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### **Waste: uncovering the global food scandal**

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firms more likely to reflect social concerns, going beyond the pure profit-maximising objective. However, the typology immediately runs into problems, as significant differences between Germany and Japan are identified, something the author himself acknowledges as an issue to be addressed in the VOC model. The model does strike one as somewhat oversimplified at times and also any mention of the cultural typology proposed by Hofstede (1994) is lacking. Hofstede's analysis contrasted company cultures in MNCs with those of its employees in different locations and could therefore challenge the VOC concept in some respects. It would be interesting, for example, whether Mikler's strong reliance on Australian employees of the case study companies as interviewees colours his findings. Hofstede would probably suggest that it does, though the VOC approach would suggest that it does not.

Mikler's primary focus here is these firms' approach to environmental issues and the VOC model allows him to conclude that LME firms (Ford) are primarily driven by market forces, i.e. they wait for the market to demand a greener car before acting and when forced to by legislation will opt for the minimum required to meet the standard – regulation is seen as adding costs. The CME firms take a different approach. Mikler explains that they regard regulation as setting minimum standards, which are in any case arrived at through consultation between regulator and regulated. There is a further subdivision between CMEs, in that German firms favour incremental technological improvements (e.g. diesel), while Japanese firms, described as operating within a 'technonationalist' version of CME, favour more radical technological changes, such as hybrids. The importance of this, Mikler argues, is that these firms export their home values around the world in the form of cars they offer to world markets. Japanese and German cars are more environmentally compatible than US cars, because they reflect the values of their home markets. While this seems reasonable at one level, at another, these Japanese and European firms with a significant presence in North America have for some time been developing models for that market, which they would not have developed for their home market, such as the Toyota Landcruiser Amazon, BMW X5 and Volvo XC90. The effect of VOC is therefore partial, although a tendency can certainly be detected, as Mikler's empirical work also shows.

Despite these reservations, the VOC approach yields some interesting findings. It is also a relatively accessible concept and may therefore appeal to a range of stakeholders. Although the differences in approach between US and German/Japanese companies are well known, this typology adds explanatory force to this observation and could be used in particular by some observers of the industry, be they academic or practitioner, to enhance their analysis. Further development of the VOC idea may well yield even more interesting findings.

## Reference

Hofstede, G., 1994. *Cultures and organizations; software of the mind*. London: HarperCollins.

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**Waste: uncovering the global food scandal**, by Tristram Stuart, London, Penguin Books, 2009, 480 pp., £9.99 (paperback), ISBN 978-0-14103-634-2

In my opinion, Tristram Stuart's investigation has been written for anyone who wants to understand the very waste issues that are the 'elephants in the room' for many food and beverage companies. Stuart provides several chapters that describe his own lifestyle of 'freeganism', gleaned and recycling. These narratives make it very clear that whole supply chain solutions for waste from farm to shopper are required.

The development of complex food supply chains and waste outcomes were excellently described, he used examples of the industry's initial development of use-by labels as a marketing tool through to the current necessity to minimise food poisoning risks by disposing of food. This was brilliantly contextualised for the retail and service sectors where the determination of food disposal by risk alone is commonplace leading to the wasting of perfectly useful products. He rightly highlights the value of food waste being redistributed in extremely important schemes such as the UK-based Fareshare. Indeed Stuart's approach does in part demonstrate the low engagement of technical innovation in the waste supply chain. I felt engineers who solve the preservation, corrosion, packaging and redesigning problems presented by waste streams should read this book for that very reason.

While shocking statistics must be communicated in uncovering the scandal, Stuart's investigation sticks to this 'shock-them' approach, at least £20 billion of food waste is generated in the United Kingdom every year, this figure is \$US120 billion a year in Japan and so on. He reinforces his investigation with seventeenth century quotes from John Locke who advocated social contract and fairness in governance. Stuart rightly points out that our current contract for waste reduction has been the sledgehammer of legislation and tax. He believes this contract needs socialising. However, like many, I also feel more creative solutions are available with the emergence of technologies that add value to food waste and divert it to fuel, feed and fine chemical supply chains. Engineering innovations – gasification, anaerobic digestion and cellulosic digestion –

are critical for this delivery because there is no blank slate for waste policy anymore; it is a growing problem. Waste will continue to be produced in large volumes because shoppers demand food assurance that is governed by sell by, use by, packaging, preservation, chill chains and most fundamentally trust in safe food. He rightly suggests that current solutions often lack political will to solve food waste in the long term but leaves us in anticipation of an answer. This is what I was waiting to gain from the book before hitting the large section of footnotes and endnotes. To be fair, he set out to uncover not to solve our problems, but this raises an important question of the role of engineers in food waste management.

Accepting that solutions to waste are difficult to convey, the sustainable engineering area will be critical to develop them while supporting current systems of assurance and traceability in supply chains. Stuart's investigation suggested to me that the implementation of specific engineering solutions for food waste management

lags behind customer and business systems that have revolutionised food retail. He rightly concludes that a food supply revolution is urgently required, he does uncover the global scandal but I felt myself left waiting for more. His book packages much of what is wrong with our current food system in one paperback and it should be read by everyone. Indeed, I would suggest a further book is required to deal with solving this most visible of our failings from farm to shopper. I ask you a question that Tristram Stuart's book has made me consider, the global food scandal has been robustly uncovered here, but what are we going to do about it?

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