CHANGING SCENARIO IN INVESTING PORTFOLIO OF AGRARIAN SOCIETIES: A CASE STUDY OF MALABAR REGION OF KERALA

ABSTRACT OF THE THESIS

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ABSTRACT
Agriculture is one of the most prominent sectors in the Indian economy as its share in employment generation and livelihood creation is incredibly high. Agriculture and its allied industry have a mainstay in India for more than 54.6% of the Indian population engaged in this sector. Agriculture is the chief source of livelihood and essence of growth of the Indian economy which accounts approximately for 14% of the Gross Domestic Product (GDP) of the nation. The agriculture and allied sector also contribute about 11% of the country’s export. Additionally, it is the principal source of income of the country and almost half of the population still depends on agriculture. The industry provides a source of raw material for a large number of industries also. To achieve an overall GDP target of 8% during the 12th Five Year plan and to meet the intensifying demand for food, the principal focus is to accelerate the growth of agricultural production. For the overall growth of the economy, it is necessary to ensure an inclusive growth through restructuring the backward and rural population towards the track of the development and thereby increasing the incomes of those who are dependent on agriculture. Despite the steady decline of this sector’s share in the GDP, still, agriculture is the critical economic sector that plays a significant role in the socio-economic development of India.

In the present agricultural scenario, appropriate leveraging of accessible natural resources and harmonising it with the existing infrastructure to build an agro-based system which is suitable to the current situation is the need of the hour. For strengthening the agriculture sector, there needs to improve various elements like proper water management and irrigation, reclaiming the degraded land, bridging the knowledge gap about the new varieties of crop, and adequate use of fertilizers, agriculture diversification, promotion of dairy & fishery, providing affordable credit to the farmers, improving the market mechanism and focusing on land reforms.

Performance of Kerala agricultural Sector
Over the years, the performance of agriculture sector showed a steady declining trend in the area of cultivation, production and productivity emphasising on the post-economic reform period. The expansion of agricultural production rate in Kerala was remarkably higher during the eighties. More spectacular was the rising trend in the
output of non-food grains, particularly during the second half of the decade. However, during the nineties, the growth rate of agricultural production slowed down considerably. Food grains output failed to keep pace with the population growth and consequently, the per capita availability of food grains has declined. These broad trends in the growth rates of agricultural production were directly or indirectly associated with a series of related issues like input supply, markets, price policy, trade policy, etc. A quick look at the growth patterns in the area under various crops reveals that the share of gross cropped area under rice has consistently come down. Such a decrease is primarily because of the growing dominance of cash crops like coconut and rubber. As a result, the state has 50 percent short in rice production compared to consumption requirements. The growth of the agricultural sector continues to witness volatility. Food grain production in the state has been declining year after year. In recent years, the prices of many of the food and non-food crops have been dropping or fluctuating due to the removal of quantitative restrictions on imports. The state has been losing its prominent role in the export of traditional agricultural commodities such as pepper, cardamom, cashew kernels, and tea. The other major problems facing the agriculture sector include the high cost of cultivation, too much attention paid to commercial crops, low productivity, high land cost, and the decrease in the size of the farm holdings. Given the pathetic condition of the economy, the state initiated many reforms starting in early 2001. Since then Kerala has announced reform measures in the sectors like agriculture, industry, government finances, infrastructure, Information Technology (IT), labour, tourism, etc. In the agriculture sector, many incentives were offered to the biotechnology sector. The government has established an Agri-Export Zone for the export of vegetables and fruits.

