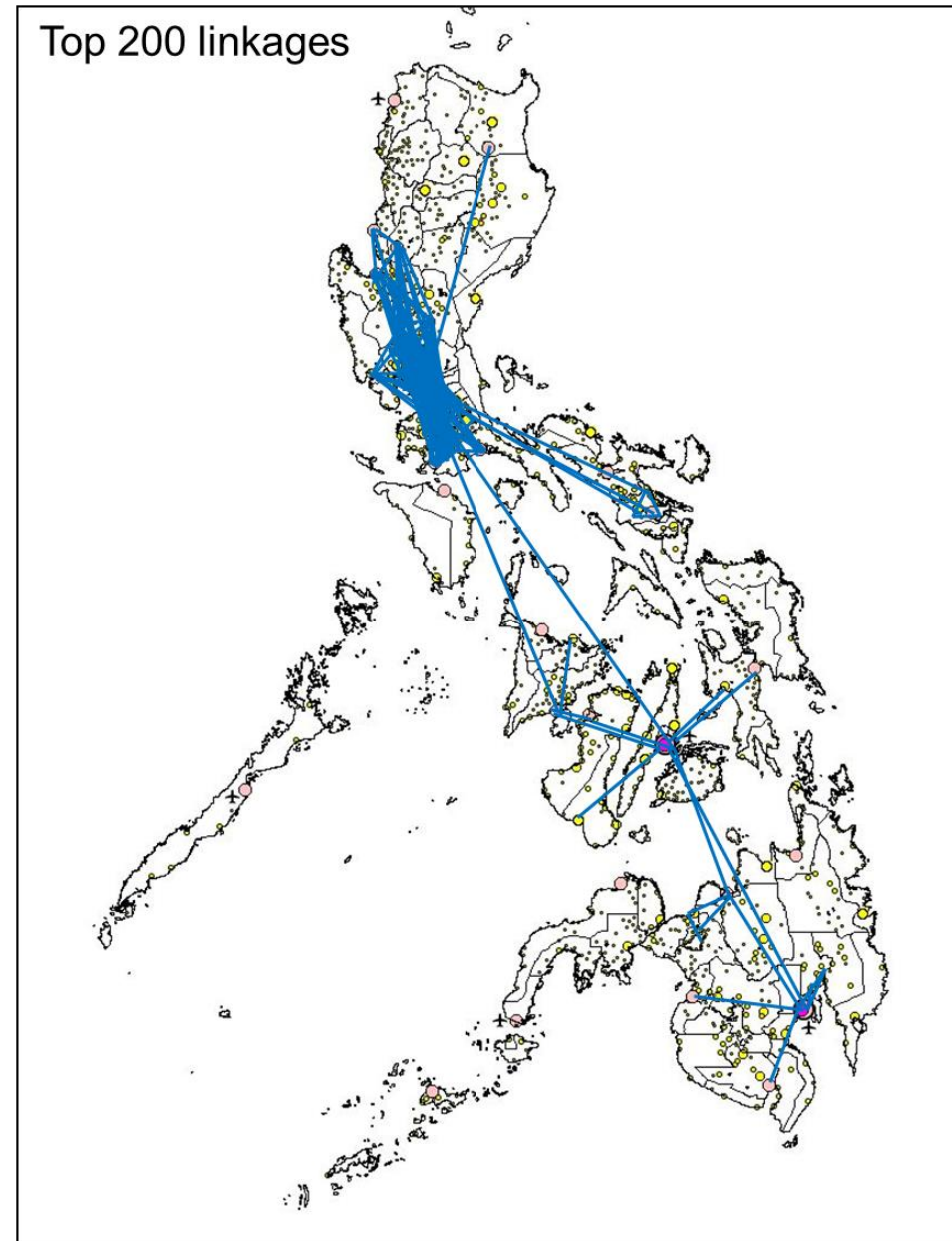
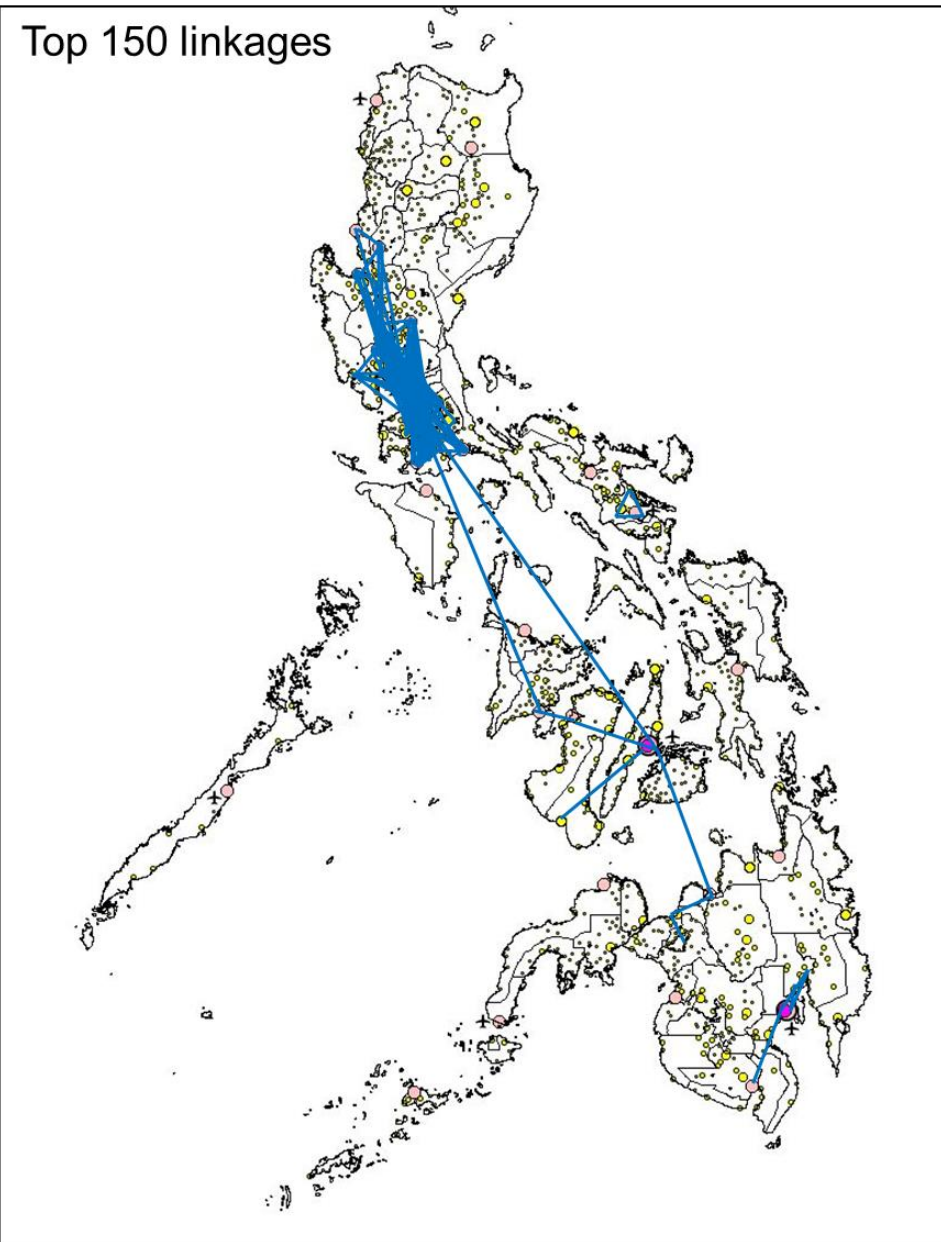


