

# Effect of Socio-Demographic Covariates, Team Behaviour and Managing of Emotions to Farming Efficacy

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**Abstract-** Paddy cultivation is the livelihood of more than 1.8 million farm families in Sri Lanka. Study examined the socio-demographic factors contributing to the success of paddy farmers in the Dry Zone of Sri Lanka. Study analysed the socio-demographic covariates like gender, age, farming experience, and citizenship performance behaviour among farmers, their managing of emotions at work, and their occupational self-efficacy. Sixty three (63) paddy farmers (32 males, and 31 females) were selected for the study from the Polpithigama DS area based on stratified random sampling. Mann-Whitney test, Wilcoxon rank-sum test, Correlation, and Multinomial logistic regression tests were used for inferential analysis of data, along with descriptive analysis. Study found male farmers recording superior and significant differences with female farmers in many farming practices. There were no significant relationships of farmers' occupational self efficacy with their age, gender, farming experience, citizenship performance behaviour, or their management of emotions at work.

**Keywords-** Farming efficacy, Gender, Citizenship performance, Managing of emotions

## I Introduction

The demand for sound farming practices increase with the global population and a falling ratio of arable land to population. As per the Food and Agricultural Organisation (FAO), world's total agricultural land area consists of 4.93 billion hectares, which is nearly 38% of its' total land area [1]. Asia produces majority of the world's rice production, and China, India, Vietnam, Burma, Indonesia, Bangladesh, and Sri Lanka are the major rice producing countries in Asia [1]. Contribution of agriculture in Sri Lankan economy was almost 11.9% of GDP in 2010 [2]. About 32.7% Sri Lankan workforce were involved in agricultural sector, with over 64% of farming families cultivating holdings of less than 0.8 hectares [2]. Rice is the most basic and popular food item, and the staple food in Sri Lanka [1]. Paddy is cultivated mostly as a wetland crop in Sri Lanka. Total paddy cultivation is estimated to be about 708,000 hectares at present [2]. Paddy cultivation is the livelihood of over 1.8 million farm families in Sri Lanka, with an annual produce of 4.3 million tons in 2010 [2]

### 1.1 Occupational Self Efficacy

Self-efficacy is the 'people's judgments of their capabilities to organize and execute courses of action required attaining designated types of performances' [3].

Individuals harbour self-beliefs that allow them to apply themselves and to have self-control over 'who they are, and what they want to be' [3]. Occupational Self Efficacy (OSE) reflects the conviction or the confidence of a person's ability to fulfill his job related behaviour at a highly desirable level to the employer [4]. Positive correlations have been found between OSE and job satisfaction, and performance across countries [4]. Gupta and Sawhney [5] found that private sector males had a higher OSE over females and public sector executives, in their study among the private sector and public sector executives in India.

### 1.2 Farmer Groups and Citizenship Behaviour

Farmers get mutually benefitted from group activities in paddy cultivation. Knowledge and information sharing have been found vital for rural farm development [6]. Citizenship performance behaviour (CPB) is termed as 'Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization' [7]. Such behaviour among farmers leads to mutual benefits in farming. Empirical findings have suggested the benefits of CPB in farming. Farmer groups reduce transaction and cultivation costs, improve marketing facilities, and facilitate other services [8]. A Sri Lankan study [9] found a significant relationship between the group interaction level, and entrepreneurial behaviour of farmers.

### 1.3 Managing of Emotions

Farmers have to make many decisions and to manage their frustrations throughout farming. They have to co-operate with many stakeholders including fellow farmers. These activities and occasions are involved with dealing with their emotions. Emotional Intelligence 'refers to the ability to process emotion-laden information competently and to use it to guide cognitive activities like problem-solving and to focus energy on required behaviors' [10]. Managing emotions, which belongs to the sub-construct of Strategic EI [11], and empirically evidenced as 'strategic behaviour' (Kilduff, Chiaburu, and Menges, [12] is considered as the most advanced EI component [13].

