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A Study of ERP System Implementation Issues and Challenges in Sugar Factories in Western Maharashtra

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Abstract

The helpful sugar business has embraced an exceptionally mind boggling ERP for overseeing different exercises, very much like some other cycle industry, but carrying out an ERP in the agreeable area's way of life presents various challenges. Through this work, the reasonable reasons for this are found. The adequacy of ERP is the fundamental subject of the ongoing review work, explicitly as to direction. As far as examination into IT applications and computerization, the helpful sugar industry in Maharashtra is one of the spearheading fields. From direct projects like MS Succeed to Sugar ERP, computerization in the helpful sugar business is thought about. ERP arrangement brings about massive change that should be painstakingly figured out how to receive rewards. Sugar industry ERP In any area, carrying out ERP calls for an extremely lengthy investment and a huge monetary speculation. Despite the fact that ERP has had an ideal effect across all ventures, some have seen a good outcome while others have seen execution disappointments.

Keywords: *ERP, Sugar Factories, Western Maharashtra, Financial Investment*

1. INTRODUCTION

Globalization involves a borderless monetary climate. Such globalization has made a bunch of important circumstances for any financial development to prevail with regards to propelling industry. Sugar cooperatives are not an exemption for the previously mentioned truth. It suggests that the reception of IT-empowered innovation is fundamental as long as possible, maintainable development of helpful sugar enterprises (Pandey, 2007). Enterprise Asset Improvement, likewise alluded to as ERP frameworks, is the latest progression in the IT business. ERP, or enterprise asset arranging, is a framework that incorporates business reconciliation through IT. ERP programming was at first designed for the assembling area and basically included administrations for putting together and running key organizations including deals the executives, creation the board, bookkeeping, and financial issues.

The genuine groundwork of human culture is participation and coordinated effort. Mahatma Phule and Rajarshi Shahu Maharaj's work and methods of reasoning assisted the helpful development with creating in Maharashtra (Leon, 2008). Mahatma Gandhi grasped that "the technique for collaboration is the best way to the flourishing." Persuasive, all around took care of cooperatives in Maharashtra should be visible in the helpful sugar plants and dairies. A large number of townspeople's lives have changed because of these cooperatives. Late Padmashree Vithalrao Vikhe Patil established the principal agreeable sugar plant with the assistance of Prof. Dhananjayrao Gadgil and late Vikunth Mehta.

1.1 COOPERATIVE SUGAR INDUSTRY IN MAHARASHTRA: A HISTORICAL BACKGROUND:

Topographically, the territory of Maharashtra is in the locale that is best on the planet for developing sugarcane. As far as sugarcane horticulture, it was a late adopter when contrasted with different nations in this belt as well as to different locales in India, like Uttar Pradesh and Bihar. These Northern States are not set in the best subtropical belt. In Maharashtra, the primary sugar plant opened its entryways in 1919. This was the Haregaon, Ahmednagar locale,

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Belapur Sugar Factories. The Walchand Sugar Plant, the second sugar production line, was established in 1930 (Inamdar, 2015). A levy commission was laid out in 1930 to examine the sugar business' requirement for security. The tax commission recommended fifteen years of security. Alongside giving security, the Indian government likewise carried out a supportive procedure and offered impetuses to the sugar area. Toward the finish of The Second Great War, 13 sugar plants had been made in Maharashtra because of the new approach. Private and joint stock enterprises work every one of these factories.

In Maharashtra, there was not a solitary helpful sugar industry before to freedom. The Pravara Agreeable sugar plant, Maharashtra's most memorable helpful sugar production line, was established in the Ahmednagar area in 1948. In India, especially in Maharashtra, countless helpful sugar plants have been created since this time. Today, sugar plants overwhelm the Maharashtra horticultural and modern scene.

1.1.1 Nature and Role of an ERP in a coop field

All clients, both immediate and aberrant, as well as different partners, for example, providers like stick producers and normal individuals like sugar pack buyers, are remembered for an ERP. No matter what the framework's tendency, the respectability of the data framework is significant to guaranteeing the outcome, everything being equal. (Report, Sahyadri SSK Ltd., 2007). Every substance should achieve its prompt objective to add to the accomplishment of the operable objective of the sugar production line and the general honesty of the data framework.