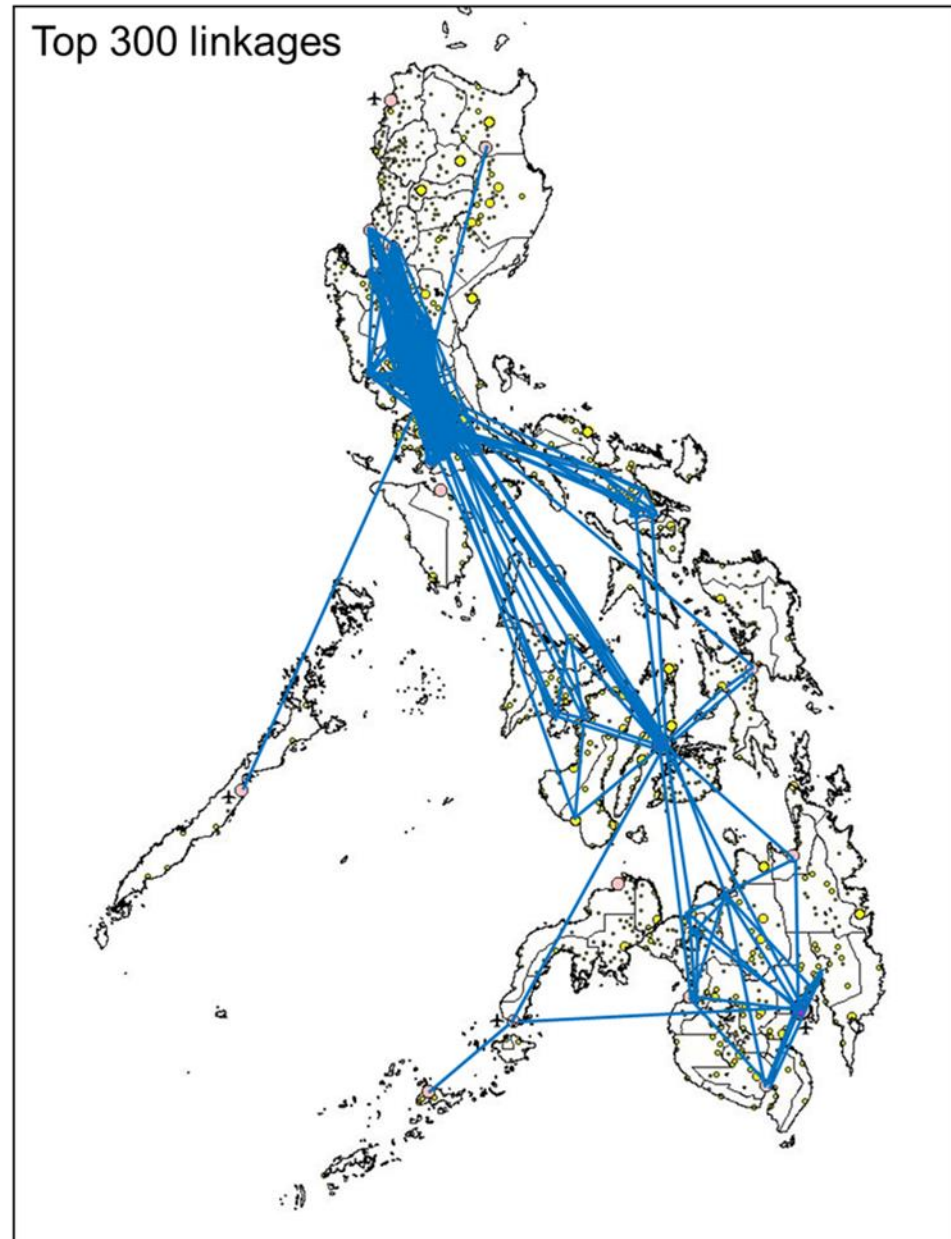
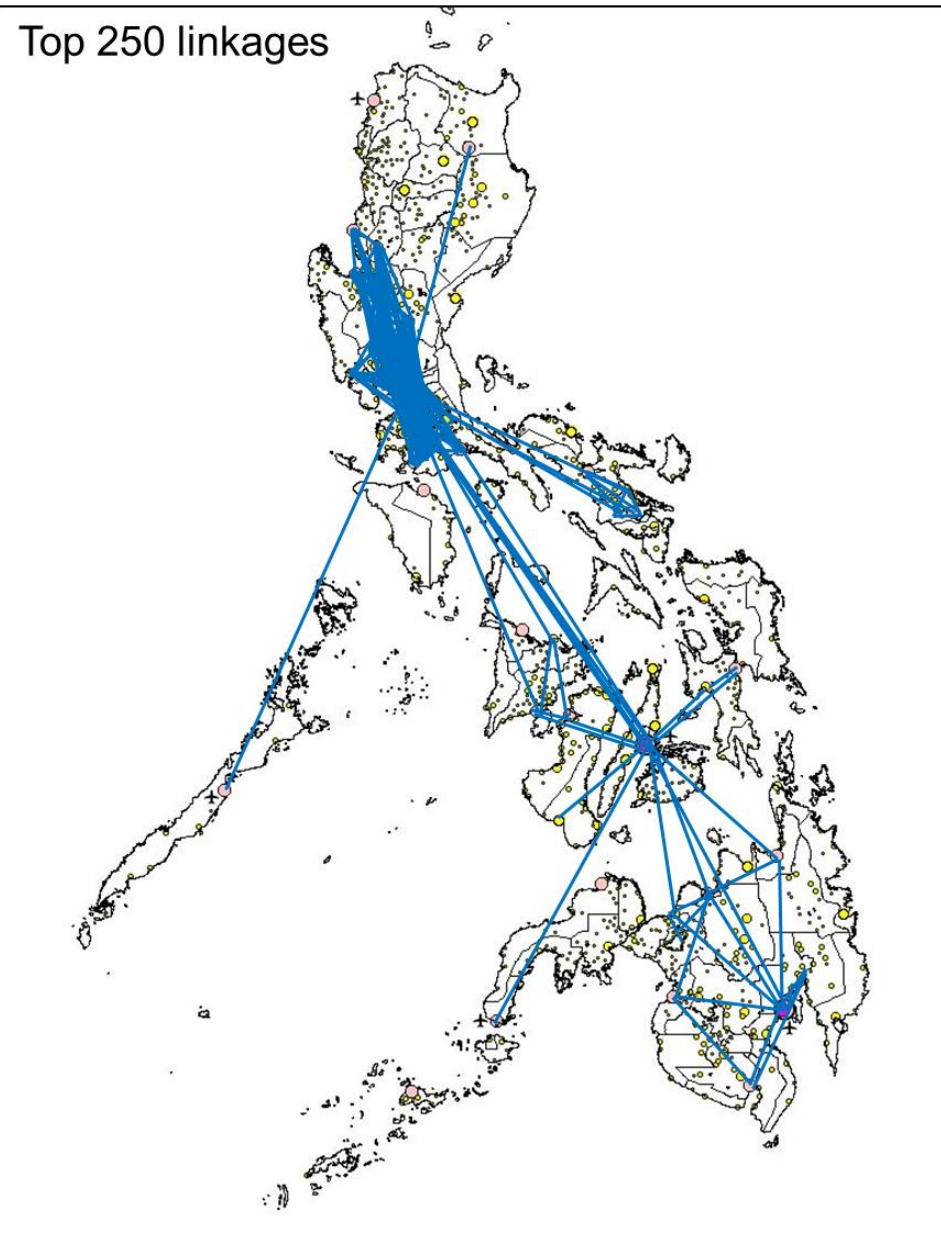
Top 50 linkages



Top 100 linkages







*Potential linkages, based on gravity model using population and road distance, pop>200k, maximum 1,000 km.

