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Women Farmer Participation and Its Determinants in Agricultural Training Programmes, for Central Division Fiji

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Abstract
The primary purpose of this paper is to recognise the essential factors that contribute to women farmer involvement in training events which, was used to determine significant independent variables for the five provinces of Central Division Fiji adding to 120 women farmers. The sampling was done in concern with any form of training provided in the agricultural, animal and crop sector alike. Considering the independent variables used to indicate the significant contributing factors influencing women participation in training, Marital status, age, tertiary education, extension services, access to market and the size of owned land played active roles. More interestingly, the variables that played insignificant influencers were the number of family members in the farmer household and the reason for farming. A logit analysis was used to display the results of significant and insignificant determining variables. Thus, the overall understanding of these variables through this study carried out in Fiji can lead to better decision making in regards to training programmes for women farmers and consequently producing positive agricultural development in Fiji which can become an efficient tool for agricultural ministry. Moreover, better agricultural policies for women farmers can be adopted based on their determinants to agricultural involvement.
Keywords: Training programmes, women farm, participation, agriculture, gender and Fiji.
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Introduction

Fiji obtained its independence in the year 1970 after being ceded to the British Empire in the year 1874. Preceding to colonisation, iTaukei (native Fijians) women and men together contributed to production systems, while gaining influence and rank conferring to their contribution (McKinnon et al., 2016). However, later on, once the cash economy was introduced, it led to a substantial shift in gender relations, where men attained power and status through their involvement in the cash economy. In disparity, women had to absorb traditionally shared subsistence and caregiving activities. Hence, they became burdened excessively with work tasks and less involved in significant domestic and community-level decision making (Yabaki 2006). In the year 1879, the first indentured labourers arrived in Fiji from India, resulting in the current two affiliation ethnicities in Fiji. In the year 1987, the county held its first democratic elections. However, soon after followed two coups in the same year.

The expected progress through a democratic country on gender equality and socio-economic growth was brought to a halt. Hence, the two military coups had resulted in the deterioration of women's economic, political, and social status while threatening their potential to achieve equality with men (Lateef 1990). Despite the coup, Fiji has from the early 1990s had an increasing number of women that entered the labour sector through the manufacturing industry, in particular, garment factories. The number of self-employed women had also increased. Income-generating activities such as farming, market-gardening, fishing and reef-gleaning, craft production, retail outlets and food vending were amongst the self-employment sectors. Many of these women were self-made, having received no capital or training assistance (Booth and Balakrishnan 1999).

The next political instability occurred in the year 2000. On May 19th, the political uneasiness within the country came into light, throwing the economy back on its growth (Chand 2000). The instability revealed the costs incurred by the erosion of Fiji's stock of social capital. As the attempts to improve the rights of women, environmental sustainability, and youth welfare had occurred, a mutual vision of the national public good remained elusive (Alley 2001). As the country went through new elections, yet again another coup took place in the year 2006. However, this coup appeared to be different from previous coups as there was a commitment to uphold law and order by the interim Government (Chand 2009). In 2013, the Constitutional Bill of Rights recognised the Government's commitment to gender equality through Section 26 on Rights to Equality and Freedom from Discrimination, which prohibits discrimination on the grounds of sex, gender, sexual orientation, gender identity and expression, marital status, or pregnancy (ADB, 2016).

The interim Government continued until the year 2014 when Fiji held democratic elections. Fiji further progressed in women development: according to Fijian gender outlook, Fiji has made considerable progress in recognising gender issues and towards gender and development (Vuki and Vunisea 2016). According to the World Bank Women, Business and Law 2016, "Fiji adopted a new constitution which no longer recognises customary

law as a source of law" (World Bank 2015). Thus, further progressing towards non-discrimination, especially in the sectors of Farming. However, the series of coups have greatly influenced the development and living standards of the country and women empowerment. It is noted that each coup had pushed the economy back to some three years in terms of per capita income, more importantly, all of the past four coups have contributed to the erosion of governance and thus weighed heavily on the rate of growth of the economy Chand (2009), resulting in poverty. It is recognised that the households headed by females, disabled, elderly or other disadvantaged groups are usually lacking labour resources from family and community support, and naturally, these households are the ones which are the most food insecure and vulnerable (Mackay and Horton 2003).

