



Factors Responsible for Livelihood Diversification of Unirrigated Farmers

Sathyapriya Eswaran¹ and Asokhan Murugan^{1*}

¹*Department of Agricultural Extension and Rural Sociology, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.*

Authors' contributions

This work was carried out in collaboration between both authors. Author SE designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Author AM is a chairman and helped to design the methodology and carried out the article corrections. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2019/v31i430140

Editor(s):

(1) Dr. Zhao Chen, Department of Biological Sciences, College of Agriculture, Forestry and Life Sciences, Clemson University, USA.

Reviewers:

(1) Juvy G. Mojares, Batangas State University, Philippines.

(2) Juliet Libanda, Jiangsu University of Science and Technology, China.

Complete Peer review History: <http://www.sdiarticle3.com/review-history/48340>

Original Research Article

Received 15 January 2019

Accepted 06 April 2019

Published 15 April 2019

ABSTRACT

Livelihood diversification is the process by which households construct a diverse portfolio of activities and social support capabilities for survival and in order to improve their standard of living. Farmers were shifting their occupation from one to another because of several reasons. Hence, this study was undertaken with the objective to elucidate the factors responsible for the occupational change of agrarians. The study was conducted in the western zone of Tamil Nadu, with a sample size of 120. The samples were drawn by using purposive sampling method. The factors were collected from relevant literature, farmers, extension personnel and scientists and finally, the collected items were sent for the judge's opinion. Based on the judges rating the valid items were selected and used for interview schedule construction. The information was gathered by using a pretested well-structured interview schedule. The respondents asked for responding to each and every factor based on the nature of influence. The calculated index score was ranked to identify the higher influencing factors for livelihood diversification of agrarians. Notable findings of the study were, production factors contributed vastly for agrarian's livelihood change among all other categories either pushing or pulling the respondents.

*Corresponding author: E-mail: masokhan@gmail.com;

Keywords: Livelihood; diversification; occupation; factors; index.

1. INTRODUCTION

Agriculture is the main occupation in India, but the area under agricultural activity and the person's involvement towards agricultural occupation was reduced over the period of time. The shift in occupational pattern from the primary sector to the secondary and tertiary sectors or a shift in the origination of income from agriculture to industry and the tertiary sector is considered to be a natural process of economic development. Thus, diversification is considered to be a movement to a better state than the existing one.

Livelihood diversification as an individual or household level strategy does not fit well into the conventional picture. Diversification may be a strategy for survival or accumulation [1]. Livelihood diversification is the process by which households construct a diverse portfolio of activities and social support capabilities for survival and in order to improve their standard of living. It is an infinitely heterogeneous process differentiated in its causes and effects [2].

In addition, livelihood diversification is an effective way of solving the problems caused by poverty and environmental degradation. Therefore, livelihood diversification can be used as an efficient indicator to evaluate the success and sustainability of the rural community, which is, for instance, true in China [3].

Irrigated farmers defined as the farmers have irrigation facility for crop cultivation. Simply garden land holders was noted as irrigated farmers in this study.

Push factors can be derived as the factors which are all pushing the respondents to go out of the traditional practices. Push factors are not rigid in nature, it varies across specificity. Push factors are the pathway for finding up of new dimensions of opportunities. It could be simply depicted as "The impulse we have, the response we give". Pull factors could be derived as the factors which are all responsible for pulling up or attracting people towards the newer dimensions or opportunities. Pull factors should prick the minds towards the newer dimensions. Pull factors will provide hope for success.

2. REVIEW OF LITERATURE

Ellis [2] revealed that livelihood and profits are not the same, but are strongly related because individual and familiar structure and level of

benefits will determine the access to these means of income and will convert them into better-off.

High population growth resulting from high fertility rates, shrinking farm sizes and growing landlessness in sub Saharan Africa could have potentially negative impact on rural welfare and food security and by de-fault pushing unskilled farm labour into mainly low-return nonfarm sectors [4-6].

Amare and Belaineh [7] reported that in Ethiopia at a national, regional and household levels the focus of policy is to increase agricultural productivity and farm income so as to attain food self - sufficiency. In spite of this fact, farmers are engaged in a variety of off and/or non-farm activities to diversify their income with a view to feed and sustain themselves during crop failures.

Phillipo et al., [8] found that smallholder farmers use a variety of practices to adapt to climate variability and change. These practices include crop and livestock management, diversification of livelihood strategies and land use management [8].