### 1.4 Scope of the Study

Main purpose of study was to examine the impact of socio-demographic factors of farmers to their efficacy in Paddy farming. This study attempts to answer the question 'what is the impact of socio-demographic factors to the farming efficacy in rural Sri Lanka?' Study examined the socio-

demographic factors contributing to paddy farming in the Dry Zone of Sri Lanka. Study specifically analysed the farming experience, CPB among farmers, their managing of emotions, and OSE of farmers. The impact of gender differences to the practices in paddy farming was also examined. Study has posited four main research hypotheses. They are as follows:

*H1: There is a positive relationship between the Farming Self Efficacy and farmers socio-demographic covariates, namely Age, Gender, and Farming experience.*

*H2: There is a positive relationship between the Farming Self Efficacy and farmers' citizenship performance behaviour.*

*H3: There is a positive relationship between the Farming Self Efficacy and farmers' managing of emotions.*

## **II. Methodology**

### **2.1 Sample Design**

Polpithigama divisional secretariat (DS) area in the Kurunegala District of Sri Lanka was selected for the study. This DS area was selected to represent a dry zone farming community based on an exploratory study with the community leaders and government agriculture instructors (AI's). Balagolla, Indigolla, Herathgama and Saliyagama grama niladari (GN) Divisions of Polpithigama DS area were selected purposively based on the paddy cultivation practices and production. Paddy cultivation farmers' registration lists accessed through the Govijana Sewa Kendra was the sampling frame of the study. Accordingly, paddy cultivation farmers in the Polpithigama DS area made the study population, and sampling unit of the study was a paddy farmer involved in farming in the DS area. Sixty three (63) paddy farmers (32 males, and 31 females) were selected for the study from the Polpithigama DS area based on stratified random sampling. Data collection was conducted using an Interview schedule. The interview schedule consisted of research constructs on the Knowledge sharing, Team Behaviour, farmers' perception of the nature of farming practices as a career, and the innovation and adoption of farming practices.

### **2.2 Data Collection and Analysis**

Data collection was conducted using an Interview schedule. The interview schedule mainly consisted of research constructs on CPB among farmers [14], farmers' managing of emotions [15], and OSE of farmers [4]. Qualitative as well as quantitative data were collected; both primary as well as secondary data were used. Secondary data were used to supplement the findings. Key Informant discussions (KID) were used to strengthen the quantitative findings. Secondary data were collected using the publications of Sri Lanka Census and Statistic department, *Hectorkobbekaduwa* institute, World Bank publications etc. Data analysis was conducted using the Statistical Package for Social sciences (SPSS). Descriptive statistics along with frequency tables were used. Multinomial

logistic regression was used to analyse the relationship among the major variables.

## **III. Results and Discussion**

### **3.1 Socio-demographic characteristics**

Polpithigama DS area belonged to rural, and intermediate climatic zone in Sri Lanka. Nearly a half (49.2%) of the respondents was females. This was due to the stratified random sampling technique of selecting equal proportion from both genders. Majority of the Sri Lankan farming population consists of males. Age distribution in the sample ranged from a minimum of 34 years to a maximum of 72 years. Mean age of the sample was 53.56 years (mean age of males being 50.81 years, and the mean age of females being 56.39 years). Farmers' level of education varied from no formal education up to Advanced Level education. Majority have completed the grade 10, and the mean (M) level of education of the respondents in the sample was above grade eight (M (of males) being 8.41, and M (of females) being 8.10). Accordingly no disparity could be observed in the education level (and system) based on the gender. Greater majority (87.3 %) of the respondents were married. Widowers were 4.8%, single and Separated (Living Separately) were 3.2%, and only 1.6% were divorced. Overall mean value of farming experience was 18 years. It varied vastly on a gender difference (Refer Figure1). Male farmers recorded a vastly experienced mean value of 27 years in farming, whereas females farming experience recorded a mean value of 8.58 years.

### **3.2 Citizenship Performance Behaviour among farmers**

Farmers' CPB was measured by using a scale varying from a minimum score of 7 and a maximum score of 42 [14]. It consisted of six statements. Farmers' CPB (involvement in team work and co-operation) reported a significant difference based on their gender (Mann-whitney u 276.50, Wilcoxon w 772.500, Z -3.034). Female farmers reported a lower level of involvement in team behaviour, and co-operation during farming practices with a mean value of 24.92, compared to the mean value of 38.86 recorded by the males (farmers). Based on the dispersion of scores they were categorized into 3 clusters to facilitate further analysis. They were category 1 (scores 13 -19) Low in CPB (42.9%), category 2 (scores 20 – 24) Moderate in CPB (44.4%), and category 3 (scores 25 – 31) High in CPB (12.7%). Accordingly the greater majority (87.3%) have been low to moderate in their CPB with other farmers.

