

A Study on Pre-Export Marketing Problems of Entrepreneurs and Enterprises of Mango Pulp in Chittoor District of Andhra Pradesh

G. Suresh Babu

Associate Prof. of Commerce, Dept. of Commerce, Govt. Degree & PG College, Puttur, Chittoor Dist, Andhra Pradesh

Abstract: The fruit processing units in Chittoor district process largely mangoes. Other fruits processed, though in small quantities are guava, papaya, grapes and tomato. In addition to catering to the domestic markets, the mango processing units contribute substantially to mango pulp exports from India. These units, developed into a cluster over the last two and a half decades, spontaneously have also contributed to the emergence of a large network of support providers in the form of raw material suppliers, transport providers, suppliers of packing material, machinery and equipment servicing firms, exporters and skilled labour etc. The development of Chittoor fruit processing industry assumes significance considering the inherent strengths and weaknesses of the units.

The strengths relate to the presence of a dependable raw material base, good export potential for tropical and sub-tropical fruit pulps and juices, expanding urban markets within the country for natural fruit juices, easy accessibility to better technologies, major domestic markets for end products and a seaport for exports.

The weaknesses relate to highly seasonal operations of the units, narrow product mix, inadequate effort to enhance product range and explore domestic markets, lack of cost optimization effort, limited inter-firm interaction, absence of critical common facilities, varying product quality, excessive dependence on merchant exporters, lack of alternative market effort, no waste utilization and objectionable practices of waste disposal.

This research focuses on the problems faced by mango pulp entrepreneurs and enterprises during the pre-export marketing of mango pulp in Chittoor district.

Keywords: Fruit processing, Cluster, Common facilities, Cost optimization.

1. INTRODUCTION

India is the largest mango producer in the world, and has the range of varieties in mango and processing mangoes of this fruit. Export of mango pulp is significant. Exports of processed fruit and vegetables, particularly mango pulp have increased significantly after economic liberalization Indian economy. The main countries importing Indian processed fruits and vegetables are the Gulf countries, USA, UK, Germany and Russia.

The exports of mango pulp from the Chittoor district are estimated at 60,000 tonnes of cans and 15,000 tonnes of Aspetic per year. The main variety of Mangoes processed is Totapuri which is sourced from Chittoor district in Andhra Pradesh and from North Arcot and Dharmapuri districts in Tamilnadu. Good quality Alphonso is usually sourced from Maharashtra.

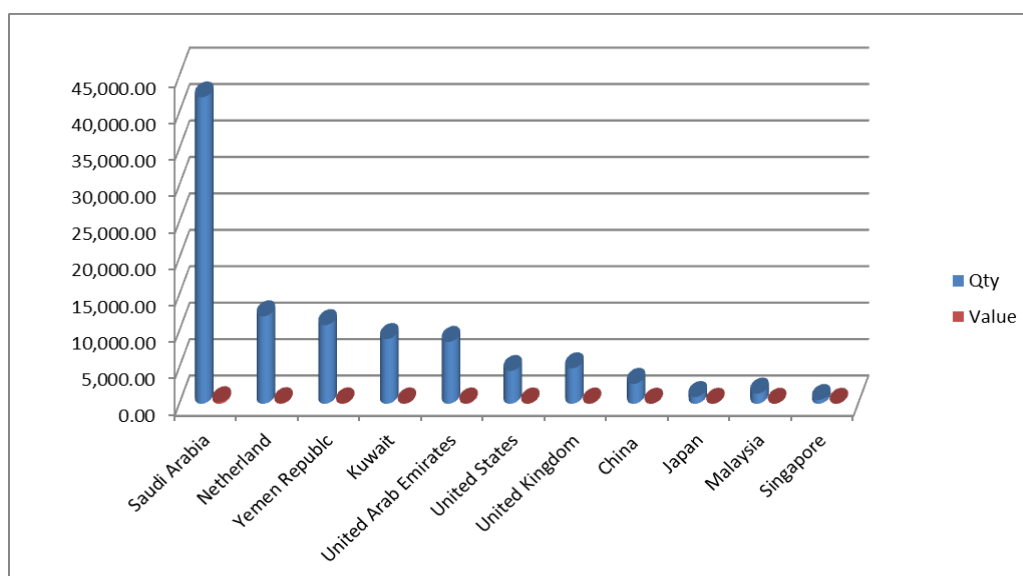
2. EXPORTS OF MANGO PULP FROM INDIA

Table 1: Exports of mango pulp to top 11 countries - 2015-16

S.No	QTY in Mts		Value in Rs. Crore	
	Country	Qty	Value	
1	Saudi Arabia	42,055.43	221.97	
2	Netherland	12,004.53	87.01	