Kassie [9] reported that institutional factors such as secured perception of land ownership and becoming membership in cooperatives have significant influence on the probability of farm households' participation in non-agricultural activities.

Based on the above review evidence recently farmers are shifting their occupation from one to another because of several reasons. This paper deals with the factors responsible for the farmer's livelihood change.

3. METHODOLOGY

The study was conducted in the western zone of Tamil Nadu, three districts were selected namely Coimbatore, Erode and Tirupur based on maximum area under agricultural operations. Gathering of in-depth knowledge, the study was carried in unirrigated condition with a sample size of 120. The samples were drawn by using purposive sampling method. The factors were collected from relevant literature, farmers, extension personnel and scientists and finally the collected items were sent for the judge's opinion. Based on the judge's ratings, the valid items were selected and used for interview schedule construction.

The information was gathered by using a pretested well-structured interview schedule. The respondents asked for responding to each and every factor based on the nature of influence. The influence interval is

S. No	Very Low	Low	Medium	High	Very High
1.	5	4	3	2	1

Finally calculates the influence intensity index by using the following formulae.

$$\text{Influence Intensity Index (III)} = \frac{\text{Sum of factors influence of each statement}}{\text{Total number of respondents}}$$

The calculated index score was ranked for elucidating the factors having a higher influence for livelihood diversification of agrarians.

4. FINDINGS AND DISCUSSION

This part deals with the various factors responsible for diversification among the respondents in the unirrigated area. The factors were classified into two categories i.e., 'push factors' and 'pull factors'.

The Push and Pull factors responsible for livelihood diversification of farmers collected were classified as production factors, economic factors, marketing factors and social factors as in the table. The respondents were asked to express the factors responsible for their diversification. The information gathered from the respondents was analyzed and tabulated as below.

4.1 Push Factors Responsible for Livelihood Diversification

4.1.1 Production factors responsible for livelihood diversification

The collected responses related to production factors were analysed and presented in the following Table 1.

From Table 1, the influence intensity index indicate that poor irrigation facility (4.37), labour scarcity (3.99), high wage rate of labour (3.45), lack of advisory service (3.24), high hiring charge of farm implements (3.20) and high incidence of pest and diseases(3.00) were the major contributing push factors for livelihood diversification.

The factors like lack of training facility (2.94), lack of storage facility (2.89) and variation in seasonal rainfall (2.86) were influenced moderately. Remaining factors such as unfavourable agro-

climate (2.84), small land holdings (2.82), lack of input supply (2.71), inadequate processing and value addition unit (2.69), fragmented land holdings (2.57), lack of insurance facilities (2.55) and inadequate resource availability (2.47) were slightly influencing the farmers to change their regular occupation.

Unirrigated farming system solely depends on rainfall as a major source of irrigation, but climatic variation caused the adverse effects such as unseasonal rainfall, declined rainfall amount, temperature and humidity variation. These effects affect the crop cultivation practices in the unirrigated area and also induced the new pest and diseases emergence. Hence, the unirrigated respondents felt poor irrigation facility, pest and diseases incidence as the major contributing factors for livelihood change.

Another notable issue in the study area was industrialization, the industries attract the majority of the people by providing transport facility, food, holidays and high wages than agricultural wages. As a result, people move from agricultural labour to industrial worker, this fact indirectly led to labour demand and higher wages for agricultural operations. These might be the reasons for the majority of the unirrigated respondents quite the agricultural work and move towards other attractive income-oriented business.

In some cases, the own family members alone managing the farm activity. In this situation lack of time, they were not attending the training properly. Besides, the time of training and facility also not suitable to participate. It would lead to attitudinal change among the irrigated growers about farming.

Mostly in the unirrigated area, doesn't have a storage facility, thus the farmers unable to store

products for the long term. This also one of the reasons for an occupational change.

Due to rainfall failure, unirrigated land holders unable to do any timely farm operations, it led to yield reduction or crop failure. At the time the farmers expected the crop insurance facility to overcome the agricultural risk but poor crop insurance facility deviate the farmers from agricultural dependence.

The inadequacy of agro-industries in the nearby area also influenced the respondents to divert entire agricultural operations. Aberration of joint family to the nuclear family type of living hints land fragmentation. Due to small land size, the farmers faced hurdles in getting loan and inputs and also received small returns. These might be the reasons for the occupational change of respondents.

