

Institution: Ulster University		
Unit of Assessment: Business and Management Studies (17)		
Title of case study: ICS 1: Driving growth and performance improvement in the sourcing process		
Period when the underpinning research was undertaken: 2004 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Ronan McIvor	Professor of Operations Management	1994 - present
Trevor Cadden	Senior Lecturer in Operations Management	2004 - present
Period when the claimed impact occurred: 2014 - 2020		
Is this case study continued from a case study submitted in 2014? N		
<p>1. Summary of the impact</p> <p>Research into sourcing practices conducted by the authors has resulted in significant social, economic and environmental impacts for firms regionally, nationally and internationally. The recommendations from this research have had a direct impact in the following areas:</p> <ul style="list-style-type: none"> I1: Driving process improvement in sourcing practices; I2: Developing strategies for risk management in sourcing; I3: Integrating sustainability into sourcing practices. <p>The significance and reach of the research have encompassed manufacturing and service organisations at a national/international level (the Trellis industrial network in Denmark, Danske Bank, Balcas Limited, Barclays Bank), and at a regional level (Social Enterprise NI, SMEs on the island of Ireland). Through working with influential support agencies such as IntertradeIreland and Manufacturing NI, this research has made a significant impact for their 15,000 member firms.</p>		
<p>2. Underpinning research</p> <p>The sourcing of product and service functions from suppliers has become a key strategic issue. A key aim of this research involved analysing theories in the areas of strategy, finance, economics, organisational change and operations management, and developing them into practical frameworks for application in the sourcing practices of manufacturing and service organisations (R1-R6). The research has provided important and novel insights into various aspects of sourcing, including:</p> <ul style="list-style-type: none"> • Linking sourcing with the competitive strategy of an organisation; • Analysing supplier and competitor performance in the sourcing process; • Assessing the risks of certain sourcing strategies; • Selecting and managing an appropriate supplier relationship strategy to deliver process improvement; and • Integrating social sustainability into sourcing practices. <p>Research undertaken from 2005-2015 incorporated organisational capability theory, which linked the sourcing decision-making process with the competitive strategy of an organisation (R3, R4, R6). Transaction cost economics was integrated into this analysis to understand the risks of employing suppliers versus sourcing products or services from internal functions (R3, R4, R6). In addition, the relational view was employed by Cadden et al. (2020) to demonstrate the importance of stakeholder engagement and participation in changing sourcing practices for</p>		

process improvement and enhancing social, environmental and operational performance outcomes **(R1)**.

Mclvor et al. (2009) and Mclvor (2016) also focused on linking process improvement with the sourcing process, which involved analysing how process improvement techniques should be employed in the decision-making, implementation, and relationship management phases of the sourcing process **(R2, R5)**. This research provided guidance on how to improve performance and reduce risk in outsourcing arrangements, as well as driving process improvement externally with suppliers. This guidance has allowed firms to achieve improvements in service quality and reduced costs from suppliers, while limiting risks such as losing key process knowledge, poor supplier management and cost overruns **(R2, R5)**.

A further strand of this research involved analysing the capabilities required by the buying organisation to deliver improvements in the sourcing process **(R2, R5)**. By focusing on the entire sourcing process, the research enhanced our understanding of the capabilities required for process improvement, and highlighted the enablers of, and barriers to, process improvement. In particular, the research highlighted the need to better understand how process improvement can be nurtured and developed across inter-organisational boundaries with buyers and suppliers **(R2, R5)**.

Research undertaken by Cadden et al. (2020) further revealed that the implementation of process improvement approaches alone, such as lean thinking, does not result in increased operational performance and sustainability outcomes. While management has widely adopted such practices to physically change layouts, roles, or processes to drive improved efficiency, the desired operational and sustainability outcomes are rarely achieved. Management must include employees at all levels in each stage of the decision-making process for these outcomes to be realised. It was found that the involvement of employees in process improvement initiatives through cross functional teams, lean workshops and formal/informal feedback mechanisms, led to increased employee engagement, more efficient process design, less waste, and increased productivity and sustainability **(R1)**.

