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Estimating the Potential Economic Impact of the COVID-19 Pandemic on Philadelphia

- This analysis attempts to estimate what the likely economic impact of the current COVID-19 pandemic could be on Philadelphia's economy and real estate market.

- The last major flu pandemic, which was the "Spanish Influenza" of 1918-1920, is used as the case study for this analysis.

- This last pandemic is a particularly useful example for several reasons:

    - It was the last major pandemic similar in scale to the current one, claiming 675,000 U.S. lives.
    - It was followed by an especially severe economic downturn, with the Dow falling 47% and unemployment rising to nearly 12%.
    - Philadelphia was one of the most adversely affected cities, with over 12,000 deaths.

- The empirical results in this analysis were obtained by surveying the existing peer-reviewed research on the economic impact of the 1918-1920 pandemic, and then updating it to today using Philadelphia's current economic inputs and parameters as well as the prevailing estimates of the current pandemic's potential total death toll.

- If the median forecast from a survey of medical experts predicting the current virus's national death toll prevails, the economic consequences to Philadelphia are projected to be the following:

    - A loss in the city's total GDP of $1.25bn.
    - A loss in the city's total manufacturing output of $311.4m.
    - For medium-to-large businesses, 389 business failures, resulting in a loss to the city of $4.4m in BIRT revenue and an increase in unemployment of approximately 11,350 persons.
    - An increase in the city's poverty rate to 28.3%, which is an addition 40,411 impoverished persons.
    - An $11.6bn loss in total capital income (defined as dividends, interest and rental income).
    - A $19.6bn drop in total wage income, resulting in a loss to the city of $761.7m in wage tax revenue.
    - An $81.6bn devaluation of the city's housing stock and a subsequent loss in real estate tax revenue of $1.1bn.

- Based upon the range of possible virus-related deaths and the duration of the current self-quarantine, the total economic cost of the pandemic to each Philadelphia household (over several years) is estimated to range from approximately $51,000 to $692,000.

- Applying these numbers to the range of potential deaths that are expected to be prevented implies that the cost per each individual life that is saved will range from $7.1m to nearly $39m.

- Since most individuals either do not possess that much or earn that much, this implies that the city will have to borrow quite heavily to cover the ultimate economic cost of the pandemic.

- But, while these numbers are very high, <u>they are heavily contingent upon two major assumptions</u>:

    - The total U.S. death from the virus will be at least 200,000 persons.
    - The U.S. economy will react as adversely to the current pandemic as it did to the previous one.

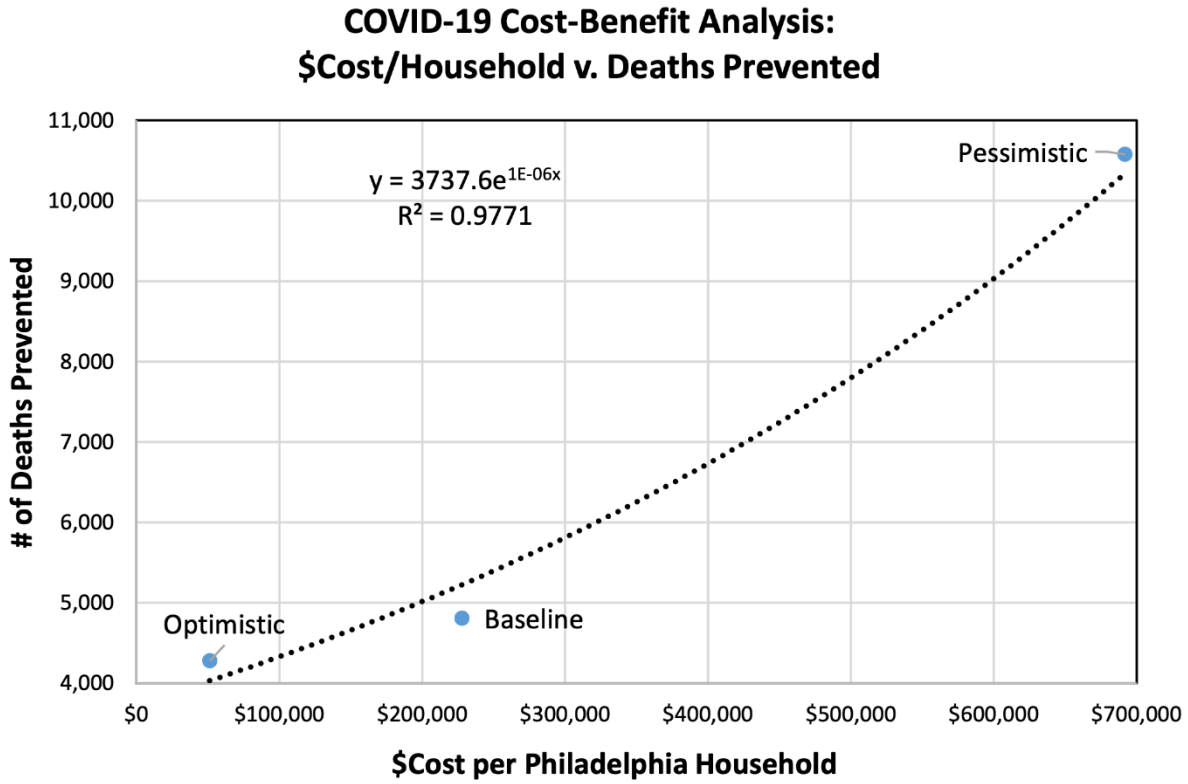
- However, one major aspect that the last pandemic did not have that this one does is the extensive self-quarantining and work stoppage/reduction that is currently occurring.

    - While the city did force many establishments to temporarily close that were places of large interpersonal gatherings (e.g. schools, bars, theaters, restaurants), most places of business and production remained open for the duration of the 1918-1920 pandemic.

- Moreover, despite the lack of extensive quarantining and a much higher death toll than the current pandemic's, the durations of the last pandemic and the economic downturn that followed were actually quite short:

    - Historical records from the time indicate that the vast majority of deaths in Philadelphia occurred in a 6-week window from late September to early November 1918.
    - Although the official length of the 1920-1921 Depression was 18 months, most of the acute economic pain occurred in a period of approximately half of that period.

- **The policy implications of this analysis suggest that the cost of a prolonged self-quarantine and work stoppage are not only high, but will grow increasingly higher as its duration continues:**



- **<u>Conclusion:</u> The results suggest that policymakers and elected officials should be conscientious about the magnitude of potential economic losses due to containing the virus (quarantining) as they address potential losses due directly to the virus itself (deaths), and use this information to plan an adaptive response tailored to the severity of the crisis.**

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