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Does Gender matters in correlates of consumption poverty?

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Abstract: This paper estimate poverty prevalence of male and female-headed household in Sri Lanka and explores the factors associated with the probability of being poor. Data from Household Income and Expenditure survey 2016, which is the national survey conducted by the Department of Census and Statistics, Sri Lanka used for this study. This study employed the marginal effect of the logit model to understand the likelihood of poverty. Household in the bottom quintile of consumption expenditure has been considered as poor while the group of individual, household and spatial characteristics considered as explanatory variables. The study found that poverty prevalence is high among male-headed household than female-headed household. The results indicate that household size, employment status, income sources and location of residence are significantly associated with the probability of being poor of both male and female-headed household. This paper contributes to the comparison of the experience of gender and poverty in a developing country and seeking better policy formulation based on evidence-based research.
KEY WORDS: *poverty, gender, Sri Lanka, male- headed household, female-headed household.*

I. Introduction

This paper primarily focuses on the factors associated with consumption poverty among Sri Lankan male and female-headed household, using the latest available Household Income and Expenditure Survey (HIES) 2016 data. Poverty in Sri Lanka has reduced significantly over the past two decades from 29 per cent in 1995/96 to 4.1 per cent in 2016 whereas significant numbers (0.8 million) remain in poverty in 2016. Despite the equal population of men and women in Sri Lanka, their labour force participation maintains the more significant gap between male (73.4 per cent) and female(34.9 per cent) while unemployment also high among female (6.9 per cent) than male (3.4 per cent). According to the UNDP (2016), gender inequality index for Sri Lanka is 0.386 and ranked 87th out of 188 countries and ahead of Bangladesh (119th), Nepal (115th), Pakistan (130th) and India (125th) while considerably behind Malaysia ranked at 59 and Thailand at 79.

Development literature identifies individual, household and community groups of characteristics associated with poverty. While there is a considerable amount of poor people in Sri Lanka and gender inequality also existing considerable level, the above group of characteristics would also have undoubtedly contributed to the present poverty status of male and female-headed families. Hence, this study has an objective of identifying characteristics of being poor of the male and female-headed household. The rest of the paper organized as follows. Section 2 reviews of relevant literature. Methodology, including types of data, data sources, and analytical techniques are in section 3. The research findings highlighted in section 4. Section 5 concludes the paper.

II. Literature Review

"Feminization of poverty" is the concept that has been most commonly used in the development literature, because it combines gender inequality and poverty, which have drawn the attention of many researchers. Gender inequality could take place in many aspects such as education, employment, wage, decision making, domestic work and childcare, where women have had to bear the much more onerous burden of the unpaid work while being subject to discrimination and marginalization in opportunities for work. Likewise, women are also more vulnerable to income and poverty because of their reproductive role, focus women on spending more time on childcare and consequently, less income in paid work.

When defining the term feminization of poverty, there are some methodological and conceptual underpinnings. According to Pearce's (1978) original definition, the feminization of poverty means the higher incidence of poverty among female-headed households concerning poverty levels among male-headed households. Later, Medioros and Costa, 2007; 2010 and Chant, 2014 argued that feminization is a dynamic process rather than a static state. Hence, the feminization of poverty seems a higher number of women in poverty than men or the

over-representation of women among the poor people. The literature also appears to recognize two dimensions to the feminization of poverty. First, as Pearce (1978, p.28) remarked: "women who are poor because they are women". That is, the female gender is in itself likely to make the individual poor, that is, being a female makes it more likely that an individual is poor, even if she shares the same characteristics as of a male, other than her gender, of course. The second dimension to the feminization of poverty is that of a woman is the head of a household, then that household is more likely to be poor, than if the household had a male head.

Gender, as a correlate of poverty, has received much attention from scholars and practitioners in recent times. It widely accepted that women are much more disadvantaged and more likely to be poor in many countries in terms of income, employment, education, rights, and are also more likely to be subjected to violence (UNDP, 2014). Pearce (1978) was the first to draw attention to the fact that women are poorer than men and highlight the several dimensions of poverty that affect women. Since then, many more women's advocates have presented sufficient empirical evidence that has underlined Pearce's original observation (Chant, 2014). The empirical literature suggests that women are more likely to be poor than men in many countries, but not in all countries and the impact of female headship can also vary because not all female heads are poor as of their heterogeneity (Buvinic and Gupta, 1997; Medeiros and Costa, 2008).

