First Oxford Meeting on Impact Valuation of the Food System

Mathematics Institute, University of Oxford, 11-12 April 2017

Summary

- Major food companies have tremendous direct and indirect impacts on health, society, and the environment through their global value chains, product design, ingredient choice and advertising. A Trucost 2012 report highlighted that the food sectors' environmental costs were estimated to be 224% higher than their financial earnings; the only sector for which environmental costs outweighed earnings.
- The measurement and monetised valuation of impacts is an emerging method for companies, investors, and, potentially, regulators and consumers, to account for positive and negative impacts of the food sector on society's shared natural and social capital.
- Environmental and social challenges make it inevitable that current external impacts will be internalized by companies and markets. Impact valuation allows companies to: measure and manage external impacts; restore trust and retain their social license; identify and prioritise external impacts to address; retain access to regulated markets (e.g. green procurement); manage litigation and reputational risks; capitalise on opportunities in marketing and brand advantages; utilise new transparency and engagement formats; introduce through technology simpler but consumer customised health, social and environmental labelling.
- Valuation fits naturally within fiscal accounting and reporting, though when applied to natural and social capital it quickly becomes more complex. Current approaches have largely addressed environmental aspects and have been based upon aggregated life cycle data. They have thus focussed upon the company, direct suppliers and, in some cases, consumer use. There have been only a few early attempts to consider a total product or enterprise impact.
- The meeting (Oxford; April 11-12, 2017) brought together industry, civil society and academia to determine what can be done in the pre-competitive space to advance impact valuation and true cost accounting both conceptually and technologically. Major food companies (e.g. Arla Foods, Danone, Nestle, PepsiCo, Sainsbury's and Syngenta), WWF and Oxfam, and other interested parties were represented. It was co-convened by the University of Oxford's Food Systems Programme, the Environmental Law Program at Pace University's Elisabeth Haub School of Law, and UC Davis' Agricultural Sustainability Institute.
- Topics included (i) food system concepts and environmental and social metrics; (ii) data sources, data standards, and the technology required for data collection and transfer; and (iii) regulation, policy and use, including future company regulation and legislation on environmental and social responsibility, incorporating impact valuation methodology standardization efforts in law and policy, and commercialisation of impact valuation for private procurement. The workshop discussions are summarised in a section below.
- An exercise at the meeting identified a strong majority for pre-competitive and standardised impact valuation for food systems. Within that generic statement there was discussion on what and how it should be standardised (methodology, metrics, data?) and who would guide or co-ordinate the pre-competitive effort for what uses?
- The same exercise identified a strong majority view that industry should lead on impact valuation. Where leading meant taking initiative, providing impetus, and initial investment. Leading was distinguished from development, where partnerships could occur with academia, and distinguished from eventual uses, which crossed into public, civil society and consumer sectors. The public sector was identified as a heavy future user and shaper of impact valuation via policy and regulation, examples of which already exist, e.g. sustainable public procurement. The view was that public sector involvement would follow industry lead.
- The meeting recognised the need for a stronger methodology for Food System Impact Valuation which should be consistent; balanced across environmental, social and health, prioritised; scientifically credible; and simple. It should also be coordinated and transparent; encompass a range of worldviews so as to

ensure wide applicability; modular, in the sense that the same data and methodological components could serve multiple uses; be best practice addressing immediate requirements for use but also be evolving and building in capability for long term visions for use; and deliver outputs in a form to help make decisions for users.