Fig. 4. Metro Centers with Pop > 700k (2015)

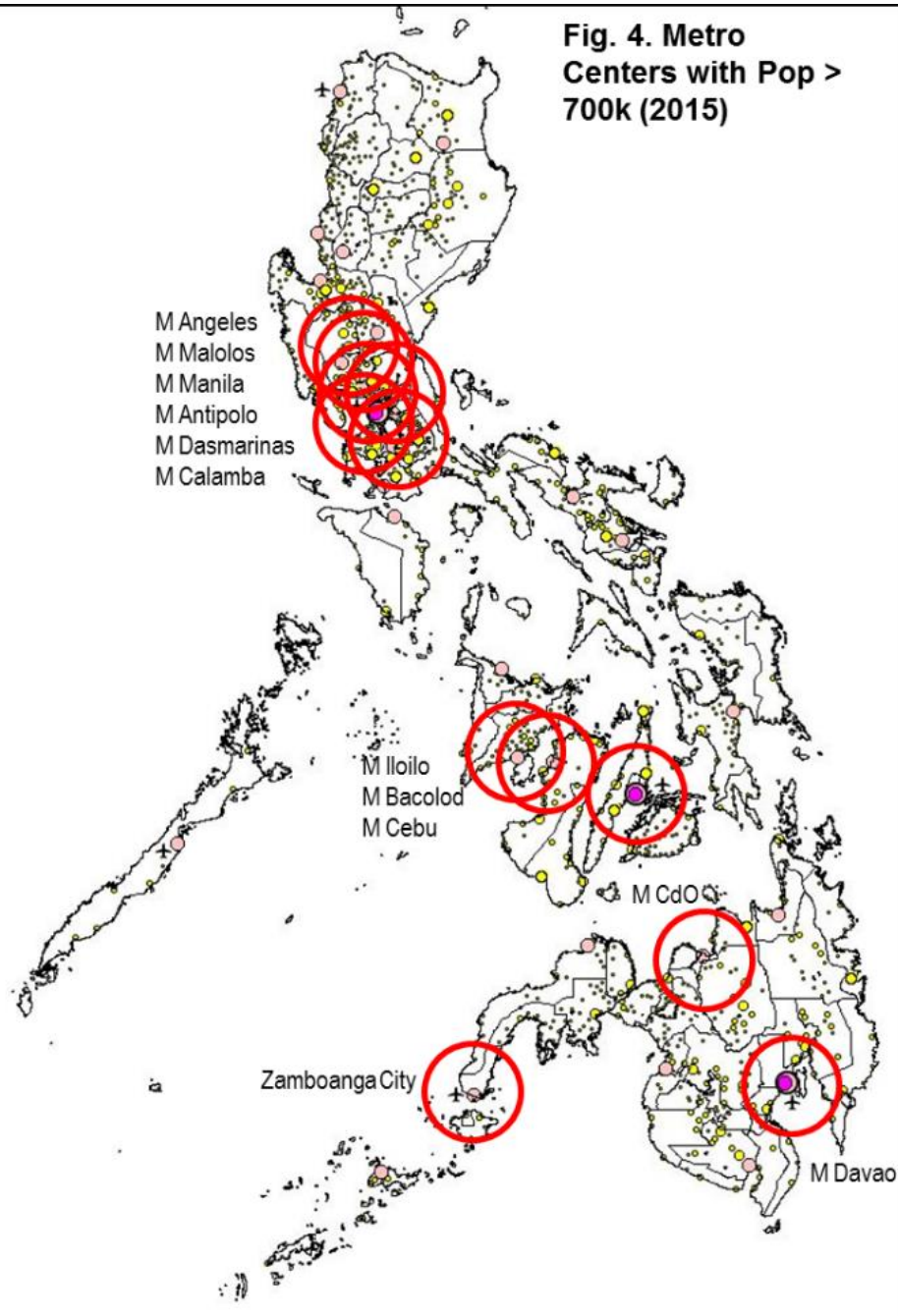
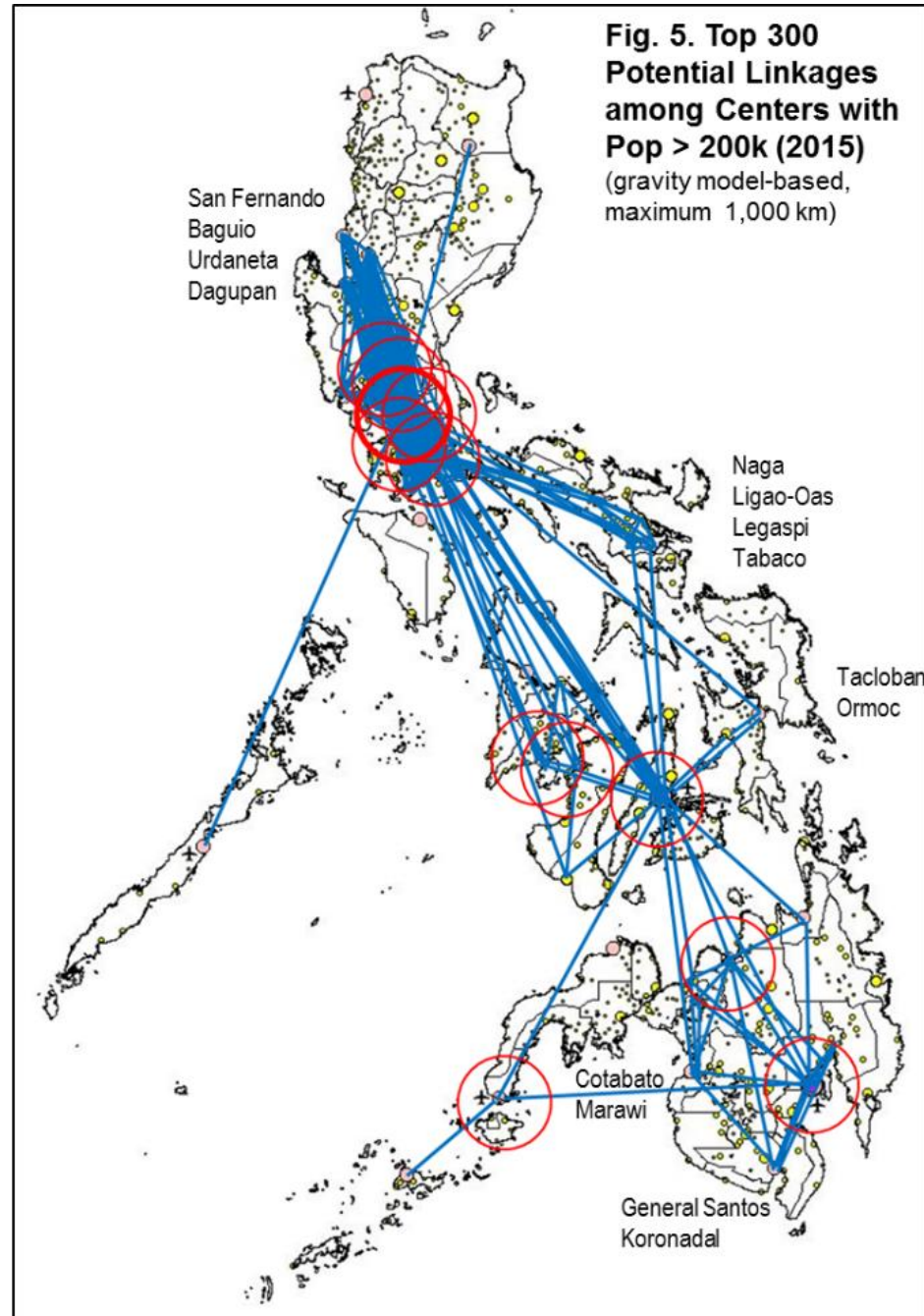


