

Performance of Cottage Units in Virudhunagar During Covid 19

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Abstract - The economy of any nation boost ups only when the business sector blooms. Industrial revolution pumps the attitude of starting business among the people. If sufficient resources are available, people may start business in a large level. When resources are limited, they do their business in a micro, small or medium level. Some of them start their business and carry out their production in their homes. These industries are known as cottage industries. They produce the goods and distribute it within the limited coverage. After getting popularity, they expand their business coverage. In December 2019, a pandemic disease Covid 19 spread all over the world. In order to control it, Government announced lock down. The disease not only affects the health of the people but also affects the economic position of the world. During this situation, cottage industries are suffered by lot of problems. The present study points out the problems faced by cottage industries during Covid 19 and strategies adopted to handle crisis during Covid 19.

Index Terms - FIFO, LIFO, safety precautions

INTRODUCTION

Cottage industries are a major breadwinner for many households in India. Cottage businesses have one advantage that they can be started with very low initial investments, so this type of business is ideal for people with low incomes/villagers. In addition to that, the raw materials to manufacture cottage unit products are available easily in their surrounding environment. The cottage and small-scale industries hold enormous potential for employment generation. Additionally, a person working in such an industry is basically a self-employed one. Cottage and small-scale industries take part in about 40% of the total industrial output in India. There are approximately around 3,50,000 units within the state of Tamilnadu, providing employment to over 2.2 million people. Furthermore, it has been

empirically found out that this industry has provided economic independence to the women in developing and developed countries. Moreover, the whole family involves in producing items in this industry, hence it facilitates numerous families with an employment option throughout the year.

Statement of the Problem

While business operating in cottage units may remain small, they still have to compete with other firms, whether other cottage units or larger-scale companies. This requires them to employ new technologies that will improve efficiency and productivity. They also will have to compete for sources of labor, which can be especially difficult as a country becomes more developed and wages rise. In this situation, in 25th March 2020, Government announced lockdown due to the spread of Novel Corona Virus pandemic disease. The business of cottage units decline during that lockdown period. The cottage units cannot continue the production process due to non-availability of labourers and raw materials. The earning capacity of the cottage units showed a negative trend. The present study will make an attempt to study the performance of cottage industries during Covid 19.

SCOPE OF THE STUDY

The present study is confined to study the problems faced by cottage industries in their business especially in the field of production, marketing, human resources, finance and inventory. It also analyses the strategies adopted by cottage industries to handle the crisis during Covid 19 period.

RESEARCH METHODOLOGY

The methodology of the research covering methods of data collection, instruments used for data collection, sampling design, statistical tools used for data analysis, hypotheses of the study and area of the study are described as follows.

Date Collection

The study is based on both primary and secondary data. The primary data has been gathered from 171 cottage unit proprietors. The secondary data has been collected from books, magazines, journal and encyclopedias.

Instruments Used for Data Collection

The primary data will be collected from 171 cottage units by using well-structured and pre-tested questionnaire. Based on the pilot study, some of the unwanted and unsuitable questions will be removed from the instrument and few questions were simplified. The result of the pilot study will be useful for the researcher to frame the final questionnaire for collecting information from the respondents.

Sampling Design

In Virudhunagar, 53 revenue villages are there. In the 53 revenue villages, totally 306 cottage units are there. Rao’s calculators is used determine the sample size. The population of 306 is fed in the Rao’s calculator. At 95 per cent level of significance, the sample size is determined as 171 business units. For the collection of primary data from 171 cottage unit proprietors, convenience sampling technique will be used in this study.

Statistical Tools Used for Data Analysis

Percentage analysis has been used to analyse the frequency tables. Factor analysis has been used to analyse the strategies adopted by cottage industries to handle crisis in Covid 19.

RESULTS AND DISCUSSION

In this section, business profile of the cottage industries, problems faced by cottage industries during Covid 19 period and strategies adopted to handle crisis during Covid 19 period.

Problems Related to Production during Covid 19.

Business Profile of the Cottage Industries

In this section, the business profile viz., years of running the business and products produced have been taken into account. Table 1 highlights the business profile of the cottage industries.