**Agricultural Investment Portfolio**

An investment portfolio means that collection or combination of assets owned by the individual or by an institution. It is the grouping of financial assets like stocks, bonds, commodities, currencies and cash equivalents, etc. in addition to their fund equivalents including mutual, exchange-traded and closed funds. A portfolio can also implicate non-publicly tradable securities, like the real estate, art, and private investments. Investing in agricultural portfolios in the study signifies various combinations of the factors or variables, which are directly or indirectly influencing
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the agricultural growth. Here it brings in the importance of agricultural portfolio mix which would be used to minimise risk and maximise return in the farming activities. Investors should construct a favourable investment portfolio per their investment objectives, cost, risk tolerance and the yield. The selection of the variables very much depends upon the factors affected to the investments like land, labour, equipment, money, climatic variations, fluctuating demands of the agricultural commodities, etc. The selection of portfolio is substantially subject to the region or area where an investor/farmer is ready to invest in their money in the form of farm investment or any other agricultural activities. Hence, selection of portfolio or the combination of the variables different from one area to another, some investment type to another. Investors can also have multiple portfolios for various purposes. In this study, it's the building of agriculture investment portfolio considering the variables such as Size of the agriculture investment, Preference in investment period and technology used, Risks involved in the investment, Decision taken by the investor in the proper time related to the investment, and also which methods suitable for the area of investment. These all are significantly affected to the agricultural growth that depends on various physical, economic and governmental factors. The future dividends of a stock or an interest, and principal of a bond may be uncertain. He also said that, in this case, probabilities or chances should be assigned to several possible values of that security and the mean of these values can be used as the valuation of the security

Building an Agricultural Portfolio

Despite the recent poor financial performance of agriculture and overall sectorial negative growth, farming sector urgently needs to set up or build a portfolio suitable to the system or method for the farmers or investors to attain a favourable return through the best performing agricultural operations to overcome the dangerous situation faced by the farmers or the sector as whole. The sectoral growth relatively moves or drives to the growth of other industries and also leads to the economic development of the region through the state further. With the help of variables or factors, this sector should form part of a well-diversified portfolio.

Building an agricultural investment portfolio based on the region or the level of investment with the combination of factors like Investment Size, Investment
Abstract

Preferences, Investment Decision, and Investment Risk consideration of the physical, economic and various governmental factors which is inevitable towards agricultural growth. It will undoubtedly give exact route to reach the destination point of riskless return or the risk-return adjustment area through suitable crop portfolio diversification strategies.

Statement of Problem

Today, Indian agriculture especially needs more public investment and policy support in several areas to overcome the current structural weaknesses such as the low scale of operations, the poor state of rural infrastructure, lack of product diversification, low R&D spending, low productivity, the absence of marketing infrastructure, and inadequate financial support, primarily because of the big decline in public investment in the sector, post-reform. According to GOI report (2016) the share of agriculture and allied activities in the country’s GDP has steadily declined from 32.2 percent in 1990-91 to 24.3 percent in 2001-02 and 15.4 percent in 2015-16. However, more than two-thirds of the country's population continues to depend on this sector even now, and it employs 60 percent of the productive workforce. Clearly, this tendency means that the overwhelming majority of the population, which depends on agriculture for its livelihood, is getting increasingly impoverished.

The agriculture in India has been witnessing a fast-changing investment strategy which has a real influence on India's total international and domestic trade. Indeed, globalisation has had its ultimate impact on the agriculture, and the concept of free trade and investment has been visualising a diminishing trend in prices of agricultural commodities, which results in decreasing investment in agriculture and diverting to some other sectors. To exploit the opportunities of globalization, the developing economies are thinking of diversification of their investment not only for profit-making but also to compensate losses rather than meaningless resistance. The diminishing trend in agriculture investment could merely visualise the rapid growth in other sectors.

Being in the very same line, Kerala has also been undergoing through radical investment pattern changes; with no exceptions to agriculture. Being a consumer...
State, Kerala should certainly pay more attention to its agricultural output to help achieve self-reliance, though it is nearly impossible. Nonetheless, a meagre number of farmers are only still choosing to farm because of the alternative employment availability in the Gulf countries. Earlier, such farmers were used to relying on or cultivate hardly a single crop all through the year which could not necessarily yield the best. Here, there is an interesting side-line situation as the farming strategies have been changed to cultivate multiple crops in the same land to align with the suitable climate fluctuations. For a researcher, it is the duty to contextualise the dynamic investment practices in farming and dwell on to see how farmers are adapting to such situations is as extremely important as analysing the past agriculture yield.

The intention of the study is to achieve the following objectives.

- To analyse the factors influencing the changing pattern of agriculture investment strategies among agrarians of the Malabar region.
- To study the effect of various demographic factors on the Agriculture Growth Perception of agrarians in the Malabar region of Kerala.
- To examine the impact of crop portfolio diversification and its underlying factors in the wake of changing scenario in agriculture investment strategies.
- To analyse the growth trend of different cropping systems in the State.
- To suggest strategies for strengthening agriculture and allied sectors in Kerala.

