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Sustainable Global Sourcing

“ Global trading has been a way of life for hundreds, if not thousands of years, but it is only recently that the environmental and social implications of global sourcing decisions are being taken more seriously. ”

Global trading has been a way of life for hundreds, if not thousands of years, documented by legendary tales like the travels of the explorer Marco Polo or the Silk Road, one of the world's oldest and historically important trade routes. However, the scale and pace of change of global trade has changed dramatically in the last half century. Figures from the World Trade Organisation (WTO) show that since 1950, world trade in manufactured products has increased 50-fold, reaching a total of \$10,500 billion in 2008. If commodities such as fuels, minerals and agricultural products are included, the total trade figure exceeds \$15,000 billion.

Trends in global trading are the result of independent decisions taken by businesses around the world looking for sources of competitive advantage. However, these decisions have consequences, not just hidden costs but sustainability implications, which are often unaccounted for. A recent study conducted by Cranfield aimed to address this problem by looking at how companies make global sourcing decisions and how they analyse the costs, risks and sustainability implications of such decisions.



The study included fifteen case studies from seven different industries which included: retail; electronics; aerospace; fashion; mechanical equipment; oil and gas. The case studies allowed us to look in-depth at the processes used by organisations when conducting sourcing decisions, and allowed a comparison of the practices in different industries to be made.

It was clear from the research that in most cases the primary motivation for global sourcing was to reduce costs by relocating production to low labour cost countries. However, the definition of 'cost' was somewhat limited – often only including the purchase price, transportation and customs duties. The use of the 'Total Cost of Ownership' (TCO) concept whereby all supply chain costs, risk costs and transaction costs are included was conspicuous by its absence. Even more evident was the lack of consideration of the impact that global sourcing might have on greenhouse gas emissions and on social issues such as child labour, working conditions and living wages.

This blinkered and short-term view is also at odds with the concept of sustainability which is defined as the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.

It is almost always the case that global sourcing will result in longer pipelines than the local or regional equivalent. Apart from the cost of financing the additional inventory that extended pipelines require, the likelihood of disruptions to the flow is increased. It is paradoxical that in an era of 'just-in-time' the typical lead-times for re-ordering and replenishment of goods and materials have increased as a result of global sourcing. In light of this, it is perhaps surprising that the use of formal supply chain risk management procedures in the context of global sourcing decisions is not the norm. Our research identified that more often than not, the potential impact of sourcing decisions on supply chain continuity is not formally considered.

Growth in global trade and the associated increase in transportation is contributing to higher emissions of greenhouse gases, particularly carbon dioxide. Alarming few organisations participating in the study had a clear understanding of the environmental implications of their decisions. However, it was evident that awareness of environmental issues was increasing and that companies were putting more time and resources into understanding and managing the environmental impact of their operations.

There is now a growing realisation that in the not-too-distant future, organisations and even individuals will probably have to pay for the carbon impact of their activities. For the business sector, this penalty may take the form of taxes, levies or the capping of allowable emissions under carbon trading regimes. These additional costs could bring the commercial viability of their operations into question. For any organisation, it is not just the carbon impact of its in-house activities that needs to be understood but rather the total carbon effect of its wider supply chain.



With the current trend to off-shore sourcing continuing rapidly, the implications for total carbon impact are significant. To understand the true carbon footprint of a supply chain for any product requires the ability to conduct a 'through life' analysis of the emissions generated from cradle to grave. What is the total environmental cost from raw material sourcing through manufacturing and distribution to consumption and disposal?

The research revealed some promising practices in global sourcing such as: the use of total cost models; risk management techniques; ethical codes of practice and environmental assessment tools. However, it showed inconsistency of practices between firms, indicating a wide gap between the top and bottom performers. This suggests that there are still many opportunities for companies to improve their approach to making global sourcing decisions.

It has long been recognised that 'what gets measured gets managed.' It is now acknowledged by specialists in change management that a powerful means of initiating behavioural change is through changes in the performance metrics that are used. At the moment, there are few recognised measures that are applied to assess the true economic, environmental and social impacts of supply chain strategies. At Cranfield, we propose the development of a 'balanced scorecard' approach which will enable organisations to better monitor the wider impact of their sourcing strategies as well as providing a means of establishing 'mileposts' for improvement targets.

Whilst there is a growing awareness of the environmental and ethical implications of global sourcing decisions, it remains commonplace to have no formal mechanisms in place to attempt to measure these effects. However, there is an emerging wave of opinion that the environmental and social impacts of supply chain decisions need to be taken seriously. Businesses today need to ensure they are doing all they can to minimise their environmental impact by addressing the social and environmental implications of their supply chain. [MF](#)

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