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## **Enhanced Business Model for the farmers of Gauribidanur Taluk, Karnataka**

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**Abstract:** The study of existing marketing system in the state of Karnataka – Gauribidanur Taluk, Chickballapur Dist, is conducted. The data was collected through questionnaires. A total of 699 farmers were from the taluk covering almost the same number of villagers were contacted and gathered data. The analysis of data shows that the farmers are interested in the present ICT system available. However we find large number of people not continuing with the system of marketing. The reasons for farmers to not use or discontinue with the existing system of ICT provided by the government forms the basis for construction of enhanced business model. The reasons form the hardships that need to be addressed and changes in the procedures to be followed to increase the number of farmers using ICT in marketing agricultural products. The data collected is statistically analyzed to understand the reasons, laxity, hurdles, technical problems and the attitude of the farmers towards the use of new technology in marketing. The suggested model is an enhancement of the existing and tries to removes all the hurdles in implementing ICT in agricultural products marketing. The new model on implementation will not only increase the ICT use in marketing but also be a guiding star in all the agricultural activities.

**Keywords:** Agricultural marketing, Business model, Kissan Call center, Rural marketing.

### **Introduction**

Agriculture being the backbone of Indian economy, we find a large amount of workforce in this sector. The introduction of ICT has enhanced the overall quality of various sectors. There is a necessity to introduce ICT in agriculture so as to ease the agricultural dependent farmers harvest the fruits of computerization. In this direction the government is working hard to introduce a mechanism that allows penetration of IT into the farming sector. The computerization of APMC was a decisive step in this direction[5]. All the APMC in the state are computerized and once this was achieved the government has also taken steps to connect all these APMCs under the Unified Market Platform (UMP). This allows the farmers to sell the agricultural produce online. UMP allows the product not to be sold buyers of one geographical region but to all the connected regions of AMPC through the UMP. This provides the farmers with greater bargaining power so that they can compare the prices and then accept or reject an offer. Electronic system allows for bidders to register and then bid for the products online. The proximity of mandi is immaterial and hence any buyer interested in buying can do so by following the procedures set the APMC.

The paper is based on the study in Gauribidanur Taluk, Chickballapur Dist, Karnataka, India. The model discussed in this paper provides solution to not only marketing but also to all the steps of farming. We start with providing support right from providing the expected time of rain till the harvesting and also

aid in transporting. This procedural approach to farming in association with the authentic data from weather department, agricultural satellites and APMC servers with a proper and effective procedure to disseminate information at the right time to the needy is the key to good ICT system which would attract and retain farmers in the system.

**Related work**

A business is to be represented in its own terms so that the overall business can be understood from a third party perspective[4]. This is necessary because the problems that may creep up may be so complex that unless there is a complete understanding of the business system and the problem on hand it is impossible to analyze the problem with respect to the system and provide a proper recovery mechanism[2]. This cannot be done over night when the system is in trouble. Hence a business model is used to record an existing business or to foresee the nature of nature of business and its various activities. The first proposed a pictorial representation of the business model [1] was called to the business model canvas[3]. There are a number of variations to this model. But the main features remain the same except for customization of canvas to their business.

**Proposed Business model**

Key Partners	Key Activities	Buyer’s Activity	Key Resources	Seller Resource
		Govt/ APMC Activity		Buyer’s Resource
		Seller Activity		
Control Brakes				
Revenue Structure				

Fig 1: Business model to help farmers’ market their grains.

**Key Partners:**

The important stake holders are APMC yard, Registered Buyers and Registered Farmers. APMC yard is the market place where all the transactions of the selling happen. It is also a place where the government has complete hold on all the procedures to be followed so that all the involved stake holders are in perfect harmony. It is the government’s duty to ensure that farmers and the buyer’s rights/interests are protected well within the frame work of marketing. It is a physical place marked by the government for landing and lifting of agricultural produce. The procedure involved is to ensure honest and prompt marketing. Registered buyers are the people who intend to buy, deposited initial amount, deposited funds, provided proof of trading, interested in the goods available in the market which is guaranteed by APMC for quality, graded and timely shipment. The seller is the farmer is has provided sufficient proof of geographical association, wishes to accept the rules and regulations laid down by the government, follows the procedure of sale and has goods landed in the yard.