Based on the theoretical and empirical evidences, the present identifies five independent variables pertaining to crop portfolio investment that includes investment size, preference, decision, risk, and crop diversification. The study covers a span of around two decades for the changing trend analysis of the agriculture. For the empirical analysis of the household perception, a primary data analysis is carried. EFA and CFA have been used to validate the instrument and was further processed by using One-way ANOVA and Multiple regression Analysis. In order to run the analysis the study formulated following hypotheses and testing results were also discussed under each sub heads:
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H₀₁: There is no significant difference in Agriculture Growth Perception across various demographic variables of agrarian society in the Malabar region of Kerala.

Sub-Null Hypotheses

H₀₁.₁: There is no significant difference in Agriculture Growth Perception across various Age categories of agrarian society in the Malabar region of Kerala

Findings of the analysis indicated that age agriculture growth concept best understood by the age group of 46 or more. Thus, the null hypothesis is Rejected.

H₀₁.₂: There is no significant difference in Agriculture Growth Perception across gender category of agrarian society in the Malabar region of Kerala

The results help interpret that agriculture growth is understood by both male and female in the same way. Nonetheless, it is also to be noted that there were only a few female respondents who filled out the questionnaire. Thus the null hypothesis is Accepted.

H₀₁.₃: There is no significant difference in Agriculture Growth Perception across different educational groups of agrarian society in the Malabar region of Kerala

The analysis enormously helps to conclude that there is no significant difference in how well an elementary educated to a graduate educated household farmers to understand agriculture and its growth. It implies that the four graduate farmers & 35 intermediate educated farmers could not create an entirely different agriculture growth perception at all. Hence, the null hypothesis is Accepted.

H₀₁.₄: There is no significant difference in Agriculture Growth Perception across various localities of Agrarian society in the Malabar region of Kerala

The analysis tells that the agriculture growth perception differs from one place to another. This also enables the researcher to infer that the locality of the household farmers matters to constitute a perceptive agriculture growth. Therefore, the null hypothesis is Rejected.
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\textbf{H}_0\textbf{1.5}: There is no significant difference in Agriculture Growth Perception across various farming experience level of agrarian society in the Malabar region of Kerala

These figures indicate that the perceived agriculture growth is quite significantly varying in accordance with the level of farming experience. Thus the null hypothesis is \textit{Rejected}

\textbf{H}_0\textbf{1.6}: There is no significant difference in Agriculture Growth Perception across various Farm Income groups of agrarian society in the Malabar region of Kerala

The results help to understand the level of perception of farmers about agriculture growth. This clearly indicates that there is no significant difference in agriculture growth perception across different farm earning group made by the respondents. Thus, there null hypothesis is \textit{Accepted}

\textbf{H}_0\textbf{1.7}: There is no significant difference in agriculture growth perception across various Crop Investment levels of agrarian society in the Malabar region of Kerala

The results clearly show that there is no significant difference in the agriculture growth perception of agrarians even if they invest lower capital. Thus, it is to be concluded that perception is purely formed based on their education and level of experiences in the farming. Thus, the null hypothesis is \textit{Accepted}

\textbf{H}_0\textbf{2}: There is no significant impact of Crop Portfolio Investment on Agriculture Growth Perception of agrarian society in Malabar region of Kerala

**Sub-Null Hypotheses**

\textbf{H}_0\textbf{2.1}: There is no significant impact of Crop Diversification Portfolio on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala

In the case of Crop Portfolio Diversification, it is evident from the above table that the beta value is 0.326 and sig. value is 0.000 \((p < 0.001)\) which significant at 5\% level of significance as the value is less than 0.05. It implies that the Crop Portfolio Diversification has a positive and significant impact on Agriculture Growth Perception. Hence, the hypothesis (\textbf{H}0\textbf{2.1}); \textit{there is no significant impact of Crop}
Diversification Portfolio on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala is **Rejected**.

