



# How Increasing A&E Charge will affect the A&E Attendance?

急症室收費上調如何影響急症室求診人數?

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## BACKGROUND

The Hospital Authority reviewed the service charge of 17 public hospital and has proposed raising the fee of accident and emergency service from 100 to 220, in order to lessen the pressure on overcrowded wards.

## AIM

To know whether increase the fee for A&E services is a good way to lessen the pressure of overcrowded emergency wards. Factors other than price will be studied to find out what is the best way to reduce A&E attendance.

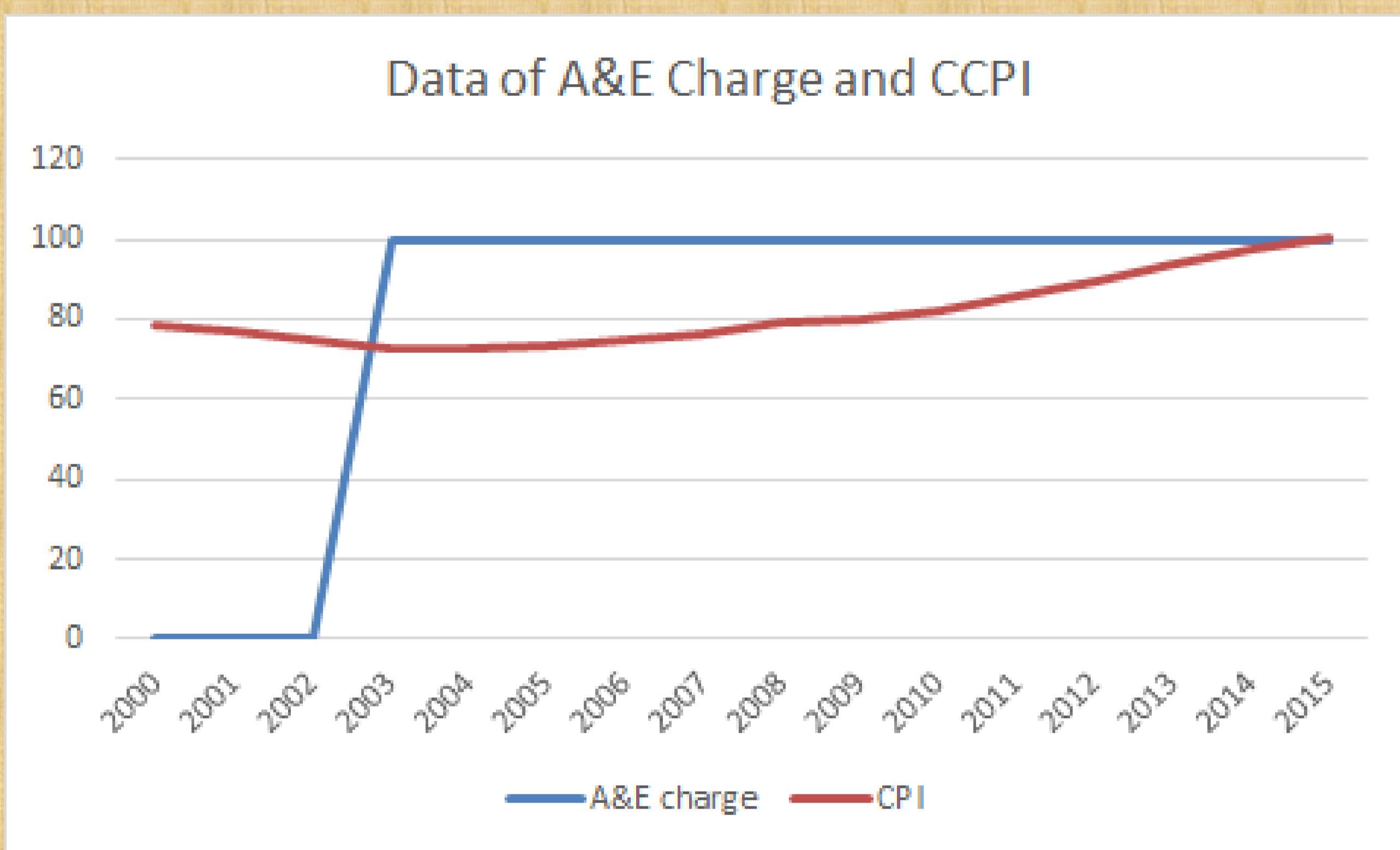
## METHODOLOGY

Data Source:

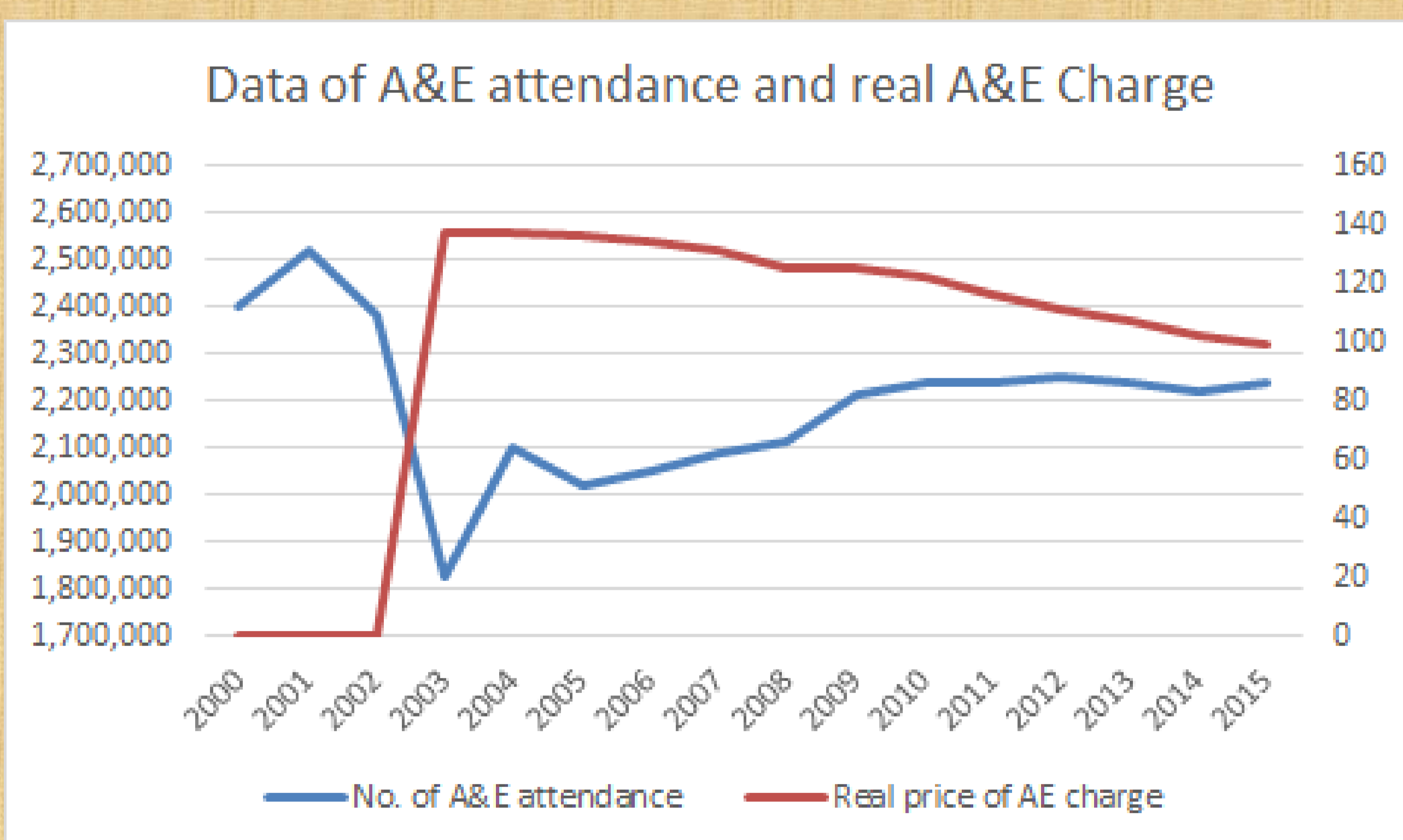
- Change In Population
- General Price Level
- The Per Capita Income
- Total Number Of A&E Attendance Over The Last 15 Years