3. References to the research Outputs can be provided by Ulster University on request.

R1 - Cadden, T., Cao, G., Yang, Y., McKittrick, A., Mclvor, R. and Onofrei, G. (2020). The effect of buyers' socialization efforts on the culture of their key strategic supplier and its impact on supplier operational performance, *Production Planning & Control*, 30, 1-17.

R2 - Mclvor, R. (2016). An Analysis of the application of Process Improvement Techniques in Business Process Outsourcing, *International Journal of Quality and Reliability Management*, 33, 3, 321-343.

R3 - Gerbl, M., Mclvor, R., Loane, S., and Humphreys, P. (2015). A Multi-theory approach to understanding the Business Process Outsourcing Decision, *Journal of World Business*, 50, 3, 505-518.

R4 - Mclvor, R. (2009). How the Transaction Cost Theories and Resource-based Theories of the Firm inform Outsourcing Evaluation, *Journal of Operations Management*, 27, 45-63.

R5 - Mclvor, R., Humphreys, P., McKittrick, A. and Wall, A. (2009). Performance Management and the Outsourcing Process: Lessons from a Financial Services Organisation, *International Journal of Operations and Production Management*, 29, 10, 1025-1048.

R6 - Mclvor, R. (2005). *The Outsourcing Process: Strategies for Evaluation and Management*, Cambridge: Cambridge University Press.

The underpinning research in this case study was completed through the following peer reviewed externally funded research grant awards:

- Mclvor, Leverhulme/British Academy Grant, An Analysis of the Client Capabilities required for Performance Improvement in Business Process Outsourcing: GBP7,928 (January 2013 – April 2014).
- Mclvor, Institute of Chartered Accountants in Scotland Grant, Employing Business Improvement Techniques to Improve Performance and Reduce Risk in Services Outsourcing: GBP10,961 (September 2010 – February 2012).

- Mclvor, Chartered Institute of Management Accountants Grant, A Study of Performance Measurement in the Outsourcing Decision: GBP9,974 (January – December 2006).

4. Details of the impact

The impact of the research has focused on improving how organisations, policy makers and support bodies should make more effective sourcing decisions at regional, national and international levels. The recommendations from the research have had a direct impact in the areas of process improvement, risk management and sustainability in sourcing practices.

I1: Driving process improvement in sourcing

The impact of the research has been applied internationally through collaboration with the Trellis network in Denmark (**R2-R6**). The Trellis network developed outsourcing and offshoring tools, and its members included companies such as Danske Bank, Maersk, Carlsberg, Vestas, Grundfos, Danish Crown, Xellia Pharmaceuticals and LEGO. Our research led to a number of collaborative interventions with this network, which involved applying the sourcing frameworks with these member companies. The former managing director of the Trellis industrial network emphasised that there was extensive impact emanating from the research: *“The collaboration enhanced outsourcing and offshoring outcomes for a number of our member companies by helping them to apply a number of sourcing tools and techniques in the framework [and] employ outsourcing as a vehicle for obtaining operational and financial performance improvements whilst reducing supply market risk.”* (**C1**)

For example, the engagement with the Trellis network led to Danske Bank achieving significant benefits in process improvement and sourcing across its global operations, as evidenced by the following comment from the Head of Digital Transformation, Data & Operational Excellence: *“The support from UUBS [Ulster University Business School] was very beneficial in developing capabilities in process improvement and change management necessary for transforming our approach to sourcing and implementing the change with maximum impact and minimum risk. Our outcomes were game-changing. We were able to improve performance and deliver cost savings, increase service quality and eliminate inefficient internal processes.”* (**C2**)

We also worked closely with Balcas, a leading European company in the renewable energy field, and this involved applying the sourcing frameworks to assist with the strategic sourcing decision-making process and driving process improvement (**R2, R4-R6**). Applying these frameworks allowed Balcas to identify how it could reduce costs and improve performance in these areas. For example, cost savings were achieved through applying the frameworks to fibre supply and processing, as the CEO of Balcas explains: *“It [the sourcing framework] has allowed the local teams to quickly appraise the true value of different fibre supplies to the business. Our new approach to fibre value appraisal and internal improvement opportunities has provided a conservative saving of £1M per annum.”* (**C3**)