TABLE 1
Business Profile of the Cottage Industries

Business Profile		No. of Respondents	Percentage
Year of running the business	Below 5	58	33.92
	5-10	71	41.52
	Above 10	42	24.56
Products produced	Honey candy	13	7.60
	Snacks	20	11.70
	Pickles	22	12.87
	Masala powder	12	7.02
	Temple ghee lamps	24	14.04
	Dry fish packets	6	3.51
	Papad	18	10.53
	Parotta	16	9.36
	Home made jaggery sweets	19	11.11
	Soap oil	21	12.28

Source: Primary data

Out of 171 cottage industries, 71 (41.52%) have run the business for 5-10 years, 58 (33.92%) have run the business for below 5 years and 42 (24.56%) have run the business for above 10 years.

Out of 171 cottage industries, 24 (14.04%) have manufactured temple ghee lamps, 22 (12.87%) have made pickles, 21 (12.28%) have manufactured soap oil, 20 (11.7%) have prepared snacks, 19 (11.11%) have manufactured home made jaggery sweets, 18 (10.53%) have made papads, 16 (9.36%) have prepared parotta, 13 (7.6%) have manufactured honey candy, 12 (7.02%) have prepared masala powder and 6 (3.51%) have packed dry fishes.

PROBLEMS FACED BY COTTAGE INDUSTRIES DURING COVID 19

In this section, five problems such as production, marketing, finance, human resources and inventory problems faced by cottage industries during Covid 19 are studied.

Production Problems Faced by Cottage Industries During Covid 19

Production is the core of business of manufacturing firms. Production is a combination of many factors – men, money, material and machinery. When right kind of raw materials are available at right time in right quantity and quality, the production work is carried out eminently. Some cottage units used machineries for production while others used it for packaging. Table 1 shows the production problems faced by cottage units during Covid 19.

TABLE 2
Production Problems Faced by Cottage Industries During Covid 19

Production Problems	No. of Respondents	Percentage
Usage of existing method of production	92	53.80
Unable to service the machinery	52	30.41
Lack of knowledge about modern production methods	27	15.79
Total	171	100.00

Source: Primary data

Out of 171 cottage industries, 92 (53.8%) have faced a problem of usage of existing method of production, 52 (30.41%) have faced a problem of unable to service the machinery and 27 (15.79%) have faced a problem of lack of knowledge about modern production methods.

Marketing Problems Faced by Cottage Industries During Covid 19

Marketing had given life to the products manufactured by the business firms. It helps to popularize the products and stimulate the people to buy again and again. Table 3 shows the marketing problems faced by cottage units during Covid 19.

TABLE 3
Marketing Problems Faced by Cottage Industries During Covid 19

Marketing Problems	No. of Respondents	Percentage
Unable to cover wider area	60	35.09
Lack of advertising opportunities	40	23.39
Rapidly changing marketing mix	71	41.52
Total	171	100.00

Source: Primary data

Out of 171 cottage industries, 71 (41.52%) have faced a problem of rapidly changing marketing mix, 60 (35.09%) have faced a problem of unable to cover wider area and 40 (23.39%) have faced a problem of lack of advertisement opportunities.

Human Resources Problems Faced by Cottage Industries during Covid 19

Human resources are the keting had given life to the products manufactured by the business firms. It helps to popularize the products and stimulate the people to buy again and again. Table 4 shows the marketing problems faced by cottage units during Covid 19.

TABLE 4
Human Resources Problems Faced by Cottage Industries During Covid 19

Human Resources Problems	No. of Respondents	Percentage
Lack of human resources	79	46.20
Demand for high remuneration	39	22.81
Turnover/Absence of human resources	53	30.99
Total	171	100.00

Source: Primary data

Out of 171 cottage industries, 79 (46.2%) have faced a problem of lack of human resources, 53 (30.99%) have faced a problem of turnover/absence of human resources and 39 (22.81%) have faced a problem of demand for high remuneration.