Fig. 5. Top 300 Potential Linkages among Centers with Pop > 200k (2015)
(gravity model-based, maximum 1,000 km)

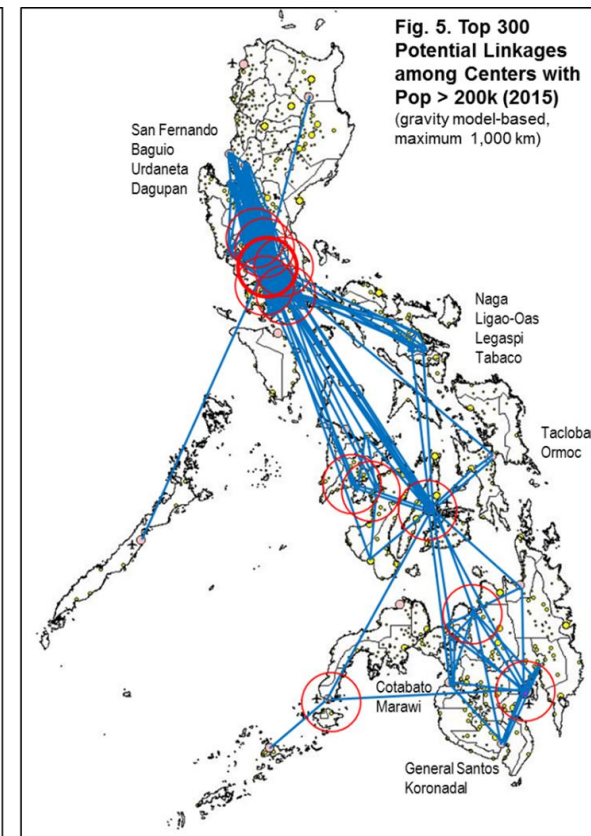
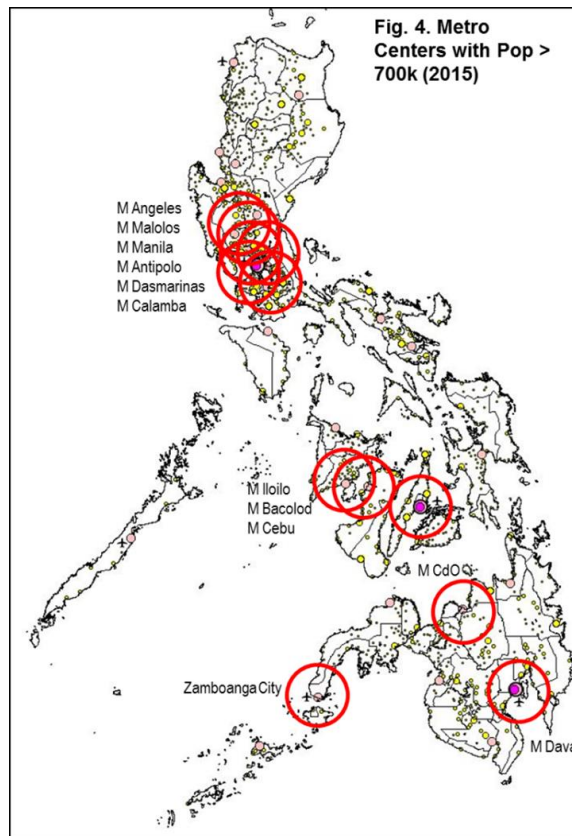


Criteria 2

Metro clusters should be kept intact (within the same state) to enhance scale and agglomeration economies.

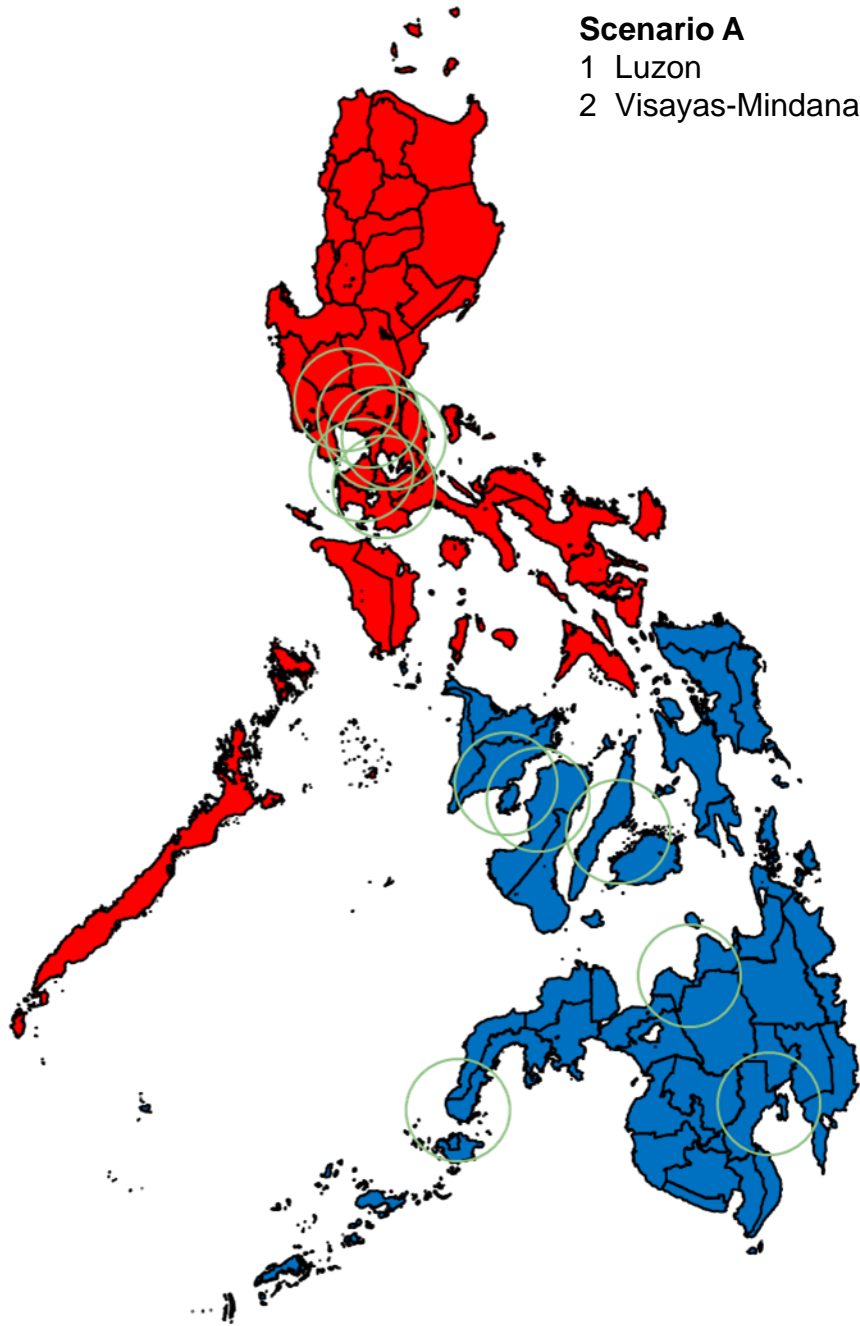
Rank	Metro Area	Pop 2015	CBD
1	Mega Manila	22,251,767	Makati, BGC, Ortigas, Alabang, Eastwood, MOA, Vertis
			Vistacity, Evocity,* Vermosa,* Alabang West*
			Nuvali, Greenfield, Eton City*
			Clark, Marquee, Alviera,* Nepo Center*
2	Metro Cebu-Iloilo-Bacolod	4,030,908	Cebu BP, AITP, SRP, Mactan Newtown, Gatewalk*
			Northpoint, Capitolyo, Goldenfield*
			Iloilo BP, Atria
3	Metro Davao	1,737,114	Abreeza, SM Lanang, Davao Park,* Landco*, Damosa*
4	Zamboanga City	861,799	
5	Metro Cagayan de Oro	810,603	Centro, Limketkai, Pueblo BP*