Moreover, even though agriculture has been recognised as a fundamental driver of economic growth and poverty reduction as well as an investment opportunity, the revitalisation of this sector fails partly because women's roles and gender inequalities are overlooked (Manfre, Rubin, Allen, and Summerfield 2013). It is also noted that most of the Fijians remain as subsistence farmers and, notably, many of which are females. As identified in the 2009 Agriculture Census: of the 216,438 farmworkers; approximately 64,000 are female with about 62.5% not receiving remuneration (Ministry of Agriculture 2009). Thus, it becomes of utmost importance that training should be provided for uplifting women farmers not only economically but also in a social context. Hence, the call for this research in the participation of training with prior considerations on needs and challenges faced by women farmers in attending training programmes highlighting on significant influencers which are achieved through logit analysis. Additionally, the results shall provide a pathway for consideration of significant variables hindering women participation leading to better designing of agricultural training programmes while increasing the success rate of participation in the central division of Fiji.

Agricultural training programmes for women farmers

Training is described as the improvement of the ability of an individual towards their occupation, making them more effective and efficient (Farinde & Ajayi, 2005) and this is closely related to the concept of is participation. As explained, "Participation in training always requires a deliberate action, for example, enrolling in a training programme or turning up to a venue at a set time. The training participant expects to receive new information, in the form of knowledge and/or skills" (Kilpatrick and Rosenblatt 1998); hence, the two terms complement each other. Correspondingly in case of agriculture, it is crucial to note that agricultural development programmes are seen as driving motors for poverty alleviation and agricultural growth. However, little is known how it is affected or affects differential access to assets for women and men (Meinzen-Dick et al. 2014). What is more, is that most of the agricultural development programmes focused on men and so to achieve gender equality requires rebalancing through increased focus on women. Nevertheless, the difference in gender roles, resources and responsibilities between women and men in different social class, ages and ethnicity needs to be adhered to when carrying out analysis and programming (Quisumbing et al. 2014).

Furthermore, when women farmers are associated with participation in training programmes, it is critical to note that research has shown that women training related to financial concerns help improve the household more than men training. In other words, the wellbeing of a rural household could primarily be improved even if only one family member in the household attends financial literacy training and has a savings account. However, a significantly higher level of wellbeing is achieved when that person is a woman (Jonathan Sibley and Jeff Liew 2009). Moreover, women entrepreneurship is widely acknowledged in the economic development of all countries, as there is an understanding that neglecting women in the development process leads to the underutilisation of human resources (Tibaijuka 1994). Hence, the development of women is a necessity, and one way of achieving these developments can be through the provision of training. Evolving women's technical and entrepreneurial skills is crucial, given the growing food demands, the varying context of agricultural trade and the changeable long-term effects of climate change (Njobe 2015). The integration of agricultural training with enterprise training can help smallholder women to market and manage their farm production more effectively while taking advantage of new opportunities (Collett and Gale 2009).

However, the commencement of farmer training and programme establishment is possibly one of the utmost significance, but so far it is also one of the most poorly understood areas of agriculture and food system research and practice (Niewolny and Lillard 2010). Examination of transfer of information issues requires a clear understanding of what is meant by transfer of information as well as the identification of factors that affect transfer (Timothy et al. 1988). Women, moreover, tend to have multiple reasons for attending an agricultural training, while men tend to have singular reasons (Kiernan et al. 2012). In the same manner, women also have different reasons affecting their access to agricultural training. Studies have also explained how women's various roles on the farm, including family duties, may affect their attendance and partaking in meetings (Ball 2019; Riley 1995).

