

Economic policy and health sector

Empirical evidence

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Who are we?

Main areas of research at the Institute for Finance and Artificial Intelligence are: health economics, corporate finance, financial markets and institutions, risk management, econometrics and data science (including artificial intelligence and machine learning). We develop new methods and their software and hardware implementation. Our members work on projects for industry and different government institutions in and outside Slovenia.

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Example 1 – what influences the economic impact

| Explanatory variables: | Multipliers: Output | | Income | | Value added | | log(Employment) | | Import | |
|------------------------|---------------------|-------|--------|-------|-------------|-------|-----------------|-------|--------|-------|
| | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. |
| X01 | 0.030 | 0.001 | 0.005 | 0.091 | 0.004 | 0.057 | | | -0.001 | 0.106 |
| X02 | -0.001 | 0.001 | | | | | | | | |
| X03 | | | | | | | | | -0.012 | 0.038 |
| X04 | -0.038 | 0.004 | | | | | | | | |
| X05 | | | | | 0.011 | 0.051 | | | -0.006 | 0.002 |
| X06 | | | | | | | -1.253 | 0.000 | | |
| X07 | | | | | | | -0.343 | 0.020 | | |
| X08 | | | | | | | -0.524 | 0.000 | | |
| X09 | | | | | | | | | 0.001 | 0.052 |
| X10 | | | | | | | | | -0.008 | 0.001 |
| C | 2.416 | 0.000 | 0.332 | 0.112 | 0.503 | 0.055 | 3.454 | 0.009 | 1.043 | 0.000 |
| R-squared | 0.673 | | 0.159 | | 0.305 | | 0.975 | | 0.888 | |

X01 - government and compulsory health insurance schemes (% of current expenditure on health), X02 - expenditure on health (per capita, US\$ purchasing power parities), X03 - expenditure on health (% of gross domestic product), X04 - expenditure on pharmaceuticals and other medical non-durables (% of current expenditure on health), X05 - Gini coefficient of equalised disposable income (EU-SILC survey), X06 - log of GDP per capita, X07 - log of constant returns to scale efficiency (Storto, 2017), X08 - log of total pharmaceutical expenditure (% of total health expenditure), X09 - % of urban population, X10 - healthy life years expectancy at birth, C - regression constant.

JAGRIĆ, Timotej, GRBENIC, Stefan O., JAGRIĆ, Vita. What drives the healthcare sector's economic impact? : evidence from European countries. International journal of health governance. nov. 2021, vol. , issue , str. [1-13], ilustr. ISSN 2059-464X. <https://www.emerald.com/insight/content/doi/10.1108/JHG-05-2021-0043/full/pdf?title=what-drives-the-healthcare-sectors-economic-impact-evidence-from-european-countries>, DOI: 10.1108/JHG-05-2021-0043. [COBISS.SI-ID 86893827]

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Example 2 – economic properties and epidemic outcome

| Covid 19 outcome variable | Model 1 LOG(Deaths - cumulative total) | | Model 2 Deaths - cumulative total | | Model 3 Deaths - cumulative total | | Areas of possible policy measures | Types of possible policy measures |
|--|---|-------|--------------------------------------|-------|--------------------------------------|-----------|-----------------------------------|--|
| | Coefficient | Prob. | Coefficient | Prob. | Coefficient | Prob. | | |
| Determinants of the Covid 19 outcome | | | | | | | | |
| South America | -1.381*** | | | | | | Regional characteristics | No policy measures possible |
| Africa | -1.856*** | | | | | | | |
| Asia | -1.894*** | | -0.639* | | -0.7105* | | | |
| Oceania | -3.360*** | | -2.828*** | | -4.8998*** | | | |
| Covid 19 Cases - cumulative total | 0.307*** | | | | | | Virus characteristics | No policy measures possible |
| Covid 19 virus clade_20A | 0.024 | | 0.030 | | 0.4856 | | | |
| Covid 19 virus clade_20B | 0.250* | | 0.240* | | 0.6210*** | | | |
| Share of population older than 65 | -0.587** | | | | | | Population characteristics | Long- and mid-term policy measures possible |
| Share of the population living in urban areas | 1.713*** | | | | 2.0748** | | | |
| Mean BMI (male and female) | | | 3.872** | | | 9.9473*** | Equality characteristics | Long-, mid-, and short-term policy measures possible |
| Female employment-to-population ratio | -1.266*** | | | | | | | |
| Gini index of consumption | | | -1.814** | | -3.9628*** | | | |
| Share of public health care sector | | | -0.478* | | -0.9352** | | | |
| Healthcare Access and Quality Index | | | | | -3.9142** | | Health sector characteristics | Long-, mid-, and short-term policy measures possible |
| GDP per capita, PPP (constant 2011 international \$) | | | | | | | National economy characteristics | Long-, mid-, and short-term policy measures possible |
| High-Tech export (share of manufactured exports) | | | -0.393* | | | | | |
| FDI country attractiveness | | | -0.350** | | -0.7123*** | | | |
| Share of the agriculture sector | -0.393* | | 5.063*** | | 6.7496*** | | | |
| Google mobility measures | | | 0.451*** | | 0.4016*** | | Cultural characteristics | Short-term policy measures possible |
| Constant | 0.101 | | -5.472*** | | -11.4865*** | | | |
| Sample | 78 | | 61 | | 61 | | | |
| R-squared | 0.734 | | 0.664 | | 0.7918 | | | |

JAGRIČ, Timotej, FISTER, Dušan., JAGRIČ, Vita. Reshaping the Health-care with Economic Policy Measures Based on COVID Epidemic Severity: A Global Study. UNDER REVIEW -2021

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What can we do and where to go?

- Which type of provider has a higher impact on the local economy?
- The impact of a reduction in the provision of health services on the local economy.
- Climate change impacts health but the health-care industry impacts the environment.
- Structural changes and economic relevance of the health sector?

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