# **Data Analysis of Poverty**

**IBM Descriptive Analytics**

**(IBMDESC)**

**Professor: Mr. Joaquin Bamba**

**Belchez, Maica L.**

**Heramia, Johanna Marisse C.**

**Tadeo, Jose Lorenzo G.**

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## **Introduction – Johanna**

What is Poverty? Poverty, according to Randolf S. David, it is theInability to provide for the basic requirements of minimum survival – such as food, housing, clothing, and medical care. The question we must ask is why large numbers of a country’s population find themselves in this situation. 26.3 percent of Filipinos were found to be living below the poverty line, per Philippine Statistics Authority. Poor people are getting poorer while rich are getting richer and there are many causes or factors why Filipinos are still under this never-ending poverty. They don’t earn enough money to buy their needs. This maybe because of the government doesn’t provide adequate social services to those who could least afford, there are many children in household, high inflation of prices and the income are still low, lack of education and more.

You will see statistical data of poverty in the Philippines in different region through the graphical representation using R. Population, number of families, poverty incidence, family income and expenditure, Annual Per Capita Poverty Threshold per region and more important role that may help in analyzing the poverty and what are the factors contributing to it, how they are related to each other, its summaries and analysis.

## **Population Per Region – Johanna**

The region that has highest population as of 2012 is in Region IV-A or CALABARZON, to be exact, it has 13,458,967. (Data below are rounded-off to hundreds for better view of data in graph.) This data will help us determine if percentage of poverty is related to the number of population by region.

## 

> population2012=tapply(DataV3$Population2012, DataV3$RegionalDesignation, FUN=sum, na.rm=TRUE)