It has was elaborated that realizing the potential of women in agriculture requires established public institutions and NGOs to comprehend the changing roles of women as well as their access to (i) education; (ii) market and information; and (iii), ownership and control of economic and natural resources (Watson 2008). It is has been further elaborated that "Recognising women's involvement in commercial crop production and ensuring

that they benefit from research, extension, credit, land tenure rights, market access and other elements of production, innovation and participation still requires a significant organisational shift in many agricultural services" (Rekha Mehra and Mary Hill Rojas 2008). However, even though participation can be empowering, but such changes can not only be solely brought by expertly designed programmes without targeted policy measures over a time horizon. While simultaneously, it should be noted that in no way does it diminish the significance of better-designed projects to meet women practical needs for basic services towards a progressive livelihood (Das 2014).

Gender gaps for women farmers in agriculture development

There are several reasons for the closing gender gap for both emerging and developed countries. One of which is that "Gender gaps are in themselves a violation of equity as they condemn a certain group of individuals, most notably women, to a situation of constant disadvantage purely as a result of their sex" (Klasen 2005). Seemingly, the issue of gender roles are determined socially and not biologically; it is a fluid concept that changes according to policies, norms, resources and context. Also, even though all societies are marked with gender difference, but it varies widely between different cultures (Quisumbing et al. 2014). Moreover, there are many differentials to gender gaps between man and women; this can be in terms of age, education, equal pay, employment, health, inheritance and political opinions and the existence of these gaps is a persistent reality across the world. Hence, to bridge the differential gap and establish effective policies, it is essential to explore their determinants.

Furthermore, these gender gaps are the source to the various challenges faced by women which triumph over the benefit gained through traditional or subsistence farming. For instances in cultural forms, women farmers, are not consistent entities as their roles are significantly influenced by factors such as religion, educational level, geography and age. These forms of social differences are amongst the things that hinder their farming abilities (Gawaya 2008). Likewise, rural women traditionally have suffered socio-cultural and economic discrimination and have had lesser opportunities in comparison to men for personal growth, education, and employment. In 2011, for Asia and the Pacific, only 36% of women aged 15 and over were in the employment sector (ADB, 2011). Shinbrot, Wilkins, Gretzel, & Bowser (2019) have also explained how patriarchal hierarchy acts as a constraint for women from leadership roles in sustainable development and this results in restriction for personal growth for women. As for education, illiteracy hinders women's liberty to opt for numerous choices to assert greater mobility in social interactions resulting into circumstances where women's involvement in agriculture and other sectors in the economy remain obscured and unaccounted (Prakash, 2003). "In fact, women's education is seen as one of the most effective channels for reducing inequalities between men and women that ensures maximum participation of women in the development process" (Chattier 2013).

In continuation, for many traditional societies, a woman's worth is measured in terms of her role as a mother and wife (Negusse et al., 2004). In other words, the marital status of women and its affiliation with productiveness on the farm becomes a contributing factor. Hence, individual women farmers marital status explains their unique challenges to farming, and as such is noted from a study carried out in rural Tanzania by Van Aelst & Holvoet, (2016). Furthermore, in reality, a woman's whole affiliation to farming is constructed through their route of entry and status within the farm family. Not only does it affect interpersonal relationships inside the family, but it additionally, affects the woman's role in the general area of farming (Shortall 2003). For instance, land ownership and space provided for farming plays a vital role in women farmer development. The property rights in owning land is a significant contributor towards access to other productive resources; most notably, it provides access to credit from banks. The other benefits that come with owning land include the rights for grazing livestock, the right to hire labour and access to water (Evers and Walters 2000). When there are restrictions to land ownership, it places limitations on the ability of women to have the independence to make decisions and develop into an economically autonomous individual. Thus, it continues to prevent women from alleviating gender inequities and obtaining independent livelihood resources (Chattier 2012).