Because of an absence of between departmental information utilization and coordination, the sugar business isn't developing, creating, or extending financially, requiring the utilization of both an incredibly mind boggling ERP and a MIS. In Maharashtra, there are 179 helpful sugar plants. A sum of 36 sugar factories use data frameworks, 20 of which are finished ERP frameworks like VSI Sugar ERP and a few other specific frameworks made in Visual FoxPro.

1.1.2 ERP and Sugar Industries

Quite possibly of the main headway in corporate data frameworks throughout the course of recent years has been the improvement of enterprise asset arranging (ERP) frameworks (Davenport, 1998; Hitt et al. 2002; Upton and McAfee 2000); and data framework (II) (Hanseth and Braa 2001). The upsides of carrying out and utilizing ERP frameworks can be utilized to make sense of why organizations are keen on them (Robey et al., 2002). The benefits are simply to some degree connected with the innovation; most of them result from hierarchical changes, for example, new business processes, authoritative changes, work methods, the coordination of managerial and functional exercises, and the reception of global principles for work rehearses, which the innovation upholds.

A data innovation based IS frequently incorporates the parts of the business processes that can be effectively robotized for data dealing with. Each data handling choice should be portrayed and programmable because of the idea of this IS. The cutting edge IS can't represent the range of human inclinations and conduct since it relies upon the foundation of summed up, methodical way of behaving.

Each piece of information that the data innovation based IS utilizes should likewise be definitively and exclusively determined, as well as PC storable. This is the viewpoint of a data engineer: hard viewpoint of the information for more data about the many perspectives on IT applications in the sugar business, numerous sites were suggested (Report, Vasantdada Sugar Institute of Technology, Pune, 2006). The scope of data on these destinations isn't simply neighborhood or restricted to Maharashtra, yet additionally public and worldwide. A few sites, including www.fcamin.nic.in, www.dgftmumbai.nic.in, www.dgftdelhi.nic.in, and www.mahasugar.gov.in, were inspected to refresh our insight into the innovative commitments made by government organizations like the Public Data Community to the making of state of the art IT applications for the helpful sugar industry.

1.2 OBJECTIVE OF THE STUDY

1. To identify the factors (challenges) influencing the sustainability of faced by Western Maharashtra Sugar Factories

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2. To examine the role of EPR system in minimizing the challenges from good governance perspectives

1.3 HYPOTHESES OF THE STUDY:

The cornerstone of any research project is the hypothesis. As a result, the key hypotheses are formulated as follows and will be examined in the study paper.

1. When compared to sugar prices around the world, there is no difference between Indian sugar prices.

2. The short crushing season, low sugar mill yield, and high excise duties are not the causes of the high price of sugar.

3. The issues facing the sugar industries are not caused by bad government policies.

4. The lack of sufficient cane, insufficient government support, and the use of state-advised prices are not the causes of the sugar industry's sickness.

2. REVIEW OF LITERATURE

Sugar industry is the second largest agro-based industry in India with 530 licensed factories out of which 56% in co-operative sector with 62% of total sugar production
Sugar industry is the second largest agro-based industry in India with 530 licensed factories out of which 56% in co-operative sector with 62% of total sugar production
According to Dr. A. M. Gurav (2020), Sugar industry is the second largest agro-based industry in India with 530 licensed factories out of which 56% in co-operative sector with 62% of total sugar production. The industry units are primarily based in rural part of several states in India. It has a major deal of contribution in making Maharashtra as one of the progressive states. It has developed and grown through co-operative mechanisms spreading wealth and benefits. However, it has been facing several challenges such as lack of technology, liquidity of money, lack of effective governance, lack of visionary leadership, sustainability etc.