Gunewardena et al. (2007) estimated poverty by gender for the whole population of Sri Lanka using Consumer Finance Survey (CFS) 2003/04 and found a higher incidence of poverty among men than among women. Gunatilaka (2014) used the Household Income and Expenditure Survey (HIES) data of 2009/10, also found a higher incidence of poverty among men than women in Sri Lanka. Using a logit regression, her analysis also showed that women were not more likely to be poor than men, other things equal. In contrast, Gunatilaka(2014) found that working women are more likely to be poor than working men, with lower earnings, low skilled occupation and larger household size associated with the probability of working females being poor. Neither Gunewardena et al. (2007) nor Gunatilaka (2014) looked at the specific case of female-headed households. However, de Silva (2008) used Sri Lankan Integrated Survey (SLIS) data to show that female-headed household is 6 per cent more likely to be poor than a male-headed household in Sri Lanka. He pointed to the gender wage gap in the labour market and lower average welfare among women as underlying factors. His study also found that the gender of the household head significantly correlated with the standard of living, using quantile regression. In particular, he found a negative relationship between per capita expenditure and female-headship of households at all quintiles.

III. Methodology

The analysis in this study uses expenditure data from Household Income and Expenditure Surveys (HIES) 2016, which is the available latest national survey conducted by the Department of Census and Statistics, Sri Lanka. The study's principal unit of analysis is the household since the consumption poverty is determined at the level of the household. This study investigates the covariates of the probability of a household being in the bottom quintile of the consumption by estimating the following model:

$$\mathbf{Pr(poor20 = 1 | X_1, X_2, X_{3,} X_n) = F(\boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 X_1 + \boldsymbol{\beta}_2 X_2 + \boldsymbol{\beta}_3 X_3 + \boldsymbol{\beta}_n X_n)}$$

Where poor20 is the bottom quintile of the per capita consumption expenditure, X_n is the explanatory variables and β_n are the parameters reflecting the impact of change in X_n on the probability of being poor20. The same model used for three separate groups of household names all household, male-headed and female-headed.

IV. Findings

Poverty incidence by gender, sector and province is shown in Table 1, using the national poverty line as well as the household in the bottom 20% of consumption expenditure quintile and bottom 40% of consumption expenditure quintile. Table 1 shows that the incidence of poverty was higher among males, at 4.1 per cent, 23.8 per cent and 44.8 per cent compared with females, 3.9 per cent, 23.6 per cent and 44.6 per cent based on national poverty line as well as bottom 20 % of consumption expenditure quintile and bottom 40% of consumption expenditure quintile respectively. Poverty rates between males and females by sector were slightly differing. Poverty incidence was higher among female-headed household in the estate sector than male, whereas in urban and rural male-headed household reported higher poverty incidence based on the national poverty line. Based on the other two measures, female poverty incidence was higher in the urban sector. When we look at the incidence of poverty among provinces, except North-Western province, all other provinces report poverty prevalence is higher among male-headed families than female. According to the bottom 20% and 40%, poverty incidence is higher relatively among female in Western province, and other provinces report higher poverty incidence among male-headed families.

Table 1: Poverty incidence in Sri Lanka, by gender, sector and province 2016, at the national poverty line, bottom 20% and 40% of the household consumption expenditure Quintile

	National Poverty		Bottom 20 %		Bottom 40 %	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Sri Lanka	4.1	3.9	23.8	23.6	44.8	44.6
Urban	2	1.6	12.2	15.5	29.8	32.1
Rural	4.4	4.1	24.9	24.1	46.4	45.6
Estate	8.3	10.4	48.3	45.4	74.6	73.1
Western Province	2.4	1.9	14.8	15.8	32.2	33
Central province	7	5.1	36.8	27.3	58.9	50.1
Southern province	3.9	2.8	25.6	23.6	47.1	45.5
Northern province	9.5	5.7	40	32.7	64.9	55.6
Eastern province	9.3	7.1	39.1	36.8	66.2	63.1
North Western province	2.7	3.4	21.6	16.7	43.9	36.8
North Central province	4.2	3.7	22.1	19.2	45.7	39.4
Uva province	7.6	5.7	37.3	34.1	37.4	34.2
Sabaragamuva province	8.6	5.4	40.4	30	62	54.4

Source: Author calculation using data from Department of Census and Statistics Household Income and Expenditure Survey data of 2009/10.
Note: Survey weights used. National poverty line is Rs.4166 per capita consumption expenditure.