Lastly, one of the most critical challenges faced lies in the provision of appropriate extension services. Despite extensive training offered, studies show a lack of women participation (Aref 2011; Mayoux 1995). There are several reasons for a woman's inability to participate, one of which is gender-sensitive extension policies. As it has been noted before, equal treatment does not necessarily mean equal benefits for women, as different approaches may be considered for different needs, times and productive activities (van Crowder et al. 1998). Likewise, it is essential to collaborate with household strategies between women and men. For instance, programmes that link agriculture extension with nutrition and health education or microcredit opportunities have been shown to be effective (Manfre et al., 2013). In some cases, women trained by female extension workers show more considerable improvement in participation, adoption, technical knowledge, awareness, quality and creditability of their farms (Lahai et al., 2007). In overall to achieve gender equality, the question lies in this context of whether women have control of available resources; whether they partake in use of and decisions surrounding the accrued benefits of increased production and income, and whether if the resources meet their priorities and requirements, will all determine whether the gender gap in agriculture is closed (Huyer 2016). Hence, the necessity

surrounding gender-based research, especially for Pacific island nations like Fiji that lack of data which is required for the development.

Methodology

Survey Area Description

The country of Fiji Islands is located in the pacific ocean and consists of four divisions Central, Eastern, Western and Northern. The Central Division is located on the mainland of Fiji known as Viti Levu. Within the Central Division resides the capital of Fiji, Suva. The Central Division has an estimated population of 378,284 people, including 188,260 females and 190,024 males (Fiji Bureau of Statistics 2018). The total area used for agriculture farms in the Central Division sums up to 45, 867.15 hectares. The hectares includes temporary crops, fallows, permanent crops, coconuts, pastures, natural forests, planted forests and not used agricultural land. The permanent crops (with scientific names) grown in the Central Division are banana *(Musa sapientum),* bele *(Abelmoschus Manihot),* breadfruit *(Artocarpus altilis),* chillies, cocoa *(Theobroma cacao)* (wet beans), coconut *(Cocos nucifera)* (copra) nuts, coriander *(Coriandrum sativum),* duruka *(Saccharum edule)*, lemon *(Citrofolia limon),* ota, passion fruit *(Passiflora edulis)*, pawpaw, pineapple *(Ananas comosus)*, plantain *(Musa balbisiana)*, rourou (taro leaves), voivoi *(Pandanus caricosus)* and yaqona *(Piper methysticum)* (Ministry of Agriculture 2009). This division is also known for commercial dairy, beef and poultry farming. There are five different provinces situated in the Central Division; these are Namosi, Serua, Rewa, Naitasiri and Tailevu. These provinces were used as sampling ground for women farmers in this study.

Sampling Procedure and Data Collection

Primary data for the study pertains to farm surveys done in the Central Division of mainland Fiji in February 2019. From the Central Division, all five provinces women farmers population was calculated through the listing received by the Ministry of Agriculture of Fiji which gathered up to 600 registered women farmers. Random sampling was done in five provinces, namely, Rewa, Tailevu, Naitasiri, Serua and Namosi. Moreover, twenty per cent of women farmers of each province were randomly selected, ten per cent of which were picked out of the trained women farmers and ten per cent out of the untrained women farmers.

The questionnaires were distributed randomly in each province through the help of the Ministry of Agriculture of Fiji. During the filling of the questionnaires, translators were present for both Indo-Fijian and iTaukei language. All questionnaires filled had only women present at the place of the interview to avoid any male influence in judgements. Additionally, the questionnaire had a declaration of anonymity attached regarding any personal information given. Hence, it provided a space for women farmers to express their opinions honestly.

Table 1. Sample Size Trained and Untrained Women Farmers in the Central Division of Fiji

Central Division	Blocks	Number of Farmers	10% of Selected Trained Participants	10% of Selected Untrained Participants
	Serua	84	8	8
	Namosi	67	7	7
	Rewa	184	18	18
	Tailevu	87	9	9
	Naitasiri	178	18	18
			60	60
	Total 600 farmers		Total 120 Participants Questioned	

Analytic Framework

In regression models, it has been implicitly assumed that the dependent variable or the Y variable is quantitative, while the explanatory variables are either quantitative, qualitative or dummy (Gujarati, 2009). In this regression model, the dependent or response variable is dichotomous or binary, taking a 1 or 0 value. For example, an untrained women farmer in the Central Division is either participating in the agricultural training programme or not. Thus, the dependent variable (participation in the agricultural training programme), can take only one of two values: 1, if the women farmer is a participant in the agricultural training programme, and 0, if she has not participated in any training programmes. The logistic regression model or the logit model is a qualitative choice model which is used to describe the relationship between a dependent variable and independent variables, and this usually when the dependent variable follows a Bernoulli probability distribution (Gujarati 2004; Gujarati and Porter 2009).