> population2012

ARMM CAR NCR Region I Region II Region III

33625 16766 123154 48744 33259 106096

Region IV-A Region IV-B Region IX Region V Region VI Region VII

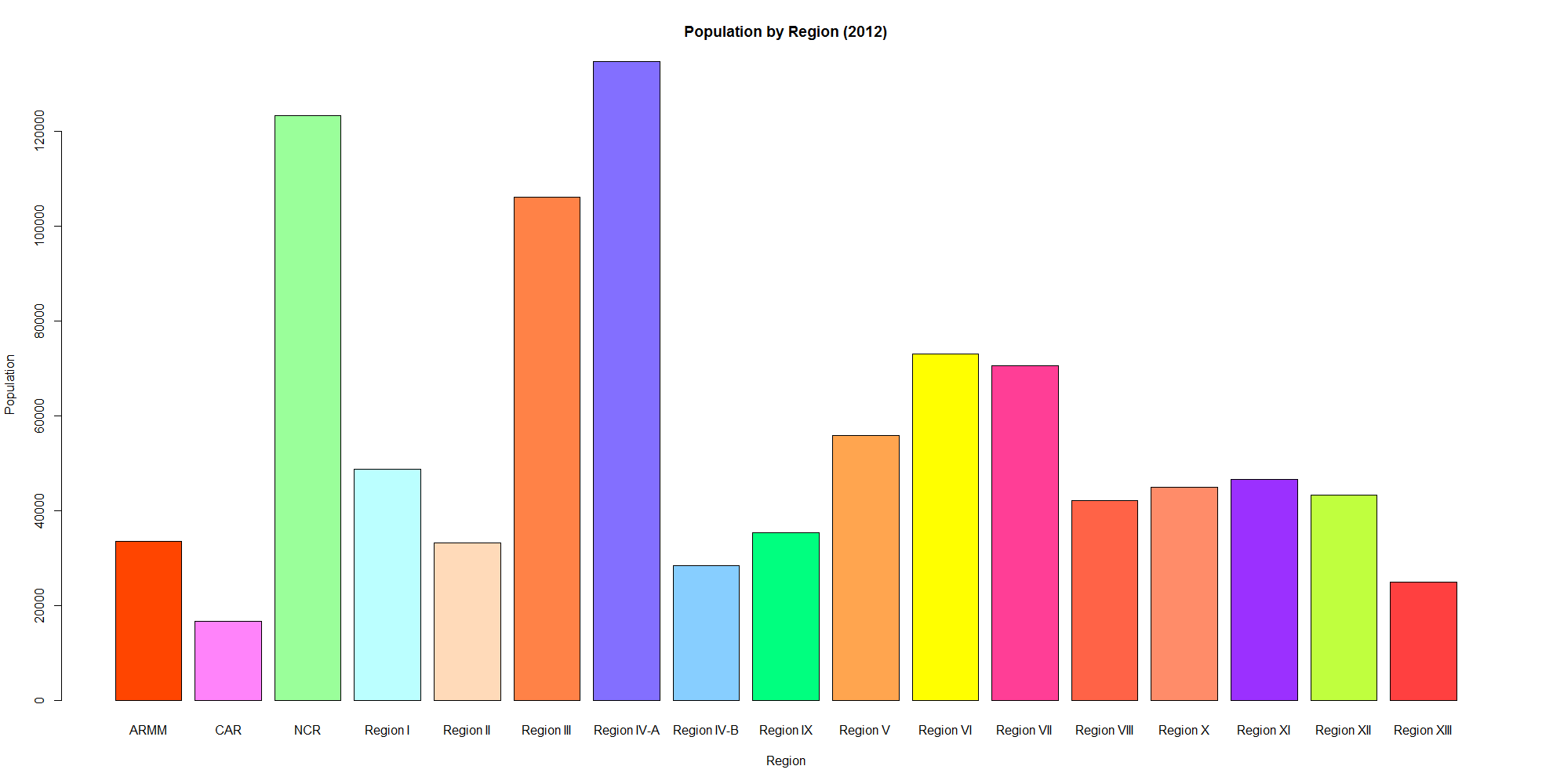
134590 28510 35456 55919 73092 70609

Region VIII Region X Region XI Region XII Region XIII

42146 44896 46600 43306 25074

> colors <- c("orangered1","orchid1","palegreen1","paleturquoise1","peachpuff1","sienna1","slateblue1","skyblue1","springgreen1","tan1","yellow1","violetred1","tomato1","salmon1","purple1","olivedrab1","brown1")

> barplot(population2012,ylab="Population",xlab="Region", col=colors,main="Population by Region (2012)")



> population2015=tapply(DataV3$Population2015,DataV3$RegionalDesignation,FUN=sum,na.rm=TRUE)