The survey of the writing centers around the examination of earlier exploration in the space of the picked research question as well as different issues associated with the computerization of the sugar business (Pawar, 2005). Perhaps of the most essential move toward the exploration interaction; it acquaints the scientist with the examination cycle and examination holes. To comprehend the examination holes in the picked research issue and before research concentrates on connected with the sugar business to turn out to be more associated with the exploration cycle (Pisal, 2012). The computerization, IT execution, and ERP execution in the sugar businesses are the reason for the writing audit.

W. Mc. Whinney and C.R.Murry (1974) in their exploration on "Advanced PC device for sugar factories" they drill down numerous utilizations of PC in sugar industry, for example, bookkeeping, designing administration, project configuration, process control, assessment and arranging and so on. Analysts likewise portrays that improvement of in-house PC based data framework and centralization in information the executives assists sugar ventures for increment with benefitting and status of association

Liang Zhang, Matthew K.O. Lee, Zhe Zhang, Probir Banerjee (2002) in their distributed article "Basic Achievement Elements of Enterprise Asset Arranging Frameworks Execution Progress in China" concentrated on effect of different variables on ERP execution. Scientist concentrated on 138 firms in northern, eastern china and involved overview strategy for study. That's what analysts found, top administration support, business process reengineering, successful venture the executives, client association; schooling and preparing, appropriateness of equipment and programming, information exactness, merchant backing and association culture are emphatically impacted on ERP execution. Specialists featured the product merchant has critical impact in molding a definitive result of the ERP execution consequently association ought to zero in on ERP programming seller choice

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T. K. Balwe (2004) in their workshop paper on "Agreeable Sugar Industry in Maharashtra: Past, Present and Future" he analyzed the planned and created ERP programming bundle known as VSI Sugar ERP for Indian sugar Industry. Creator examined exhaustively elements of bundle, benefits, required foundation, execution interaction and encounters of sugar factories who have carried out VSI Sugar ERP. (Kulkarni D. G., 1971.) It is a product bundle meant to demonstrate a coordinated, minimal expense, programming answer for sugar and partnered industry with full and guaranteed support reinforcement. The striking elements of VSI sugar ERP are easy to use, simple and adaptable for execution and customization, guaranteed security privileges expected for framework and versatile to require based alterations for extra turn of events. The creator featured the need of this bundle to the sugar businesses in order to get a change the tasks of the sugar helpful ventures

Dyaneshwar Pisal, Dr. Ajay Kumar, (2011) in their exploration work on "Mechanized model for sugarcane gathering for viable preparation and control in agreeable sugar factories in Pune Area" they broke down fundamental issue of sugarcane reaping is the ill-advised using time effectively. Scientist planned DSS model for giving thought of decide how much pounding is normal in each forthnight and oversee all out squashing of season ahead of time. Specialist recommended a framework that aides for gathering the board

Rajendra Kumbhar (2011) in his examination work on "ERP framework for compelling administration of agreeable sugar ventures - A contextual investigation of Sahyadri SSK, Shirawade, Karad" he has featured different issues connected with sugar businesses, for example, absence of straightforwardness in administration and slow pace of data handling that prompts misfortunes, defilement and misappropriation of assets (Kumar Chittaranjan, 2000). To take care of these issues analyst recommend multi-module coordinated ERP programming for association improvement including sugarcane the executives, compound lab the board, stick charging, deals, godown the executives, shares, store, refinery and financial administration modules

3. RESEARCH METHODOLOGY

Essential and optional sources are utilized in the ebb and flow research. Essential information were accumulated utilizing a pre-tried survey method. (Liang Zhang, 2002)The optional data accumulated from different books, Indian enumeration information, periodicals, diaries, magazines, research articles, course reports, news stories, master panel concentrate on reports, distributed research papers, unpublished works, departmental distributions, and the web

3.1 Sample Size: 100

3.2 Sampling Population: In view of clear irregular examining strategies, two locale from every district are picked. Hence, respondents from Pune, Satara and Kolhapur of Western Maharashtra have been targeted for the present study.