As stated by (Gujarati 2004), the basic underlying concept of the logit model is specified as:.

$$P_i = E(Y = 1 \mid X_i) = \beta_0 + \beta_1 X_i, \quad i = 1,2, \ldots, n$$

Where: $P_i = P(Y = 1|X_i)$ is the probability of the $_i$th farmer participating in the agricultural training programs and Y = 1 means women farmers participation; Y= 0 means women farmers not participating, X_i = explanatory

variables or independent variables, β_0 = the intercept, β_i = the corresponding coefficients and *n* is the sample size. Furthermore, participation in agricultural training programs can also be written as;

$$P_i = P(Y = 1|X_i) = \frac{1}{1+e^{(\beta_1+\beta_2 X_i)}}$$

Moreover, further simplified as:

$$P_i = \frac{1}{1+e^{-Zi}} = \frac{e^z}{1+e^z}$$

Where $Z_i = \beta_1 + \beta_2 X_i$. The equation represents what is called the (cumulative) logistic. Where Z_i ranges from - ∞ to + ∞; P_i ranges between 1 and 0. Also, P_i is non-linearly related to Z_i (i.e. X_i), and hence, meeting the two conditions essential for a probability, P_i is non-linear in both X and β parameters.

If P_i, the probability of a women farmer participating in a training programme, is given as before, then $(1 - P_i)$, the probability of a woman farmer not participating in a training programme can be given as:

$$1 - P = \frac{1}{1 + e^{Zi}}$$

Which can further be written as:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Zi}}{1 + e^{-Zi}} = e^{Zi}$$

P_i / (1- P_i) is noted to be the odds ratio that is in favour of women participating in agricultural training programmes. In simple terms, it is the ratio of the probability that a woman farmer in the Central Division will participate in an agricultural training programme to that of a probability of a woman farmer not participating in agricultural training programmes. Taking the natural log of the formula, we obtain:

$$L_{i=In}\left(\frac{P_i}{1-P_i}\right) = Z_i = \beta_0\, \beta_1 + \beta_2 X_2 + U_i$$

Where: Y (dependent variable) = Women farmer ‟ participation in the in agricultural training programmes (represented as: participation = 1; no participation as = 0).

$\ln\left(\frac{P_i}{1-P_i}\right)$ = log-odds are in favour of women participants in agricultural training programmes; P_i = probability of the $_i$th farmer.

Moreover, β_0 = the intercept parameter; β_i (β_1, β_2…β_n) = parameters to be estimated;

X_i = independent variables;

U = error term (Gujarati and Porter, 2009).

Analysis and results

Table 2. Different types of training attended by survey respondents

Types of Training	Frequency	Percentage	Cumulative
Farm mechanisation training	2	3.33	3.33
Farm Business management training	20	33.33	36.67
New agricultural practices and information	21	35	71.67
Others	17	28.33	100
Total	60	100	

Source: Field survey carried out in February 2019.

Among all of the training types, women attended to new agricultural practices and information training the most amounting to 35 per cent of the sample. The reason being is due to women wanting to increase productivity on their farms. However, it is very close to that of women who attended farm business management training which is 33.33 per cent. This was most likely attended by farmers to learn on the process of sales and marketing. On the contrary, very few (3.33 per cent) participated in farm mechanisation training. This is most likely due to machinery designing and operating system not being female user-friendly. Other forms of training, such as refresher training and follow up training, resulted in 28.33 per cent participation of women.

Table 3. Different types of training survey respondents proposed.

Types of Training	Frequency	Percentage	Cumulative
Farm Business management training	22	36.67	36.67
Agricultural farming practices and techniques	14	23.33	60
Training on new information and resources	24	40	100
Total	60	100	

Source: Field survey carried out in February 2019.