Finance Problems Faced by Cottage Industries during Covid 19

Finance is considered as life blood of the business. When the business firm come across problems related to sources, utilisation and distribution of finance, it will affect the growth of the business. Table 5 depicts the finance problems faced by cottage industries during Covid 19.

TABLE 5
Finance Problems Faced by Cottage Industries during Covid 19

Finance Resources Problems	No. of Respondents	Percentage
Shortage of funds	79	46.20
Limited sources of money borrowing	39	22.81
High rate of interest	53	30.99
Total	171	100.00

Source: Primary data

Out of 171 cottage industries, 79 (46.2%) have faced a problem of shortage of funds, 39 (22.81%) have

faced a problem of limited sources of money borrowing and 53 (30.99%) have faced a problem of high rate of interest for borrowing.

Inventory Problems Faced by Cottage Industries during Covid 19

Inventory act as a lubricant to carry out operations of the business. Inventory include raw materials, work-in-progress, finished goods, spares etc. Table 6 indicates the inventory problems faced by cottage industries during Covid 19.

TABLE 6

Inventory Problems Faced by Cottage Industries during Covid 19

Inventory Problems	No. of Respondents	Percentage
Perishable nature of goods	21	12.28
Lack of storage facilities	81	47.37
Price fluctuation of inventories	69	40.35
Total	171	100.00

Source: Primary data

Out of 171 cottage industries, 81 (47.37%) have faced a problem of lack of storage facilities, 69 (40.35%) have faced a problem of price fluctuation of

inventories and 21 (12.28%) have faced a problem of perishable nature of goods.

STRATEGIES ADOPTED TO HANDLE CRISIS DURING COVID 19 PERIOD

Eighteen statements indicating the strategies adopted by cottage unit to handle crisis during Covid 19 period have been framed and responses given by the respondents are measured with the help of Likert's five point scaling technique. Cronbach Alpha test has been used to examine the reliability of eighteen statements.

The cronbach alpha values of the eighteen statements are presented in Table 7.

TABLE 7

Cronbach Alpha Test Results

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.927	0.205	18

Source: Primary data

Cronbach Alpha reliability scale of the strategies adopted by travel agencies to promote tourism is 0.927 which shows that the reliability of the data is good.

Factor analysis has been used to analyse the strategies adopted by cottage units to handle crisis during Covid 19 period.

TABLE 8-Strategies Adopted to Handle Crisis in Business due to Covid 19

Strategies	Strongly agree	Agree	No opinion	disagree	Strongly disagree	Total
Production	57	33	21	15	45	171
Use of alternative raw materials	92	31	11	12	25	171
Buy bulk quantity of raw materials to obtain discount	80	12	47	12	20	171
Proper maintenance of machinery	51	53	18	11	38	171
Marketing						
Advertise products in social media	71	69	13	6	12	171
Give offers like buy one get one free	52	49	31	23	16	171
Adopt personal selling	63	40	32	12	24	171
Provide door delivery facility	45	41	53	11	21	171
Human resources						
Provide safety precautions	70	35	19	16	31	171
Obtain the help of family members when labour shortage	79	43	19	19	11	171
Provide refreshment –tea and breakfast	71	62	14	20	4	171
Reduce their work time	49	42	44	16	20	171
Finance						
Approach money lenders for obtaining credit	45	39	31	30	26	171
Approach banks for obtaining loan	60	56	19	17	19	171
Surrender LIC policies	39	35	30	32	35	171
Pledge jewelry in non banking financial institutions	36	71	22	37	5	171
Inventory						
Arrange suitable storage facility	51	45	29	27	19	171
Adopt 'First In First Out' policy	35	39	41	51	5	171
Adopt 'Last In First Out' policy	57	33	21	15	45	171

Source: Primary data

Before applying factor analysis, it is essential to check whether the data is fit for analysis or not. For that purpose, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity test are implemented to test the fitness of the data.

TABLE 9

Strategies Adopted to Handle Crisis in Business due to Covid 19

- KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.977
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Bartlett's Test of Sphericity	Approx. Chi-Square	3857.557
	Df	269
	Sig.	.000

Source: Primary data

KMO test shows that the KMO measure of sampling adequacy is 0.977 which is significant as its p value (.000) is less than 0.05. (0.000<0.05) and Bartlett's test of sphericity is also significant.

