Gaano na ba tayo karami?

Tracking Population Growth and its effects to Philippines' Carrying Capacity in selected indicators

Team Data Hoarders

CSO Representatives
Freddie R. Boral
Gerardo S. Evan
Nicka' Ragua
Binibining Ruffa Torregoza

Bicol University Students
Francis Shellwynn P. Dineros
Gerald A. Miranda

CTTO

1

Population Growth Rate of the Philippines Census Years 1799-2007

Note:

1.Population from 1799 to 1896 excludes non-Christians.

2.Includes household population, homeless population Filipinos in Philippine Embassies/Consulates and missions abroad and institutional population who are found living in institutional quarters such as penal institutions, orphanages, hospitals, military camps, etc at the time of census taking

Source: National Statistics Office

2

Slide 3

An Essay on the Principle of Population

THOMAS MALTHUS

NEW EDITION

Quantity

Population

Malthusian catastrophe

Production of food

Time

"Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will show the immensity of the first power in comparison of the second."

3

Slide 4

Growth rate is a factor in determining how great a burden would be imposed on a country by changing needs of its people for resources, infrastructure and jobs.

[EVOS] EVOLVED HUMANS
418 POPULATION GROWTH

Global
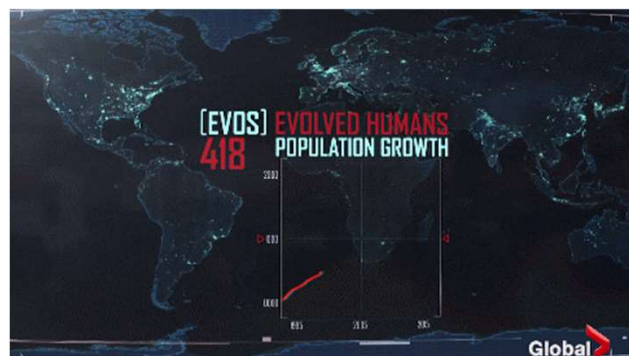
4

Population exceeding the carrying capacity of an area or environment is called overpopulation. It may be caused by growth in population or by reduction in capacity.
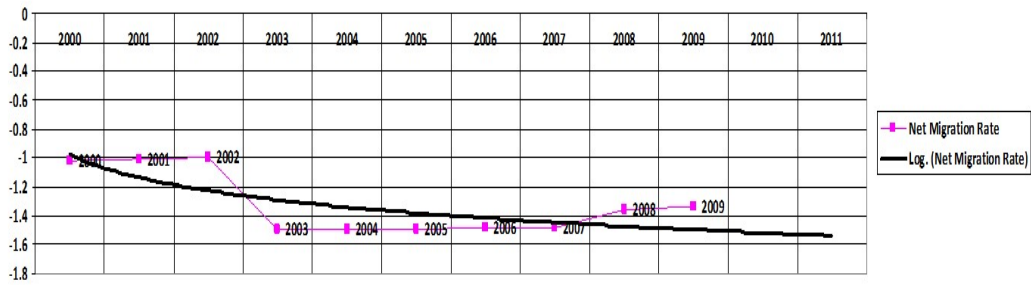