**H₀2.2**: There is no significant impact of investment decisions on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala

In the case of Investment Decision, the beta value is 0.185 and sig. value is 0.000 ($p < 0.00$) which is again significant at 5% level. Thus, the p-value is less than 0.05. It implies that the investment decision of household farmers is having a positive and significant impact on agriculture growth perception. In other words, AGP is significantly affected by investment decision factors. Therefore, the hypothesis (**H₀2.2**); *There is no significant impact of investment decisions on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala is Rejected*

**H₀2.3**: There is no significant impact of investment size on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala

The beta value of Investment Size is found out to be 0.313 and sig. value is 0.000 ($p < 0.001$) which highly significant at 95% percentage confidence interval. The p-value is way less than 0.05 which implies that investment size of household farmers is having a positive and significant impact on agriculture growth perception. Hence, the hypothesis (**H₀2.3**); *There is no significant impact of investment size on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala is Rejected*

**H₀2.4**: There is no significant impact of investment risk on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala

In the case of Investment Risk, the beta value is 0.320 and sig. value is 0.000 ($p < 0.001$) which is again significant at 5% level. Thus, the p-value is less than 0.05. It implies that the investment risk factors of household farming are having a positive and significant impact on agriculture growth perception of the agrarians. In other words, AGP is significantly affected by investment risk factors. Therefore, the **H₀2.4**: *There is no significant impact of investment risk on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala has been Rejected*
Abstract

H₀\text{2.5}: There is no significant impact of investment preferences on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala

Finally, Investment Preference of household farmers is giving a beta value of -0.10. This tells that IP and AGP has a negative relationship and significant value was still 0.011 which stayed within the limit of 0.05. Thus, the researcher conceived that the IP has a strong and significant impact on Agriculture growth perception of household farmers or agrarians. So, the hypothesis (H₀\text{2.5}); There is no significant impact of investment preferences on Agriculture Growth Perception of agrarian society in the Malabar region of Kerala is Rejected.

Conclusion

The study “Changing Scenario in Investing Portfolio of Agrarian Society: A Case Study of Malabar Region of Kerala” discusses the perceived agriculture growth of household farmers in the Malabar region of Kerala. The term agriculture growth is comprehensively understood by agrarians or household factor seeing the different factors causing a quick-change scenario in agricultural investment over the period. Moreover, this perceptive-cum-exploratory type of study earnestly attempted to understand the level of constructive agriculture growth perceived by the household farmers in the four districts of Malabar region. Technically, the agriculture is well defined by the income dependence, the risk involved in the farm investment, investment alternatives available in front, size of investment in the farming, various decisive factors affecting, crop portfolio awareness among the farmers is vital factors that establish a well-perceived or informed agriculture growth among farmers. In a nutshell, the agriculture growth, here, in this situation is the perceived understanding about the agriculture as an income source by considering the impacting factors and demographic profile of the farmers being the limiting factors.

As an initial observation, the researcher has chosen 12 crops (both cash and food crops) to see the overall agricultural investment practices developed in Kerala. Post analysis of the secondary sources, the study found an overall declining trend in the agriculture output. However, cash crops are still being cultivated by the household farmers. Whereas, food crops are predominantly imported from the neighbouring
states such as Andhra Pradesh and Tamil Nadu. Thus, this changing trend gave a strong ground to seek the prevalent issues in the agricultural investment in the Malabar region; being the area under study.

Generally, a dependent variable must be traversed by various independent variables which can define the problem quite well. The research explored issues filtered out as a result of changing scenario. Firstly, during the exploratory stage, the study found out a number of factors which directly matter the most. Initially, agriculture investment is also considered as an investment alternative; thus, the amount spent for agriculture such as the purchase of equipment, cost of fertilisers and pesticides, modernisation cost is quite significant factors to form the investment size variable. Conversion of cultivable land into non-farming activities can lead to an increase in the cost of initial investment as well.

Secondly, the "preferences" of the same farmers looked to be highly important in comprehending the agriculture growth. Availability of investment avenues, diversified cropping preference, labour-intensive technologies in farming and risky farming would form the preferential factors which could define another set of sub-dimensions to the influencing factors.

As a third important determinant, "investment decision" on farming found to be a fundamental construct. Income generation and thereby wealth creation by farmers, availability of funds and incentives, liquidity requirements, risk factors, growth and expansion are all constituted to the concept of decisive factors of investment in agriculture.

Any monitory activity can potentially confront with inherent "risk" especially if it meant for future income generation; agriculture investment is no exception for it. The study helps to understand that there is an inadequate return on agriculture investment. Underlying risk evolving out of natural calamities, monitory liabilities, return uncertainty, commodity price changes, government policies and its changes are added to the risk element in the agriculture. All these factors broadly made out to be "Investment Risk" in cultivation.
Finally, Crop portfolio diversification has been understood as the widely accepted measure which can mitigate risks derived out of investing in agriculture. Therefore, the research paid close attention to the "crop diversification" practice as priority solution. In the same way, the majority of the respondents agreed upon the importance of crop portfolio investment practices.

