

The Gendered Impact of Agricultural Market Reforms on Financial Benefits in Uganda's Smallholder Farming Households

Denis TUSHABOMWE^{1,*}, David Mugambe Mpiima²

¹Department of Development Studies, Makerere University, Kampala, Uganda

²School of Women and Gender Studies, Makerere University, Kampala, Uganda

*Corresponding author's e-mail: tdgenyonyi@gmail.com

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ABSTRACT

Although studies have reported a positive correlation between agricultural market-liberalization reforms, smallholder commercialization and rural household income, the effect of this shift on gender income relations remains less understood. This study aimed to examine the gendered effect of market reforms and the resulting accelerated commercialization on income in smallholder farming households in Uganda, focusing on Irish Potato farming households in Rubanda district, South-western Uganda. We employed a sequential mixed-methods design involving quantitative and qualitative data strands. Quantitative data were obtained through a survey of 201 potato farmers while qualitative data were obtained through 15 key informants interviews, 27 in-depth interviews and 9 FGDs. STATA 17 for descriptive and inferential statistics –*Chi Square* and '*t-test*'– were used to analyse quantitative data while deductive thematic analysis was used for qualitative data. Results revealed that market reforms and commercialization led to the emergence of dichotomous income streams for male and female members of households. Positive change in women's income significantly improved their position in a number of income management and decision aspects including allocation in crop production, custody and other household affairs, mainly children's education. However, commercialization situated potato production in the monetary domain increasing men's interest in the crop, previously women's domain, as a major source of income. This heightened patriarchal power and authority over women's attained positions and agency, perpetuating unequal gender income relations. Results suggest that increasing women's income from independently managed plots produces positive and significant bargaining outcomes. The study underlines the need for government and other development actors to provide targeted training to women and building their capacities to manage income from independently farmed plots, and changing men's negative attitudes and norms towards women's ownership of and control over income.

Keywords: Agricultural market reforms; commercialisation; gendered income relations.

1 Introduction

In recent decades, reforming agriculture has dominated discourses and debates on promoting growth and transformation of developing country economies, mostly in sub-Saharan Africa [1-4]. The reform narrative, rooted in the World Bank's Structural Adjustment Program (SAPs) hinged on the modernisation theory. The main argument was that a shift from traditional subsistence farming to 'modern' commercial agricultural production is a necessity for rural transformation [5]. The modernisation theory thus based on the assumption that agricultural reforms and commercial-modes of production would ultimately lead to integration of rural-based smallholder farmers into 'market systems' and value chains, hence increasing farmers' welfare [6, 7]. Hence, agricultural reforms targeted improving the welfare of rural smallholder farmers, who constitute over 70% of the population in sub-Saharan Africa (Africa Agricultural Status Report, 2017). Some scholars [e.g. 8] posit that 'welfare' is multidimensional and may connote well-being, food

43 security, and household assets. However, studies employing a ‘welfarist approach’ have approximated the
44 concept with household income [9]. Therefore, this article argues that the underlying objective of imple-
45 menting market reforms was to enhance rural farmers’ incentives and consequently general well-being
46 through modern and commercial modes of production and enhanced incomes. Given the gendered nature
47 of agricultural markets, liberalization reforms, commercialization and change in income would imply alter-
48 ing household production structures, producing different gender relations outcomes. We note that gender
49 relations are central in organizing: production, consumption, and benefits accruing from crop production
50 implying that change in gender relations has an inverse effect on commercialization processes. The perti-
51 nent question is: Did farmers’ income change? If so, for who? What is the effect of the change gender
52 income relations in terms of decision-making and control?

53 A positive correlation between market reforms, commercialization and household income has been doc-
54 umented by studies in sub-Saharan Africa [10-14, 27] and in Uganda (15, 16). However, given that small-
55 holder households differ in a number of dimensions such as internal organization and structure, resource
56 endowment and capacity to access markets, not all have equally benefited as evidenced by studies in coun-
57 tries such as India [17], Bangladesh [18], Ethiopia [10, 19, 20] and Malawi [21]. This points to unequal
58 benefits for male and female members of farming households. We argue that although increasing household
59 income underpinned agricultural reforms, the effect of the changes in income on the relationship between
60 male and female members of farming households, as unintended consequence of the reforms, remains less
61 understood. In line with this argument, [22] have underlined the fact that while agricultural commercializa-
62 tion has contributed to positive shifts in household income, it remains unclear how household members,
63 mostly women, fare in the management and making of decisions related to use of such income. Indeed,
64 [23] warns us against “assuming that positive change in household income resulting from commercialised
65 agricultural production translates into equitable distribution and equal gender relations.

