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Group 22
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"The Impact of Individual income on the Health insurance spending"

Methodology

Hypothesis: Increase in income level can raise the expenditure of life insurance

Using data of gross insurance premiums per capita (US dollars) in the year of 2015 from 30 countries from OECD Data

Dependent variable		
Variable	Represented by	Unit
Insurance	Gross insurance premiums per capita	US dollars
Independent variable		
Variable	Represented by	Unit
GNI	Gross national income (GNI) per capita	US dollars
Life expectancy	Total life expectancy at birth	Years
Fertility rates	Fertility rates	Numbers of children
Household savings rate	Percentage of household disposable income	Percentage
Price level	Price level index	OECD=100
Education level	Level of upper secondary (attainment percentage of 25-64 years old)	Percentage

Findings

Source	SS	df	MS	Number of obs =	30
Model	764364326	6	127394054	F(6, 23) =	5.00
Residual	585891060	23	25473524.4	Prob > F =	0.0021
Total	1.3503e+09	29	46560530.6	R-squared =	0.5661
				Adj R-squared =	0.4529
				Root MSE =	5047.1

insurance	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gni	.6832949	.1705696	4.01	0.001	.3304448	1.036145
lifeexpect~y	104.4331	693.1862	0.15	0.882	-1329.532	1538.398
fertilityr~s	927.9433	6017.328	0.15	0.879	-11519.85	13375.73
savings	8.646239	174.7619	0.05	0.961	-352.8763	370.1688
price	-243.023	106.0534	-2.29	0.031	-462.4111	-23.63493
education	-151.4389	98.24893	-1.54	0.137	-354.6823	51.8045
_cons	-4386.635	59075.64	-0.07	0.941	-126593.9	117820.6

Multiple Regression:

$$insurance = -4386.635 + 0.6833(gni) + 104.4331(lifeecpect\sim y) + 927.9433(fertilityr\sim s) + 8.6463(savings) - 243.023(price) - 151.4389(education)$$

(59075.64) (0.1706) (0.693.1862) (6017.328) (174.7619) (106.0534) (98.2489)

- Test the significance at 5% of the independent variables
- Null hypothesis: the coefficient of the independent variables is 0 (mean no effect to the dependent variable)

- P-values of the independent variables the gross national income per capita (gni) is 0.001 and that of price level (price) is 0.031
  - smaller than 0.05 (5%)
  - => statistically significant to the dependent variable gross insurance premiums per capita

Analysis

Life insurance products are normal goods

- Demand will increase when they have more income
- More income, the proportion of premium to income will be smaller
- More willing to pay for it

Individuals with higher income are probably the breadwinner of their family

- If they die suddenly under uncertain condition, their family may lose the monetary support for their life
- Avoid an enormous negative effect to their family

Price level index is statistically significant (negative value)

- Higher price level decreases the gross insurance premiums per capita
- A decrease in price level that deflation can cause a decrease in interest rate
- Benefit from investment will be smaller
- Individuals may transfer the money from the investment to the spending on the insurance products when there is a decreasing in interest rate

Conclusion

Positive relationship between gross insurance premiums per capita and gross national income (GNI) per capita

Limitations

- Sample size is too small to support the findings
- Regression model using cannot prove the causal relationship between the dependent variable and independent variable
- Only 6 independent variables for the study (there are other factors that can affect the decision of the individuals on the life insurance expenditure

Future research

- Use more related independent variables to run the regression model that can show how the life insurance expenditure is affected
- Find data from more countries and also using the values in different years ((Increase the accuracy of the results)