It is seen in table 3 that 40 per cent of women who did not participate in any form of training would highly

likely prefer to involve themselves in training on new information and resources. As gathered, this is due to the understanding of new resources and information, meaning better productivity in farms. Another 36.67 per cent of women farmers would like to attend farm business management training. The reason behind this was that farmers have excess produce in their farms; however, this does not necessarily mean that they know what is to be done to sell the excess produce. Hence, the vitality of attending these forms of training whereas 23.33 per cent of farmers would instead participate in training on agricultural farming practices and techniques. This was recommended by farmers in the effort to improve their farming methods in their fields in practical forms.

Logistic Regression

The logit table shows the significance of different independent variables tested. A reference base was used for categorical variables in the logit model through STATA analysis. The reference for the categorical variables, Marital status was Single, for Age was from the years 16-35, for Education was Primary schooling, for Land size was less than 2 acres, for Family members was between 1-2 members and for why farm, the reference base was both business and food.

Table 4. Determinants of women participation using the logit model

Logistic regression — Number of obs = 120; LR chi2(21) = 62.78; Prob > chi2 = 0.0000; Log likelihood = -51.787364; Pseudo R2 = 0.3774

Participation	Coef.	Std. Err.	Z	P>z	[95% Conf.	Interval]
Mari_Status						
Married	-2.572828	1.024565	-2.51	0.012**	-4.580938	-0.56472
Divorced	-4.613988	2.08101	-2.22	0.027**	-8.692694	-0.53528
Widow	-2.75396	1.428244	-1.93	0.054*	-5.553267	0.045348
Age						
36-45	3.59726	1.298525	2.77	0.006***	1.052197	6.142322
46-65	2.971267	1.246755	2.38	0.017**	0.527673	5.414862
65 above	4.383614	1.79491	2.44	0.015**	0.8656548	7.901572
Education						
Secondary	1.193734	0.781375	1.53	0.127	-0.3377335	2.725201
Tertiary	3.725271	1.767168	2.11	0.035**	0.2616858	7.188855
Family mem						
3-4 mem	-1.514531	1.425807	-1.06	0.288	-4.309062	1.28
5-6 mem	-1.90322	1.400795	-1.36	0.174	-4.648728	0.842288
7 above	-2.107526	1.427639	-1.48	0.14	-4.905648	0.690595
Farming Group	1.879123	0.661371	2.84	0.004***	0.5828605	3.175385
Mechanisation						
Man operated	-0.3393987	0.75808	-0.45	0.654	-1.825208	1.146411
Animal operated	2.35779	1.244571	1.89	0.058*	-0.0815244	4.797104
Extension service	1.496839	0.613778	2.44	0.015**	0.2938562	2.699822
Market	1.228638	0.591304	2.08	0.038**	0.0697044	2.387571
Land Size						
2-10 acres	-1.488425	0.730381	-2.04	0.042**	-2.919945	-0.05691
6-10 acres	-0.410057	0.759855	-0.54	0.589	-1.899346	1.079232
11 above	-4.238631	1.501915	-2.82	0.005***	-7.182331	-1.29493
Why farm?						
Business	-0.6648955	1.257628	-0.53	0.597	-3.129801	1.80001
Food	-0.9580357	0.999182	-0.96	0.338	-2.916396	1.000324
_cons	-1.18439	2.043811	-0.58	0.562	-5.190186	2.821405

* Is significant at 0.10%; ** Is significant at 0.05%; *** Is significant at 0.01%

Logit regression analysis results and discussion

Marital status plays a significant role in participation for women farmers. Looking at the categories of marital status, it can be stated that being married and divorced both plays 5 per cent of significance in influencing

participation, while being widowed plays a 10 per cent significance in positively influencing women to participate in training programmes. This is perhaps because married women can attend training programmes more freely as their spouses or other family members can take care of the household. While for divorced farmers, the possible need for family support pushes them to participate in programmes to improve productivity and to gain more income for the family. For widowed women farmers, the probability of being the sole decision-maker and provider in the family would push for their participation in training programmes.