4.1.2 Economic factors responsible for livelihood diversification

The collected responses related to economic factors were analysed and presented in the following Table 2.

It could be seen from the above table that lack of credit facility (3.04), increased the cost of cultivation (2.93), increased family expenditure (2.71) and poor asset base (2.63) were influenced highly. The remaining factors were asset deterioration (2.46), substantial income fluctuation (2.29), inadequate farm output (2.17) marginally influenced.

Regarding economic factors, the unirrigated respondents perceived that credit agencies were not focusing much on the development of unirrigated farming. Due to the stringent rules and regulations to avail loan from credit agencies, the respondents not able to do the agricultural practices in a timely manner. These facts would lead to yield reduction and poor outcome.

Higher wages, labour shortage, higher input cost have increased the cost of cultivation. Therefore, the small landholders incapable to overcome those problems and warrant to quite the agriculture and go for blue collar jobs in the nearby city. Modernization increased family expenditure and

change the people mentality. Hence, the income earned from farming not satisfy the family needs of farmers it pushes the people to do high earning jobs.

4.1.3 Marketing factors responsible for livelihood diversification

The collected responses related to marketing factors were analysed and presented in the following Table 3.

Table 3 revealed that the high influencing factors were less market price of commodity (3.18), poor transport facility (2.99), lack of marketing infrastructure (2.87) and middlemen involvement (2.9). The least influencing factors for livelihood change were market distance (2.68), inadequate processing facility (2.64), excessive product availability (2.40) and poor consumer preferences (2.33).

With respect to marketing factors, the respondents pushed towards a non-agricultural activity or commercial crop cultivation because of less product price. This might be due to the fact that minimum support price not fixed to all the commodity. However, price fluctuation, consumer preference and market demand of commodity also influenced the decision-making behavior of respondents about crop selection. Owing to higher input cost, the farmer could not get higher income recently. The above circumstances, farmer's pushed to do another attractable income-oriented business activity.

4.1.4 Social factors responsible for livelihood diversification

The collected responses related to social factors were analysed and presented in the Table 4.

Table 4 showed that the push factors for livelihood diversification of respondents such as health status (3.24), joint decision by family members (3.03), working age of family members (2.87), family type (2.86), elevation in choosing nonfarm wage strategy (2.78), fear of risk taking (2.76), guilty feel about the business (2.75), poverty (2.75), societal factors (2.74), lack of rural infrastructure (2.65), lack of awareness about new inventions (2.61), exposed risk coping strategy (2.60), less support from family members (2.47), population growth (2.47) and disasters (2.41).

From the result, all the factors were contributing to change the respondent's livelihood strategy. At present, the middle and old age group of respondents only depended much on agriculture than the young age group. Hence, due to the health constraints, the middle and old aged respondent's involvement in agricultural activity was reduced over the time period.

Lack of agricultural labours led to do the farm activity by themselves, but the reality the family members are dispersed where for either work or studies. During the time the household members desired to leave agriculture.

The other societal factors like wealth, family status, guilty feel about farming, less support and pressure also influenced to change their work. Disasters like flood also induced the farmers to move less risk-oriented jobs. In general, nowadays farmers were expected to live a sophisticated life with fewer risk jobs, so leave the agricultural venture and joined the blue collar jobs in companies and industries.

4.2 Pull Factors Responsible for Livelihood Diversification

4.2.1 Production factors responsible for livelihood diversification

The collected responses related to production factors were analysed and presented in the following Table 5.

From Table 5 major influencing pull factors were the low level of water consumption (3.18), agriculture mechanization (3.10) and booms in the oil sector (3.08). During the survey notified that the climatic variation might be the reason for low water consuming crop cultivation among the unirrigated respondents.

Availability of farm inputs (2.82), low pest and disease occurrence (2.70), easy farm operation related business emergence (2.69), excess training facility (2.66), resource availability (2.64), newly affordable technology emergence (2.63) were influencing at medium level diversification. Introduction of farm implements and tools for various cultural operations and processing would be the reason for crop change among the respondents. Also, Large scale development of oil industries might be the reason for increased oil crop cultivation in the unirrigated area.

