

# PCR and Measurement Error

Isaac Liu

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## Application: Government Share of Healthcare Spending and Life Expectancy

In the left column in the table below I first regress the life expectancy at birth for all individuals in a given country and year on a measure of government spending as a share of total health expenditure. In the middle column I include the economic controls/covariates of GDP per capita (PPP), GNI per capita (PPP), Survey Mean Income/Consumption Per Capita, ILO GDP per person employed, and Net Foreign Assets Per Capita, all from the World Bank. In the rightmost column I instead use the first principal component combining these covariates.

I standardize all variables by subtracting the mean and dividing by the standard deviation, linearly interpolate data between known observations, and remove country-years with missing values for any of the economic indicators.

	<i>Life Expectancy at Birth (Years)</i>		
	(1)	(2)	(3)
Government Share of Health Expenditure	0.567*** (0.019)	0.315*** (0.018)	0.328*** (0.019)
GDP Per Capita PPP		-0.500*** (0.063)	
GNP Per Capita PPP		0.673*** (0.061)	
Survey Income/Consumption Per Capita		0.022 (0.016)	
GDP Per Employed Person		0.336*** (0.033)	
PC1			0.286*** (0.011)
Observations	1,965	1,965	1,965
$R^2$	0.322	0.523	0.494
Adjusted $R^2$	0.322	0.521	0.494
Residual Std. Error	0.824	0.692	0.712
F Statistic	932.284***	429.214***	958.990***

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
All variables are standardized.

# Appendix

Figure 1: Correlations Between Covariates and Life Expectancy

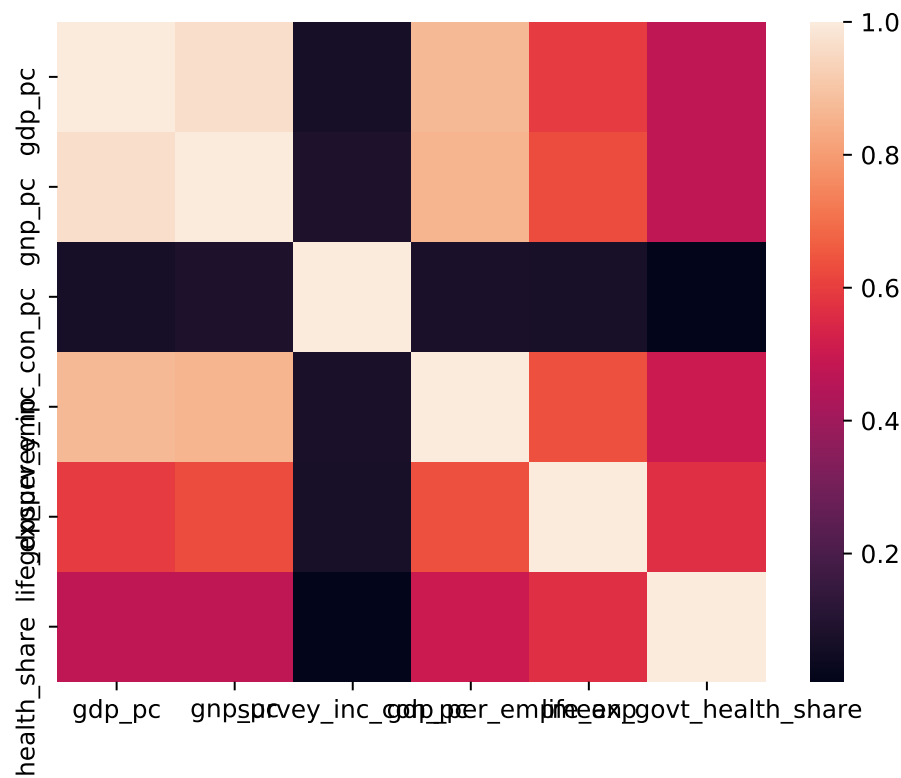


Figure 2: Economic Measures PCA Loadings

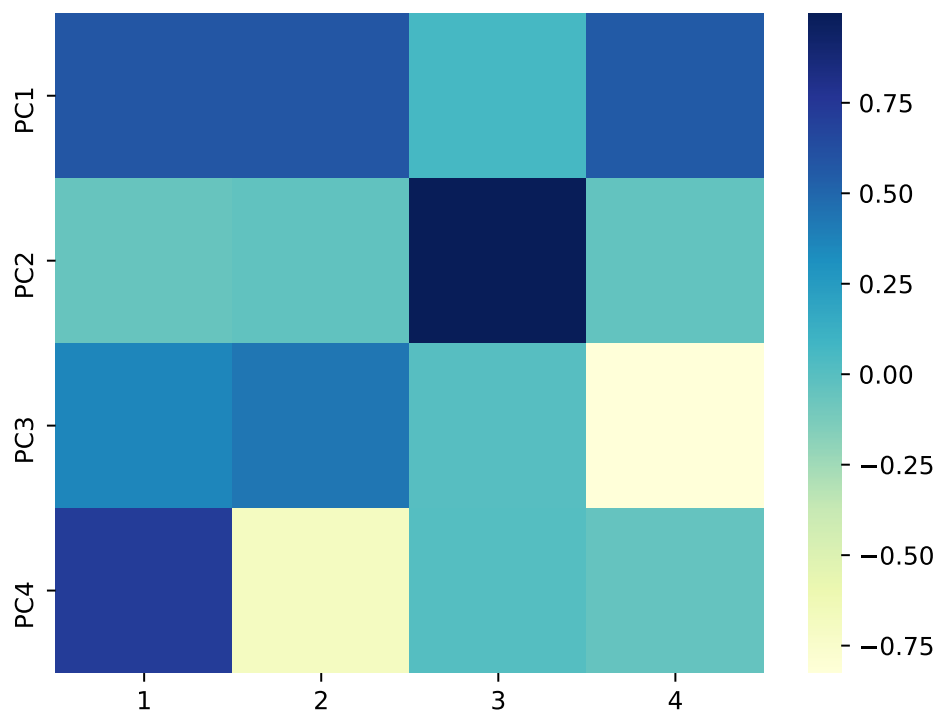


Figure 3: Economic Measures PCA Share of Variance Explained

