

## **Effects of the Covid-19 as a Supply Shock on the Regional Economy of İzmir**

**Alper Duman**

Izmir University of Economics, Turkey  
alper.duman@ieu.edu.tr

**Ayla Oğuş Binatlı**

Izmir University of Economics, Turkey  
ayla.ogus@ieu.edu.tr

### **Abstract:**

We study the effects of Covid-19 on the regional economy of İzmir during March-May 2020 period in which bulk of the lockdown measures were imposed. The channels that we consider are fourfold. First, we check the heterogenous employment effects of the Covid-19 across different firm sizes via a regression analysis. Second, we construct two risk indices for the exports from and imports of İzmir based on (1) product complexity and (2) geographical origin or destination of international trade partners of İzmir. Third, we construct distance-work-ability indices for the İzmir economy across sectors and estimate the negative effects of the lockdowns assuming that the output of the workers depend on these indices. Fourth, we use intercity trade networks and estimate the overall network effects of a drop in average electricity consumption (as an indirect measure of the supply shock in the trade and industry) in İzmir. Our findings are consistent with the local data and the overall GDP figures from Turkstat.

**Keywords:** Regional Economics, Employment, International Trade, Input-output

**JEL Codes:** R11, J21, F16, R15