Source of population data: PSA
 *Emerging CBD (lacking office or retail or residential/hotel)



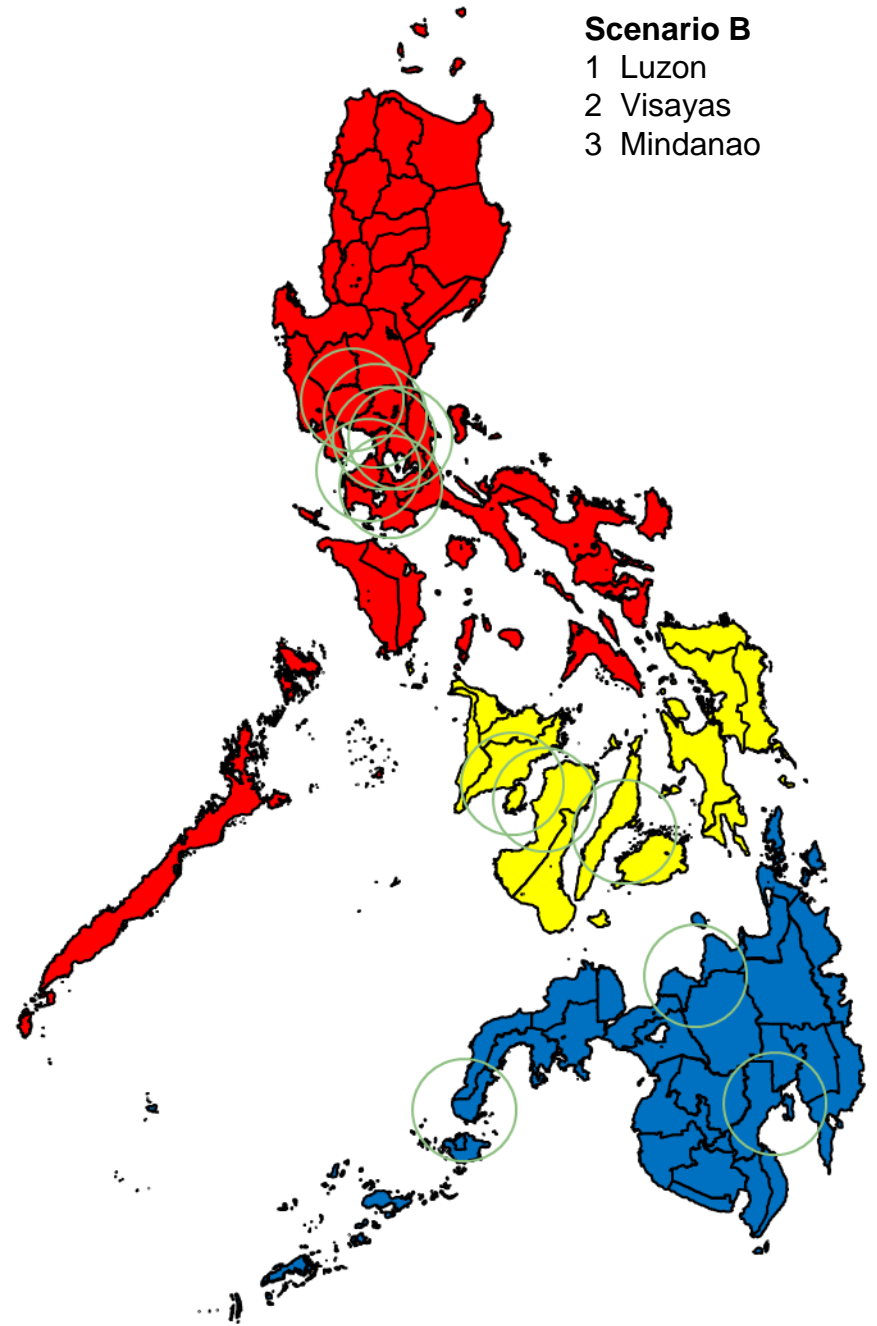
Scenario A

- 1 Luzon
- 2 Visayas-Mindanao



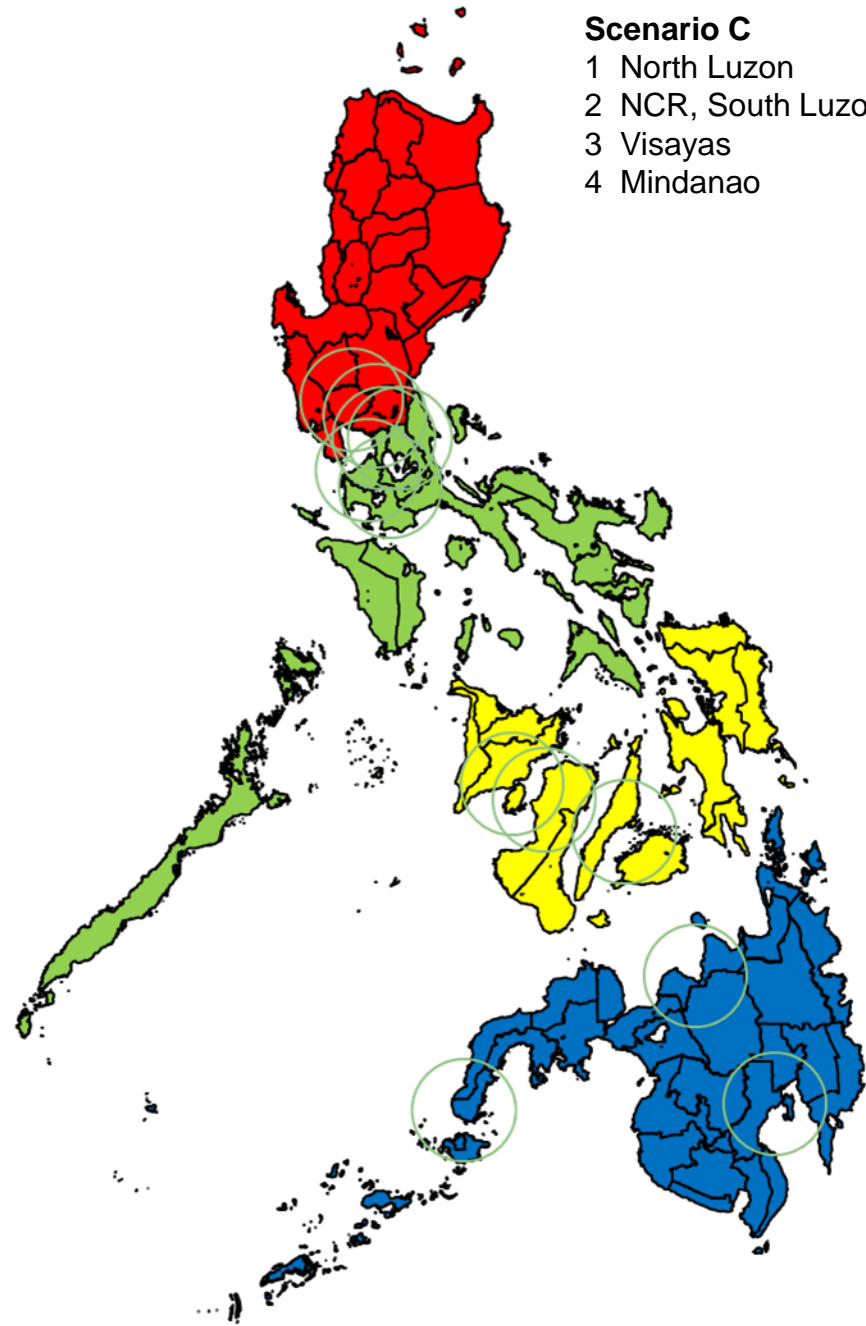
