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Further Reading: Tsakiridis, A., Mateo-Mantecón, I., O'Connor, E., Hynes, S., and O'Donoghue, C. (2021). Efficiency benchmarking of Irish and North Atlantic Spanish ports: Implications for blue growth. Utilities Policy, 72, 101268.

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Read More About: For more information about SEMRU, visit http://www.nuigalway.ie/semru/

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Assessing the performance of EU Atlantic ports

EU Atlantic ports as multi-activity transport and logistic nodes can play a major role in the sustainable development of traditional and emerging maritime sectors and in the transition to a carbon-neutral economy. While the Atlantic Action Plan 2.0 envisions that the EU's Atlantic port infrastructure and services can play a critical role in blue growth by supporting established and emerging maritime sectors, the limited size and the peripheral status of many EU Atlantic ports creates challenges in attracting the necessary traffic flows to leverage capital for infrastructure upgrades to improve connectivity with the hinterland and other activities that foster sustainable developments. With this background in mind, this research assessed the efficiency of Irish and North Atlantic Spanish ports in generating traffic, identified the drivers of efficiency and examined changes in efficiency over the period 2000–15. Subsequently, cluster analysis was employed to develop a robust typology of ports for efficiency benchmarking.

Research Findings

The average technical efficiency across the sample of 15 ports was 0.54, indicating that the traffic generated in Irish and North Atlantic Spanish ports can increase by 46% without increasing inputs. Labour, capital, a port's relative size, and specialization in cargo handled were found to be the main drivers of increased technical efficiency. At individual port level, scope for technical efficiency improvement was identified for the ports of Vilagarcía, Drogheda, Marín-Pontevedra, Waterford, Vigo, Pasajes, Avilés, and Santander. Results also show that three ports increased efficiency (Dublin, El Ferrol, and Drogheda), six ports decreased efficiency (A Coruña, Pasajes, Santander, Vilagarcía, Cork, and Waterford) while the efficiency of six ports remained unchanged (Bilbao, Gijón, Avilés, Marín-Pontevedra, Vigo and Shannon Foynes) from the 2000-07 to 2012–15 periods. The subsequent cluster analysis identified two clusters of ports. Cluster 1 includes the following PAs: Dublin, Bilbao, and Gijón. Cluster 2 represents the rest of the PAs in the sample; Cork, Waterford, Shannon Foynes, Drogheda, El Ferrol, Avilés, Marín-Pontevedra, Pasajes, Vilagarcía, Vigo, Santander, and A Coruña. The average performance of cluster 1 ports decreased between 2000–07 and 2008–11, whereas the performance of cluster 2 ports has not changed significantly from 2000-07 to 2012–15. Ports in cluster 1 were (on average) more technically efficient and used more land, labour, and capital than ports in cluster 2.

Policy Implications

This research highlighted the need for designing regional blue growth policies that acknowledge the heterogeneity as well as the similarities in the structures and economic performance of European Atlantic ports. Higher degrees of technical efficiency in cluster 1 imply a comparative advantage for larger EU Atlantic ports relative to smaller ones. The ports of Bilbao, Dublin, Gijon, Shannon Foynes, and El Ferrol could be vital nodes in new shipping routes between Irish and Spanish North Atlantic ports as Irish authorities continue to seek out new access points to the European mainland that bypass the UK land bridge in the post Brexit era. The smaller and less efficient ports could facilitate short-sea shipping, assist operations of larger neighbouring ports (e.g. Drogheda could assist Dublin) and support the local economy. An option for increasing the efficiency, especially of smaller ports, could be port cooperation through an agreement in which two or more ports jointly participate in mutually beneficial operations.

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