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Problems Faced By The Firewood Brick Manufacturers In Salem District

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Abstract

This study presents problems faced by the firewood brick manufacturers in Salem District. Brick has a longer history than civilization itself, having originated in ancient Mesopotamia around 500 BC. The Tigris and Euphrates rivers left behind thick mud and clay, which were shaped into bricks, strengthened with straw, and left to dry in the sun. The purpose of the study is to analyze the problems that firewood brick manufacturers face. The descriptive research method was used for this investigation. The convenience sampling approach was used to collect the data. The sample consists of 300 responders. The primary data was provided by the Salem District respondents to the interview schedule. The primary data were analyzed using statistical tools such as factor analysis, T-test, One Way ANOVA, and reliability statistics with the assistance of SPSS software. The primary finding of the study is that the socioeconomic characteristics of firewood brick manufacturers and their issues are not significantly different from one another.

Key Words: Problems, Fire wood, Brick & Manufacturers.

Introduction

Among the earliest and most durable building materials used by humans are bricks, which are formed by moulding a plastic mass of clay and water and then hardened by drying and burning. Right now, manual labour assisted by manpower was used to dig the clay, make the bricks, and set or draw the kilns. The first efficient brick-making machines appeared about a century ago, and up until the present, clay-making, handling, and other operations have been increasingly mechanized.

Brick is the most fundamental and historically significant building material. There aren't many other prefabricated building materials that have been as extensively and continuously used. The public's continued acceptance of this design is based on the unique combination of proper ties between the builder and the owner. This one material can be used to enclose a structure with a decorative, load-bearing wall that is virtually maintenance-free when built correctly from the beginning. Because of the raw materials adaptability and which made it possible to mould it into a large range of sizes and forms.

The flexibility that provides a cost-mixture of effectives in design and construction. Alumina and silica compounds with trace amounts of lime, magnesia, soda, or potash make up secondary clay materials. Iron compounds are found in brick clays as impurities; they are typically associated with oxides, hydroxides, or carbonates. They are primarily responsible for the vast majority of the colours present in the final product. White to cream or buff colours are produced by clays with iron oxide contents as low as 3%. As the iron oxide content increases to 8% to 10%, the colours shift to pinks and reds. Adding manganese dioxide in amounts ranging from

1% to 4% will yield a variety of grey and brown hues.

2. Relation of Brick Manufacturers

The poll unequivocally demonstrates that most labour laws, which, if correctly implemented, could have significantly improved workers' lives, do not benefit workers. One of the primary factors attributed to the current state of affairs is the implementing agencies' reported corruption. Nonetheless, a business owner in Salem District maintained that the fixed tax structure offers little opportunity to sway policymakers. In other areas, it is customary to pay mining inspectors more because overall production surpasses the government-set quota.

"We cannot produce beyond 6 lakhs of bricks. In a season's time, we produce up to 35 lakhs. We are compelled to pay this illegal money."

The amount of bribe varies from less than a thousand rupees to thirty-five thousand rupees, according to the information provided by the employers. One government agency that engages in systematic corruption is the mining department. Furthermore, the labour authorities exaggerated the quantity of examinations conducted at the brick kiln units. There were reports of brick kiln visits every three or four weeks. During the field survey, the labour officer I encountered even mentioned that there were twice-monthly inspections. Nonetheless, a few employers acknowledged that they don't often see labour inspectors at their brick kilns. According to the employees' accounts, migrant labourers are typically the ones with whom the labour enforcement authorities interact during inspections.

3. Review of Literature

S. No	Researcher Name	Year	Research Title	Journal Name	Findings
1.	Ruchi Chaudhary et al	2012	Reduction of Occupational Health Hazards of firer in Brick kiln industry	International Journal of Computer Science and Communication Engineering. Page No.51-55.	Using Artificial Neutral network and genetic algorithms. The main important result is switching over Alternative Jobs.
2.	Vikas Monga et al	2012	Respiratory Health in Brick kiln workers	International Journal of Physical and Social Science. Page No.226-244.	The main important result is mean respiratory Dust exposure in firing section was highest (19.51 mg /m3) while mean respiratory Dust exposure in Mixing & Molding section was the lowest (10.08mg/m3).
3	Deepa kumar and Arun Varun	2013	A study on Clinical- Social problems of Brick kiln workers in Gujarat	National Journal of Community Medicines. Volume 4, Issue3, Page No.503-507.	In this study major result is workers were mostly illiterate or had Primary Education. Females were uneducated. These workers are getting daily wages and there is no Holiday as such.