3	Yemen Republic	10,793.77	54.78
4	Kuwait	8,891.61	51.46
5	United Arab Emirates	8,496.68	46.92
6	United States	4,503.87	40.06
7	United Kingdom	4,870.16	37.44
8	China	2,736.76	20.52
9	Japan	934.88	11.24
10	Malaysia	1,399.93	6.87
11	Singapore	520.87	3.07

Source: APEDA Annual Export report , 2016



Graph 1 : Exports of mango pulp to top 11countries - 2015-16

3. EXPORTS OF MANGO PULP FROM CHITTOOR DISTRICT

The major export from Chittoor district is mango pulp. There are 54 mango processing units are located in Chittoor, Madanpalli and Tirupati regions. Mango pulp exports from Chittoor district were Rs.56 crores in 2000-2001 to Rs.603.24 crores in 2015-16.

Table 2: Mango pulp exports from Chittoor district

Year	Quantity Exported (M.Tons)	Value (Rs. In crores)
2000-01	28,973	56.00
2002-03	50,000	75.00
2003-04	42,130	84.20
2004-05	81,500	175.22
2005-06	95,360	190.72
2006-07	1,24,488	267.83
2007-08	1,08,782	254.39
2008-09	1,05,850	308.24
2009-10	2,07,000	616.86
2010-11	1,48,380	442.17
2011-12	1,54,390	486.72
2012-13	1,90,345	512.34
2013-14	2,06,730	539.29
2014-15	1,64,324	487.35
2015-16	2,26,562	603.24

Source: APEDA annual report, 2016

It is evident that majority of the entrepreneurs in Chittoor district suffer from want of sufficient and easy and concessional bank loans. Another major problem faced by most of the enterprises is the problem of disposal of mango waste products. They are worried about sufficient place for dumping waste products. A similar problem is regarding raw material such as mangoes, sugar, chemicals and tin plates. Since there is no direct marketing for buying mangoes middlemen sell them at exorbitant rates to the processing units.

Based on the sources on pre-export marketing problems facing by the entrepreneurs and enterprises in Chittoor district, appropriate suggestions are offered at the end to improve the performance of the fruit processing industry and exports of mango pulp in Chittoor district.

4. REVIEW OF LITERATURE

Govardhan Bobby (2013)¹ stated that, a gradual decrease in production and processing is being registered by mango processing industries in Chittoor district. The fall is being attributed to demand for newer forms of packaging and increase in automation of process. Most buying companies want aseptic packaging. Demand for canned packaging has come down drastically. According to him, aseptic packaging is particularly favored by the multinationals and big buyers as this type of packaging is good for huge quantities.

Surendra Naidu .P (2014)² in his article stated that, in Chittoor district, small scale canning units and medium scale aseptic packing units are being operated by the pre-contract system of processing and owned processing. Medium scale canning units and small scale aseptic packing units are being operated by owned processing only. In pre-contract system of processing export agencies provide raw mango fruits, cans or barrels and required chemicals to the processors (remaining all processing costs are incurred by processors) and pay Rs. 2,200 for canning units and Rs. 5,000 for aseptic packing units per one tonne of mango pulp. In owned processing all processing costs are incurred by processors for preparing mango pulp and they directly market the mango pulp without the help of exporters.

Rajasekhar Mamilla (2015)³ in his study on “Problems and Prospects of Fruit Processing Industry: A Study with Reference to Chittoor district of Andhra Pradesh” stated that the fruit processing industry, being at the lowest segment of the food processing industries, has not received adequate attention, particularly in Chittoor district of Andhra Pradesh.

