

# Global Value Chains (GVCs) as network of queues and the Great Trade Collapse

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## **Abstract:**

This paper develops a model to capture the suddenness of the recent trade collapse. We take into account the "time costs" of the headquarter besides the well-known elements of its cost function. The headquarter faces three possible ways to procure the intermediate input: vertical FDI, outsourcing and market-based procuring. Using queueing theory, we derive the "time costs" for these organizational structures. Incorporating these costs in the problem of the headquarter helps us to explain the mechanisms under which a sudden trade collapse will occur. It also helps us to address the motivation for the existence of north-north vertical FDI. Simulating the model reveals that it has the capability of generating the main qualitative features of the data on US monthly trade.