### **3.3 Managing of Emotions**

Farmers' Managing of emotions was measured by using a scale varying from a minimum score of 5 and a maximum score of 40 [15]. It consisted of 8 statements. Farmers' OSE varied from 18 to 32, with a Mean score of 25.03 and a standard deviation of 2.57. Based on the dispersion of scores they were categorized into 3 clusters for further analysis.

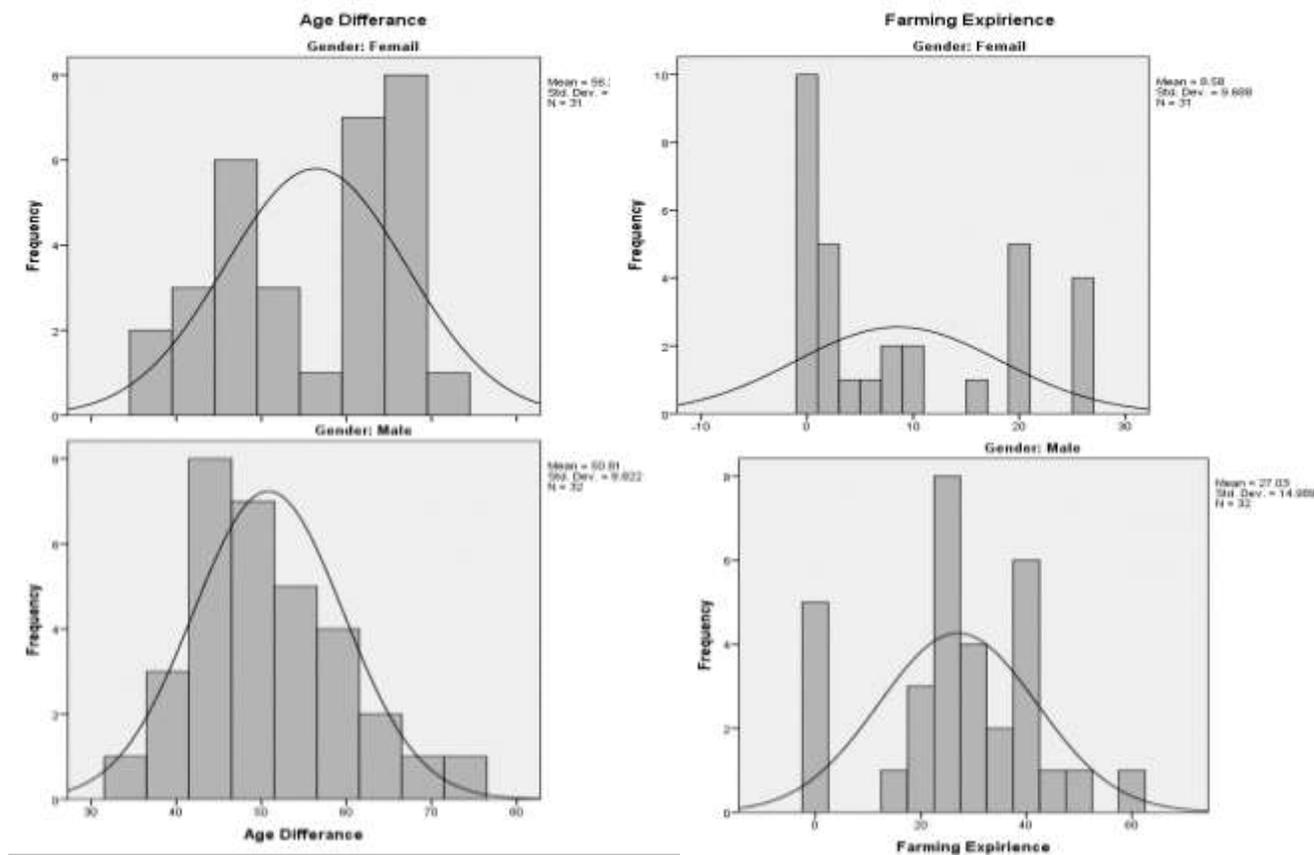


Figure 1: Age, Gender, and farming experience

(Source: Survey data of farmers of Polpithigama DS area)

Managing of emotions by farmers are indicated in the table 1 below. Only one fifth (20.6%) of the farmers have recorded a higher ability in managing of their emotions at work.