- The meeting identified key challenges in veracity, transparency, methodology, in data collection and data usage rights, and in suitability for use within policy and regulation. For example, in methodology, how to ensure comparability across metrics; encompass both short- and long-term visioning; and include factors which are hard to quantify and which cannot be discounted across time (e.g. ethics). For example, in data collection, how to collaborate with existing food chain supply standards and technology to ensure secure and traceable geospatial and temporally specific environmental and social data from farming, processing, and manufacturing is passed down the food chain. There are currently two major and direct applications of impact valuation in legislation: public procurement and eco-labeling. Further implementation of impact valuation through public policy mechanisms might be limited by legal barriers to accessing information, implementation, and resistance by industry due to corresponding legal risks.
- These challenges could be addressed by a distributed virtual research institute spanning the three convening universities (drawing on their complementary skills and networks) headquartered in Oxford, and closely linked to the food industry and civil society. It would design, undertake and synthesise research and data management across the initiative's partners; organise regular meetings to discuss progress and plan further activities; and relate its work to the FReSH programme currently being developed by the WBCSD and other relevant global partnerships and mechanisms.
- Such a virtual research institute sits at the pre-competitive nexus of industry, academia, government, and civil society. It acts as a natural catalyst for communication and shared development and interest. It can augment research investment by accessing, through projects with academic collaborators, public research funds for methodological and technological development. It is a natural advocate for the use of impact valuation across all sectors and delivering recommendations on mechanisms for policy and regulation. The institute can facilitate, through existing academic channels, multilateral development, e.g. EU-China, EU-US, US-China, that prototype eventual standards in data transfer and impact reporting across international value chains.
- Significant progress on delivering new understanding, approaches and tools could be achieved within a 3-5 year timeframe. An interim business-NGO-academia working group has been convened to plan initial research and coordination activities. The group's membership and terms of reference are provided in a separate document.

Workshop discussions

- The workshop ran for two days. Day 1 of the workshop, titled "What is the problem and where are we?", had 5 panel discussions. Industry, government and non-government actors discussed their motivations and needs for impact valuation, and the existing initiatives. In the second half of day one, academics discussed the challenges and research that could be leveraged or initiated. The next five points are paragraphs summaries of Day 1.
- Panel 1 "Impact Valuation of Natural and Social Capital". Once something has a value it has a price. Standardization is more important for investors, government, and non-government actors because they can compare across categories, whereas it is less important for individual companies. If methods are not transparent enough, companies and businesses choose methods that most suit their narratives and business models. A good way forward would therefore seem to be for a consortium of academia, industry and civil society to establish standards, i.e. to encompass a range of world views and needs.
- Panel 2 "Valuation of Health and Livelihoods". The panel recognised the potential to impact health and livelihoods positively as well as direct and less apparent systemic level negative costs. Can these impacts be valued, and therefore compared, in a manner that is scientifically sound and relevant to the broader world? The panel brought many elements of this into the discussion from products and consumers, to livelihoods of farmers and workers, and the complexity for large food manufacturers or retailers to

account for impacts and the need for graduated changes because of their influence on consumers, investors, and up-stream value chains. An interesting element in the discussion was around data. To understand impact of the food system on health, which is very complex, we need data. However collecting system level data currently is time consuming and expensive (for all actors in the chain), often kept private, and not standardised in its type. Impact valuation by companies can make positive change, however will that lead to transformative change in the food system? Perhaps only if all the sector agree on the approach and there are agreed targets on what needs to be achieved.

- Panel 3 "Food systems challenges". Food systems, as an account of the food production to food consumption chain and its externalities, are a natural context for impact valuation. Impacts of food products and actors span the full system, e.g. resource costs, working conditions in farms and refineries, and societal health costs, of sugar. Complexity of the food system and complexity in monetisation of an actor's impact preclude a complete account of valuation. The context dependence of what and what not to include in food system valuation was noted to necessitate a modular and traceable form of standardisation if it were to have veracity for direct comparison of companies or products, e.g. as required for investors or public bodies for green procurement. These were noted to lead to information problems. It was also noted that we are the midst of an information revolution. Life cycle analysis was explored for its suitability as a basis for impact valuation. While noting that monetisation of impacts allows for comparative decision making, and allows environmental and social costs to be incorporated alongside internalised costs in a company accounts and reporting, issues were raised including on commensurability and tradability of economic and social costs. Thinking from a system point of view, combined with the potential to acquire context through technological solutions, were suggested as good starts for future impact valuation.