66 Numerous studies have examined the effects of agricultural market reforms on gender relations [4, 24-
67 28]. However, much focus has been put on changes in relations built around agricultural production re-
68 sources, mainly land. In Uganda, studies [e.g 29-31] have concentrated on gender relations in high-value
69 traditional cash crops, mostly coffee, analysing production resource relations in general terms. This has led
70 to generalised conclusions and therefore assumed the effect of reforms on gender relations in smallholder
71 food crops. Attention has not been paid to the effect of the reforms on gender relations in low-value food
72 crops such as Irish potatoes [32]. Yet, these crops have today become competitive sources of livelihood for
73 both men and women in smallholder farming households for food and income and their value chains have
74 been integrated into newly commercialising rural economies [33, 34]. Further, these studies have consist-
75 ently focused on the post-reform period and used post-adjustment data to analyse changes in gender rela-
76 tions without attention paid to pre-adjustment relations.

77 We contribute to the debate on the agricultural market reforms, commercialisation and gender relations
78 nexus by adding a core element: change in gender income relations in low-value food crops by providing
79 answers to the question: How have agricultural market reforms and the resulting accelerated commerciali-
80 zation impacted on gender income relations in smallholder farming households in Uganda? The article’s
81 unique contribution lies in comparing income relations in periods “before” and “after” market reforms,
82 which has not been done in Uganda so far. Lastly, we move beyond the hitherto “assumed” understanding
83 of the effects of market reforms on gender relations in non-traditional food crops to an empirical and
84 theoretical-based understanding.

85 **1.1 Theoretical Framework**

86 The agricultural stance of the neoliberal policy was grounded in neoclassical work that was based on
87 idealised household models. These models such as Becker’s conceptualization [35] assumed an ‘average
88 representative farmer’, ignoring differences in agrarian structures and inequality in rural farming households.
89 Farming households were thus understood as “unitary entities” where members pool resources and seek

90 to maximise a common welfare function. Further, the models assume that household decisions are under-
91 taken by an “altruistic head” or “benevolent dictator” on behalf of all members of the household, thus
92 “common preference”. In essence, unitary models assume away all gender-relations dynamics within house-
93 holds including income allocation. The “benevolent dictator model” thus fails to capture conflict, inequality,
94 and individuality of household members under what [35] terms as ‘non-cooperative’ nature of gender re-
95 lations”. The non-cooperative model [35-37] holds that households comprise of individuals with varying
96 interests and preferences and different abilities to pursue these interests. Households are thus sites of ine-
97 quality, conflict, cooperation and struggle over resources and decisions on production, consumption and
98 resource allocation including income/financial benefits are made through ‘bargaining’ [35]. The model fur-
99 ther pre-supposes that since individuals have divergent preferences, there is no common pooling of indi-
100 vidually earned income, but rather bargaining-based allocation.

101 This study therefore draws on Bargaining theories to understand changes in gender income relations.
102 Bargaining connotes ‘negotiations’ that occur between members of a household to arrive at certain deci-
103 sions regarding such a household [38]. Bargaining is a form of ‘distributive’ negotiation process that is both
104 ‘competitive’ and ‘positional’ and hence leads to numerous outcomes. One of such outcomes is change
105 (improvement or deterioration) in household members’ positions in terms of decision-making and control
106 over resources including financial proceeds/income from crop production. ‘Non-cooperative existence’
107 further suggests that men and women seek different expenditure patterns, given the varying interests.

108 The outcomes of bargaining ‘as a process’ have indicators that are objective and comparable as proxy
109 measures for intra-household bargaining power [39, 40]. This study’s objective is to analyse the changes in
110 income relations between men and women as an outcome of the bargaining process. The study’s aim is not
111 to understand “how” income-related decisions are made but rather to establish the changes in decision
112 positions – “what” – that market reforms could have brought about. [35] posits that intra-household gender
113 relations tend to be affected by actions of men and women in farming households in interaction with
114 factors in extra-household arena. This argument and the ‘in-ward’-looking nature of bargaining theories–
115 as the major theoretical weakness, led to adoption of the Social Relations Framework. The framework is
116 key in understanding of factors in extra-household institutional structures of communities and markets
117 that could not be captured by bargaining theories as explanations for the changes in income relations. The
118 application of combined theories provides a holistic and nuanced understanding of the effect of agricul-
119 tural market reforms on income relations.

120 1.2 Literature Review

121 Recent research [41-43] shows that structural changes induced by agricultural market reforms and the
122 resulting “commoditisation” –termed as ‘*commercialisation*’ in this article – have an effect of transforming
123 and restructuring social relations in farming households. Similarly, [44] argues that neoliberal policies in-
124 cluding reforms in agricultural market are not ‘gender-neutral’ and therefore tend to produce varying gen-
125 dered outcomes manifesting in ownership, distribution, management and use of production resources and
126 proceeds from crop production. However, literature generally points to increasing inequality and women’s
127 deprivation [41,42].

128 Opondo et al. [11] indicates that the distribution of income in farming households is differentiated along
129 gender lines. In similar vein, [45, 46] posit that the gender of a person who earns income in a household
130 plays a central role in determining members’ position in management and use of such income. However,
131 given the heterogeneity of contexts within which smallholder farming households are embedded, these
132 effects tend to vary between differently situated households and therefore between men and women as
133 principal decision-makers in these households. This argument is supported by findings in empirical studies
134 [47-49]. For instance, a study by [49] on horticultural commercialization in Kenya reveals that although
135 women contribute over 72% of the required labour force in commercialized French bean production, they
136 only obtain 38% of the income.