Table 1: Managing of emotions (Emg) among farmers

Score range	Category	Description	Frequency (F)	Cumulative F
18-22	1	Low in Emg	10 (15.9%)	10 (15.9%)
23 - 26	2	Moderate in Emg	40 (63.5%)	50 (79.4%)
27-32	3	High in Emg	13 (20.6%)	63 (100 %)

Source: Author’s (Survey data of farmers in polopitigama, Sri Lanka)

**3.4 Occupational Self Efficacy among famers**

Farmers OSE was measured using a scale varying from a minimum score of 6 and a maximum score of 42 [4]. It consisted of 6 statements. Farmers’ OSE varied from 9 to 30, with a Mean score of 19.24 and a standard deviation of 4.41. Based on the dispersion of scores they were categorized into 4

clusters to facilitate further analysis. The four clusters are indicated in the table 2 below. Results suggest that one third of the farmers had a low OSE about their farming practice as a successful profession. Only one fourth (23.8%) of the farmers were confident of their farming practice as an effective profession to realize goals.

Table 2: Occupational Self Efficacy among farmers

Score range	Category	Description	Frequency (F)	Cumulative F
09 -14	1	Low in OSE	08 (12.7%)	08 (12.7%)
15 - 17	2	Moderate in OSE	13 (20.6%)	21 (33.3%)
19 - 21	3	Satisfactory in OSE	27 (42.9%)	48 (76.2%)
22 - 30	4	High in OSE	15 (23.8%)	63 (100%)

Source: Author’s (Survey data of farmers in polopitigama, Sri Lanka)

### 3.5 Significant Associations

Research specifically analysed the impact of socio-demographic factors, farmers CPB, and their managing of emotions to the farming self-efficacy. Farming self-efficacy

did not indicate any significant relationship with Age, Gender, Farming Experience, CPB, and managing of emotions by farmers at work. The major results are depicted in table 3.

**Table 3: Major findings through Multinomial Logistic Regression analysis**

95% Confidence Interval for Odds Ratio				
	B(SE)	Lower	Odds Ratio	Upper
<b>Moderate Farming Self Efficacy vs Low Farming Self Efficacy</b>				
Intercept	37.70 (11.17)**			
Age	-0.39 (0.22)	0.44	0.68	1.04
Low CPB	7.78 (4.84)	0.180	2.38	3.15
Moderate CPB	7.88 (4.87)	0.190	2.65	3.71
Farming Experience	0.04(0.12)	0.83	1.04	1.31
<b>Satisfactory Farming Self Efficacy vs Low Farming Self Efficacy</b>				
Intercept	29.93(10.51)*			
Age	- 0.26(0.20)	0.77	0.52	1.14
Low CPB	6.19 (4.91)	489.70	0.03	7.33
Farming Experience	0.12 (0.12)	1.13	0.90	1.43
<b>Satisfactory Farming Self Efficacy vs Low Farming Self Efficacy</b>				
Intercept	34.91(10.62)**			
Age	- 0.30 (0.21)	0.74	0.50	1.12
Low CPB	6.00 (4.80)	393.99	0.03	48.35
Moderate CPB	5.45(4.91)	232.42	0.01	35.42
Farming Experience	0.06(0.12)	1.07	0.84	1.35

Note: R<sup>2</sup>= 0.73(Cox & Snell), 0.79(Nagelkerke), 0.51(McFadden), \*p<0.05, \*\*p<0.01

## IV. Conclusion

### 4.1 Major Findings

Study did not find significant relationships of farmers' occupational self efficacy with their age, gender, farming experience, citizenship performance behaviour, or their management of emotions at work. Male farmers recorded superior and significant differences with female farmers with regard to their perception of farming as a career, involvement in teamwork.

### 4.2 Limitations and Further research

The static nature of data is a serious weakness of contemporary management research. Farmers behaviours were assessed only based on their perceptions. A longitudinal research incorporating more objective data would be more insightful.

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