Scenario B

- 1 Luzon
- 2 Visayas
- 3 Mindanao



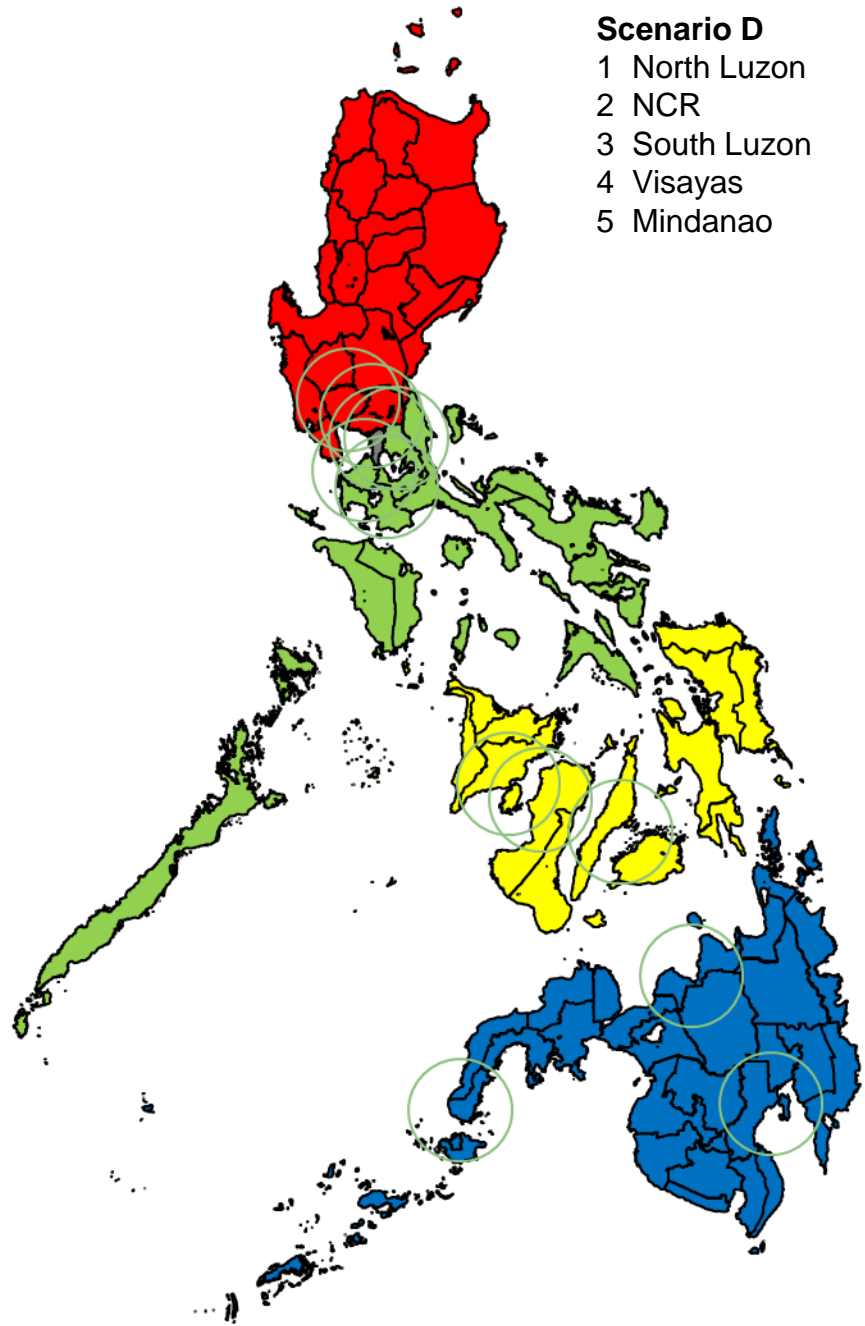
Scenario C

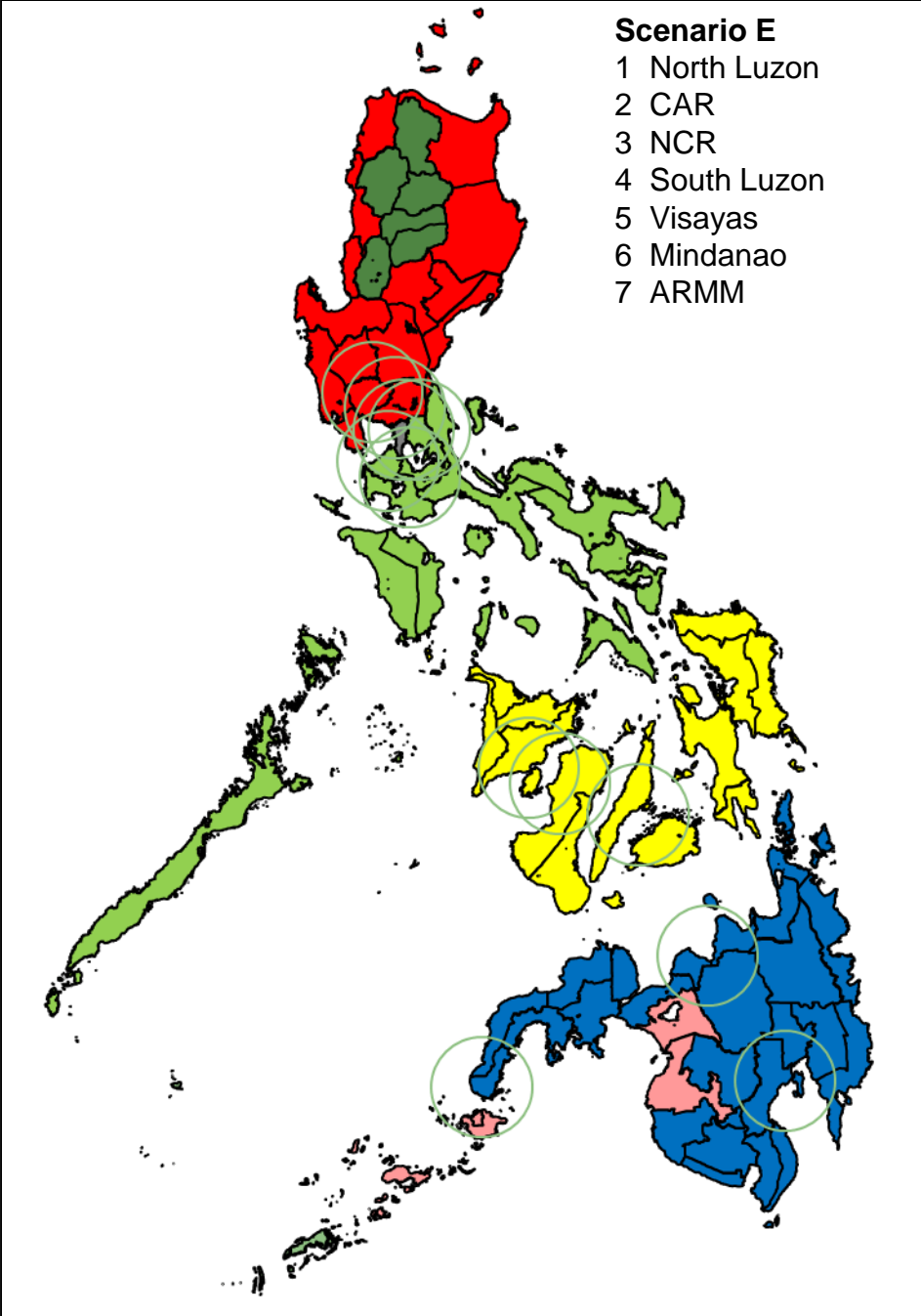
- 1 North Luzon
- 2 NCR, South Luzon
- 3 Visayas
- 4 Mindanao



