Digital Divide in Online Health Utilization in China: A Case Study of Geographical Difference in Online Health Analytics

TREO Talk Paper

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Abstract

There has been an increasing trend in which consumers are searching online for healthcare and/or healthcare provider information. According to the 2013 Health Online Report by the Pew Research Center, about 58% of American adults have used the Internet to look up health information at least at one time in the past year. But, to the authors’ best knowledge, no study has examined the digital divide in online health in China. Thus, the present study intends to explore this online health’s digital divide in China by using a geographic health analytics approach.

For the present study, we leverage online doctor reviews from each province of China and the provincial level economic data from China to explore which economic factors may influence online health information usage to investigate this digital divide online.

We have collected data from various sources for the present study, and the data collecting process remains ongoing due to the variety of data sources and the difficulty of data that we want to collect.

We propose a theoretical model as follows:

Local Online Health Utilization = Function (Internet Accessibility, Local Economy, Local Health Accessibility) (1).

Here, we use the number of online doctor reviews of a province as a proxy for online health utilization in that province, the percentage of population that has Internet accessibility as a proxy for Internet accessibility of that province, the province’s annual GDP as the proxy for local economy, and the number doctors a province has as the local health accessibility.

Reviewi = β0 + β1 Internet_Percentagei + β2 GDPi + β3 Number_Doctorsi + β4 Populationi + e (2)

Model (2) empirically examines the relationship between the number of online doctor reviews posted and the local economy. We also add each province’s population as a control variable in case a province’s GDP is highly correlated with its population.

The present study intends to explore what factors may have an impact on online health utilization in China by examining various economic-related variables. Based on the author’s knowledge, this is the first study to investigate digital divide in online health in China. Also, we will continue to collect data for multiple years, and will continue to improve our model. Ideally, we plan to use a panel data to run fixed effect regression to examine any dynamic economic variables that may influence or cause this digital divide.