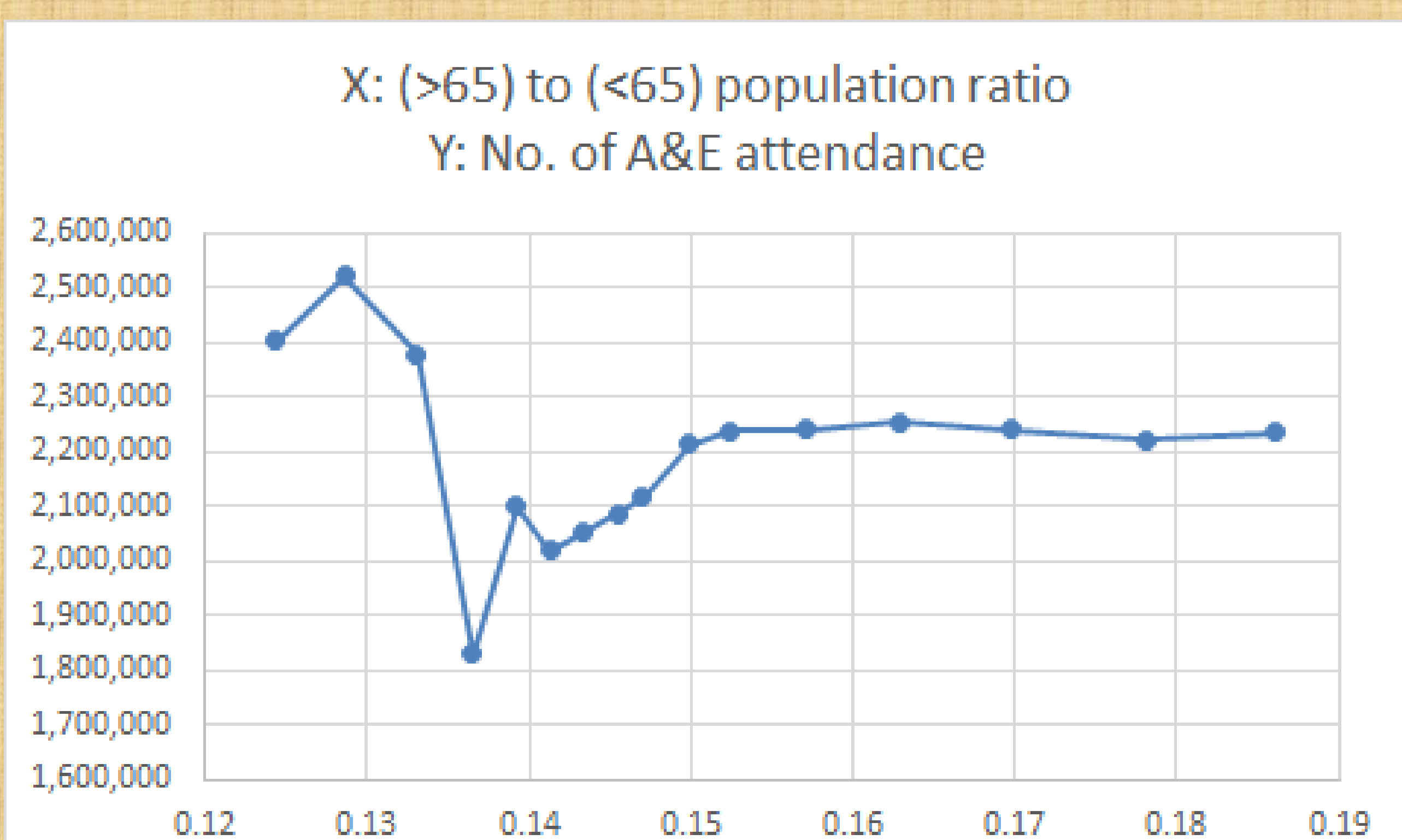
## DATA ANALYSIS



The Change in A&E Charge and the Composite Consumer Price Index in Hong Kong from 2000 to 2015

