



SUPPLYCHAIN OPTIMIZATION FOR VEGETABLES IN SANGLI DISTRICT

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ABSTRACT The main objective of this paper is to assess the issues and limitations of the supplychain of putrescible vegetables, the paper is that the initiation of study and specializing in the abstract mapping of the thought. Literature review and secondary analysis is that the base of study for this research paper. the whole analysis paper effort is to grasp the entire vegetable supplychain issues and to border possible solutions to those problems such the price furthermore as supplychain will be optimized totally.

The problem lies with the whole parts reminiscent of supplying, poor market info of demand offer and also the varied consumption patterns of the putrescible vegetables, improper and noneconomical cold storage infrastructure, lesser use of technology in farming that typically stop the wastage of the vegetables and loss, these supplychain necessities are those parts that are accountable for the losses caused to the farmers. Solutions reminiscent of contract farming, cold storage infrastructure will be originated.

KEYWORDS : Logistics, Agro, supplychain, perishables, vegetables, questionnaire, hypothesis.

INTRODUCTION

After the revolution India's Agriculture Development was at its peak, it had been principally centered towards production of agro merchandise, from that section our agricultural economy had undergone through various structural modification, our agro policy is targeted at up the complete worth addition components of the supplychain and optimizing those elements to a extent that the prime producers of this chain advantages from it.

Since independence Bharat has been farming society wherever the complete system relied on agriculture, in those days agriculture trade was done by the barter system and because the era progressed the agriculture began to grow into stable industrial trade format, agro market places were began to line up and agro promoting, supplychain came into aggressive observe, because the trade progressed the weather within the entire provide chain hyperbolic and it gave rise to quality, promoting of putrefiable vegetables and it's provide chain is completely different and a lot of complicated than several of the traditional product as a result of the perishable nature, largeness of the vegetables.

Variable earth science, weather conditions, and consumption patterns makes the provision chain of vegetables ineffective or inefficient with various wastage and monetary losses creating promoting of vegetables a lot of complicated, and as all we all know that Indian customers demand and prefers contemporary from the farm manufacture rather than preserved vegetables the provision chain effectiveness comes into observe, it plays crucial role within the whole of system, This study on the provision chain of vegetables is completed to check the entire vegetable supply chain system, establish the problems arising out of typical and ancient provide chain, and prepare the ways such the complete system advantages from it, majority the farmers on the oversized scale by reducing the wastage and monetary losses.

Research Objectives

1. To formulate solutions which relate common Vegetables Supply chain Logistics issues in Sangli District.
2. To avoid wastage and Financial losses.

Literature Review

Conventional model of vegetables provide chain (shown in figure 1) is usually followed in unorganized retail of vegetables; parts concerned during this supply chain are retailers of every kind, wholesalers, provision operators, consumers, auctioneers, farmers and shoppers.

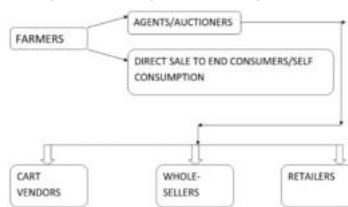


Figure 1: Conventional Retail model of Perishable Vegetables

This model has many components that makes the complete provide chain ineffective and there's countless wastage during this ancient eco system of vegetable supply chain.

There are varied types of completely different developed vegetable provide chain models followed in several developed nations, lets discuss a number of those, simply once the manufacture, the vegetables are processed to extend the period of time and so it's transported within the provide chain that any delivers it to the agents/whole-sellers, retailers and eventually to the shoppers.

The preceding pattern or model of vegetable provide chain is usually practiced in developed countries everywhere the globe, the food consumption patterns in Republic of India is completely different from that of these developed countries therefore a nation like India wherever vegetables are consumed recent and not preserved, there's a demand of planning economical and effective provide chain to avoid wastages and monetary losses.

Hypothesis

Statement: To find out whether there is significant relationship between Logistics and the perishable vegetables during Covid-19.

Null hypothesis: H0: There are no significant relationship between Logistics and perishable vegetables.

Alternate hypothesis: H1: There is significant relationship between Logistics and perishable vegetables.

Research Methodology

Research Design: This Study on offer chain improvement for Vegetables in Sangli District utilized qualitative analysis exploitation farmer's similarly as supply chain element's surveys via a form, a form was accustomed collect the inputs concerning issues in offer chain parts and its effects within the sangli District region of State Maharashtra. the info gathered from the inputs given whereas filling up the form is analyzed and thereby, it in the main focuses on the aim of the analysis.

Sampling: Sampling Region: Sangli, Maharashtra

Population: Farmers and Supplychain elements was the population for the study. The survey was Targeted towards farmer's which are involved in small scale as well as large scale farming ranging from 1 Hectare to 100 hectares and the supplychain elements like Logistics, Distribution channels, whole seller's and retailers.

