Newaporn Bhalang 2010: Inbound Logistics Cost Reduction of Automotive Manufacturer by Milk Run System: A Case Study of AA Co.,Ltd. Master of Economics (Business Economics), Major Field: Business Economics, College of Graduate Studies at Si Racha. Thesis Advisor: Mr. Bhisanuwat Thaweewat, D.A. 112 pages.

The objectives of this study were (1) to verify current inbound logistics of AA Co.,Ltd (2) to specify technical feasibility study of inbound logistics by milk run system (3) to analyze financial feasibility study of inbound logistics by milk run system. This study used primary data from interviewing AA's suppliers for information about current direct inbound logistics by suppliers and personnel from manufacturing division, production control and logistics division and financial division. The secondary data came from company's data base and various sources concerned. Both data were used for descriptive and quantitative analysis. Decision criteria based on net present value (NPV), net benefit investment ratio (N/K) and internal rate of return (IRR). In dealing with risk and uncertainty, the switching value test (SVT) was also performed.

The result of this study indicated that current direct delivery by suppliers could be replaced by milk run system proposed by AA Co,.Ltd. The main investment was 5 six-wheel trucks assigned for 5 routes in order to pick up parts from 28 suppliers. The project life was 5 years. The benefit of this project came from a gap between current operation cost (transportation cost and inventory cost) and milk run operation cost. As a result, this project was worthwhile for investment since NPV was equal to 2,313,146 baht, N/K was equal to 1.23 and IRR was equal to 17.67 percent. The SVT proved that if benefit decreased more than 13 percent or the total cost increased over than 15 percent, this milk run system became infeasible. Thus, part price without transportation cost from supplier and milk run operation cost control were the critical points of success.

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