4	Niaz Mohammad and Alan	2010	A Sociological study of Brick kiln workers in Peshawar, Pakistan	Pakistan Journal of Life and Social Science. Page No. 19-23.	The study mainly focused on the nature of work, Socio- Economic causes and effects of bonded labour.
5	Thirupathi and Anthoni	2016	Health Problems faced Brick Kiln Workers in Salem District	International Journal of Applied Research	Most of the respondent there is no Satisfaction level of the Wages in these fields. There is no difference between gender and their problems.

4. Research Gap

The researcher examined over fifty distinct works of pertinent literature. There have been few studies on the issues faced by the firewood brick manufacturers in Salem District. The majority of studies have concentrated on environmental pollution of brick industries, child labour in the brick kiln industry, and health problems faced by brick kiln workers. This study closes the research gap and becomes more significant as a result.

5. Importance of the Study

This study advances our knowledge of the issues that firewood brick manufacturers must deal with. It also examines the back office of the firewood brick manufacturers in the Salem District.

6. Statement of the Problem

The brick industry of today produces a variety of brick types, including fly ash, chamber, hollow, and red bricks. In this industry, the manufacturers of firewood bricks face numerous challenges, including issues with labour, raw materials, marketing, production, and social and health issues. The study examines both the haul and thrust components, with particular focus on the following research question:

1. What are the problems faced by the fire wood Firewood Brick manufacturers in Salem District?

7. Objectives of the Study

1. To analyze the problems faced by the firewood brick manufacturers in Salem District.

8. Hypotheses of the Study

1. There is no significant difference between socio- economic profiles of the respondents with regard to problems faced by the firewood brick manufacturers.

9. Methodology of the Study

S. No	Research	Focal Point
1.	Study Area	Salem District
2.	Type of Research	Both Qualitative & Quantitative Research
3.	Research Approach	Fire Wood Firewood Brick manufacturers
4.	Scaling Technique	Likert Scaling Technique
5.	Data Collection Method	Both Primary and Secondary Data
6.	Sampling Method	Non-Probability , Convenient Sampling
7.	Sample Size	300 Respondents
8.	Software	SPSS Version 21.0
9.	Research Instrument	Interview- Schedule

10.	Tools for Analysis	Percentage Analysis, Reliability Statistics, Factor analysis, Independent Sample t Test, F Test, Chi-Square Test & Friedman Rank Test.

10. Analysis and Interpretation of Data

Reliability Statistics for Overall Problems					
Problems	**Scale Mean if Item Deleted**	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**	**Cronbach's Alpha Value**
Money lenders do not given	81.76	96.573	.000	.812	0.857
High rate of interest	78.96	89.266	.287	.899	
Land	78.92	89.448	.271	.801	
Water	79.37	89.780	.194	.808	
Increases in raw- material costs	78.55	90.028	.299	.899	
Increases in workers' wages	78.83	89.633	.294	.899	
Unpredictable weather	78.64	90.138	.240	.803	
Price fluctuations	79.07	86.959	.339	.894	
Long period of waiting time for sales	78.73	90.511	.206	.806	
Credit Sales / Bad debts	78.55	90.202	.275	.801	
Ignorance and illiteracy	79.75	89.454	.230	.804	
Expect high level wages	79.14	87.062	.309	.897	
Chest pain	79.10	87.642	.340	.895	
Eye problems	78.99	87.130	.346	.894	
Feel inadequate nutrition	79.08	88.091	.329	.896	
Lack of quality health care	78.96	88.045	.311	.897	

Source: Primary Data

Cronbach's Alpha value is greater internal consistency is indicated by a value closer to 1, and the following general guideline is typically used to interpret the data: Anything that is less than 0.5 is **unpleasant,** anything that falls between 0.5 and 0.6 is **poor**, anything that falls between 0.6 and 0.7 is **hesitant**, and anything that is greater than 0.8 is **Outstanding** or **Good**.

The firewood brick manufacturers' sixteen problems have an Alpha coefficient of 0.857, indicating a relatively high level of internal consistency for the items in question. (Note that in the majority of social science research scenarios, a reliability coefficient of 0.85 or higher is deemed "**Good**").

11. One Sample t Test Vs Problems

One-Sample Statistics						
H0: There is no significant difference between their problems with regarding firewood brick manufacturers.						
Overall Problems	**N**	**Mean**	**Std. Deviation**	**t- Value**	**P- Value**	**H0**
Money lenders do not given	300	3.79	1.117	43.409	0.001	Rejected
High rate of interest	300	3.84	1.137	74.088	0.001	Rejected
Land	300	3.38	1.350	64.897	0.001	Rejected
Water	300	4.21	.983	63.007	0.001	Rejected
Increases in raw- material costs	300	3.93	1.048	50.434	0.001	Rejected
Increases in workers' wages	300	4.12	1.132	58.739	0.001	Rejected