The low-level influencing push factors for livelihood diversification such as export potential

oriented business (2.59), accessibility of business inputs (2.57) and availability of advisory services (2.42). Based on the accessibility of farm inputs, low pest and disease prone crops, nature of farm operations were the deciding factors for crop selection among the respondents.

4.2.2 Economic factors responsible for livelihood diversification

The collected responses related to economic factors were analysed and presented in the Table 6.

A perusal of Table 6 majority of the respondents felt that the attractive income from livestock (3.17), farmer and farm worker strategy (3.13), mixed strategy (3.11), less cost with increased remuneration (2.99), storage facility (2.89), excess credit availability (2.85), high price for specific commodity (2.83), group activity (2.83), better relative returns (2.76), income rise motivation (2.76) were the major pull factors for diversification. The remaining factors such as full-time farmer strategy (2.68), value addition unit (2.58) influenced moderately to the diversification.

The farmers were pulled for livelihood diversification by high remunerative business, daily income based activity and high income-oriented business in many cases. In some extent, the respondents pulled by infrastructure facility, market avenues, integrated business orientation and input availability. Hence, for overcoming agricultural risk and tackle the family problems the respondents look upon the less risk-oriented ventures and activities.

4.3 Marketing Factors Responsible for Livelihood Diversification

The collected responses related to marketing factors were analysed and presented in the following Table 7.

Table 7 revealed that market demand (3.07), availability of various marketing opportunities (2.94), storage facility (2.82), commodity-based approaches (2.66) and product perishability (2.60) were influencing majorly. The moderate influencing pull factors were demand in value-added preferences (2.57), high market competition (2.55), demand in processing industry (2.53) and consumer preference (2.50).

Table 1. Production factors responsible for livelihood diversification

S. No	Push factors	Very low		Low		Medium		High		Very High		Influence Intensity Index (III)	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Poor irrigation facility	0	0.00	6	0.05	4	0.03	34	0.28	76	0.63	4.37	1
2.	Labour scarcity	0	0.00	14	0.12	18	0.15	31	0.26	57	0.48	3.99	2
3.	High wage rate of labour	14	0.12	9	0.08	23	0.19	44	0.37	30	0.25	3.45	3
4.	High hiring charges of farm implements	18	0.15	13	0.11	13	0.11	56	0.47	20	0.17	3.20	5
5.	High incidence of pest and disease	28	0.23	9	0.08	16	0.13	54	0.45	13	0.11	3.00	6
6.	Lack of input supply	23	0.19	26	0.22	12	0.10	41	0.34	18	0.15	2.71	12
7.	Variation in seasonal rainfall	23	0.19	12	0.10	13	0.11	50	0.42	22	0.18	2.86	9
8.	Unfavourable agro climate	16	0.13	11	0.09	21	0.18	41	0.34	31	0.26	2.84	10
9.	Lack of advisory service	13	0.11	16	0.13	19	0.16	49	0.41	23	0.19	3.24	4
10.	Lack of training facility	24	0.20	3	0.03	34	0.28	39	0.33	20	0.17	2.94	7
11.	Lack of storage facility	13	0.11	21	0.18	20	0.17	44	0.37	22	0.18	2.89	8
12.	In adequate processing and value addition unit	12	0.10	22	0.18	27	0.23	38	0.32	21	0.18	2.69	13
13.	Lack of Insurance facilities	14	0.12	18	0.15	29	0.24	36	0.30	23	0.19	2.55	15
14.	Inadequate resource availability	28	0.23	16	0.13	19	0.16	33	0.28	24	0.20	2.47	16
15.	Fragmented land holdings	14	0.12	12	0.10	19	0.16	51	0.43	24	0.20	2.57	14
16.	Small land holdings	9	0.08	22	0.18	22	0.18	38	0.32	29	0.24	2.82	11

Table 2. Economic factors responsible for livelihood diversification

S. No	Push factors	Very low		Low		Medium		High		Very High		III Influence Intensity Index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Lack of credit facility	6	0.05	20	0.17	17	0.14	41	0.34	36	0.30	3.04	1
2.	Increased cost of cultivation	3	0.03	12	0.10	27	0.23	63	0.53	15	0.13	2.93	2
3.	Increased family expenditure pattern (Food, Clothing, Housing , Education, Medical, Social, Religious activities, Recreation)	52	0.43	7	0.06	6	0.05	38	0.32	17	0.14	2.71	3
4.	Poor asset base	18	0.15	27	0.23	17	0.14	48	0.40	10	0.08	2.63	4
5.	Asset deterioration	7	0.06	32	0.27	20	0.17	48	0.40	13	0.11	2.46	5
6.	Substantial income fluctuation	13	0.11	20	0.17	38	0.32	34	0.28	15	0.13	2.29	6
7.	Inadequate farm output	16	0.13	15	0.13	26	0.22	43	0.36	20	0.17	2.17	7