Sampling Size: 230 respondents

Data Collection Methods: The Data was collected by primary method of data collection. It is collected using Questionnaire as it enables to observe, interpret, and explain the relations between the constructs, especially in the case of our study which has cause-effect relationship between the variables. A total of hundred questionnaires were distributed in the Digital Google form format via Social media and E-mails to the Targeted elements in the supplychain right from Farmers, Logistics operators, Distribution Channels, wholesaler's, and Retailers of Vegetables. The Questionnaire contains questions regarding area

under value chain, type of element in supply chain, vegetables under cultivation and the issues arising Due to lockdown.

Tools Used in Analysis and Data Presentation: The Data collected through questionnaires is put through analysis. SPSS is used for data processing; the data is presented by using various pie as well as bar charts for better understanding the value chain. The data analysis is done by statistical methods such as chi-square to determine the association between variables.

**Analysis Report SPSS
GRAPHS-**

VALUECHAIN PIE CHART-

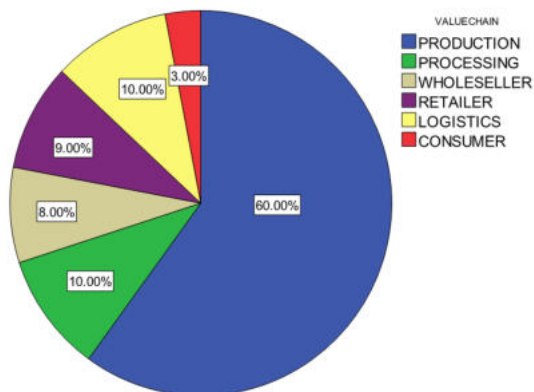


Figure 2: value chain pie-chart

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5690.278 ^a	5313	.000
Likelihood Ratio	768.349	5313	1.000
N of Valid Cases	100		

Figure 3: chi square

a. 5460 cells (100.0%) have expected count less than 5. The minimum expected count is .01.

FINDINGS/RESULT

AS WE CAN SEE THE P VALUE IS COMING LESS THAN 0.05 WHICH SUGGEST THAT ALTERANATE HYPOTHESIS IS ACCEPTED, THE LOGISTICS FACTORS ARE IN DIRECT RELATION WITH VEGETABLES TYPES, END IT IMPLIES THAT LOGISTICS FACTOR CAN AFFECT VEGETABLES,

PROBLEM FINDINGS & IT'S SOLUTION

Logistics issues:

1. designing of harvest and pre-bookings of vehicles by the farmers.
2. Route culmination and supplying method optimization for fast and effective delivery of vegetables.

Integration issues:

1. rising Poor linkages between farm gates to mandi with the assistance of NGO.
2. Contract farming is finished personal food firms

Cold chain infrastructure problems:

1. Lease cold chain infrastructure on short time basis rather than written agreement basis with the assistance of regime.

Packaging issues-

1. State government can tie up with packing material providing company & packaging federations can be set up.

Technological issues:

1. Development of rural entrepreneurs in technology, engineering and food sciences.
2. analysis establishments will give data on latest technologies in farming and its overall operations.

Financial issues:

1. Agro co-operative markets may be created.
2. correct valuation will eliminate monetary strain on farmers therefore

giving them boost financially and access to technology

Improper information to demand:

1. Optimizing data flow of demand to the farmers with the assistance of agro societies and establishments making certain swish flow of demand offer and correct operating of supply chain.

DISCUSSIONS

Improving the potency of the availability chain and also the performance of the supply within the sector are expected to extend the financial gain of farmers and scale back the destructible waste product, the importance of economical and effective foodstuff provide chain play a vital role in minimizing the losses and wastages, rise in farmer financial gain, revenue maximization from export to different countries, employment generation opportunities for the native population, and improve the quality of living or support of the farmers.

CONCLUSION

This paper presents a problematic standing of Vegetable sector provide chain and supply in Sangli district of state geographic region, India, and highlights the importance and wish of effective and economical provide chain to eradicate varied bottlenecks therefore reducing the wastage and losses within the agro sector. The analysis study conducted on the availability chain of Vegetables sector in sangli district recommend that the supply chain is extremely addicted to the supply within the sangli district and therefore the restrictions advocate by the administration leads to highly inefficient destructible supply chain that is resulting in wastages and large money losses and fewer financial gain to the weather concerned in the entire supplychain. Agro sector in India may be a potential sector and presents an enormous chance to the farmers and therefore the components of the availability chain through optimizing supply within the sangli district and fixing the cold chain infrastructure and food process units for such destructible vegetables in the sangli District.

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