Scenario D

- 1 North Luzon
- 2 NCR
- 3 South Luzon
- 4 Visayas
- 5 Mindanao





(Maps prepared with the assistance of J. Gargallo)

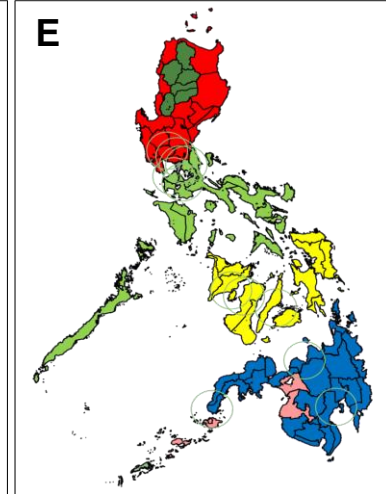
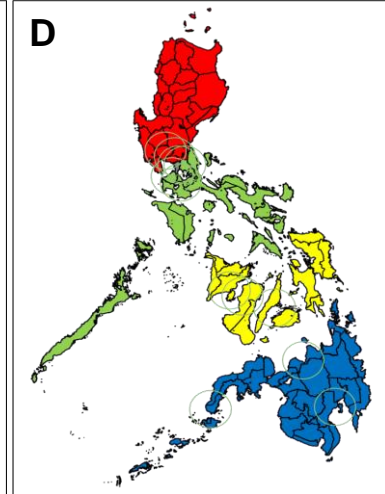
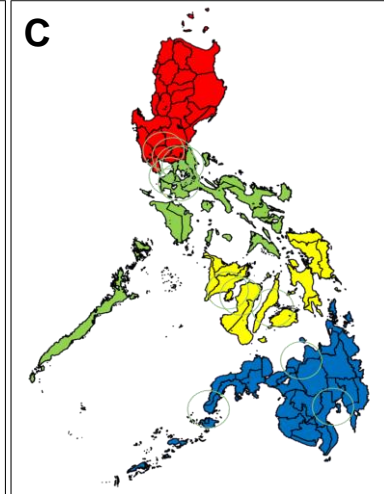
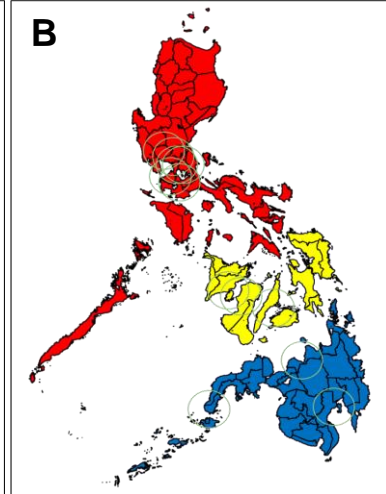
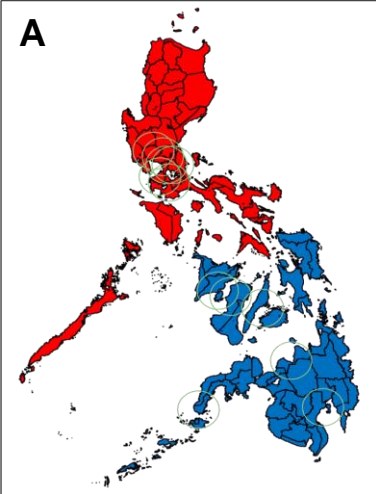


Table 5. State Scenarios

		State	Pop 2015		GRDP 2015			GRDP/cap 2015		
			Mil	%	Bil	%	widest gap	Thou	% of largest	widest gap
A	1	Luzon	57.5	57%	9,654	73%		168.0	100%	
	2	Visayas + Mindanao	43.5	43%	3,653	27%	45%	84.0	50%	50%
B	1	Luzon	57.5	57%	9,654	73%		168.0	100%	
	2	Visayas	19.4	19%	1,684	13%	60%	86.9	52%	
	3	Mindanao	24.1	24%	1,969	15%		81.6	49%	51%
C	1	North Luzon	21.4	21%	2,060	15%		96.2	46%	
	2	South Luzon + NCR	36.1	36%	7,594	57%		210.6	100%	
	3	Visayas	19.4	19%	1,684	13%	44%	86.9	41%	
	4	Mindanao	24.1	24%	1,969	15%		81.6	39%	61%
D	1	North Luzon	21.4	21%	2,060	15%		96.2	25%	
	2	NCR	12.9	13%	5,048	38%		392.0	100%	
	3	South Luzon	23.2	23%	2,546	19%		109.9	28%	
	4	Visayas	19.4	19%	1,684	13%		86.9	22%	
	5	Mindanao	24.1	24%	1,969	15%	25%	81.6	21%	79%
E	1	North Luzon (ex CAR)	19.7	20%	1,826	14%		92.7	24%	
	2	CAR	1.7	2%	234	2%		135.8	35%	
	3	NCR	12.9	13%	5,048	38%		392.0	100%	
	4	South Luzon	23.2	23%	2,546	19%		109.9	28%	
	5	Visayas	19.4	19%	1,684	13%		86.9	22%	
	6	Mindanao (ex ARMM)	20.4	20%	1,870	14%		91.9	23%	
	7	ARMM	3.8	4%	99	1%	37%	26.2	7%	93%
		Philippines	101.0	100%	13,307	100%		131.8		