The means and standard deviations of the male and female-headed households in the poorest quintile are set out in Table 2. Which is also presents the results of the t-tests of the differences in sample means between male and female-headed households are in the last column. Most of the variables in the model have a significant difference in means and proportions between male and female-headed household while few variables such as Tamil head of the household, GCE ordinary level and advanced level education, household receive the pension and reside in the estate are not reported a significant difference in proportion.

Table 2 Differences in means and proportions of characteristics of male and female headed households in the bottom quintile

Variable names	Male		Female		Results of t-test for differences in the means of the household in bottom quintile between Male and Female
	Mean/ Proportions	**Standard Deviation**	**Mean/ Proportions**	**Standard Deviation**	
Age	51.9297	13.9843	54.5732	15.8688	5.3326***
Age Squared	2892.2028	1514.515	3229.83	1739.262	6.2667***
Sinhala Head	0.6192	0.4857	0.5892	0.4922	-1.7957*
Tamil Head	0.2931	0.4552	0.2893	0.4536	-0.2454
Moor Head	0.0866	0.2813	0.1198	0.3249	3.3101***
Share of children	0.2698	0.207	0.2803	0.2414	1.4072
Share of old- parents	0.0344	0.1256	0.0572	0.1705	4.8288***
Household size	4.6825	1.6503	3.961	1.8347	-12.4084***

Primary or less education	0.419	0.4935	0.5058	0.5002	5.1154***
Secondary education	0.5039	0.5001	0.4161	0.4931	-5.1369***
GCE Ordinary Level Qualification	0.0416	0.1997	0.0435	0.204	0.2755
GCE Advanced Level and above Qualification	0.0347	0.183	0.0346	0.1829	-0.0152
Public employee head	0.0376	0.1902	0.0186	0.1353	-3.0985***
Private employee head	0.4606	0.4985	0.2023	0.4019	-15.8099***
Self employee head	0.3074	0.4615	0.134	0.3408	-11.6331***
Not working head	0.193	0.3947	0.6442	0.479	31.5876***
Head in high skilled occupation	0.0516	0.2213	0.0186	0.1353	-4.7267***
Head in middle skilled occupation	0.2888	0.4533	0.118	0.3228	-11.7237***
Head in low skilled occupation	0.4695	0.4991	0.2254	0.418	-14.8218***
Log of per capita ownership of land	7.6016	7.1022	6.6613	6.2786	-3.9711***
Home ownership	0.6432	0.4791	0.6149	0.4868	-1.7195*
Received remittance	0.115	0.3191	0.3017	0.4592	15.2031***
Received pension	0.0218	0.146	0.0257	0.1584	0.7703
Urban	0.07	0.2551	0.0958	0.2945	2.8444***
Rural	0.8492	0.358	0.8225	0.3822	-2.1338**
Estate	0.0809	0.2727	0.0816	0.2739	0.0813

Source: Author calculation using the Department of Census and Statistics' Household Income and Expenditure Survey Data 2016.

Table 3 shows the marginal effects of the logistic estimation of the factors associated with the probability of being in the lowest consumption quintile. Separate model for all household, male-headed household and female-headed household are reported in the first column, the second column and the third column respectively. In the first model, it is clear that male-headed households are 0.3 per cent less likely to be poor than female-headed household who share the same characteristics. However, the results are not statistically significant. Therefore, we are unable to conclude that female-headed household is more likely to be poor than male-headed household who share the same characteristics. However, the marginal effects of a separate model of male-headed household and female-headed household show how these selected characteristics associated with the probability of being male-headed household and female-headed household are poor, separately.