5

Population Growth Rate

Population Growth Rate
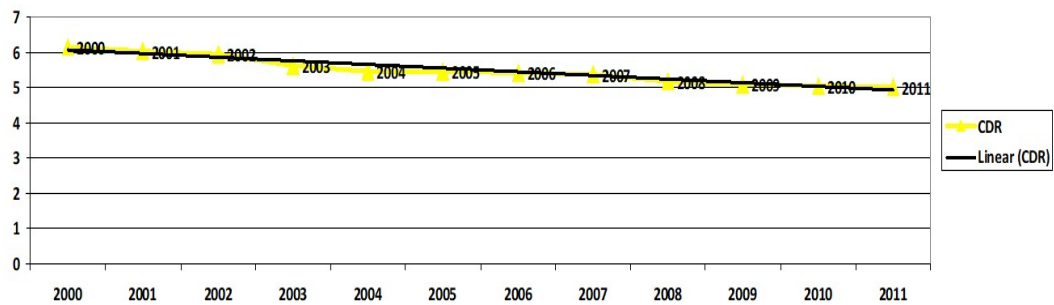2000-2011

6
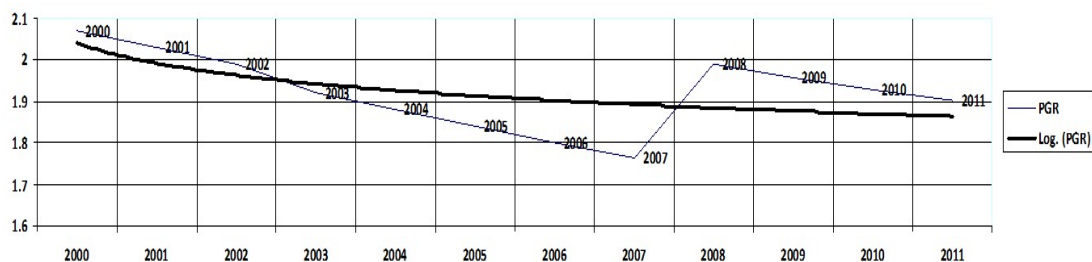
Net Migration Rate

Net Migration Rate
2000-2009

7

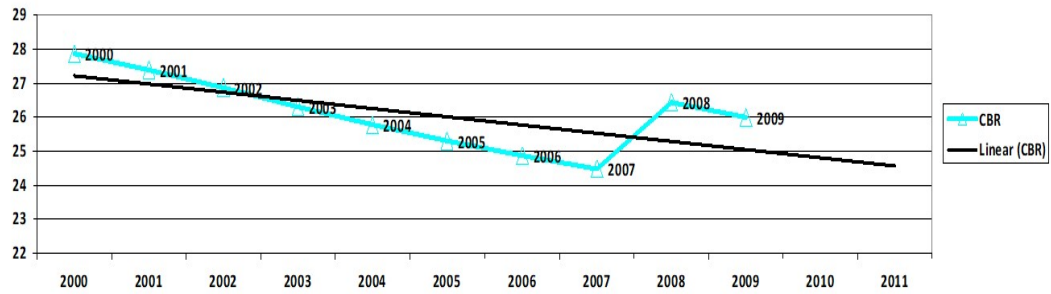# Crude Death Rate

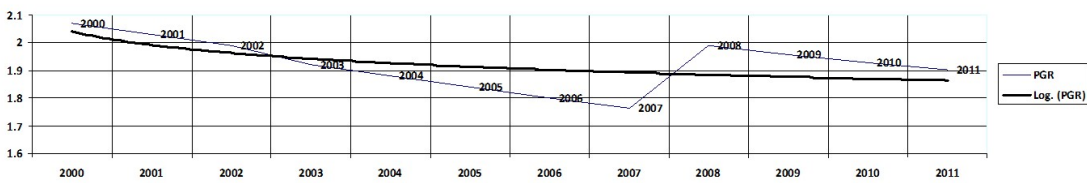Crude Death Rate 2000-2011

8

Crude Birth Rate

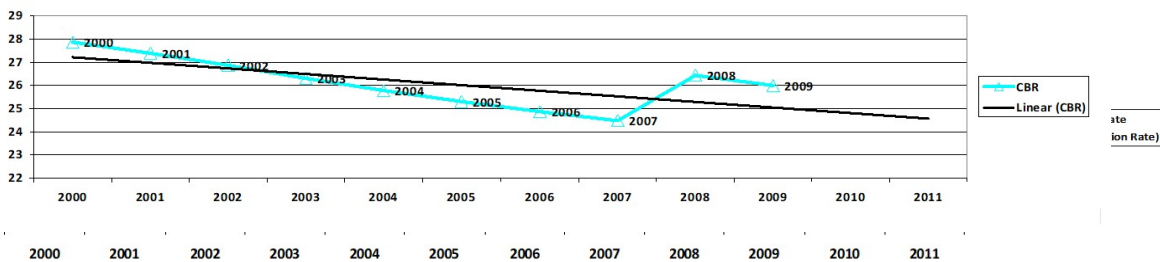Crude Birth Rate 2000-2009

9

Population Growth Rate
2000-2011

Crude Birth Rate 2000-2009

Source: *National Statistics Office*

10

Research Questions:

