

TRENDS IN JAPANESE TEXTILE TECHNOLOGY

John E. Berkowitch

for

U.S. Department of Commerce
Office of Technology Policy
Asia-Pacific Technology Program

Phyllis Genther Yoshida
Project Director

September 1996

TRENDS IN JAPANESE TEXTILE TECHNOLOGY

TABLE OF CONTENTS

Foreword	5
About the Author	6
Executive Summary: Trends in Japanese Textile Technology	7
Introduction.....	9
PART 1	11
Business Environment	11
1.1. Trade Balance	11
1.2. Globalization	11
1.3. Strategy	13
1.4. Implications for Research and Development	15
1.5. Notes	15
PART 2	17
State of the Art	17
Characterization.....	17
1.1. Objective Specification of Fabric and Apparel Qualities	17
1.2. Modeling of Fabric Mechanics	23
1.3. Notes	24
Products	26
2.1. Commodities	27
2.2. Specialties	29
2.3. Notes	49
Manufacturing	54
3.1. Fibers and Yarns	55
3.2. Fabrics	57
3.3. Apparel	59
3.4. Notes	65
Summary	69
PART 3	71
The Future	71
3.1. Predicament of the Japanese Industrial Establishment	71
3.2. Situation of the Textile Industry Complex	72
3.3. Research and Development	72
3.4. A Final Note	76
3.5. Notes	76
FIGURES	79