Table 10 illustrates the initial eigen values, extraction sum of squared loadings and rotation sum of squared loadings.

TABLE 10- Strategies Adopted to Handle Crisis in Business due to Covid 19 – Eigen Values

Components	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.458	36.258	36.258	13.458	55.247	55.247	9.657	48.752	48.752
2	9.691	11.914	48.172	11.952	6.874	62.121	9.514	9.257	58.009
3	8.645	8.24	56.412	9.658	5.951	68.072	9.149	7.325	65.334
4	8.045	5.657	62.069	7.267	4.592	72.664	8.357	6.2147	71.549
5	7.951	5.127	67.196	6.934	2.9	75.564	8.024	4.015	75.564
6	7.654	5.008	72.204						
7	7.258	4.962	77.166						
8	7.159	3.417	80.583						
9	7.005	2.957	83.54						
10	6.004	2.831	86.371						
11	5.914	2.247	88.618						
12	5.877	2.267	90.885						
13	5.694	2.199	93.084						
14	5.536	1.987	95.071						
15	5.487	1.654	96.725						
16	5.398	1.587	98.312						
17	5.219	0.934	99.246						
18	4.005	0.754	100						

Extraction Method: Principal Component Analysis.

Source: Primary data

From Table 10, it is clear that five factors are rotated. The cumulative per cent of variance explained for I, II, III, IV and V factors are 55.247, 62.121, 68.072, Table 11 gave rotated factor values.

72.664 and 75.564 respectively. The total cumulative per cent indicates the factors have 75.564 per cent reliability.

TABLE 11 Strategies Adopted to Handle Crisis in Business due to Covid 19 – Rotated Factor Matrix

Factors	I	II	III	IV	V
Finance					
Approach banks for obtaining loan	0.967				
Pledge jewelery in non banking financial institutions	0.945				
Approach money lenders for obtaining credit	0.921				

Surrender LIC policies	0.918				
Human resources					
Obtain the help of family members when labour shortage		0.984			
Provide safety precautions		0.978			
Provide refreshment –tea and breakfast		0.961			
Reduce their work time		0.952			
Inventory					
Adopt ‘First In First Out’ policy			0.948		
Arrange suitable storage facility			0.931		
Adopt ‘Last In First Out’ policy			0.927		
Marketing					
Provide door delivery facility				0.914	
Adopt personal selling				0.906	
Advertise products in social media				0.897	
Give offers like buy one get one free				0.885	
Production					
Buy bulk quantity of raw materials to obtain discount					0.855
Use of alternative raw materials					0.841
Proper maintenance of machinery					0.835

Source: Primary data

By rotating eighteen statements under Prime Component Analysis (PCA) by Varimax rotation method, five factors are rotated viz, finance, human resources, inventory, marketing and production. The cottage units have to solve all the crisis but it comes to know about the order of solving the crisis. The cottage units have handled financial crisis followed by human resources problems.

SUGGESTIONS

On the basis of findings of the study, some suggestions are offered.

1. Central Government announces lot of schemes for the welfare of cottage industries through banks during the period of Covid 19 to revamp from financial crisis. Hence, cottage units have to approach the banks to gather knowledge about welfare schemes and utilise it.
2. When sufficient number of human resources are not available due to lock down, the cottage industries have to use family members in the business process.
3. In order to avoid the loss of price fluctuations, the cottage industries have to sell products in FIFO method.
4. They may provide door delivery during the hours allotted by the Government for movement

5. They have to buy bulk quantity of raw materials to get discount as well as availability of raw materials.

CONCLUSION

Challenges, Problems and Crisis are inevitable part of the life. Like that the business also have lot a struggles. Now the struggle is raised due to Pandemic Disease Covid 19. Even though human lives and business life are in trouble, this position may be changed. In order to revamp from business challenges, the business firms have to change their strategies especially cottage units. They have to modify their product line and marketing mix to recover from loss. A correct formulation of strategy and effective execution of strategy by cottage industries will rehabilitate their business life.

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