Ok

Ok

Breaks up Mega Manila cluster

Breaks up Mega Manila cluster

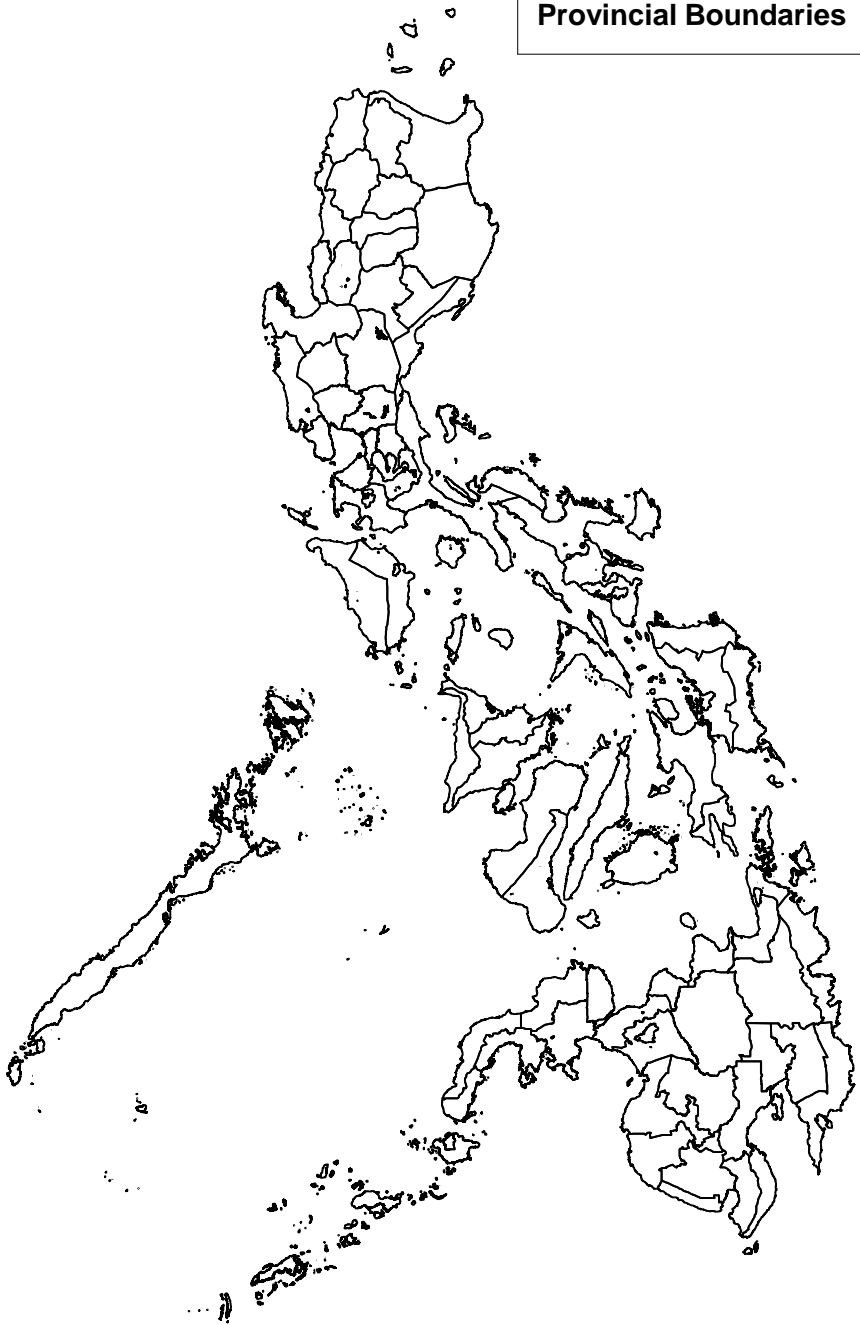
Breaks up Mega Manila cluster, and has metro anchors with less than 700,000 pop

Source of data: PSA

Conclusion

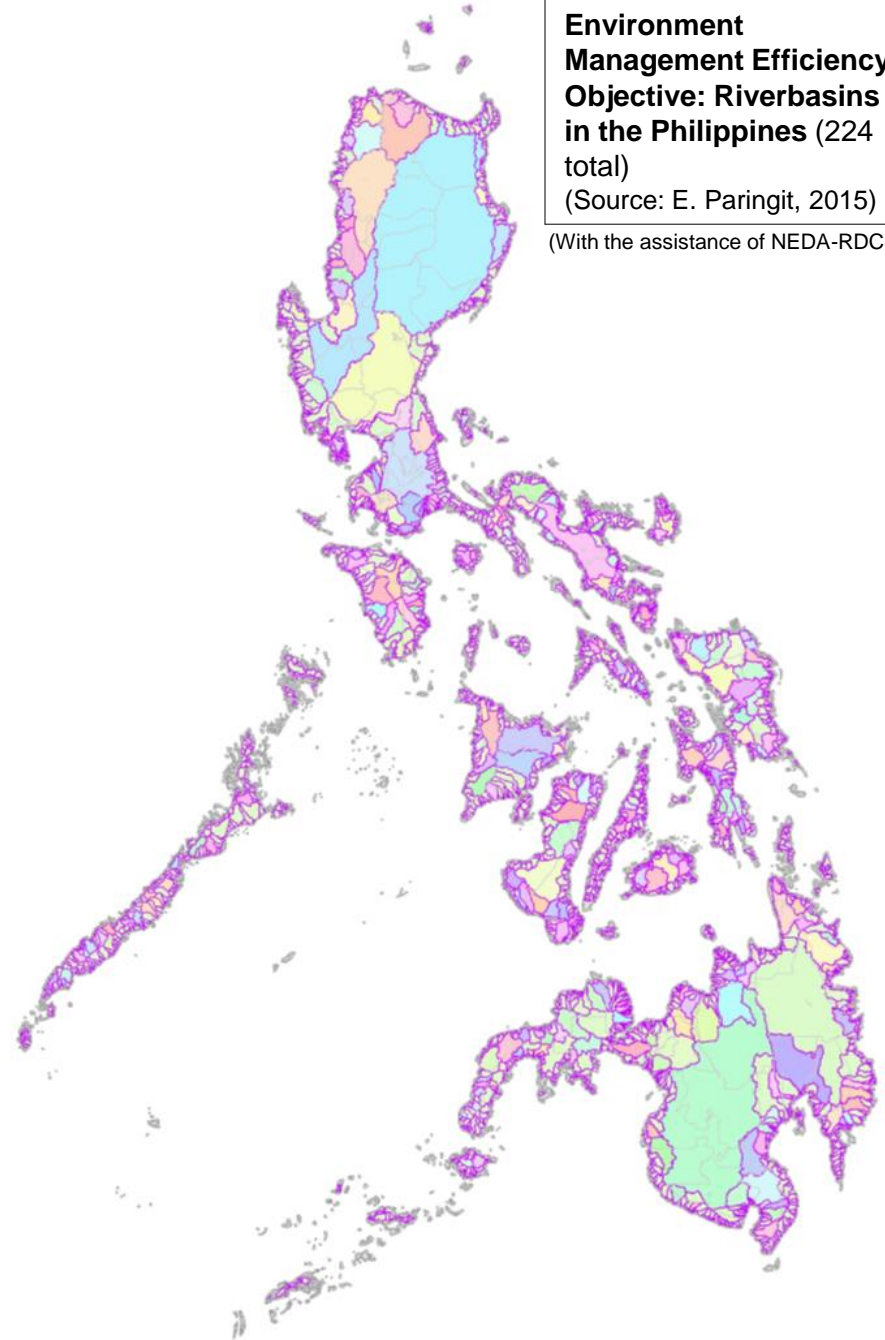
- In summary, the approach leads to the ff criteria:
 - First, each state territory to include a metro center capable of supporting a purpose built CBD. (Pop=700k min)
 - Second, clustered metro centers should be kept within the same state.
- Among the five scenarios presented, only **A** (Luzon, Vis+Min) and **B** (Luzon, Visayas, Mindanao) satisfy the criteria.
- Other scenarios can be derived; other objectives are expected to weigh in, e.g. environmental management efficiency
- Need for additional data at the city-municipal level.
- State or LGU boundaries, like geography, are not destiny. A lot depends on how cross-border relationships are managed. No matter where the boundaries are, whether under a unitary or federal republic, there will always be a need for efficient interstate or inter-LGU coordination.

Provincial Boundaries



**Environment
Management Efficiency
Objective: Riverbasins
in the Philippines (224
total)**

(Source: E. Paringit, 2015)
(With the assistance of NEDA-RDCS)



Thank you