Impact of Governmental Measures for Technological Upgradation on Coir Fibre Production in India

Dr. Salih N
Assistant Professor, Department of Commerce, Milad E Sherif Memorial (M S M) College, Kayamkulam, Alappuzha (Dist.) Kerala, India

Abstract- Coir industry is an important agro based village and cottage industry in India. It is potential to provide employment to more than 3.5 lakhs people. Indian Coir Industry is mainly an export oriented industry. Government plays a significant role in growth and development of the Indian coir industry. The Ministry of Micro, Small and Medium Enterprises (MSME) and Coir Board Jointly implemented several plans and measures for the growth of coir industry in India. Inorder to achieve a sustainable development in Indian Coir Industry, Central Government implemented Coir Industry Technology Up-gradation Scheme (CITUS). The main aim of the scheme is to provide advanced infrastructure facilities and technologies. The Governmental measures for the technological upgradation include modernization of production process, development of machinery and equipment, product development and diversification, development of environment friendly technologies and technology transfer, incubation, testing and service facilities. It seens that CITUS is the CITUS is the sole means that channelizes the financial assistance to the various spheres of technological upgradation of the coir industry. This study envisages the impact of Governmental measures in certain key areas of coir technology on fibre production in India and Kerala.

Key Words: Product Development and Diversification, Environment Friendly Technologies, Husk Retting, Technology transfer and Incubation

INTRODUCTION

Technology is an important determinant for the tremendous growth of a nation. Technological area regards as one of the nonpareil areas in coir industry which has geared the industry incomparable sectorial development. The sustainable growth of coir industry greatly depends on the advancement and diffusion of technology. Technological upgradation includes modernization of production process, development of machinery and equipment, product development and diversification, development of environment friendly technologies, technology transfer, incubation and testing and service facilities. Central Coir Research Institute (CCRI), Alappuzha, National Coir Training and Design Centre (NCTDC), Alappuzha, Central Institute of Coir Technology (CICT), Bangalore and Coir Board play a significant role in this respect.

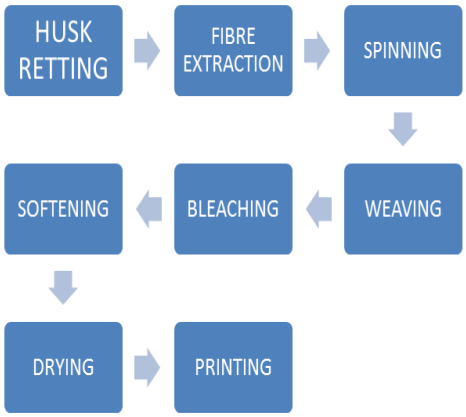

Figure: Coir Production Process

RESEARCH METHODOLOGY

The study is based on secondary data. Secondary data collected from the annual reports, journals, various research articles and theses from the following institutions.

(I) The Coir Board, Kochi.
(II) The Central Coir Research Institute (CCRI), Alappuzha, Kerala.
(III) The Centre for Development of Coir Technology (C–DOT), Thiruvananthapuram.
(IV) The Coconut Development Board (CDB), Kochi.
(V) Directorate of Coir Development (DCD), Thiruvananthapuram, Kerala.

OBJECTIVES OF THE STUDY

1. To analyse the impact of Governmental measures for technological upgradation on coir fibre production in India.
2. To analyse the impact of Governmental measures for technological upgradation on fibre production in Kerala.

HYPOTHESES

H01: There is no relationship between the fibre production in India and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies.

H02: There is no relationship between fibre production in Kerala and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies.

STATISTICAL TOOL

Ordinary Least Square (OLS) Regression

RESULTS AND DISCUSSION

Influence of Governmental Measures for Technological upgradation on Fibre Production in India and Kerala.

Fibre Production = Modernization of Production Process + Development of Machinery and Equipment + Product Development and Diversification + Development of Environment Friendly Technologies Technology transfer, Incubation, Testing and Service Facilities

Influence of Governmental Measures for Technological upgradation on Fibre Production in India

Table 01 OLS Regression Results Summary

Dependent	Variable. Ind. Fibre. Prod.			Method: Least Squares	
Included observations: 17				Sample: 1 17	
	Variable	Coefficient	Std. Error	t-Statistic	Prob.
India	Mod_Prod_Process	0.075404	0.635781	-0.1186	0.0211
	DevMachEq	0.931439	0.95861	1.72274	0.0129
	ProDevDiv	0.384801	1.489209	-0.2584	0.0009
	DevEnvFrTec	0.413677	0.937794	-0.4411	0.0362
	TecTransfer	0.206517	2.04068	-2.3554	**0.0382**
	C	627.7526	85.91013	7.30709	**0.0000**
	R-squared	0.702078	S.E. of regression		51.2461
	Adjusted R-squared	0.566658	F-statistic		5.18447
	Durbin-Watson stat	1.393729	Prob(F-statistic)		**0.01092**

H01: There is no relationship between the fibre production in India and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies

The null hypothesis gets rejected, at 5 per cent significance level, since probability of t statistic is lesser than 0.05. This implies that significant relation exists between the fibre production in India and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies. The regression equations are shown below.