ASSOCHAM (2016)⁷⁴ a recent study by Apex Industry Body, stated that united AP garnered second highest share in actual exports through Agri Export Zones. Mango pulp from Agri Export Zone (AEZ) Chittoor accounted for 95 percent of exports in erstwhile AP. With an export value worth over Rs 2,890 crore, united Andhra Pradesh accounted for second highest share of about eight percent after Rajasthan and 72 percent in total net exports worth over Rs 38,300 crore in terms of states’ actual exports through Agri Export Zones (AEZs).

5. NEED OF THE STUDY

The mango pulp processing units in the state are concentrated mainly in Chittoor district as a sequel to availability of raw materials, leverage the existing status and strengths of the district with regard to production and processing of fruits. The major problems of entrepreneurs and enterprises of processing units in Chittoor district are finance, machinery, aseptic packaging, electricity, raw material and disposal of mango waste products. Mango pulp being a food product, utmost care should be taken in maintaining the quality.

Marketing of mango pulp seems to be an insurmountable problem for fruit processing units in the district. Marketability of a product depends upon its quality and price. In spite of liberalized export trade, the export of mango pulp has been dwindling mainly poor quality in international market. Low quality of pulp produced and exported by some fruit processing units may be one of the reasons for declining the exports.

6. OBJECTIVES

1. To study the problems faced by the entrepreneurs and enterprises of mango pulp in Chittoor district.
2. To examine the problems encountered in pre-export marketing of mango pulp.

7. RESEARCH METHODOLOGY

In view of the specific objectives of the present study, it uses both primary and secondary data. It focuses attention to obtain factual data of the total 54 mango pulp entrepreneurs and enterprises in Chittoor district located 40 in Chittoor, 10 in Madanapalli and 4 in Triupati regions

Primary data generated through structured schedules and secondary data collected from various official and non-official sources are statistically treated, using the wide array of statistical tools such as factor analysis, correlation analysis, and multiple regression analysis.

8. PROFILE OF ENTREPRENEURS

Table 3: Age wise distribution of the entrepreneurs

Age	Region			
	Chittoor	Madanapalli	Tirupati	Total
20 - 25 Years	4 (10.0)	0 (0.0)	0 (0.0)	4 (7.4)
26 - 30 Years	14 (35.0)	5 (50.0)	2 (50.0)	21 (38.9)
31 - 40 Years	18 (45.0)	4 (40.0)	1 (25.0)	23 (42.6)
Above 45 Years	4 (10.0)	1 (10.0)	1 (25.0)	6 (11.1)
Total	40 (100)	10 (100)	4 (100)	54 (100)

Source: Primary data

The age wise classification of entrepreneurs is given in the Table 3 it shows that, of the total entrepreneurs, only 4 percent of entrepreneurs in Chittoor region while no one in the regions of Madanapalli and Tirupati are found to be in the age group of 20-25 years. About 14 entrepreneurs forming 35 percent in Chittoor region, 5 and 2 entrepreneurs in Madanapalli and Tirupati regions forming 50 percent in each region are in the age group of 26 to 30 years. 18 entrepreneurs in Chittoor region and only 1 percent in Tirupati region forming 25 percent have been found in the age group of 31 to 40 years. Another 4 entrepreneurs constituting 10 percent in Chittoor region and only one each at Madanapalli and Tirupati regions forming 10 percent and 25 percent respectively are formed to be in the age group of 45 years.

Table 4: Distribution of sample respondents for ownership pattern

Ownership Pattern	Region			
	Chittoor	Madanapalli	Tirupati	Total
Sole Proprietorship	44 (91.7)	03 (75.0)	1 (50.0)	48 (88.9)
Partnership	01 (2.05)	0 (0.0)	0 (0.0)	01 (1.85)
Private limited company	03 (6.25)	01 (25.0)	01 (50.0)	05 (9.25)
Public limited company	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Co-operative society	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	48 (100)	04 (100)	02 (100)	54 (100)

Source: Primary data

From the study of the sample respondents of industrial units producing the mango pulp in Chittoor district it is clear that the ownership pattern varies basing on the form of business organization. As per the table 4, almost all or a great majority of the mango pulp units are owned and run by only sole proprietors. Such units are 91.7 percent in Chittoor region, 75 percent in Madanapalli and 50 percent in Tiruapti regions. Only 1 unit has been established in partnership.