3.3 Technique for Collecting Data:

The method used was a survey by using Likert scale (1-Strongly Disagree and 5- Strongly Agree). Collecting Data were analysed in SPSS 25.0’

3.3.1 Primary Data: Structured questionnaires were utilised as the technique for data collection.

3.3.2 Secondary Data: secondary data were gathered through books, journals, and the internet.

4. DATA ANALYSIS AND RESULT

Table: 1 Indian Sugar price when compare with rest of world’s sugar price

Indian Sugar Price	No. of Respondent				Total	Percentage
	Pune	Satara	Sangli	Kolhaprur		

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High	**3**	**8**	**6**	**8**	**25**	**25%**
Moderate	**8**	**10**	**7**	**10**	**35**	**35%**
Low	**9**	**12**	**7**	**12**	**40**	**40%**
Total	**20**	**30**	**20**	**30**	**100**	**100%**

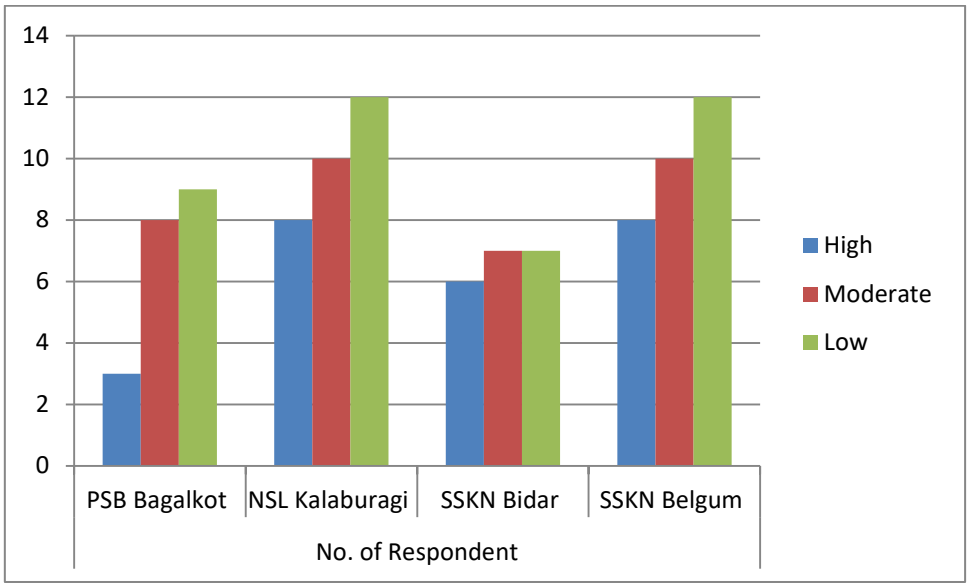

Figure: 1 Indian Sugar price when compare with rest of world's sugar price

N	Mean	Std. Deviation	Std.Error Mean
100	**2.63**	**.623**	**.053**

Table: 2 Accuracy of Indian sugar prices in comparison to other countries' sugar prices

Table 1 analyzes the respondents' assessments of Indian sugar costs to those of the remainder of the world. The invalid speculation is dismissed since the processed one example T-Test importance level of 0.00 is not exactly the regular importance level of 0.05, and accordingly, the substitute speculation — that Indian sugar costs are high comparative with other nations' costs — is acknowledged. (Mamoria C. B., 1985) Basically, it very well may be presumed that the significant expense of sugar creation in India is brought about by the effectiveness and uneconomic nature of creation in sugar plants, unfortunate yield and short pounding season, exorbitant cost of sugar stick, and significant extract imposes left by the public authority. In India, accumulating, hypothesis, and the dark selling of sugar by discount vendors are too normal notwithstanding the control of stores by sugar plants. Activity of sugar factories every year

Table: 3 Active Sugar Factories in a year

For the Month The Factory will run	**No. Of Respondent**				**Total**	**Percentage**
	Pune	Satara	Sangli	Kolhaprur		

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Up to 4 Month	7	6	5	7	25	25%
4 to 5 Month	8	9	6	8	31	31%
More than % Month	10	15	9	10	44	44%
Total	25	30	20	25	100	100%