Table 3. Marketing factors responsible for livelihood diversification

S. No	Push factors	Very low		Low		Medium		High		Very High		Influence Intensity Index (III)	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Lack of marketing infrastructure	3	0.03	20	0.17	24	0.20	47	0.39	26	0.22	2.87	3
2.	Less market price for the product/commodity	17	0.14	23	0.19	12	0.10	49	0.41	19	0.16	3.18	1
3.	Poor transport facility	18	0.15	8	0.07	36	0.30	43	0.36	15	0.13	2.99	2
4.	Inadequate processing facility	14	0.12	9	0.08	31	0.26	50	0.42	16	0.13	2.64	6
5.	Market distance	20	0.17	18	0.15	23	0.19	44	0.37	15	0.13	2.68	5
6.	Middle men involvement	16	0.13	15	0.13	21	0.18	52	0.43	16	0.13	2.69	4
7.	Excessive product availability	20	0.17	20	0.17	21	0.18	35	0.29	24	0.20	2.40	7
8.	Poor consumer preferences	18	0.15	19	0.16	30	0.25	29	0.24	24	0.20	2.33	8

Table 4. Societal factors responsible for livelihood diversification

S. No	Push factors	Very low		Low		Medium		High		Very High		III Influence Intensity Index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Lack of awareness on new inventions	10	0.08	21	0.18	18	0.15	44	0.37	27	0.23	2.61	11
2.	Fear of risk taking	3	0.03	22	0.18	16	0.13	58	0.48	21	0.18	2.76	6
3.	Family type	19	0.16	5	0.04	33	0.28	41	0.34	22	0.18	2.86	4
4.	Health status	20	0.17	16	0.13	22	0.18	41	0.34	21	0.18	3.24	1
5.	Family members decision	19	0.16	9	0.08	31	0.26	35	0.29	26	0.22	3.03	2
6.	Lack of rural infrastructure	23	0.19	25	0.21	24	0.20	28	0.23	20	0.17	2.65	10
7.	Poverty	23	0.19	10	0.08	33	0.28	35	0.29	19	0.16	2.75	7
8.	Disasters	25	0.21	23	0.19	27	0.23	37	0.31	8	0.07	2.41	15
9.	Population growth	28	0.23	21	0.18	29	0.24	34	0.28	8	0.07	2.47	13
10.	Ex post risk coping strategy	21	0.18	14	0.12	20	0.17	42	0.35	23	0.19	2.60	12
11.	Societal factors	11	0.09	31	0.26	21	0.18	40	0.33	17	0.14	2.74	9
12.	Working age of family members	5	0.04	18	0.15	33	0.28	51	0.43	13	0.11	2.87	3
13.	Elevation in choosing nonfarm wage strategy	14	0.12	14		31	0.26	37	0.31	24	0.20	2.78	5
14.	Guilty feel about the business	15	0.13	22		22	0.18	45	0.38	16	0.13	2.75	7
15.	Less support from family members	22	0.18	13		31	0.26	30	0.25	24	0.20	2.47	13

