## Identifying Agglomeration Shadows: Long-run Evidence from Ancient Ports

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## **Abstract**

We examine "agglomeration shadows" that emerge around large cities, which discourage some economic activities in nearby areas. Identifying agglomeration shadows is complicated by endogenous city formation, however, and a "wave interference" that we show in simulations. We use the locations of ancient Mediterranean ports, which seeded modern cities, to estimate shadows cast on nearby areas. These patterns extend to modern city locations, more generally, and illustrate how encouraging growth in particular places can discourage growth of nearby areas.