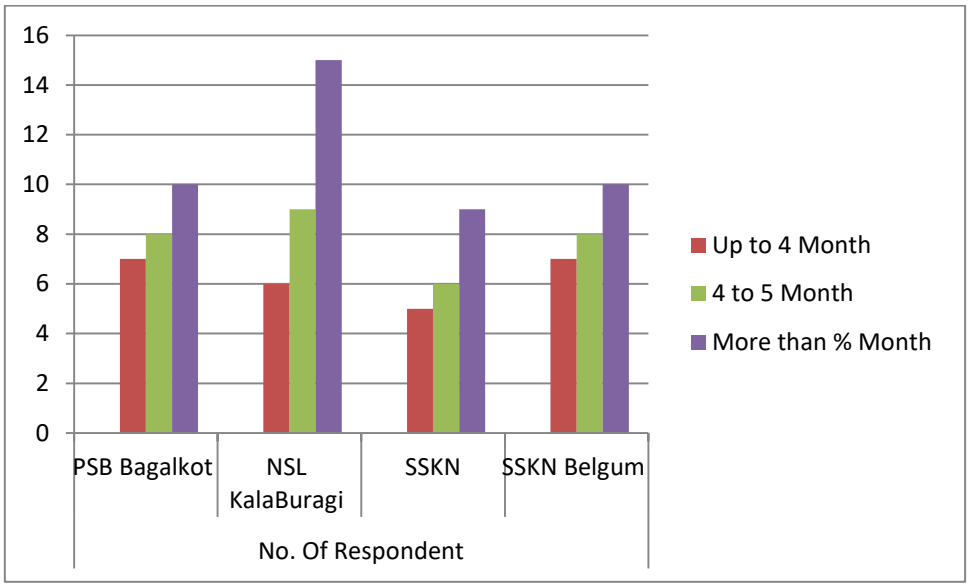

Figure: 2 running of sugar factories in a year

N	**Mean**	**Std. Deviation**	**Std. Error Mean**
100	**2.21**	**.562**	**.003**

Table: 4 Accuracy running of sugar factories in a year

The respondents' viewpoints on processing plant runs each year are displayed in Table-3. The invalid speculation is dismissed in light of the fact that the determined one example T-Test importance level of 0.00 is not exactly the standard importance level of 0.05; subsequently, the substitute speculation — as per which there is an association between occasional plant tasks and issues confronting the sugar business — is acknowledged. (L., 2000.) At last, it tends to be reasoned that most of the time the sugar factories were working was somewhere in the range of 04 and 05 months. The proprietors and workers shouldn't endeavour to work it for somewhere around a half year by giving sugar stick.

Table: 5 Problems Faced by Sugarcane Growers

Problems	Pune	Satara	Sangli	Kolhapur	Total	Percentage
Low rate for Sugar cane	01	03	02	01	07	07%
Waiting in a long Queue	05	04	05	01	15	15%

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Dishonest in weighting at weight Bridge	03	06	02	02	13	13%
Deductions in the name of tall , charges,etc	03	05	01	04	13	13%
Delay in payment of Instalments	01	03	03	05	12	12%
Shortage of Sugarcane Buyer	02	04	07	06	19	19%
Other Reason	05	05	05	06	21	21%
Total	20	30	25	25	100	100