To sum up, the overall outcome of the research, the primary solution towards the problem is proposed to be the best practice to balance the risks involved in the investment strategies in the cultivation. This can ensure adequate returns to the agriculture investment by regions. The study earnestly drilled down on to the scope of building a crop investment portfolio with a perceived understanding on the importance of Investment related factors such as size, preference, decisions and the risk that are the factors which lead to the agriculture growth of the Malabar region of Kerala. Ultimately, as it brought out by the study, that the diversification strategies such as agriculture diversification, crop diversification, crop rotation, intercropping, mixed farming, integrated farming, etc. are suitable for the area more than the single cropping cultivation on a broader horizon. However, the current research was particularly focused on the crop portfolio diversification as a first go-to solution to the underlying problem in crop cultivations.

As a concluding mark, an agriculture investment portfolio is established by seriously considering questions such as what risk factors are involved, how big is the investment to be, how to be quick in farm investment decision making, what to prefer and what not to prefer. All these interrelated questions are promptly addressed by crop portfolio diversification as the best investment strategy. Therefore, the study ends up in suggesting the best combination of crops which offer a high return but conceive less risk.

**Suggestions to Government & Policy Makers**

On a strategic level, the following crucial points have to be adopted as a hands-on remedial measure at both the state and centre government policy formulation level. These measures can strengthen the agriculture from the micro to macro level
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- The government must encourage the productivity of agriculture and horticulture crops that can bridge the present yield gap.
- The government may campaign to instil the need for mixed farming and other farm-based interventions.
- Promote hi-tech agriculture.
- Promote farmers participation in agri-business ventures.
- Identification and conversion of fallow lands into cultivable lands.
- The government must strictly restrict the conversion of fertile land into other non-agriculture farmers by recommending suitable and profitable cropping.
- The government may provide for assistance in farm mechanisation.
- Promote R&D to know the apt farming method to be adopted in a particular locality.
- Educational and training programs can be held to impart the awareness about the support price mechanism, public distribution channels, financial incentives, etc.
- There must be a remotely accessible help desk for a fast commencement of farming.
- Promote zonal/region-wise crop specific strategies.
- Loans and subsidies provided to the farmers must be observed.
- Research on how to improve energy efficiency in a farm operation with available agricultural infrastructure
- Strengthen government initiative like ATMA, Crop insurance schemes etc…
- Promote awareness campaign to encourage youth population to take farming as a primary job option by providing more subsidies and financial exclusively to youth.

Suggestions to Household Farmers

- Practice the best available cropping methods by the soil quality, seasonal fluctuation and natural calamity vulnerability.
- Make use of all the financial aids, hands-on training, distribution centres offered by the government or government tied-up institutions.
- Household farmers can walk-in to the agriculture research institutes nearby to discuss the actual problem existing in their locality.
Abstract

- Diversifying the cultivation through high-value horticulture and commercial crops can ensure the food and nutritional security.
- Adapt to integrated farming, diversified farming, crop rotation, dryland farming and crop diversification to reduce the risk of investment loss.
- There must be a balanced investment in crops according to the soil quality and other favourable factors to increase Return on Investment.
- Crop diversification must be regarded as the best alternative.
-Farmers must consider agriculture as the full-time dedicated job rather than as a parallel income source.

Directions for the future Research

The scope for the future research remains robust since the present research has been conducted with the specific objectives. In this study, the researcher has analysed only the limited variables like Investment Size, Investment Preference, Investment Decisions and Investment Risk refer by consideration of the growth of the agricultural sector. The study can be completed focusing on the macro level of agriculture statistics economics statistics if available.

- Applications of the study can be extended to other parts of Kerala State as well.
- Apart from agriculture growth perception as a dependent variable, economic growth can also be included.
- Sample size can be enlarged in the same study to understand the depth of agriculture growth perception.
- A panel Data Modelling can be developed to study the secondary data relating to the Malabar Region in particular, and it can be extended to the rest of India as well.
- The same study can be carried out in a better way with multiple group perception (gender-wise) if the sample size balances between the gender groups.