9. ENTERPRISES' PRE-EXPORT PROBLEMS IN CHITTOOR DISTRICT

Table 5: Enterprises' Pre-export marketing problems (N=54)

Variable	Frequent	Percentage (%)
Overall problem level	22	40.74
Extremely dissatisfied	12	22.22
Very dissatisfied	9	16.96
Neutral	7	12.96
Satisfied	2	3.70
Very satisfied	1	1.85
Extremely satisfied	1	1.85
Total	54	100.00

Note: Overall pre-export marketing problem mean ranges from 1 (extremely dissatisfied) to 7 (extremely satisfied)

Respondents were questioned about their pre-export problems in the mango pulp enterprises in the Chittoor district. The results were summarized in table 5, nearly 40.74% of the respondents indicated that the overall pre-export problems were high and that they were very dissatisfied, or extremely dissatisfied. 12.96% were neutral in their opinions and 3.7% of the respondents were satisfied, very satisfied, or extremely satisfied. The mean value of respondents' pre-export level of problems was 5.454, which tended toward the high end of the problem scale. This suggests that the Chittoor District mango pulp provides enterprises with a problematic experience.

Table 6: Factor analysis results of the pre-export marketing problems of mango pulp units (N= 54)

Attributes	Factor Loading					Communality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
Factor 1: Production						
Production of mango pulp	.844					0.755
Prices of material	.764					0.653
Capital	.716					0.581
Govt. Permission	.677					0.544
Govt. Policies	.642					0.680
Export Market Information	.613					0.692
Chemicals	.608					0.435
Availability of Coal	.549					0.650
Assistance From Govt.	.544					0.417
Taxes	.509					0.416
Factor 2: Marketing						
Export Procedure		.671				0.503
Competition		.592				0.702
Transport		.579				0.742
Godown facilities		.565				0.634
Water		.417				0.382
Factor 3: Infrastructure						
Packing Material			.652			0.611
Cold Storage Facilities			.647			0.440
Labour			.584			0.399
Factor 4: Resources						
Sources of Funds				.750		0.600
Subsidies from Govt.				.565		0.515
Waste Disposals				.550		0.471
Cost of Machinery				.422		0.620
Factor 5: Supply						
Supply of Raw Materials					.758	0.583
Power Supply					.681	0.552
Marketing					.617	0.547
<i>Eigen Value</i>	6.407	2.235	1.994	1.840	1.649	
<i>Variance (%)</i>	25.629	8.941	7.978	7.360	6.596	
<i>Cumulative variance (%)</i>	24.194	32.774	40.289	46.929	53.496	

Attributes	Factor Loading					Communality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
Reliability Alpha (%)	87.0	55.1	58.0	61.4	54.4	
Number of items (Total = 25)	10	5	3	4	3	

Note: Extraction Method – Principal Component Analysis

Rotation Method – Varimax with Kaiser Normalization

KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) = 0.644

Bartlett's Test of Sphericity: $\chi^2 = 0.000$ ($\chi^2 = 613.063$, $df = 300$)

The five factors underlying enterprises' pre-export marketing problems of mango pulp units attributes in the Chittoor district were as follows.

Production (Factor 1) contained ten attributes and explained 25.629% of the variance in the data, with an Eigen value of 6.407 and a reliability of 87%. The attributes associated with this factor dealt with the lack of production & policies, including "Production of mango pulp," "Prices of Material," "Capital," "Govt. permission," "Govt Policies," "Export Market Information," "Chemicals," "Availability of Coal," "Assistance from Govt" and "Taxes."

Marketing (Factor 2) accounted for 8.94% of the variance, with an Eigen value of 2.235, and a reliability of 55.1 %. This factor was loaded with four attributes that referred to lack of marketing. The five attributes were "Export Procedure," "Competition," "Transport," "Go down facilities," and "Water."

Infrastructure (Factor 3) was loaded with three attributes. This factor accounted for 7.98% of the variance, with an Eigen value of 1.994, and a reliability of 58%. These attributes were "Packing material," "Cold Storage Facilities," and "Labour."

Resources (Factor 4) contained four attributes that referred to Lack of Resources dimensions. This factor explained 7.360% of the variance, with an Eigen value of 1.840, and a reliability of 61.4 %. These attributes were "Sources of Funds," "Waste Disposals," and "cost of Machinery."

