Project Title: Sustainable Supply Chain management practice in Oil and Gas industry
Supervisor's Name: Dr. Sujan Piya
Co-Supervisor(s):
Sources of Fund:

Research Field(s):
Summary and Problem Statement:
Oil and gas (O&G) industry is one of the major industries around the world, upon which many manufacturing and service industries depend. It occupies a promising place within the global economy due to its massive growth and huge investments in infrastructure. This is reflected by the substantial ongoing investments in this industry. The industry is still the major contributor to the GDP of many countries, especially in the Middle East. However, the sudden fall of oil price in the last few years and the environmental impact surrounding it is putting huge pressure on O&G industries to improve their operating efficiency and minimize its effect on environment. Sustainable supply chain management (SSCM) is one of the important organizational philosophies to accomplish the objective of improving the operational efficiency by reducing environmental risk. This study will focus on understanding the concept of sustainability in the supply chain of O&G industry. The study will identify the critical success factors to accomplish SSCM in O&G industry and then develop a mathematical model to measure SSCM practice. The developed model will then be implemented in the O&G industry in Oman as a case study to ascertain the applicability and understand the practical implication of the result derived from the developed model.
Keywords:
Sustainability, Supply Chain Management, Oil and Gas Industry, Structural modelling tool, GRA approach
Objectives:
- Understand the philosophy of SSCM
- Identify the critical success factors related to the SCCM in the O&G industry
- Develop a mathematical model to measure SSCM practice.
- Conduct a case study to ascertain the applicability and practical implication of the developed model
Tentative Methods of Approach:
- Extensive literature review and questionnaire survey
- Data analytics
- Structural modelling and GRA approaches

Required backgrounds and skills
Backgrounds: Supply Chain, Structural modelling tool, Multi-attribute decision making
Computing Skills: Specialized statistical software/ Expert system software
Other requirements:

References:
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- Piya, S., Shamsuzzoha, A., Khadem, M., & Al-Hinai, N. (2020). Identification of critical factors and their interrelationships to design agile supply chain: special focus to oil and gas industries. *Global*

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- Ahmad, N. K. W., de Brito, M. P., Rezaei, J., & Tavasszy, L. A. (2017). An integrative framework for sustainable supply chain management practices in the oil and gas industry. *Journal of Environmental Planning and Management*, *60*(4), 577-601.