Table 5. Production factors responsible for livelihood diversification

S. No	Pull factors	Very low		Low		Medium		High		Very High		III Influence Intensity Index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Low level of water consumption	3	0.03	16	0.13	15	0.13	39	0.33	47	0.39	3.18	1
2.	Agriculture mechanization	5	0.04	23	0.19	14	0.12	55	0.46	23	0.19	3.10	2
3.	Availability of Farm inputs/implements	18	0.15	24	0.20	41	0.34	31	0.26	6	0.05	2.82	4
4.	Low pest and disease occurrence	22	0.18	17	0.14	34	0.28	40	0.33	7	0.06	2.70	5
5.	Availability of advisory services (ICT enabled)	21	0.18	32	0.27	34	0.28	22	0.18	11	0.09	2.42	13
6.	Export potential oriented business	22	0.18	28	0.23	35	0.29	26	0.22	9	0.08	2.59	11
7.	Excess training facility	27	0.23	32	0.27	22	0.18	31	0.26	8	0.07	2.66	7
8.	Resource availability	33	0.28	17	0.14	31	0.26	27	0.23	12	0.10	2.64	9
9.	New affordable technology emergence	27	0.23	19	0.16	27	0.23	29	0.24	18	0.15	2.63	10
10.	Dynamic agricultural environment	24	0.20	21	0.18	25	0.21	35	0.29	15	0.13	2.66	7
11.	Easy farm operation related business emergence	16	0.13	24	0.20	20	0.17	35	0.29	25	0.21	2.69	6
12.	Accessibility of business inputs	12	0.10	17	0.14	31	0.26	35	0.29	25	0.21	2.57	12
13.	Booms in oil sector	11	0.09	16	0.13	32	0.27	22	0.18	39	0.33	3.08	3

Table 6. Economic factors responsible for livelihood diversification

S. No	Pull factors	Very low		Low		Medium		High		Very High		III Influence intensity index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Less cost with increased remuneration	4	0.03	22	0.18	28	0.23	50	0.42	16	0.13	2.99	4
2.	High price for specific commodity	8	0.07	32	0.27	27	0.23	41	0.34	12	0.10	2.83	7
3.	Excess credit/subsidy facility	23	0.19	18	0.15	46	0.38	24	0.20	9	0.08	2.85	6
4.	Group activity	24	0.20	30	0.25	32	0.27	24	0.20	10	0.08	2.83	7
5.	Storage facility	24	0.20	20	0.17	42	0.35	23	0.19	11	0.09	2.89	5
6.	Value addition/Processing unit	20	0.17	23	0.19	33	0.28	36	0.30	8	0.07	2.58	12
7.	Better relative returns	17	0.14	31	0.26	29	0.24	27	0.23	16	0.13	2.76	9
8.	Income rise motivation	11	0.09	25	0.21	22	0.18	51	0.43	11	0.09	2.76	9
9.	Full time farmer strategy	24	0.20	22	0.18	32	0.27	25	0.21	17	0.14	2.68	11
10.	Farmer and farm worker strategy	19	0.16	23	0.19	35	0.29	26	0.22	17	0.14	3.13	2
11.	Mixed strategy	22	0.18	19	0.16	28	0.23	35	0.29	16	0.13	3.11	3
12.	Attractive income from livestock	11	0.09	15	0.13	23	0.19	42	0.35	29	0.24	3.17	1

Table 7. Marketing factors responsible for livelihood diversification

S. No	Pull factors	Very low		Low		Medium		High		Very High		III Influence Intensity Index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Availability of various marketing opportunities	8	0.07	15	0.13	33	0.28	40	0.33	24	0.20	2.94	2
2.	Market demand	5	0.04	29	0.24	22	0.18	49	0.41	15	0.13	3.07	1
3.	Storage facility	25	0.21	18	0.15	31	0.26	38	0.32	8	0.07	2.82	3
4.	Product perishability	30	0.25	12	0.10	33	0.28	33	0.28	12	0.10	2.60	5
5.	High market competition	20	0.17	17	0.14	33	0.28	34	0.28	16	0.13	2.55	7
6.	Commodity based approaches	22	0.18	19	0.16	31	0.26	37	0.31	11	0.09	2.66	4
7.	Demand in processing industry	22	0.18	19	0.16	34	0.28	35	0.29	10	0.08	2.53	8
8.	Demand in value added preferences	15	0.13	20	0.17	27	0.23	49	0.41	9	0.08	2.57	6
9.	Consumer preference	11	0.09	27	0.23	38	0.32	33	0.28	11	0.09	2.50	9

Table 8. Societal factors responsible for livelihood diversification

S. No	Pull factors	Very low		Low		Medium		High		Very High		III Influence Intensity Index	Rank
		No.	%	No.	%	No.	%	No.	%	No.	%		
1.	Social recognition	19	0.16	22	0.18	25	0.21	42	0.35	12	0.10	2.87	1
2.	Less risk	6	0.05	30	0.25	28	0.23	40	0.33	16	0.13	2.83	2
3.	Improved social status	16	0.13	31	0.26	26	0.22	41	0.34	6	0.05	2.76	4
4.	High exposure	24	0.20	31	0.26	27	0.23	35	0.29	3	0.03	2.81	3
5.	Specific work knowledge	24	0.20	21	0.18	28	0.23	39	0.33	8	0.07	2.66	5
6.	development policy	18	0.15	36	0.30	35	0.29	22	0.18	9	0.08	2.34	7
7.	Socio cultural system	28	0.23	37	0.31	33	0.28	17	0.14	5	0.04	2.34	7
8.	Social cohesion	10	0.08	47	0.39	26	0.22	37	0.31	0	0.00	2.33	9
9.	Work experiences	35	0.29	35	0.29	29	0.24	18	0.15	3	0.03	2.61	6