Supply (Factor 5) contained three attributes that referred to lack of supply. This factor explained 6.596 % of the variance, with an Eigen value of 1.649, and a reliability of 54.4 %. These attributes were "Supply of Raw materials," "Power supply" and "Marketing".

10. CORRELATION ANALYSIS

A correlation coefficient measured the strength of a linear between two variables. In the study, a correlation coefficient measured the strength of a linear between the overall pre-export marketing problems of the enterprise and five factors (Production & Policies, Marketing, Lack of Infrastructural facilities, Resources and Supply). The correlation between overall pre-export marketing problems and five factors was positive and was significant at the 0.01 level (2-tailed). For example, the correlation between overall general problems and General Production & policies (Factor 1) was 0.661 ($p=0.000$); the correlation between overall general problems and Marketing (Factor 2) was 0.162 ($p=0.242$) and not significant; the correlation between overall general problems and Lack of infrastructural facilities (Factor 3) was 0.312 ($p=0.022$), and the correlation between overall pre-export marketing problems and Resources (Factor 4) was 0.311 ($p=0.022$) and the correlation between overall general problems and supply (Factor 5) was 0.269 ($p=0.049$) Table 4.23.

Therefore, the study indicated that the correlation between overall pre-export marketing problems and lack of production and policies was higher than that between overall pre-export marketing problems and Lack of facilities or Resources or Supply. These results revealed support for hypothesis 1 that there seems to be a moderate correlation between overall pre-export marketing problems and the general problem of mango pulp enterprise attributes.

Table 7: Correlation between overall pre-export marketing problems & five factors

		Factor 1 (Production)	Factor 2 (Marketing)	Factor 3 (Facilities)	Factor 4 (Resources)	Factor 5 (Supply)
Overall pre- export marketing problems	Pearson Correlation	0.661**	0.162 [@]	0.312*	0.311*	0.269*
	Sig. (2-tailed)	0.000	0.242	0.022	0.022	0.049
	N	54	54	54	54	54

Correlation is significant at the 0.05 Level (2-tailed) * $P < 0.05$ ** $P < 0.01$

11. MULTIPLE REGRESSION ANALYSIS

In order to further reveal support for hypothesis 1, the factors that influenced Enterprises’ overall pre-export marketing problem of mango pulp, the five orthogonal factors were used in a multiple regression analysis. The multiple regression procedure was employed because it provided the most accurate interpretation of the independent variables. The five independent variables were expressed in terms of the standardized factor scores (beta coefficients). The significant factors that remained in the regression equation were shown in order of importance based on the beta coefficients. The dependent variable, enterprises’ overall pre-export marketing problems of mango pulp, was average mean scores measured on a 5-point Likert-type scale and was used as a surrogate indicator of Enterprises’ evaluation of the perception in the Chittoor district.

The equation for Entrepreneur’s overall Pre-export marketing problem was expressed in the following equation:

$$Y_s = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5,$$

Where,

Y_s = Entrepreneur’s overall Pre-export marketing Problems

β_0 = constant (coefficient of intercept)

X_1 = Production

X_2 = Marketing

X_3 = Infrastructural Facilities

X_4 = Resources

X_5 = Supply

B_1, \dots, B_5 = regression coefficient of Factor 1 to Factor 5.

Table 7 shows the results of the regression analysis. To predict the goodness-of-fit of the regression model, the multiple correlation coefficient (R), coefficient of determination (R^2), and F-ratio were examined. First, the R of independent variables (five factors, X_1 to X_5) on the dependent variable (enterprises’ overall pre-export marketing problems, or Y_s) is 0.854, which showed that the enterprise had facing problems and high overall pre-export marketing problems with the five dimensions.

Table 8: Regression Results of Entrepreneurs’ Pre-export marketing Problems Level Based on the Dimensions (N=54)

Dependent variable : Entrepreneur’s overall Pre-export marketing problems

Independent variable : Five derived factors

a) Output of simultaneous multiple regression-model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854 ^a	.729	.701	.314

a. Predictors: (Constant), REGR factor score 5 for analysis 1, REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b) Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.707	5	2.541	25.849**	.000 ^b
Residual	4.719	48	.098		
Total	17.426	53			

a. Dependent Variable: overall Pre-export marketing problems

b. Predictors: (Constant), REGR factor score 5 for analysis 1, REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

c. **Significant at 0.01 level.