Unpredictable weather	300	3.69	1.267	71.421	0.001	Rejected
Price fluctuations	300	4.02	1.186	41.106	0.001	Rejected
Long period of waiting time for sales	300	4.21	1.020	46.888	0.001	Rejected
Credit Sales / Bad debts	300	3.01	1.268	53.590	0.001	Rejected
Ignorance and illiteracy	300	3.62	1.337	53.160	0.001	Rejected
Expect high level wages	300	3.66	1.182	55.158	0.001	Rejected
Chest pain	300	3.77	1.228	54.296	0.001	Rejected
Eye problems	300	3.68	1.156	53.234	0.001	Rejected
Feel inadequate nutrition	300	3.80	1.211	40.506	0.001	Rejected
Lack of quality health care	300	3.67	1.194	52.923	0.001	Rejected

Source: Primary Data

The 16 variables pertaining to issues that firewood brick manufacturers face are displayed in the above table. Each of these variables has a statistically significant relationship to the overall problems.

The P values for the 16 variables are less than 0.05, as shown in the above table. Thus, it was determined that, at the 5% level of significance, the alternative hypotheses were accepted and the null hypothesis for the 16 variables was rejected.

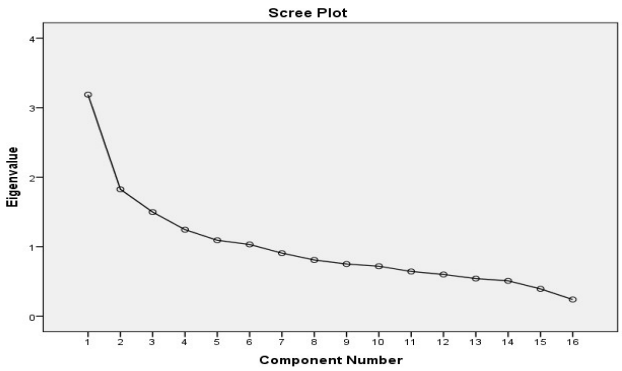
12. Factor Analysis Vs Overall Problems

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.894
Bartlett's Test of Sphericity	Approx. Chi-Square	881.776
	Df	120
	Sig.	.000

Source: Primary Data

The aforementioned table shows that the approximate Chi-Square value for the Bartlett's test of sphericity is 881.776 and the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.894, both of which are statistically significant at the 5% level.

13. Scree Plot for Overall Problems



The Eigen values are always shown on a scree plot as a downward curve that goes from largest to smallest. The scree test indicates that the "elbow" of the graph is where the Eigen values appear to level off, and elements or factors to the left of this point ought to be kept as significant.

14. Rotated Component Matrix for Overall Problems

Component Matrix						
Overall Problems	**Financial Problems**	**Raw Material Problems**	**Production Problems**	**Marketing Problems**	**Labour Problems**	**Health Problems**
Money lenders do not given	.762					
High rate of interest	.672					
Land		.625				
Water		.604				
Increases in raw- material costs		.603				
Increases in workers' wages			.499			
Unpredictable weather			.467			
Price fluctuations				.616		
Long period of waiting time for sales				.564		
Credit Sales / Bad debts				.462		
Ignorance and illiteracy					.555	
Expect high level wages					.517	
Chest pain						.484
Eye problems						.469
Feel inadequate nutrition						.421
Lack of quality health care						.495
Extraction Method: Principal Component Analysis.						

Inference

It is evident from the above table that two variables are grouped together under the first factor, "Financial Problems." "Raw-Material Problems" are the three variables that make up the second factor. Two variables combine to form the third factor, "Production Problems." Two variables combine to form the fourth factor, "Marketing Problems." Two variables combine to form "Labour Problems," the fifth factor. "Health Problems" is the final factor, and it has four variables. This indicates that four main factors are produced by factor analysis. With the aid of the proper statistical tools, every variable grouped under these factors is compounded to create the respondents' demographic profile.

15. Overall Problems tested with Gender and Independent Sample t Test

Gender Vs Overall Problems (Independent Sample t- Test)						
H0: There is no significant difference between male and female of the respondents with regarding their overall problems						
Gender	**N**	**Mean**	**Std. Deviation**	**t- Value**	**P- Value**	**H0**
Male	277	3.7976	.41818	0.486	0.004	Rejected
Female	23	3.7606	.44379			
Total	**300**					

Source: Primary Data

According to table the P value is 0.004. At the 5% level of significance, the alternative hypothesis is accepted and the null hypothesis is rejected because the P value is less than 0.05. Therefore, it can be concluded that the male and female manufacturers of firewood bricks differ greatly in terms of their overall issues.

