



lyit

Institiúid
Teicneolaíochta
Leitir Ceanainn

Letterkenny
Institute
of Technology

MASTERS BY RESEARCH

DURATION: (2 YEARS)

BUILDING SUPPLY CHAIN RESILIENCE THROUGH LEAN PRACTICES

SUPERVISED BY: DR GEORGE ONOFREI



DEPARTMENT OF BUSINESS STUDIES

OVERVIEW

Literature has highlighted the fundamental impact of lean practices on operational performance across various industry sectors (Henao et al., 2019, Onofrei et al., 2019), however little is known about their impact on supply chain resilience (De Sanctis et al., 2018). Given the recent COVID-19 (SARS-CoV-2) effect on global networks (Ivanov, 2020), this study is proposing to investigate synergy/trade-off relationships between lean and supply chain (SC) resilience paradigms upon disruption.

Various papers on supply chain disruption and risk management highlighted that lean practices, being efficiency-based and suitable for “stable” environments, have placed firms into a “vulnerable” position and unable to respond well to disruptions (Chopra and Sodhi, 2014, Christopher and Holweg, 2011). More recent studies, such as Ruiz-Benitez et al. (2019) and Lotfi and Saghiri (2018), contradict this view and state that higher level of leanness enhance the recovery time and consequently, can lead to a higher resilience in the system. These conflicting views require further clarification (Lotfi, 2019), therefore the trade-offs between lean and resilient practices in the SC should be examined in detail with a view to improving the recovery time for companies affected by disruption. This study aims to shed light on the relationship between lean and resilience paradigms and their impact on SCs.

Volatile business environments are becoming the norm, as global disruptions and competitive forces create additional uncertainty. Over the last two decades, individual businesses are no longer competing as stand-alone entities, but rather as supply chains (Christopher, 2000). Companies has moved towards supply chain management (SCM) as a mechanism to increase their organisational effectiveness, competitiveness, customer care and profitability (Rajesh, 2018). Managing development of supplier partnerships and strategic alliances is becoming a critical issue since it impacts companies and overall operational and supply chain (SC) performance. Lean practices focus on eliminating all types of waste, reducing or minimizing the variability from demand to supply (Onofrei et al., 2019). Companies must adopt lean philosophy internally (their own operations) and externally (customer and supplier’s operations), in order to achieve a maximum return.

In the last five years, various disruptions and unexpected events (earthquakes, floods, droughts, pandemics, wildfires, etc.) have disturbed the regular flow of service, products, and materials along the SC (Ruiz-Benitez et al., 2019). Thus, the SC risk management has become one of the most researched topics in operations and supply chain literature. Although various studies have proposed practices for companies to adopt in such turbulent times, the current pandemic has highlighted the fact that when it comes to putting into practice, very few are applicable.

The proposed study aims to investigate the impact minimisation of such unexpected events, by focusing on building SC resilience, through the implementation of lean practices. From a practical perspective, this research will provide empirical evidence on how to improve the overall SC performance using different paradigms (lean, agility and resilience). Theoretically, the proposed study will add to the debate related to the synergies/trade-offs between lean practices and resilience in the supply chain.

POSTGRADUATE EDUCATION AT THE SCHOOL OF BUSINESS

The School of Business incorporates three vibrant departments in Business Studies, Design & Creative media and Law & Humanities which offer a mix of taught, research and executive education masters/postgraduate programmes. The School has over ten years' experience in industry focused postgraduate programmes which are developed in partnership, and, a dynamic community of over 100 student and staff researchers working on a range of areas reflecting the complexities and challenges which the 21st century brings. For further queries please contact the School of Business on 074 9186210.

RESEARCH MASTERS SUPPORTS

By undertaking a Masters by Research in the School of Business at LYIT, not only will you receive a Level 9 qualification, but you will also receive:

- A stipend of €10,000 per annum for 2 years. Programmes fees will also be waived
- Structured and Accredited Research training/support
- Dedicated Research workspace and Laptop

APPLICATION PROCESS

- This is a funded Research Masters, therefore normal programme fees of €5,000 per annum do **not** apply.
- The minimum requirement for recruitment is a Level 8, Degree in Business (minimum 2.1) or equivalent. Applicants will be called for interview, please note that shortlisting may apply.
- Further information available at:
<https://www.lyit.ie/Research-Innovation/Postgraduate-Research-Opportunities> or alternatively contact: schoolofbusiness.admin@lyit.ie