Using Simulation to Determine Resource Requirements for Outsourcing Outbound Logistics Process

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https://doi.org/10.35609/gcbssproceeding.2023.1(163)

ABSTRACT

Outsourcing has become an important approach for organizations to improve their focus on core business and thus increase their performance since 1980s (Madsen, 2017). Many organizations outsource non-core activities with the intention to reduce costs, concentrate on core activities, gain access to skilled workforce, and etc. Logistics activities are one of the popular functions for organizations to outsource due to lack of skill and resources. Nowadays, outsourcing logistics activities is becoming a practice worldwide (Yang, 2014). Logistics outsourcing has proven to be an effective way for organization to improve customer services, reduce logistics costs, and gain competitive advantage (Aguezzoul, 2014; Jonsson, 2008; Kamble and Gawankar, 2016). This results in an emerging of 3PL or Third-party logistics provider, an external logistics service provider offering single or multiple logistics activities to its customers, which typically is on contract basis (Yang, 2014). The global 3PL market reached $750 billion in 2014. 80% of all Fortune 500 companies and 96% of the Fortune 100 used some form of 3PL services (Menner, 2015). Despites the benefits, there are some risks associated with loss of control, long-term commitment, and the failure of 3PL to perform their works. Therefore, it is crucial for a company to invest time during initial stages of the outsourcing relationship to ensure value is achieved throughout the process.

Keywords: Outsourcing, Simulation Modelling, Contract Management, Resource Requirements, Resource Allocation