1. **What is the population of the Philippines from 2009-2017**
2. **What is the Population Growth Rate (PGR) from 2009-2017**
3. **What is the determinant of population growth rate in the Philippines?**
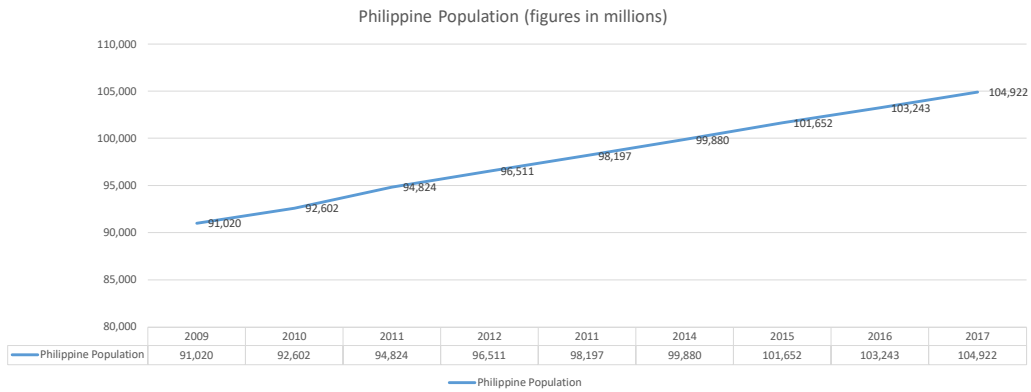4. **What is the impact of the population in the carrying capacity of the Philippines?**

11

Conclusions:

Philippine Population

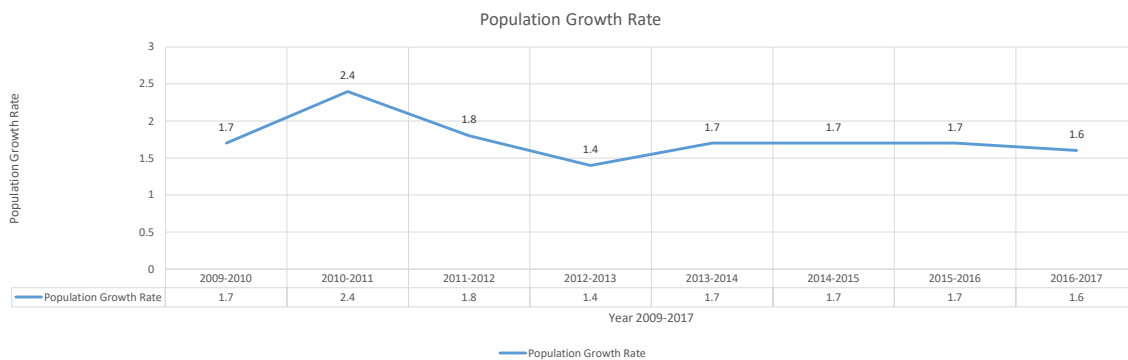**Source: Philippine Statistical Authority,
Accessed February 23, 2020**

12

Findings:

Philippine Population (figures in millions)

	2009	2010	2011	2012	2011	2014	2015	2016	2017
Philippine Population	91,020	92,602	94,824	96,511	98,197	99,880	101,652	103,243	104,922