**Key Activities:**

The model proposed is a complete model right from the first step of starting cultivation till the last step of marketing and selling. The model uses the Kissan Call center as the middle layer to ensure that the farmers are in track of procedures and follow disciplined modern farming methods to produce good yield and then follow the marketing and sales through our enhanced model.

The Government has a Kissan call center in place in all the states so as to provide information in the native language. This is associated with Agricultural universities or agricultural centers in every geographical area. The weather department is connected to these centers and predictions of rain are a

part of the function. We use this to encourage the farmers to understand the soil conditions, water source needed, investment needed and the expected gains by providing information on the following:

1. Identify crop to be cultivated
2. Identify quality and grade the crop
3. Display the product for its registered buyers
4. Arrange for online bid
5. Take decision on sale/extend display of bid
6. Complete sale by accepting bid on behalf of farmers
7. Settle payments
8. Get prospective buyers to register
9. Arrange for transport service on request
10. Form governing rules from time to time so that all stake holders are protected

**Buyer's Activities:**

1. Register online to certain APMC yard by paying registration charges
2. Maintain sufficient balance with APMC to be eligible for bid
3. Bid for crops made available by APMC
4. Make arrangements for transporting goods bought through online bid within a stipulated period
5. Renew registration year after year
6. Withdraw/Transfer funds from/to APMC yard account
7. Cancel an order within 3 hours of allotment of bid

**Government/APMC activities:**

1. Fix registration charges of Buyers and sellers
2. Facilitate APMC to accept deposits from various buyers and define a mechanism for online bid
3. Provide good ambiance for trade by defining rules and regulations to govern the over all activities
4. Grade crops as per quality
5. Fix minimum price based on grading and maintain transparency
6. Ascertain proper weight and procedures for weighing
7. Host grain data and all other data needed for bidding
8. Send SMS alerts to all registered buyers interested in certain crops
9. Accept online bidding based on the deposit of funds in APMC repository
10. Follow Close of bidding procedure based on the written opinion of the farmer
11. Reschedule/continue bidding procedure based on the written opinion of the farmer
12. Reassess grain quality and quantity from time to time
13. Follow government fixed price and buying norms for government as per the latest rules framed
14. Settlement of all payments through cheque or bank transfer based on farmer's request

**Seller (Farmer) Activities:**

1. Ascertain grain type, quantity, demand and present selling price
2. Register with nearest APMC yard
3. Get the crop graded before being transported to APMC
4. Get estimates from all sources before taking to APMC. Kisan Call center and other agricultural consultants can come in here.
5. Decide on time to harvest and date of transportation in consultation with APMC
6. Decide on continuing to keep the bid open or to close the deal

**Key resources:**

1. APMC yard, Its personal and infrastructure
  2. Web site and its flexibility to add more pages for bid along with capability to categorize pages based on grain's quality and type
  3. SMS server along with service packs
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4. Farmers call center
5. Transport facility (Field to APMC yard and APMC yard to Buyer)
6. Internet facility
7. Secure and robust Payment gateways
8. Information of soil quality, seeds, water needed, dependable water sources, government fixed price and expected selling price

**Seller Resources:**

1. Mobile phone
2. Farmer call center
3. APMC quality and estimate slip
4. Government policy on buying
5. Information on need and requirement for the crop
6. APMC web portal and its handlers

**Buyer's resources:**

1. Mobile Phone
2. Laptop/Desktop with internet facility
3. SMS alerts on addition of new pages and confirmation of sale
4. Available funds in APMC and its flexibility to add or withdraw funds
5. Information of minimum price fixed by the government, governments buying price and its policy of sale
6. APMC pages available for bidding