> population2015

ARMM CAR NCR Region I Region II Region III

37841 172220 128773 50261 34514 112182

Region IV-A Region IV-B Region IX Region V Region VI Region VII

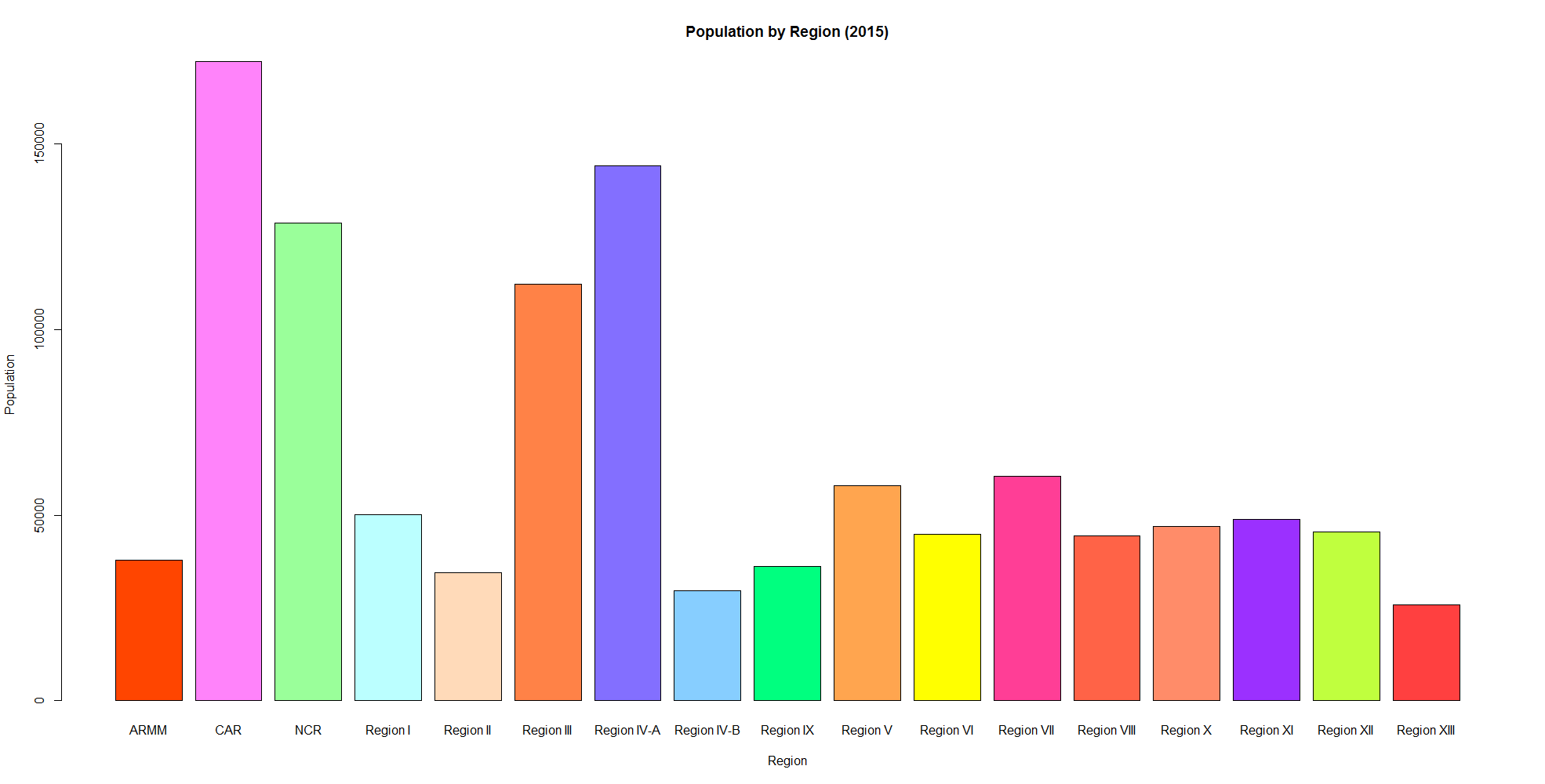
144148 29634 36298 57970 44772 60419

Region VIII Region X Region XI Region XII Region XIII

44402 46893 48933 45453 25967

> colors <- c("orangered1","orchid1","palegreen1","paleturquoise1","peachpuff1","sienna1","slateblue1","skyblue1","springgreen1","tan1","yellow1","violetred1","tomato1","salmon1","purple1","olivedrab1","brown1")

> barplot(population2015,ylab="Population",xlab="Region", col=colors,main="Population by Region (2015)")



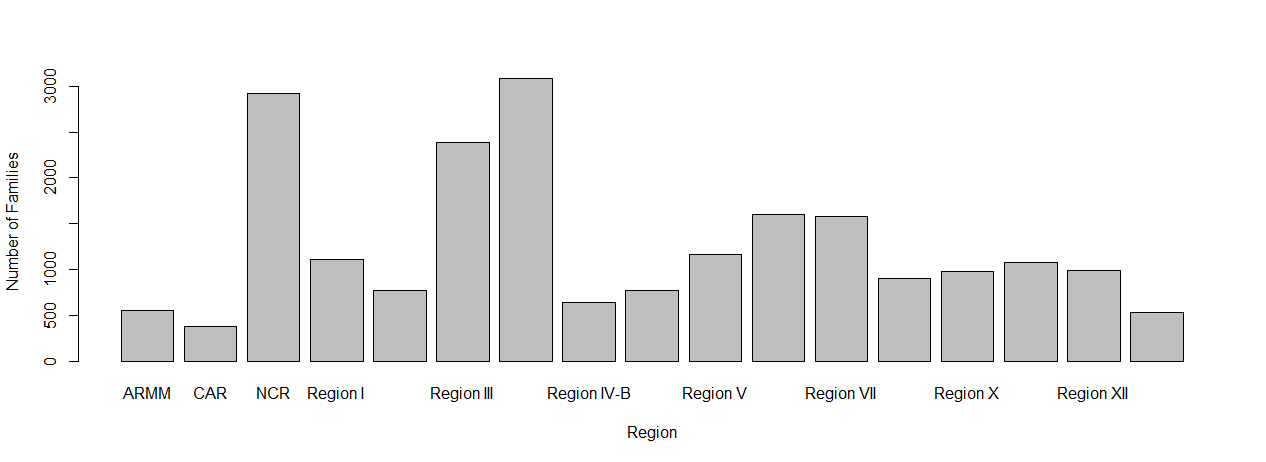
## **Poverty Incidence among Population Per Region – Renzo**

## **Poverty Incidence among Family Per Region – Johanna**

## **Family Per Region – Johanna**

> family2012=tapply(DataV3$NumberOfFamilies2012,DataV3$RegionalDesignation, FUN=sum, na.rm=TRUE)

> barplot(family2012, ylab = "Number of Families", xlab = "Region")



## **Average Income of Families Per Region – Renzo**

## **Average Expenditure of Families Per Region – Johanna**

## **Annual Per Capita Poverty Threshold – Maica**

## **Poverty Incidence by Population – Renzo**

> plot(Data$Population2015, Data$PovertyIncidenceAmongPopulation2015, xlab="Population", ylab="Poverty Incidence", main="Poverty Incidence By Population (2015)")

> poverpopu2 <- lm(Data$PovertyIncidenceAmongPopulation2015~Data$Population2015)

> abline(coef(poverpopu2), lwd=2)



## **Poverty Incidence by Population – Renzo**

> plot(Data$Population2012, Data$PovertyIncidenceAmongPopulation2012, xlab="Population", ylab="Poverty Incidence", main="Poverty Incidence By Population (2012)")

> poverpopu <- lm(Data$PovertyIncidenceAmongPopulation2012~Data$Population2012)

> abline(coef(poverpopu), lwd=2)

## 

## **Poverty Incidence by Families – Renzo**

> plot(Data$NumberOfFamilies2015, Data$PovertyIncidenceAmongFamilies2015, xlab="Number Of Families", ylab="Poverty Incidence", main="Poverty Incidence By Families (2015)")

> poverfami2 <- lm(Data$PovertyIncidenceAmongFamilies2015~Data$NumberOfFamilies2015)

> abline(coef(poverfami2), lwd=2)



## **Poverty Incidence by Families – Renzo**

## **Recommendation and Conclusion – Renzo**