



THESIS APPROVAL
GRADUATE SCHOOL, KASETSART UNIVERSITY

Master of Engineering (Industrial Engineering)

DEGREE

Industrial Engineering

FIELD

Industrial Engineering

DEPARTMENT

TITLE: Sensitivity Analysis of the Bullwhip Effect in a Three-Level Supply Chain
 with Stochastic Demands and Lead Times

NAME: Ms. Natnicha Khumwan

THIS THESIS HAS BEEN ACCEPTED BY

_____ **THESIS ADVISOR**

(Assistant Professor Juta Pichitlamken, Ph.D.)

_____ **COMMITTEE MEMBER**

(Assistant Professor Waessara Weerawat, Ph.D.)

_____ **COMMITTEE MEMBER**

(Associate Professor Saisuda Somchit, M.S.)

_____ **DEPARTMENT HEAD**

(Associate Professor Kongkiti Phusavat, Ph.D.)

APPROVED BY THE GRADUATE SCHOOL ON _____

_____ **DEAN**

(Associate Professor Vinai Artkongharn, M.A.)