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## Resources, Conservation and Recycling

Volume 36, Issue 3, October 2002, Pages 211-240

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# Shipping news: the implications of electronic commerce for logistics and freight transport

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[https://doi.org/10.1016/S0921-3449\(02\)00083-6](https://doi.org/10.1016/S0921-3449(02)00083-6)

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## Abstract

The paper considers the significance of electronic commerce (e-commerce) for freight transport, logistics and physical distribution, regarding both business to business and business to consumer commerce. The possible implications of e-commerce are analysed in the broader context of structural change, going beyond narrow assessments that overstate the significance of e-commerce and its potential to make freight traffic more efficient. The main argument of the paper is threefold: first, most recent analyses of freight transport and logistics implications of e-commerce are overstating the current relevance of e-commerce applications on the one hand, and neglecting the influence of the underlying structural change in the entire logistics system on the other. Second, conventional analyses of certain efficiency benefits of e-commerce are probably too optimistic, whereas its negative effects are underestimated at the same time. E-commerce is likely to support longer transport distances and often higher delivery

frequencies, increasing demand for land, due to the establishment of new transshipment points (distribution centres) and, to a certain extent, a shift towards truck and air freight transport modes. Third, e-commerce and IT are interrelated components of the structural change in distribution. They affect the environment in terms of vehicle miles, related emissions and energy consumption, by speeding up the time and increasing the geographic area of transport operations. Whether e-commerce contributes to a more efficient distribution system or not very much depends on particular regional circumstances, such as consumer habits, delivery modes and population density. Overall, there is some evidence that e-commerce is likely to reinforce longstanding trends of transport growth, rather than breaking them. Future research should investigate e-commerce more comprehensively, in relation to the entire distribution system and to its application in firms and households. This would also be more useful for dealing with a generic property of modern economy and society: increasing demand for flexibility, speed and mobility.



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## Keywords

E-commerce; Logistics; Physical distribution; Freight transport; Warehousing; On-line retail; Home delivery; Environment; Land use; Traffic generation; Structural change; Corporate re-organisation; User behaviour

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