India Fibre Production = 627.7525+0.07540 *Modernization of Production Process + 0.9314 * Development of Machinery and Equipment +0.3848* Product Development and Diversification +0.41367* Development of Environment Friendly Technologies

+ 0.2065* Technology transfer, Incubation, Testing and Service Facilities

Inferences

- A 100 percentage increase in Governmental measures for Modernization of Production Process reflects as 107 percentage increase in Indian fibre production
- A 100 percentage increase in Governmental measures for Development of Machinery and Equipment reflects as 193 percentage increase in Indian fibre production.
- A 100 percentage increase in Governmental measures for Product Development and Diversification reflects as 138 percentage increase in Indian fibre production.
- A 100 percentage increase in Governmental measures for Development of Environment Friendly Technologies reflects as 141 percentage increase in Indian fibre production
- A 100 percentage increase in Governmental measures for Technology transfer, Incubation, Testing and Service Facilities reflects as 120 percentage increase in Indian fibre production

It can be inferred that the Government measures in the line of technological up-gradation have the potential to bring forth positive effect on the fibre production in India.

Influence of Governmental Measures for Technological upgradation on Fibre Production in Kerala

Table 02 OLS Regression Results Summary

Dependent Variable.Kera. Fibre. Prod.				Method: Least Squares	
Included observations: 16 after adjustments				Sample (adjusted): 1 16	
	Variable	Coefficient	Std. Error	t-Statistic	Prob.
Kerala	Mod_Prod_Process	0.053562	0.120222	-0.4455	0.0254
	DevMachEq	0.81808	0.191779	0.45928	0.0159
	ProDevDiv	0.445687	0.284144	1.56852	0.0478
	DevEnvFrTec	0.401538	0.177263	-0.9677	0.0356
	TecTransfer	0.235574	0.389312	-2.1463	0.0274
	C	169.9268	16.24124	10.4627	**0.0000**
	R-squared	0.55885	S.E. of regression		9.68417
	Adjusted R-squared	0.338275	F-statistic		2.5336
	Durbin-Watson stat	1.769439	Prob(F-statistic)		0.09891

H0: There is no relationship between fibre production in Kerala and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies.

The null hypothesis gets rejected, at 5 per cent significance level, since probability of t statistic is lesser than 0.05. This implies that significant relation exists between the fibre production in Kerala and the Governmental measures for technological upgradation such as Modernization of Production Process, Development of Machinery & Equipment, Product Development & Diversification and Development of Environment Friendly Technologies.

Kerala Fibre Production = 169.9268 +0.05356* Modernization of Production Process + 0.8180* Development of Machinery and Equipment + 0.4456* Product Development and Diversification +0.4015* Development of Environment Friendly Technology +0.2355* Technology transfer, Incubation, Testing and service

Inferences

• A 100 percentage increase in Governmental measures for Modernization of Production Process reflects as 105 percentage increase in Kerala fibre production

• A 100 percentage increase in Governmental measures for Development of Machinery and

Equipment reflects as 181 percentage increase in Kerala fibre production

• A 100 percentage increase in Governmental measures for Product Development and Diversification reflects as 144 percentage increase in Kerala fibre production

• A 100 percentage increase in Governmental measures for Development of Environment Friendly Technologies reflects as 140 percentage increase in Kerala fibre production

• A 100 percentage increase in Governmental measures for Technology transfer, Incubation, Testing and Service Facilities reflects as 123 percentage increase in Kerala fibre production

It can be inferred that the Government measures in the line of technological up-gradation have the potential to bring forth positive effect on the fibre production in Kerala.

Model Specification Test

RAMSEY RESET Test Results

		Value	df	Probability
India	t-statistic	1.341244	10	0.2095
	F-statistic	1.798935	(1, 10)	0.2095
Kerala	t-statistic	0.949354	9	0.3672
	F-statistic	0.901273	(1, 9)	0.3672

Since the probability of t-statistic and F statistic are greater than 0.05 the null hypothesis of correct specification fails to get rejected, in both the cases of India and Kerala. This indicates that there is no functional form of misspecification, in both the regression equations.

CONCLUSION

The growth of an industry mainly depends on the strength of its technology. Like any other industry, the technological area of coir industry regards as one of the nonpareil areas which geared the industry incomparable sectorial development. Owing to the outstanding advancement and diffusion of technology, coir industry enjoys a significant role in economic growth of the country in terms of production and export. The governmental measures for the technological upgradation includes modernisation of production process, development of machinery and equipment, development of environment friendly technologies, technology transfer, incubation, testing and service facilities. That is why India has emerged as the largest producer and exporter of coir on the globe.

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