I2: Developing strategies for risk management in sourcing

The research impact has been extended to Barclays Bank in the area of concentration risk (**R3, R4, R6**). In the financial services industry, concentration risk is concerned with understanding any dependencies on a single supplier and lower tier suppliers, and the corrective action that should be taken in the event of supplier failure. Where concentration risk is not managed effectively it can lead to unplanned service outages, service disruptions to internal operations and customers, and damage to the brand and corporate reputation of the financial institution. We worked with Barclays to allow it to better understand and monitor the key factors that drive concentration risk internationally with some of its core suppliers, and to identify which suppliers to monitor more closely in order to ensure concentration risk is being mitigated. The research has had a significant impact on managing concentration risk in Barclays, as outlined by the MD - Head of Supplier Management: *“... the research findings and advice which you have shared with us has allowed us to track important drivers of concentration risk on an on-going basis and allowed us to take positive action to reduce their potential impact.”* (**C4**)

Using the underpinning sourcing and risk management research we worked with a number of support agencies, including Manufacturing NI (a lobbying organisation for manufacturing firms in

NI) and InterTradeIreland (a government-funded organisation that helps SMEs on the island of Ireland explore new cross-border markets and develop new products, processes and services) (R3, R4, R6). Working with these supporting agencies, online decision support tools were developed for companies on how to mitigate Brexit supply chain risks in areas such as delays, disruptions, information technology systems, forecasting, inventory and procurement.

Through a competitive tendering process, GBP35,074 was secured from Manufacturing NI (with funding from the Brexit readiness fund, Department for Business, Energy and Industrial Strategy). The online tools developed were publicly available and in the first 3 months, approximately 9,000 firms registered, and 67,332 website impressions were made representing firms across 13 sectors (C5).

Through conducting an evaluation of the impact of the decision support tools, Manufacturing NI found that companies achieved practical and financial benefits from applying them, as outlined by the CEO of Manufacturing NI: *“Over 80% of firms that accessed the resources found they significantly improved their supply chain resilience and readiness for Brexit.”* (C5). The impact of this engagement also had a significant influence on government support in relation to the supply chain needs of SMEs in Northern Ireland, as the CEO of Manufacturing NI explains: *“This (project) resulted in follow-on support to businesses in the area of supply chain disruption (due to COVID-19). To date, a total of £12,000,000 has been secured in grant support direct to small and micro manufacturers”* (C5).

As part of a competitive tender, further funding was obtained from InterTradeIreland (GBP52,780). This project focused on delivering a supply chain capability and skills-based analysis of SMEs involved in cross-border trade on the island of Ireland to inform both policy and practice. The outputs led to shaping InterTradeIreland’s Corporate Plan 2020, the creation of a cross-directorate Brexit Taskforce and a dedicated funding stream for managing supply chain risk (C6). This fed directly into national government policy meetings with the UK Treasury and the Department of Enterprise, Trade and Investment in Ireland around innovation and economic development. The insights formed part of a new initiative and development of a UK Task Force for Economic Recovery at a local and regional level and provided detailed and practical support for SMEs involved in cross-border trade (C6).

The follow-on effect of these initiatives to manage the impact of Brexit has already been evident through SMEs engaging in InterTradeIreland-funded FUSION (similar to KTPs in the UK) projects to enhance their capabilities in process improvement in sourcing. For example, a one year project led by McIvor and Cadden with Tan Organic, starting in January 2020, has delivered considerable benefits. This project involved applying the sourcing frameworks to improve the firm’s management practices in the areas of process improvement and risk management. The final project report has highlighted a projected sales increase of EUR3,800,000 over 3 years (representing a doubling in turnover), with efficiency savings contributing a further EUR276,000 to profit over that three-year period (C7).