Second, the R^2 is 0.729, suggesting that more than 72% of the variation of enterprises' overall pre-export marketing problems was explained by the five factors. Last, the F ratio, which explained whether the results of the regression model could have occurred by chance, had a value of 25.849 ($p=0.000$) and was considered significant. The regression model achieved a problematic of goodness-of-fit in predicting the variance of enterprises' overall pre-export marketing problems in relation to the five factors, as measured by the above –mentioned R, R^2 , and F ratio. In other words, at least one of the five factors was important in contributing to enterprises' overall pre-export marketing in the Chittoor district.

C) Output of simultaneous Multiple Regression Coefficients

Independent Variables	B	Std. Error	Beta	T	Sig.
(Constant)	3.463	.043		81.158**	.000
Factor 1 (Production &Policies)	.379	.043	.661	8.795**	.000
Factor 2 (Marketing)	.093	.043	.162	2.158*	.036
Factor 3 (Facilities)	.179	.043	.312	4.150**	.000
Factor 4 (Resources)	.178	.043	.311	4.144**	.000
Factor 5 (Supply)	.154	.043	.269	3.584*	.001

** Significant at $P < 0.01$; *Significant at $p < 0.05$; a. Dependent Variable: overall Pre-export marketing problems

In the regression analysis, the beta coefficients could be used to explain the relative importance of the four dimensions (independent variables) in contributing to the variance in enterprises' overall pre-export marketing problems of mango pulp attributes (dependent variable). As far as the relative importance of the five factors in pre-export marketing problems dimensions is concerned, Factor 1 (production & policies, $B_1=0.661$, $p=0.000$) carried the heaviest weight for enterprises' overall pre-export marketing problems, followed by Factor 3 (Lack of infrastructural facilities, $B_3=0.312$, $p=0.000$), Factor 4 (Resources, $B_4=0.311$, $p=0.000$), and Factor 5 (Supply, $B_5=0.269$, $p=0.001$). The results showed that a one-unit increase in problems with the production & polices factor would lead to a 0.661 unit increase in enterprises' overall pre-export marketing problems in mango pulp with the Chittoor district, other variables being held constant.

In conclusion, all underlying dimensions are significant. Thus, the results of multiple regression analysis reject hypothesis 1, that there is no relationship between the enterprises pre-export marketing problems of mango pulp attributes and the overall pre-export marketing problems. So, there is a relationship, which is what you expected.

The Fitted model is $Y = 3.463 + 0.379 * F1 + 0.093 * F2 + 0.179* F3 + 0.178 *F4 + 0.154 *F5$, Where Y is the overall pre-export marketing problems score.

From the Standardized regression coefficient it can be seen that the highest preferred factor to explain problems is F1 followed by F3, F4, F5 and F2 in that order. Further, all the regression coefficients are found to be statistically significant ($p<0.005$).