The age category shows at different levels of age with different level of significance to participation. Between the ages of 36 to 45, women farmers are more likely to attend training programmes at 1 per cent significance compared to when they turn 46 and above, as their significance changes to 5 per cent. In other words, women farmers take more initiative in attending training events at a younger age. The older they grow, the less likely they are to attend training events, which can be due to health deterioration.

As for the education status of farmers, tertiary form education only plays a significance in women farmer participation at 5 per cent. It shows that tertiary education positively influences women participation. The outcome can be due to their formal means of attaining higher education that gives them a better understanding of the relevance of training as a form of education; hence, a driving factor for their participation. The categorical variable of family members or household size shows no significance to women participation in training programmes at any number of tested members. In other words, women farmer participation in the Central Division is not influenced by the size of the family.

Moreover, regarding the farming groups, it facilitates information exchange and enables members to negotiate for better terms on the input and output markets. Therefore farming groups are expected to influence participation in training programmes positively. Hence, women that are part of any form of the farming group are more likely to attending training programmes as it can be seen in the analysis shown at 1 per cent significance.

In regards to mechanisation, the ability of a woman farmer to own any form of machine whether operated through man or animal does not play a role in women participation in training at 1 and 5 per cent respectively. However, those women who own animal operated machines are more likely to attend training by a 10 per cent significance. The result is most likely due to women owning animals and implement which play crucial roles in production increment and produce transportation.

Extension services and women participation are significantly related as is shown from the analysis, i.e., extension services influence women participation at 5 per cent significance. Frequent contact with extension services is likely to keep the farmer informed of new training courses and influence them into participation. Likewise, market availability to a woman farmer also influences their decision in the participation of training programmes. Market availability and women participation are 5 per cent significant. The ability to sell products to market gives the farmers a reason to increase their production, which can be significantly achieved through agricultural training.

When considering the land size and women participation, women that own land size ranging between 2 to 10 acres and 11 above acres are more likely to participate in training programmes. In fact, at the significant rate of 5 per cent and 1 per cent respectively. This is perhaps because as land size increases, more resources can be gained through the land. Hence, they tend to adopt agricultural technologies for better use of their property. Lastly, when considering why a farmer chose to do farming and her relation to training participation, it can be stated that it plays no significant role whether the farmer started farming for business or food.

Conclusions & recommendation

Fijian women who participate in farming are generally subsistence farmers who face considerable hindrance in their farm training involvement due to social-economic factors. Although women farmers in Fiji may get access to available resources, their access to agricultural extension services seems less likely in comparison to male farmers. The result is most likely due to male farmers greater involvement with cash crops. Moreover, land ownership and patriarchal governance structures result in women having insufficient opportunities to participate in decision-making processes. Thus, this article aimed to detect the factors influencing women participation in training programmes emphasising women involvement in the farming sector of Fiji.

The results from the logit model explain the most crucial areas that affect women decisions to participate in training programmes. The significant components determining farmer participation were marital status, age, farming groups, market, land size and extension services. These results have important implications when designing training programmes: it is vital to consider these factors to get active women participation and increase productivity in the agricultural sector. Not only that, but it is also critical to get women's perspective on the type of preferred training they need. Given that 80 per cent of the Fijian agriculture sector is made of subsistence farming and many of which are women farmers, hence, the most appropriate means to increase agricultural productivity is through women farmers training. Considering many influential factors, decision making in designing suitable women farmer agricultural programmes can be established while giving the programme a better chance of success. Similarly, the information can be used as a guide to creating better gender inclusive agricultural

policies and in bridging gender gap of the country.

In recommendations, it can be stated that further work to refine the methods used can be useful and shall provide a gateway for researching the other three division of Fiji. It can be noted that besides the determinants analysed for, other causal factors may also influence women participation which needs to be considered in future analysis. Finally, through the research, only specific attributes to women in agriculture are noted in this article. Hence, follow-up research can provide a more in-depth understanding of women farmer reasonings for involving themselves in agricultural and its development. Thus, a combination of more qualitative and quantitative approach for constructing a practical methodology is recommended in efforts to survey the whole country.

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