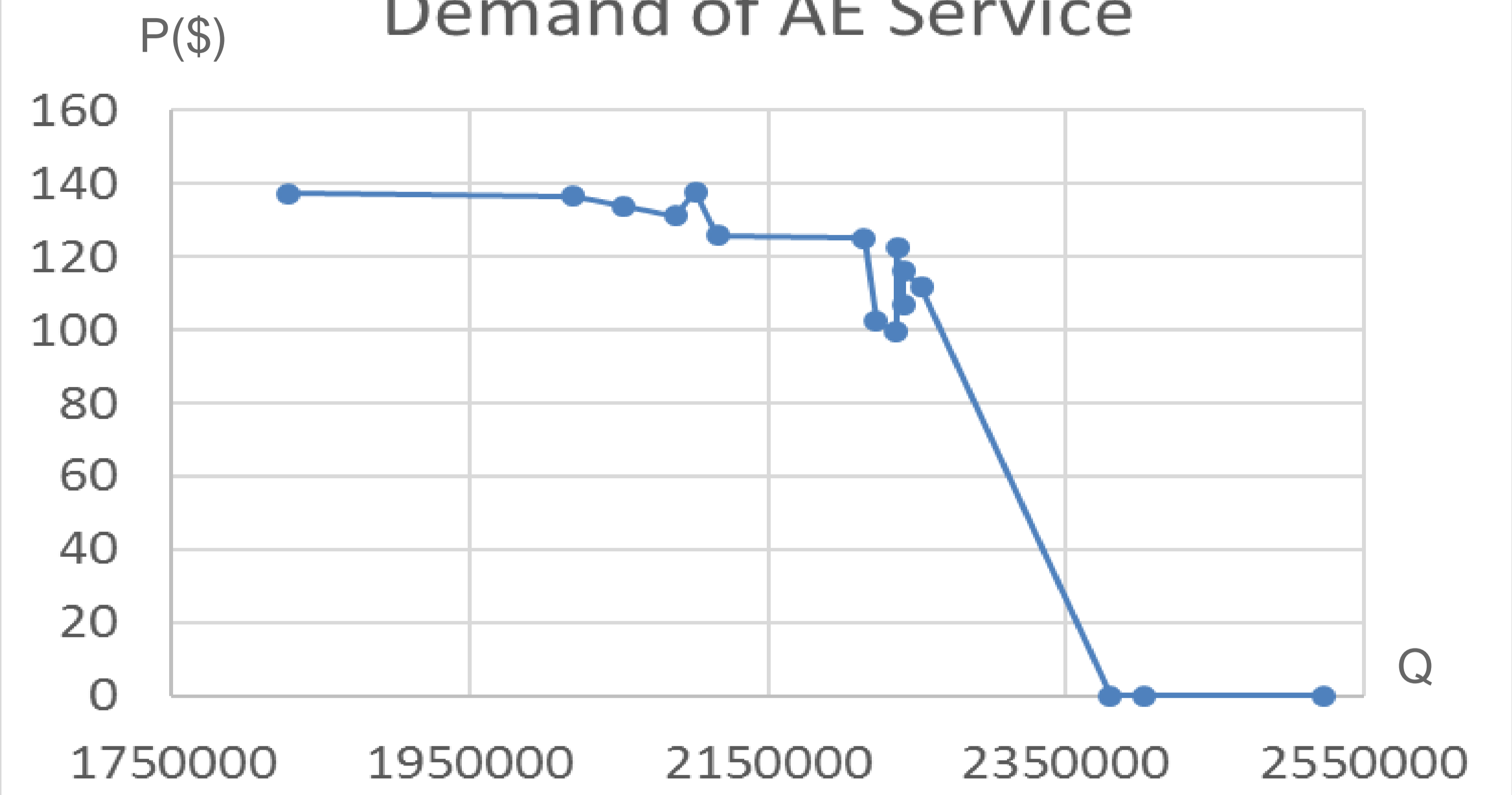


The Change in A&E Attendance and the Real Price of A&E charge from 2000 to 2015



The ratio of Population "above 65" to "below 65" years old and the Total A&E Attendance from 2000 to 2015

## Demand of AE Service



## REGRESSION ANALYSIS

$$\text{A\&E Attendance} = \beta_0 + \beta_1(\text{pr\_GDP}) + \beta_2(\text{r\_P}) + \beta_3(\text{pop\_}>65)$$