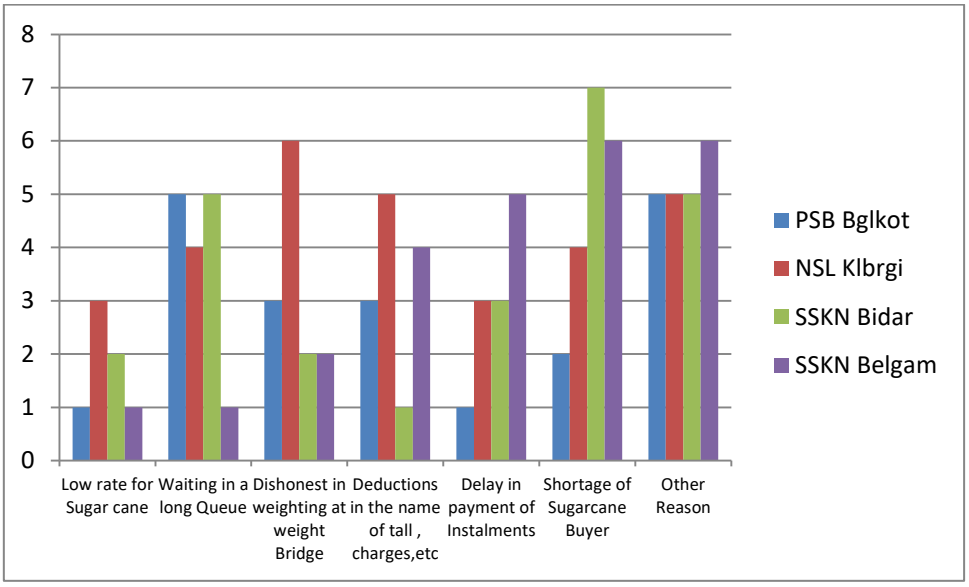

Figure: 3 Problems Faced by Sugarcane Growers

N	Mean	Std. Deviation	Std. Error mean
100	4.09	2.986	2.91

Table: 6 Accuracy Issues Sugarcane Farmers Face

The respondents' viewpoints on the issues looked by sugarcane cultivators are displayed in Table-05. The invalid speculation is dismissed on the grounds that the determined one example T-Test importance level of 0.00 is not exactly the standard importance level of 0.05, and the substitute theory — that there is a connection between the previously mentioned issues and sugarcane cultivators — is as needs be acknowledged (Misra, 1985). At last, it tends to be presumed that all of the previously mentioned issues should be settled to put a grin on ranchers' countenances and urge them to keep developing sugarcane.

Table: 7 Problems of Production of Sugar

Problems	**No. of Respondents**					
	Pune	**Satara**	**Sangli**	**Kolhapur**	Total	Percentage
Low Availability of Cane	5	4	5	5	19	19%

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Short Crushing Season	10	6	7	5	28	28%
Low Yield of Sugarcane	5	6	8	6	25	25%
Low Milling Efficiency	5	4	10	9	28	28%
Total	25	20	30	25	100	100%