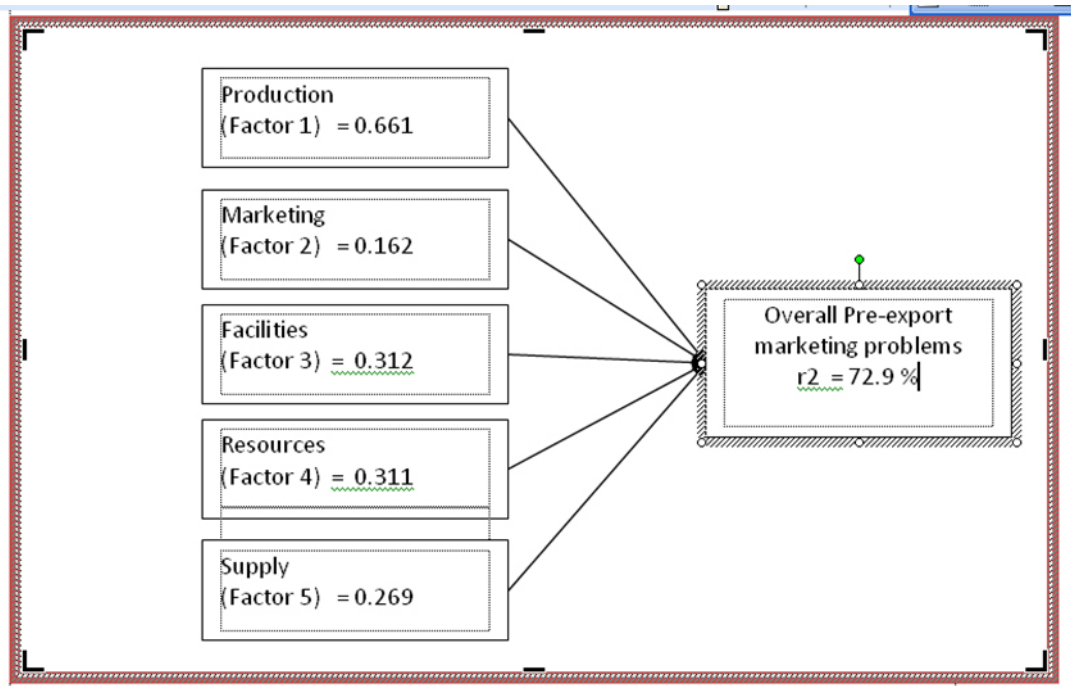


Figure 2 : Overall pre-export marketing problems with respect to enterprises

12. CONCLUSION

As evidenced from the analysis, the major production problems observed among Chittoor district enterprises are lack of production, poor infrastructural facilities, low quality of resources, problems with Government policies and issues related to marketing. Enterprises have been recognized as successful entrepreneurs because they possess qualities desirable in and relevant to entrepreneurship. However, in a society where enterprises have a multitude of roles to play, supply of raw material may occur when an individual is expected to fulfill multiple roles within a limited amount of time.

Production and export related policies factor1 were a characteristic of most of the respondents' lives in the present study, leading to subsequent problems in their work and life domains. Regression analysis revealed a negative association of production and policies with overall pre-export marketing problems which is consistent with the findings that conflict between enterprise production and export occurs when individuals have to perform multiple roles, such as employees and entrepreneur.

Two other important findings of the present study are increased facilities and resources among enterprises. The factor 3 and factor 4 lacks showed the financial assistance for providing facilities and purchase of raw materials. Another significant domain factor 5 causes marketing of mango pulp among enterprises in Chittoor district were the export issues, which is positively associated with overall pre-export marketing problems. The important concern of mango pulp enterprises is a lack of a sufficient Government support network.

REFERENCES

- [1] FICCI (2013), Food 360, Seminar on fruits and vegetable processing in India, Hyderabad, organized by ASSOCHAM and Govt. of Andhra Pradesh, 6th and 7th November, 2013.
- [2] Ravat D.S (2013), ASSOCHAM, Secretary General Food 360, seminar on fruits and vegetable processing in India, Hyderabad, organized by ASSOCHAM and Govt. of Andhra Pradesh, 6th and 7th November, 2013.
- [3] Govardhan Bobby. K (2013), Executive director, Suvera Processed Foods (p) Ltd, Chittoor, an article in Food and Beverage news Book, 10th June, 2013, pp 30-32.
- [4] Krishna V.V.M (2014), An article in the Hindu daily, dated 19th august, 2014; on fruit processing industry needs value addition, pp no.5.

- [5] Jaggaiah T, Priyanka M.N.K, Deshmukh S (2014), An article in International Journal of Sales and Marketing Management Research and Development (IJSMMRD) Vol. 4, issue no.4, august, 2014, pp 33-40.
- [6] Surendra Naidu P (2011), Indian Journal of Applied Research, an article on the study of economics of mango processing in Chittoor district. Vol.4, June, 2014, pp 17-21.
- [7] Rawat D.S (2015), Report on “A study on AEZ,s in India”, National Secretary General, ASSOCHAM.
- [8] Mamilla Rajasekhar (2015), Problems and Prospectus of fruit processing industry: A study with reference to Chittoor district of Andhra Pradesh, International Journal of Research in Commerce, Economics & Management, Volume No.5 (2015), Issue No.1 January.
- [9] Mamilla Rajasekhar (2015), Impact of Foreign Direct Investment (FDI) In Indian Food Processing Sector, IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 17, Issue 1.Ver. I (Jan. 2015), PP 06-12.
- [10] ASSOCHAM (2016), Reports a recent study by apex industry body on AEZ, Chittoor.