**Control Breaks:**

1. Farmers based on the location and quantity of land available for cultivation is advised on the list of crops he can cultivate in his land by the farmers call center. Water resource, investment capacity, source of funds along with various subsidies made available to him plays an important role in deciding on the crop for cultivation.
2. The crop chosen along with farmer's unique-id is registered in call center. This helps in pushing alerts in time and all other steps to be followed in time. This also prepares the farmer for his next agriculture step and also keeps him financial informed on his available sources and subsidies.
3. A quality inspector is to visit each and every village twice in a month and provide information on the quality of crop and health of the crop. He could also be a link between the call center and the actuals on ground.
4. A grading inspector from the APMC is to visit each and every village twice in a month and provide information on the grade of crop. He could also be a link between the farmer and the APMC yard.
5. Update on grading and quality of crop can be a constant vigil taken up by the quality inspector and the grading inspector.
6. SMS alerts on all details of particular crop at the right time through farmers call center
7. Fixing of price by APMC personal and upload
8. Decision on continuing to keep the bid open for more than 24 hours
9. Decision to sell at government fixed price or available bid price

**Revenue Structure:**

**APMC YARD:**

1. Registration of buyers based on government policy
  2. Registration of sellers (farmers) based on government/APMC policy
  3. Commission from Buyers
  4. Commission from Sellers
  5. Taxes earned through various activities
  6. Charges on extension of bid time
  7. Charges on over storage of grains by bidders
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8. Un-lifted stock sale

Buyers:

1. Registration Cost
2. Fund transfer to APMC account
3. Transport cost

Sellers (Farmers):

1. Registration cost
2. Funds from sale of grains through APMC
3. Transport cost
4. Waiting cost of bidding site

**Proposed Procedure**

Step 1: Get briefing from farmers call center on

- Right time to start cultivation and other agricultural activities
- Expected time of rain and intensity
- Expected sources of water during the agricultural activity
- Options available on crops wrt geographical location and amount of land held
- Estimated cost per acer of land
- Expected selling price
- Manure/pesticides/fertilizers needed and estimated cost

Step 2: Based on all the above parameters farmer is allowed to choose a crop and register through an SMS about the crop chosen. This will help the call center to send notification and alerts wrt the crop cultivated.

Step 3: The automated SMS server in association with an intelligent system would send SMS from time-to-time on steps to be taken by the farmer in normal circumstances. However the farmer may call the center in case of any extremities and get advised.

Step 4: The quality inspector visits the village twice in a month and access the quality of crop and will act as the link between the call center and the actual cultivated field

Step 5: The grading inspector of the APMC will visit the cultivated land and grade the crop. He is also in-charge of update and reassessments.

Step 6: The farmer is provided with an estimate by the grading inspector

Step 7: On harvest, the farmer would information on

- Grade of crop
- Price of grains fixed by the government and the current APMC bid happening
- Cost of transportation
- Waiting time involved through APMC

Step 8: Transport gains for sale to APMC yard premises and register himself along with all required specifications

Step 9: The details of the grains along with all needed data is fed into the system and a web page is prepared as a part of the APMC web portal. The web page will have facilities to bid for the grains above the fixed price of the government price and will instantly display the highest bidder's amount. This is done based on the funds available with APMC of bidder.

Step 10: All pre-registered buyers are invited for bidding through a notification sent by SMS

Step 11: Allow online bidding for a period of 24 hours and then take a call on closure or continuation of the bid. A written opinion is taken from the farmer as it involves extra charges to continue the web page.

Step 12: On closure

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- APMC would deduct debit the funds available with them of the bidder.
- Send a notification of acceptance of successful bid
- The seller (Farmer) is issued a DD/Cheque/Account transfer based on the needs and request
- Bidder is provided seven days to lift the stock from the APMC

### **Conclusion:**

The steps suggested in the model are an enhancement over the present system of marketing followed by the government through the APMC yards. This leads us to the ideal scenario where the government has complete information on the crop cultivated, problems due to natural extremes, expected yield, quality of yield of each crop, total cultivated land for each crop, water needed for these crops and the time of flow of water to channels, expected price of the crop, government support price that can be fixed, need for new industries, type of industry and the overall earnings of the farmers.

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