—Philippine Population

**Source: Philippine Statistical Authority,
Accessed February 23, 2020**

13

Population Growth Rate
2009-2017

Population Growth Rate

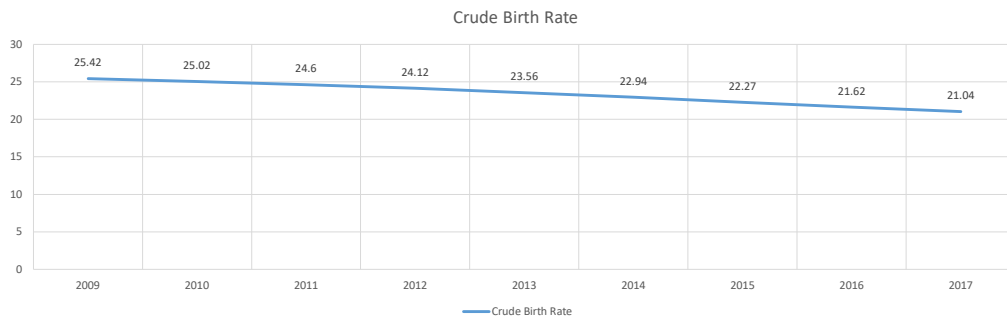|	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Population Growth Rate	1.7	2.4	1.8	1.4	1.7	1.7	1.7	1.6

Year 2009-2017

—Population Growth Rate

**Source: Philippine Statistical Authority,
Accessed February 23, *2020***

14

Determinant of Population Growth Rate 2009-2017: Crude Birth Rate (per 1000 population)

Crude Birth Rate

Source: Knoema.com,
Accessed February 23, 2020

15

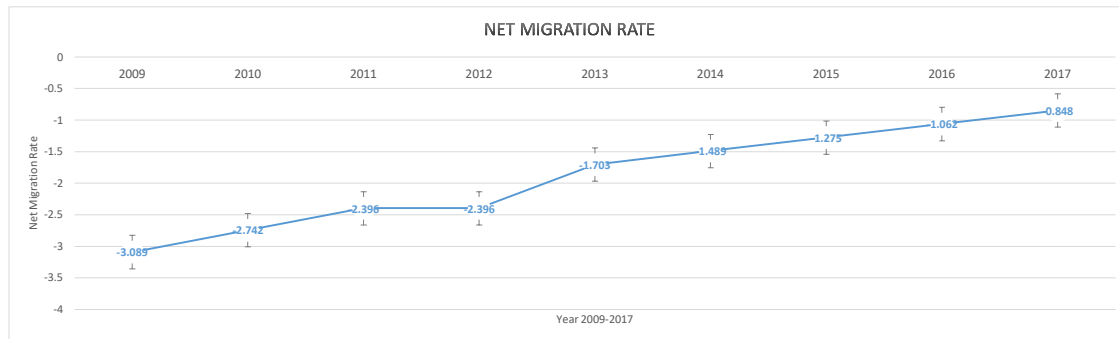# Determinant of Population Growth Rate 2009-2017: Crude Death Rate (per 1000 population)

Crude Death rate
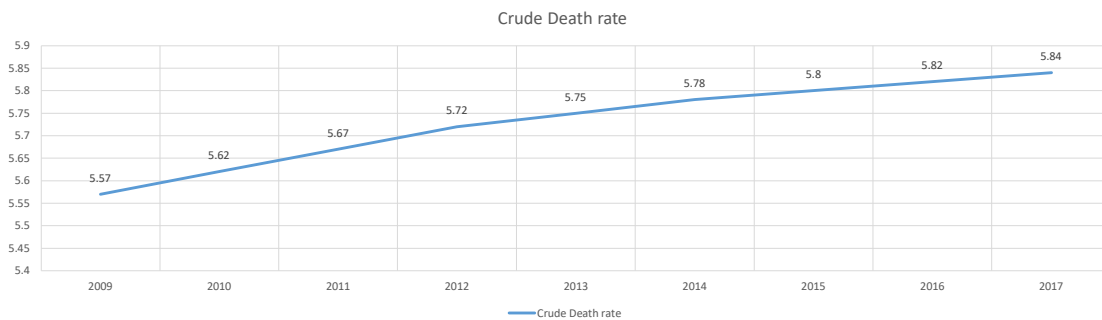
Source: Knoema.com,
Accessed February 23, 2020

16

Net Migration Rate
(per 1000 population)

NET MIGRATION RATE

Source: Philippine Statistical Authority,
Accessed February 23, 2020

17

Determinant of Population Growth Rate
2009-2017: Crude Birth Rate
(per 1000 population)

- In 2018, a total of 1,668,120 live births were registered, which is equivalent to a crude birth rate (CBR) of 15.8 or 16 births per thousand population.