The One-Way ANOVA test is used to determine how respondents with varying gender differ in their overall problems. It is discovered that regardless of their gender, all firewood brick manufacturers have the same general issues.

16. Overall Problems tested with Age and One Way ANOVA

Age Vs Overall Problems (One Way ANOVA)						
H0: There is no significant difference between age group of the respondents with regarding their overall problems						
Age	**N**	**Mean**	**Std. Deviation**	**F- Value**	**P- Value**	**H0**
Below 35	44	3.7595	.40172	0.359	0.008	Rejected
36-40	84	3.7731	.47392			
41-45	100	3.8257	.39139			
Above 45	72	3.7986	.40576			
Total	**300**					

Source: Primary Data

According to table the P value is 0.008. At the 5% level of significance, the alternative hypothesis is accepted and the null hypothesis is rejected because the P value is less than 0.05. Therefore, it can be concluded that the manufacturers of firewood bricks differ greatly in terms of their overall issues.

The One-Way ANOVA test is used to determine how respondents with varying levels of education differ in their overall problems. It is discovered that regardless of their level of age group, all firewood brick manufacturers have the same general issues.

17. Overall Problems tested with Education and Chi-Square Test

H0: There is no significant association between educational qualification of the respondents and their overall problems							
Education	**Overall Problems**			**Total**	**Chi- Square Value**	**P- Value**	**H0**
	Low	**Medium**	**High**				
Illiterate	6	26	14	46	6.494[a]	0.037	Rejected
	13.0%	56.5%	30.4%	100.0%			
School Level	46	81	45	172			
	26.7%	47.1%	26.2%	100.0%			
Graduate	18	37	15	70			
	25.7%	52.9%	21.4%	100.0%			
Others	4	7	1	12			
	33.3%	58.3%	8.3%	100.0%			
Total	**74**	**151**	**75**	**300**			

Source: Primary Data

Above the table indicates that P value is 0.037. Since P value is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted at 5% level of significance. Hence it is concluded that there is significant association between educational qualifications of the respondents and their overall problems.

18. Friedman Rank Correlation and Overall Problems

Friedman Rank Test Vs Overall Problems								
H_0: There is no significant difference among the mean rank and problems faced by the brick manufacturers								
	N	**Mean**	**Std. Deviation**	**Mean Rank**	**Rank**	**Chi- Square Value**	**P- Value**	**H0**
Financial Problems	300	3.89	.613	3.79	3	133.735	0.001	Rejected
Raw- Material Problems	300	3.93	.625	2.84	5			

Production Problems	300	3.93	.679	3.98	1			
Marketing Problems	300	3.55	.653	2.75	6			
Labour Problems	300	3.83	.637	3.74	4			
Health Problems	300	3.63	.606	3.90	2			

Source: Primary Data

As can be seen from the table above, the P-value is less than 0.05. Therefore, at the 5% level of significance, the null hypothesis is rejected. Thus, it can be inferred that there exist notable variations in the average rankings and issues encountered by firewood brick manufacturers. The most significant factor affecting the firewood brick manufacturers, based on mean rank 3.98, is production issues. This is followed by health issues (mean rank 3.90), financial issues (mean rank 3.79), labour issues (mean rank 3.74), raw material issues (mean rank 2.84), and marketing issues (mean rank 2.75).

Suggestion

The majority of firewood brick manufacturers lack the necessary licenses to produce bricks. Therefore, the government ought to mandate acquiring a license and streamline the application process. The owner's perspective in this analysis of the issues facing firewood brick manufacturers is that they do not have significant financial difficulties. However, there are significant financial difficulties for both owners and employees in this work. Thus, it was suggested that the financial facilities be assisted by the government or others. It is imperative that buyers pay their bills on time while making credit purchases. One noteworthy small-scale sector is the brick industry. However, it is not given the same privileges as other small-scale industries.

Conclusion

The issues that the firewood brick manufacturers in Salem District's rural areas encountered have been examined in the study. Every issue raised by firewood brick manufacturers has been taken into account. The proper statistical tools are used to test each goal. Based on the results, recommendations have been provided together with the pertinent findings. The issues faced by the firewood brick manufacturers in Salem District's rural areas have not been the subject of any investigation to yet. This research gap is filled by the current study. This final chapter has provided opportunities for additional research relevant to the current study in addition to filling this gap. The issues that the firewood brick manufacturers in Salem District's rural areas encountered have been examined in the study. Every concern brought out by manufacturers of firewood bricks has been considered. Every target is tested using appropriate statistical tools. Along with the relevant findings, recommendations based on the results have been given. There hasn't been any research done on the problems that firewood brick manufacturers in the rural parts of Salem District are facing. The present work closes this research gap. In addition to closing this gap, this last chapter has offered chances for further research pertinent to the current study.

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