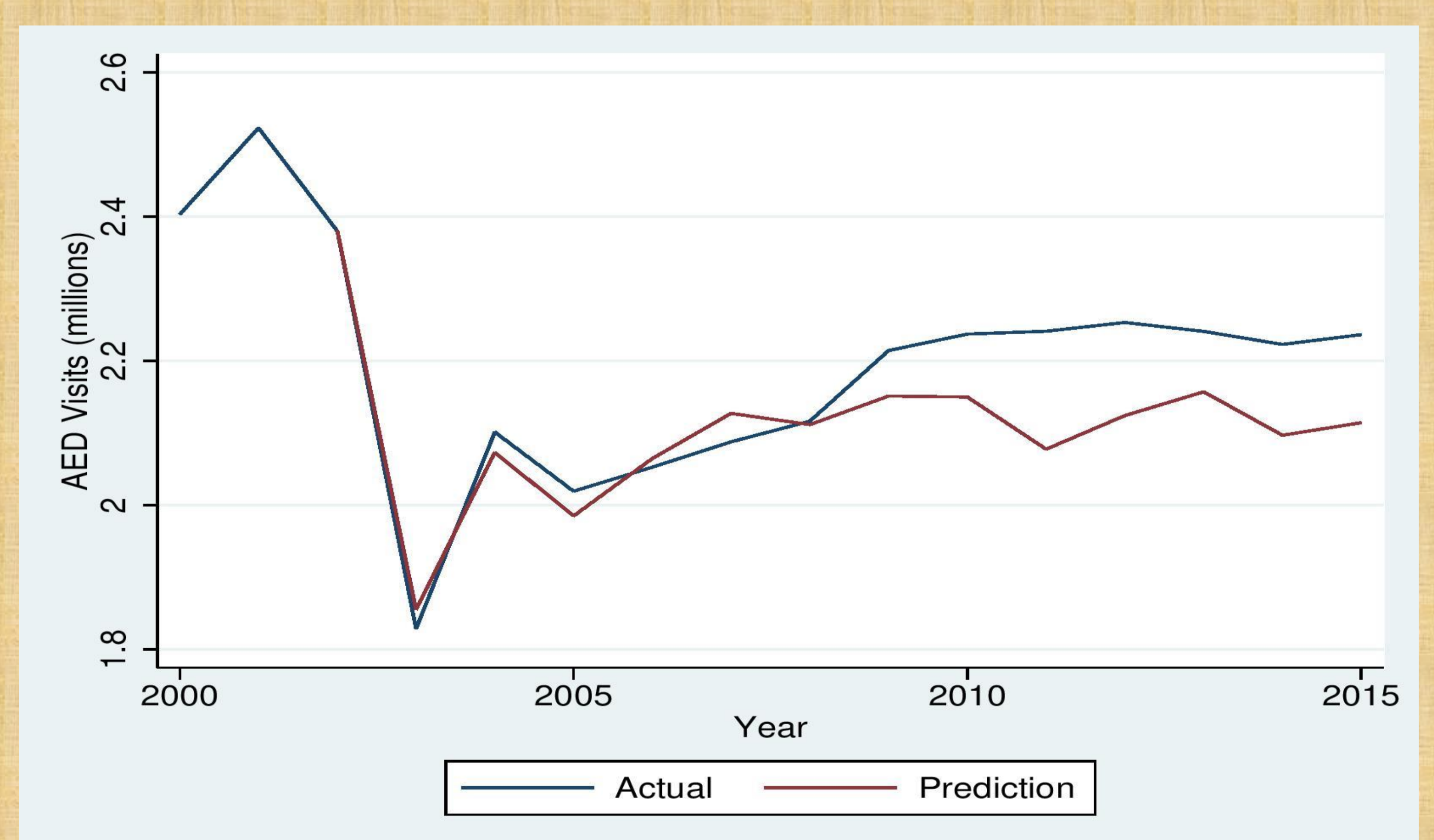
$r\_P$  = Real A&E charge  
 $pr\_GDP$  = Per capita real GDP  
 $pop\_>65$  = Population of people over 65 years old

### Variables affecting the A&E Attendance

Variables	Coefficient	P-value
Real A&E Charge*	-3717.93	0.0000
Per capita Real GDP*	3.9712	0.0138
Population of over 65	-0.7227	0.1317
Constant*	2186750	0.0000
R-squared		0.8638
Observation		16

\* Significant Variable

$$\text{A\&E Attendance} = 2186750 - 3717.93(\text{r\_P}) + 3.9712(\text{pr\_GDP}) - 0.7227(\text{pop\_}>65)$$



VAR Simulation of A&E Attendance

## Conclusion

A one dollar increase in real price of A&E service  $\uparrow$   
The estimated A&E attendance  $\downarrow$  around 3700.

when the fee of A&E service increases to \$220 from \$100, A&E attendance will have an about 424,000 decrease.

## Suggestion

To lessen the overcrowded wards, the government can do the followings:

- Fix the real price of A&E service instead of the nominal price
- Fix the real price of A&E to real GDP ratio