- The number of registered live births showed a decreasing trend, noticeably from 2012 to 2018. The decrease in the last six years was 6.8 percent, from 1,790,367 live births in 2012 to 1,668,120 recorded births in 2018. (See Figure 1 and Table 1)

- On the average, there were about 4,570 babies born daily or about 190 babies born per hour or approximately three babies born per minute.

18

Poverty Incidence:

Figure 1. Poverty Incidence among Population (in Percent)
2006, 2009, 2012 and 2015

26.6   26.3   25.2   21.6*

2006   2009   2012   2015

Full Year
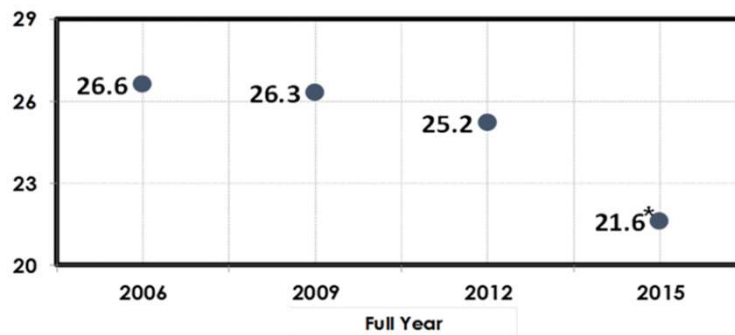
*statistically significant decrease between 2012 and 2015 based on t-test

19

Traffic Situation in the Philippines

20

Recommendations for Data Scientist and Researchers:

1. Correlating baseline statistics to other data category (health, economic, education, etc.) will draw insightful attributions, to ensure utility to government, private and other stakeholders. Also, baseline data and data on the RPRH procurement and expenditures should be correlated to establish budgetary priorities.

2. Comparative budgetary data on pre and post RPRH implementation to determine the impact of the RPRH policies and pieces of legislation.

3. The result of this simple data analysis highlights its limitation. A more in-depth analysis using other methodologies should undertaken. The richness of the data will serve basis for new programs and approaches to fully addressed this issue.

4. This gives emphasis on the potential of data science to monitoring and evaluation and auditing initiatives of the government to properly account for and deter misspending of public funds.

21

Recommendations along governance domain:

1. Baseline statistics and the results of correlational research endeavors should influence Government Planning and Budgeting Cycles in the different levels of governance, to minimize political and religious consideration.

2. Tracking initiatives should trickle down to the regional, city and municipal levels. Evidence-based approach should inform Planning and Budgeting priorities of LGUs.

3. The government should maximize the potential of data science in key government initiatives.

4. Localization of RPRH initiatives and pieces of legislation.

22

Recommendations for Private and Civil Society Organizations.

1. Private companies with expertise and Government can explore possibilities for Public and Private Partnerships to venture various public service endeavors.

2. Using credible data, Civil Society Organizations (CSOs) can better work for the inclusion, improvement and sustenance of RPRH budget to adequately fund RPRH commodities and services.

3. CSOs are better armed to look into accountabilities of government agencies for the effective and efficient implementation of RPRH in the country.

23

Team Data Hoarder

Freddie R. Boral-Data Collator/Presenter
Gerardo Evan- Data Collator
Gentlemen Bicol

Bb. Ruffa Torregoza-Presente
Nicka' Ragua
Gayon, Inc

Gerald Miranda- Data Researcher/Presenter
Francis Shelwynn Dineros- Data Researcher
Bicol University College of Science- Second Year

24

25