Re-Shoring Manufacturing through the Application of Additive Technologies

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Abstract

Re-shoring in the UK has gained considerable momentum in the last two years. A number of scholars have also explored this phenomenon in different countries including USA, Germany and France. However the operational perspectives still remain untouched. According to the study previously done by the author of this paper, one of the primary factors behind the re-shoring phenomenon in the UK is the lack of responsiveness. Therefore there is long lead-time associated with the supplies from low-cost countries such as China and India. In order to prevent this, new generation of technologies such as Additive Manufacturing (AM) can be used to postpone the final configuration of the product until the real data about the demand is available. This study aims to investigate how AM technologies can change the supply chain configuration of the company which is involved in repatriating manufacturing activities back to the UK and use local network instead of oversea supplier. In order to carry out this study, a survey questionnaire was conducted among 55 companies that use AM technologies in their production. Results indicate that AM can support re-shoring strategies by allowing more customisation, shorter lead time, and more responsiveness to customer demand.

Keywords
Additive Manufacturing, Postponement, Re-shoring, Supply Chain

Biography

Hamid Moradlou is a PhD student at Loughborough University, UK studying Supply Chain Management issues related to re-shoring manufacturing activities back to the UK. His research area focuses on investigating the applicability of postponement in re-shoring context within automotive sectors. He has a graduated MSc in Advanced Manufacturing Engineering and Management from Loughborough University and BSc in Mechanical and Manufacturing Engineering with Management from University of Bath, UK.

Chris Backhouse is Professor of Product Innovation at Loughborough University, UK with extensive knowledge and experience of Higher Education in the Middle East and South East Asia. He is a regular international presenter in his field of innovation and entrepreneurship with extensive links with Universities in Singapore, Hong Kong, Malaysia, Indonesia, China, and Egypt. He advises on research and enterprise strategy and on taught curriculum content. He is a mechanical engineer by background having obtained his PhD whilst employed by Unilever Plc. In 1990 he joined Loughborough University where he has held various senior positions including Dean of the Faculty of Engineering and as Director of Internationalisation Strategy – responsible for the University's strategic international partnerships. His research activities have focused on the human aspects of motivation, innovation and entrepreneurship within an industrial context. He has published widely in the academic press and presented at numerous international conferences.