In any farming activity, the end result was marketing of product either raw or processed. The respondents were pulled by enormous marketing facilities and approaches. Because the respondents were expected the higher returns. Farmers oriented towards demand-based crop selection and value addition for reducing the product wastage. Thus, might ensure the farmers from low price risk and motivated as an agripreneur.

4.4 Societal Factors Responsible for Livelihood Diversification

The collected responses related to societal factors were analysed and presented in Table 8.

From the social-oriented factors, social recognition (2.87), less risk (2.83), high exposure (2.81), improved social status (2.76), specific work knowledge (2.66) and work experiences (2.61) were pulling the farmers majorly to extend the farm activities, and also the factors such as development policy (2.34), socio-cultural system (2.34) and social cohesion (2.33) contributing to the livelihood change.

Recent times prestigious issue, social status among colleagues were majorly pulling the farmers to take over the high income-oriented business activity. The training facility, exposure and farmer's previous experiences also pull the respondents towards the extent traditional activity. Besides, social cohesion stimulated the farmers to cultivate the same crop in a region.

5. CONCLUSION

The study concluded that the livelihood diversification is possible and essential to saving the crumbling agriculture economy and environment. There is a claim that diversification tends to stabilize farm income at a higher and higher level when the pattern of diversification is such as to accommodate more and more rewarding crops. This is particularly important for small farmers who strive to make their farms viable.

In several circumstances, diversification is needed to restore the degraded agricultural base or to enhance the value of agriculture. In several instances, cropping systems had been diversified or new cropping systems had been introduced to retain or to enhance the value of farm activity.

Farm diversification is helpful for the sustainability of agriculture. The ultimate goal of sustainable agriculture is to conserve agriculture and to enhance the health and safety of farmers over a long period.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Hart Gillian. The dynamics of diversification in an Asian Rice Region. Lynne Rienner Publishers Inc., USA; 1994.
2. Ellis F. Household strategies and rural livelihood diversification. *Journal of Development Studies*; 1998.
3. Liu Z, Liu L. Characteristics and driving factors of rural livelihood transition in the east coastal region of China: A case study of suburban Shanghai. *Journal of Rural Studies*. 2016; 43:145–158.
DOI: 10.1016/j.jrurstud.2015.12.008
4. Haggblade S, Hazell PB, Reardon T. (Eds.). Transforming the rural nonfarm economy: Opportunities and threats in the developing world. Baltimore, MD: Intl Food Policy Res Inst. John Hopkins University Press; 2007.
5. Headey DD, Jayne TS. Adaptation to land constraints: Is Africa different? *Food Policy*, 2014;48:18–33.
DOI: 10.1016/j.foodpol.2014.05.005
6. Muyanga M, Jayne TS. Effects of rising rural population density on smallholder agriculture in Kenya. *Food Policy*. 2014;48: 98–113.
DOI: 10.1016/j.foodpol.2014.03.001
7. Amare Demissie, Belaineh Legesse. Determinants of income diversification among rural households: The case of smallholder farmers in Fedis district, Eastern Hararghe Zone, Ethiopia. *Journal of Development and Agricultural Economics*. 2013;5(3):120-128.
8. Phillip F, Bushesha M, Mvena ZS. Adaptation strategies to climate variability and change and its

- limitations to smallholder farmers. A literature search. Asian Journal of Agriculture and Rural Development. 2015; 5:77–87.
Available:<https://doi.org/10.18488/>
9. Kassie GW. Agroforestry and land productivity: Evidence from rural Ethiopia. Cogent Food & Agriculture. 2016;2: 1259140.
DOI: 10.1080/23311932.2016.1259140

© 2019 Eswaran and Murugan; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<http://www.sdiarticle3.com/review-history/48340>