

# Department SEMINARS



**DEM** DIPARTIMENTO DI  
ECONOMIA E  
MANAGEMENT

## Nighttime lights as a measure of local economic activity

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### A B S T R A C T

This paper investigates the use of nighttime lights as a proxy for local economic activity, focusing on Italy, Brazil, and the United States at various levels of geographical aggregation using high-resolution nightlight data from NASA's Black Marble project.

Nighttime lights appear as a robust proxy for economic activity, proxied by personal income or GDP, with elasticity values consistently around 1 across different administrative levels when all variables are expressed in density and a correction for the size of the unit of observation is inserted in the estimate as well as a control for time. Therefore, our findings support an educated use of nighttime lights as proxy for local economic activity.

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