- Panel 4 "Data and technology challenges": This was a very wide-ranging discussion of some of the fundamental technical challenges in creating feasible, user-friendly platforms for valuation of food system impacts. These gaps and challenges span the gamut: data definitions, concepts, and standards often do not exist or are not widely shared; data access is patchy and integration is fragmented; controlled vocabularies and ontologies exist for a number of specialized sub-topics, but no overarching, comprehensive food system ontology has yet been established. At the same time, technological change rapidly is creating relevant new approaches. Although these are yet to be applied to impact valuation in food systems, some emerging techniques (such as digital ledgers) appear promising and merit further applied R&D, as do application of established modelling strategies as means of integrating disparate food system processes and data. In the discussion, intellectual property questions that will shape data access and the related tension between proprietary standards and open standards emerged as priorities for resolution since these questions will shape the path forward, either opening or foreclosing possibilities in this dynamic space. Progress on intellectual property questions likely will require collaboration between technical experts (data scientists, information technologists) with institutional experts (accountants, attorneys).

- Panel 5 "Law, policy and use challenges": There are currently only two direct applications of impact valuation in legislation: public procurement and eco-labeling. The use of impact valuation in public procurement policies and practices has the potential for large scale application, however its success might be limited by other existing policies, the global nature of supply chains, and a lack of clear methodologies and definitions. There is currently one eco-label based on impact valuation metrics. But the expanded use of eco-labels is subject to a lack of trust and clarity that defines the current proliferation of eco-labels, generally. Potential applications include the creation of prescriptive public health and environmental standards based on impact valuation data and analysis (such as performance standards or prohibitions) or market mechanisms. Further implementation of impact valuation through public policy mechanisms might be limited by legal barriers to accessing information, implementation, and resistance by industry due to corresponding legal risks.

- Day two of the workshop, titled "Ways forward", involved three sessions with group discussion and plenary feedback – including the exercise mentioned in the summary above.

- Session 1 “Simplifying and Standardising the Valuation of Food Production Value Chains”: Simplification and standardisation for valuation of environmental impacts, and to a lesser extent social impacts, is underway. The only food sector specific guidance is in the Natural Capital protocol food & beverage booklet. The group reflected on trade-offs between simplification and veracity, standardisation and flexibility, and bottom-up (detailed) versus top-down (aggregate) data collection and use. Given major users with a variety of applications and objectives and the complexity of the food system, this creates a challenge as no prescriptive form of simplification and standardisation would fit all. In addition the current maturity of work means that alignment may be too difficult at this stage, and that convergence is probably a better short term objective. The group identified gaps that could be filled through collaboration with academics in environmental and social science. The most effective path forward was seen to be “just starting”, with a gradualist approach of collaboration and convergence. A post-workshop goal was to create the leadership that would drive such collaboration and convergence, and to especially work on product/diet valuation. Potential innovations were discussed post-workshop that lessened the need for trade-offs, such as evolving toward a modular basis of standardisation.
- Session 2 “Scoping of Valuation of Health Outcomes”: The session scoped a methodology to value health outcomes in a comparable, universally acceptable, way and action steps to initiate the methodology’s development. For this initial scoping the focus was on direct health outcomes linked with food consumption and first order indirect impacts on non-consumer actors of the food chain. The group identified a list of factors and metrics and identified barriers and difficulty to developing a suitably simple but universal foundation for health impact valuation. To progress, the group advocated a multi-stakeholder working group with the potential to oversee a research project developing: (i) a knowledge base through wide interdisciplinary consultation and elicitation and a range of ascending case studies, and (ii) prototype health impact valuation methodologies.
- Session 3 “Implementing valuation in the food system: usage options and policy barriers”: started with a wider scope of a better understanding of what our positive food future should look like. After identifying these goals, it considered not just the technical barriers to achieving these goals but also the institutional barriers, in particular the challenges posed by silos that occurs in both public and private governance. Silos complicates implementation of comprehensive impact valuation because no one decision maker (or, even, department of decision makers) is charged with considering the full range of impacts. Our conversation on next steps focused on mapping positive futures with a first step a survey of existing impact valuation activities and positive future modelling. Taking these steps will require development of a work infrastructure to facilitate both research and fundraising to support research. The group concluded that while some infrastructure exists within the various participating academic institutions, affiliating with an existing effort, such as FReSH (http://www.wbcsd.org/Projects/FReSH), would be an efficient path forward.