I3: Integrating social sustainability into sourcing practices

The research impact was extended to integrating social sustainability into sourcing through the development of a social value framework (SVF) regionally. The initial impetus for this impact was via a KTP with Bryson Charitable Group (BCG), acting as a pilot project on behalf of Social Enterprise NI, the body representing the sector. BCG is recognised as a leading social enterprise regionally and is the largest organisation in this sector, employing approximately 1,000 people and supporting approximately 30,000 people every year through a variety of services. These services include recycling services, care services for children, families and the elderly, future skills services (upskilling and returning unemployed to work), energy services (tackling fuel poverty and helping to reduce energy costs for householders), and intercultural services (assisting asylum advice).

The development of a framework for measuring social value as part of the NI public procurement process, worth GBP3,000,000,000 in tenders annually, was a central aim of the KTP. Social

value was previously excluded from the tendering process, which resulted in social enterprises being largely unsuccessful in applications, and instead projects being awarded primarily on the basis of organisation size and financial cost, thus ignoring social or environmental impacts. Underpinning research provided a methodology and highlighted the importance of people engagement and participation in the decision-making process and model development (R1). Application of these insights was fundamental to achieving acceptance and inclusion of social value within the sourcing process.

The key outcomes of this project demonstrated how social value could be measured and included in the sourcing process through the development of an outcomes based quantifiable SVF. The innovative framework received full support by the NI Central Procurement Directorate (the body responsible for public procurement tendering) and other key stakeholders, including all political parties and regional government departments. A social value clause is now embedded within the tendering process, and a social value bill motion was agreed at the NI Assembly as a result of this project (C8). A SVF in NI is to follow imminently (agreed by a cross party committee and awaiting legislative approval – delayed due to the NI Assembly collapse between 2017-2020, and more recently COVID-19).

Since the development of a measurable SVF, and a resulting social clause embedded within the public procurement tendering process, the wider social enterprise sector has flourished. The last independent commissioned review, in 2018, of the social enterprise sector revealed how this collaborative project was instrumental in providing the platform for growth and social sustainability within the social enterprise sector. For example, in the last 5 years (from 2013-2018) employment within the sector increased from 12,200 to 24,280, and turnover of social enterprises increased from GBP600,000,000 to GBP980,000,000. In addition, three quarters of social enterprise organisations are now making a profit, which is an increase from 68% over the review period. Further, there has also been a 44% increase in social enterprise start-ups and this has resulted in knock-on benefits to local communities. For example, social enterprises are now emerging in disadvantaged areas, with 25% of social enterprises now based in the 50 most deprived areas of the region, and 53% of the workforce of social enterprises come from the local area (C8).

The Chairman of Social Enterprise NI summarised the impact of this partnership as follows: *“The significant impacts of this partnership with UUBS [Ulster University Business School] in terms of sustainability, job creation, economic growth and social value are transformative to the sector and regional economy. It has been game changing, with the narrative and landscape of public procurement now irrevocably transformed... the creation of a Social Value Act in NI fundamentally changes how we do business.”* (C9)

5. Sources to corroborate the impact

C1 = Statement from former Managing Director of Trellis network impact of the research with participating companies.

C2 = Statement from the Head of Digital Transformation, Data & Operational Excellence at Danske Bank supporting evidence of process improvement and sourcing practices.

C3 = Statement from CEO of Balcas Limited supporting evidence of process improvement.

C4 = Statement from Managing Director – Head of Supplier Management at Barclays Bank supporting evidence of impact of research on outsourcing and concentration risk.

C5 = Statement from CEO of Manufacturing NI highlighting impact of research on Brexit and supply chain management in Northern Ireland.

C6 = Statement from InterTradelreland on impact of research on providing advice to SMEs on the implications of Brexit for supply chain management on island of Ireland.

C7 = Final report from FUSION project with Tan Organic.

C8 = Social Enterprise NI supporting evidence pack of the social sustainability impact in government public sourcing.

C9 = The Chairman of Social Enterprise NI can be contacted to corroborate the impact of the UUBS partnership.