Table 3: Factors associated with the probability of being poor in 2016: Marginal effects of logistic estimation

	All	Male	Female
Age	-0.0059	-0.0026	-0.0123

	(0.0104)	(0.0130)	(0.0177)
Age Squared	0.0001	0.0000	0.0001
	(0.0001)	(0.0001)	(0.0002)
Tamil Head	0.4840***	0.4065***	0.7059***
	(0.0543)	(0.0625)	(0.1096)
Moor Head	0.2013**	0.1649*	0.3181*
	(0.0703)	(0.0829)	(0.1347)
Male head	-0.0295		
	(0.0541)		
Share of children	1.1127***	1.1202***	1.2015***
	(0.1176)	(0.1428)	(0.2099)
Share of old- parents	0.5591**	0.7265**	0.3927
	(0.1713)	(0.2315)	(0.2616)
Household size	0.3123***	0.3256***	0.2818***
	(0.0143)	(0.0173)	(0.0262)
Secondary edcation	-0.7354***	-0.7655***	-0.6533***
	(0.0448)	(0.0518)	(0.0904)
GCE O'Level Qualification	-1.4169***	-1.4683***	-1.2516***
	(0.0896)	(0.1038)	(0.1799)
GCE A'Level and above Qualification	-2.0044***	-2.0065***	-2.0393***
	(0.0990)	(0.1147)	(0.2001)
Public employee head	-0.8544***	-1.0304***	-0.1801
	(0.1133)	(0.1291)	(0.3024)
Private employee head	0.1384*	0.0031	0.4351***
	(0.0640)	(0.0822)	(0.1104)
Self employee head	-0.1387*	-0.2728**	0.0763
	(0.0707)	(0.0870)	(0.1481)
Head in high skilled occupation	-0.7427***	-0.7128***	-0.9850***
	(0.0901)	(0.0964)	(0.2721)
Head in middle skilled occupation	0.0481	0.0592	0.0351
	(0.0541)	(0.0583)	(0.1544)
Log of per capita ownership of land	-0.0077**	-0.0084*	-0.0061
	(0.0029)	(0.0033)	(0.0067)
Home ownership	-0.1138**	-0.1472**	-0.0354
	(0.0432)	(0.0501)	(0.0858)
Received remittance	-0.4610***	-0.4347***	-0.5819***
	(0.0538)	(0.0701)	(0.0890)
Received pension	-1.1012***	-1.1214***	-1.1567***
	(0.1142)	(0.1357)	(0.2106)
Urban	-0.9778***	-1.0485***	-0.7104***
	(0.1060)	(0.1236)	(0.2077)

Rural	0.0450	0.0337	0.1512
	(0.0917)	(0.1068)	(0.1800)
Observation	**21756**	**16129**	**5627**

Source: Estimated using the Department of Census and Statistics' Household Income and Expenditure Survey Data 2016. Sample weights used.

Notes:
The omitted categories in the dummy variable analyses are: Sinhala; Primary or less education; not working head, head in low skilled employment, not receiving remittances, not receiving pension, living in estate sector
***, **, and * denote statistical significance at the one per cent, five per cent and ten per cent levels respectively.

In these three models, most of the characteristics significantly associated with the probability of being poor. Ethnicity is highly associated with poverty. For instance, Tamil and Moor head are more likely to be poor than Sinhala head. The marginal effects of the share of children in the household, the share of old parents in the household and household size have a positive and significant association with the likelihood of poverty. Better educated head of the household is less likely to poor than primary or less education in all models. However, the relationship is stronger among male than female. The working heads are less likely to poor than not working head, and the male head working in the public sector is significantly less likely to poor whereas the female head working in the public sector is also less likely to poor than not working head but not significant. Either male or female heads who are working in the high skilled occupation are significantly less likely to poor than low skilled employees. Likelihood of poverty is less among male and female-headed household which are receiving remittance or pension than not receiving either. Households in the urban sector are less likely to poor relative to the household in the estate sector. Marginal effects are significant in three models, and the relationship is stronger among male-headed families than female-headed families. Age of the head of the households and living in a rural area is not significant in any model.

V. Conclusions

This study assesses the extent of consumption poverty among male and female-headed Sri Lankan household using recently available household-level data (Household Income and Expenditure Survey 2016). The study also identified the individual, household, and spatial level characteristics of the male and female-headed household that are associated with the likelihood of poverty. First, the analysis concludes that poverty prevalence is slightly high among male-headed household than female. The likelihood of poverty is less among male-headed household relative to female-headed household, but the marginal effect is not significant. The study found the household size and composition, level of education, the nature of employment, income and location are the critical dimensions of poverty. However, the association is stronger among male-headed families than female-headed. The findings of this study suggest that policies aimed at reducing poverty among male and female-headed household while improving income, education, and employment of the people of Sri Lanka.

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