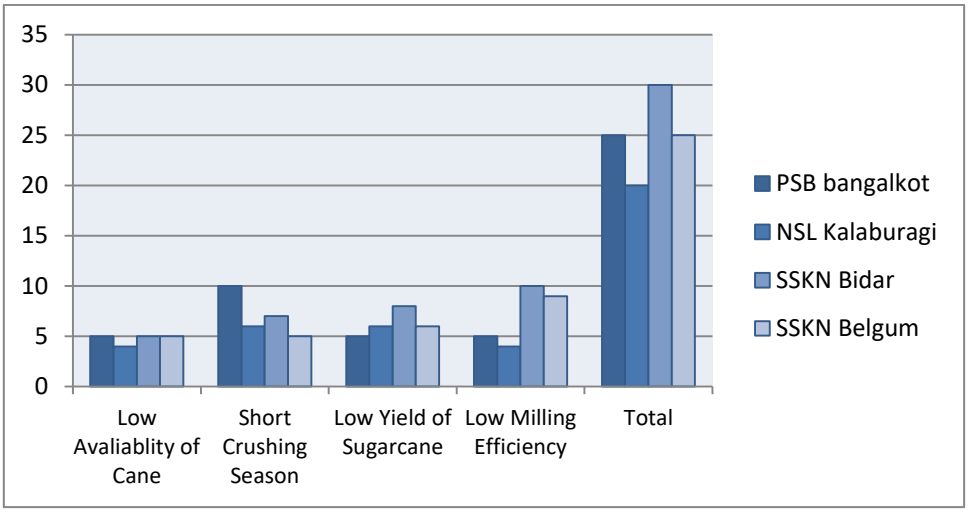

Figure: 4 Problems of Production of Sugar

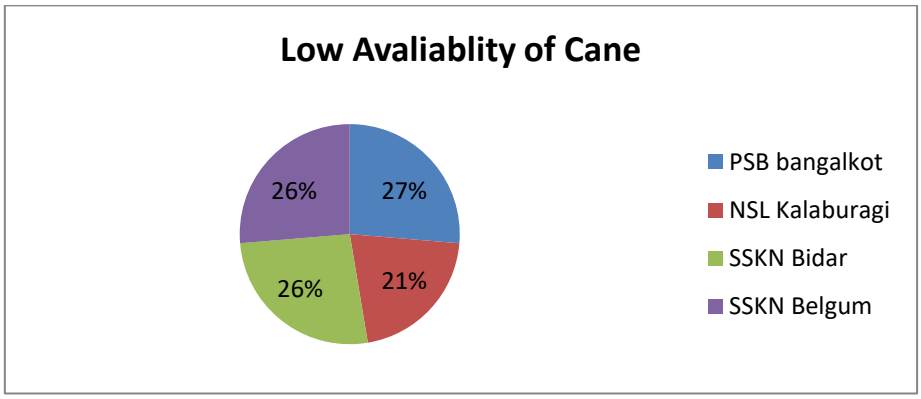

Figure: 5 Problems of Production of Sugar

N	Mean	Std. Deviation	Std. Error Mean
100	3.91	2.156	.199

Table: 8 Accuracy Problems with Sugar Production

Table 08 presentations the respondents' contemplations on the issues with sugar creation. One example T-test importance level is determined to be 0.00, which is not exactly the ordinary importance level of 0.05. Thus, the invalid speculation is dismissed and the elective speculation, which is that there is no distinction, is acknowledged. The issues with sugar creation incorporate low processing effectiveness and low sugarcane yield. (Mohite Y.J., 1974.) At last, it

tends to be reasoned that the low sugarcane yield, short smashing season, unacceptable area of industry in Western Maharashtra, and deficient stock of stick all add to creation issues for sugar factories, which have low processing effectiveness and extremely low sugarcane recuperation rates. Also, as Indian sugar factories come up short on own sugar plants, they need command over the amount and nature of sugarcane.

5. DISCUSSION

Based on the above data analysis and literature reviewed, it can be said that Enterprise Resource Planning (ERP) systems can play a significant role in improving the governance of sugar factories in Western Maharashtra. ERP systems are software solutions that integrate various business processes and functions within an organization, enabling real-time monitoring and decision-making. In the case of sugar factories in Western Maharashtra, an ERP system can help improve governance by streamlining various processes such as procurement, production, sales, and distribution. By providing a single source of truth for data, an ERP system can help decision-makers make informed decisions, reduce operational costs, and optimize resource utilization.

An ERP system can help sugar factories optimize their procurement process by automating purchase orders, tracking inventory levels, and forecasting demand. This can ensure that the factory always has the right raw materials on hand, while minimizing inventory holding costs. An ERP system can help sugar factories improve their production process by providing real-time visibility into production schedules, capacity utilization, and quality control. This can help optimize production, minimize waste, and ensure product consistency. An ERP system can help sugar factories improve their financial management by providing real-time visibility into cash flows, expenses, and revenue. This can help optimize cash management, reduce financial risk, and improve profitability.

6. CONCLUSION

Sugar factories are the growth engines of rural economy in Western Maharashtra. Agriculture, automobile, food processing, education, banking are interlinked with the socio-economic conditions of farmers, local self-governments, banks, school/colleges etc. The public authority ought to guarantee that there is a consistent stock of unrefined components so the business' sugar plants might work really and to the furthest reaches of their capacity during all seasons. In the event that India is to accomplish the brilliance of independence, accomplish the situation with net exporter, and become a huge player in the worldwide market, a planned and purposeful exertion is expected to appreciate and solidify the necessities of the purchaser, rancher, and processor to resolve the different above issues. By carrying out better collecting methods and working intimately with ranchers, sugar factories can increment efficiency as far as yield, sugar levels, and recuperation. Government should give critical help to ranchers and sugar factories to increment creation.

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