A Major Project Report On

# Selecting Alternatives for Green Supply Chain Performance System in context of Indian manufacturing Industry

Submitted for the award of the degree of

Master of Business Administration (Executive)

By

ARVIND GUPTA

2K14/MBA/503

Under the guidance of

Dr. Mohit Tyagi, Assistant Professor

Department of Mechanical Engineering



Delhi School of Management Delhi Technological University (Jan-May 2016) Session – 2014-2016

## CERTIFICATE

This is to certify that the project entitled "Selecting Alternatives for Green Supply Chain **Performance System in context of Indian manufacturing Industry**" has been successfully completed by Arvind Gupta –2K14/MBA/503.

This is further certified that this project work is a record of bonafide work done by him under our guidance. The matter embodied in this report has not been submitted for the award of any degree.

(Supervisor) Dr. Mohit Tyagi Assistant Professor Department of Mechanical and Production Engineering Delhi Technological University Bawana Road, Delhi-110042

#### DECLARATION

I hereby declare that the project report entitled "Selecting Alternatives for Green Supply Chain Performance System in context of Indian manufacturing Industry" submitted by me to Delhi School of Management, Delhi Technological University in partial fulfillment of the requirement for the award of the degree Master of Business Administration (Executive) is a record of project work carried out by me under the guidance of Dr. Mohit Tyagi (Assistant Professor). I further declare that the work reported in this project has not been submitted for the award of any other degree in this institute or any other institute or university.

Arvind Gupta Roll no. – 2K14/MBA/503 Student – Master of Business Administration (Executive) Delhi School of Management Delhi Technological University Bawana Road, Delhi - 110042

### ACKNOWLEDGEMENT

I am using this opportunity to express my sincere gratitude to everyone who supported me directly or indirectly throughout the preparation this project. I am thankful for their aspiring guidance, invaluably constructive criticism and friendly advice during the project work. I am extremely grateful to them for sharing their thoughts and illuminating views on a number of issues related to the project.

It is great pleasure for to acknowledge a debt of gratitude to Dr. P.K. Suri, Professor and Dean – Delhi School of Management, Delhi Technological University for his valuable contribution to the project.

As is the role played by an anchor in the ship, the same has been played by Dr. Rajan Yadav, Associate Professor and Coordinator, EMBA program of Delhi School of Management, Delhi Technological University without whom the project would not have been in the present state. So, my sincere regards to him as well.

My sincere thanks and gratitude to the entire faculty of Delhi School of Management for their generous help and unconditional support during completion of this project.

I would also like to extend my sincere gratitude to various dealers and overhauling workshop owners (names could not be published as they allowed the interview on the condition of nondisclosure of confidentiality) for guiding me with the insights of the automotive industry by the virtue of wealth of knowledge and experience they possess.

Last but not the least, I would also like to thank all students (4<sup>th</sup> Sem, MBA-Executive) whose suggestions in this regard proved to be valuable.

Arvind Gupta Roll no. – 2K14/MBA/503 Student – Master of Business Administration (Executive) Delhi School of Management Delhi Technological University Bawana Road, Delhi - 110042

## TABLE OF CONTENTS

## **Table of Contents**

Certificate	ii
Declarationi	iii
Acknowledgmenti	iv
List of Figure	vi
List of Tablev	<b>'ii</b>
Introduction	1
Literature Review	4
Research Methodology1	10
Model Development 1	12
AHP Methodology1	4
Model Analysis	6
Results and Discussion	21
Managerial implications2	23
Conclusion	23
Limitation and Future Scope2	24
References	25

## List of Figures

Figures	Description	Page No
Figure1	Five factors in supply chain (after Hugos 2011)	5
Figure2	Flow Chart for Research Methodology	10
Figure3	Model for alternatives for Green Supply Chain Performance System in context of Indian manufacturing Industry	13
Figure4	Graphical presentation of alternatives with respect to attributes	21
Figure5	Graphical presentation of weightage of alternatives.	22

## List of Tables

Table No	Description	Page No
Table 1	Factors identification from various studies	11
Table 2	Factors identification	11
Table 3	Factors Finalisation based on discussions.	12
Table 4	Saaty's scale of relative importance	15
Table 5	Pair-wise comparison matrix for criteria	16
Table 6	Paired comparison matrix in decimal for with priority weights	16
Table 7	Pairwise comparison of sub attribute of C1	17
Table 8	Pairwise comparison of sub-attributes with respect to C2.	18
Table 9	Matrix for alternatives with respect to C11.	18
Table 10	Matrix for alternatives with respect to C21.	18
Table 11	Matrix for alternatives with respect to attribute Hazardous Chemicals and emissions C1	19
Table 12	Matrix for alternatives with respect to attribute Society Preparedness C2	19
Table 13	Matrix for alternatives with respect to attribute Regulatory Framework C3	19
Table 14	Matrix for alternatives with respect to attribute Green Design C4	20
Table 15	Matrix for alternatives with respect to attribute Green Purchasing C5	20
Table 16	Final Summary	20
Table 17	Final Weight	21