137 Literature indicates that agricultural market reforms and commercialization tend to increase men's au-
138 thority and power, as heads of households, and decision-making and control over income accruing from
139 crop production [46, 50]. "Income management" is used in this study in the sense that a household member
140 that receives money is free to decide how such money can be utilized or spent without necessarily consulting
141 the other member. On the other hand, "control" is used in the sense of exercising higher-level decision-
142 making authority than management rights [51]. Management therefore connotes 'agency' – the ability of
143 an individual to make choices or define goals and act upon them [52]. Other studies have argued that as
144 subsistence crops become more commercialized, women's space in 'management and use of income from
145 crop production shrinks as such income becomes "cash income" [22, 53, 54]. This revelation concurs with
146 findings in earlier studies [e.g 14] which revealed that 'when a crop enters the market economy, men are
147 likely to take over from women; women therefore less benefit from market-oriented production as well as
148 men do'.

149 A number of factors have been advanced in literature to explain variations in distribution, decision-
150 making and control over income accruing from commercialised crop production between men and women.
151 Among these include the value attached to the crop under commercialisation [45, 46, 55, 56] patriarchal-
152 based norms and practices, and disparities in control over other resources, mainly land [57, 58]. However,
153 as [59] argues, the notion that income from commercialised agricultural production is controlled by men
154 cannot be taken as a rule since there are instances where women may have autonomy over such income,
155 for instance in *de facto* female-headed households and *de jure* male (joint)-headed households where there
156 are changes in cultural beliefs and norms. These assertions underline the fact the women are not a homog-
157 enous group, neither are they passive victims of patriarchy. Hence, they tend to react in different ways,
158 either overtly or covertly, to men's assertion and control over proceeds from agricultural production, as
159 evidenced by empirical studies in Kenya [50] and Ethiopia [53] where women have resorted to non-con-
160 frontational means such as "side" or "secret" selling, in what [60] termed as "weapons of the weak".

161 Quite different from the above literature, some studies [61] have advanced the argument that where there
162 are different crops with incomes from such crops earned by different household members and sold in
163 different markets that have gender differentiation, income tends to belong to the person who earned it. In
164 such instances, a scenario of 'husband's income', 'wife's income' and 'family income' results. [61] refers to
165 this scenario as the "traditional gender division of income control". In line with this [62] basing on a study
166 in Niger notes that commercialisation has led to a 'dichotomous' stream of household income where in-
167 come from all common "household plots" is classified as "male income" while income from marginal or
168 peripheral land cultivated by women is classified as "female income". The pertinent question is: Do women
169 fully manage the "female income" and are they free to make decisions relating to use of such income?

170 The 'resource bargaining school' [63, 64] posits that increasing women's contribution in income earnings
171 generates shifts in gender relations by enhancing their intra-household bargaining position and more equi-
172 table share of decision-making power. The assumption here is that the spouse who contributes more to the
173 household in monetary terms is entitled to greater bargaining power in decision-making. However, some
174 other studies [65] dispute this school's line of thinking arguing that even when they dominate labour pro-
175 vision and their financial contribution in the household increases, women still continue to have less capacity
176 to negotiate their position in the household. For instance, [65] insists that increasing women's earnings may
177 yield further intra-household gender-related tensions and marital discord since it may result into men claim-
178 ing part of or all the income earned from their 'land resource'. Lastly, in the debate on income management
179 a revelation, that even if women's income increases, such income is expected to be spent on domestic
180 household needs while men's income is spent on "adult" goods [22, 26; 66, 67]. These patterns of income
181 spending have largely been attributed to 'gendered cultural ideologies', referred to as "maternal altruism"
182 [68]. These, as [69] argue, drive women into spending much of their earnings on daily household needs,
183 while supporting the notion that men have a right to spend on personal needs.

184 While literature shows varying changes in gender income relations induced by market reforms and ac-
 185 celerated commercialization, there is limited discussion on the implications of these findings for policy-
 186 making and interventions in smallholder food crops. Addressing gender income disparities in smallholder
 187 farming households provides practical relevance for this study.

188 2 Materials and Methods

189 2.1 Study Area and Population

190 The study was carried out in Rubanda district, South-western Uganda, and involved 201 potato farmers
 191 selected from Muko and Bubaare sub-counties as primary respondents. The choice of the district hinged on
 192 the fact that it has the highest level of Irish Potato production in western Uganda [70, 71], with over 90%
 193 reliance on the crop as a source of livelihood in terms of food and income. Irish potatoes were selected
 194 since they are the fastest commercializing crop in the district and in Uganda generally and are listed among
 195 prioritized crops under the Agriculture Sector Strategic Plan (ASSP) 2015/16-2019/20 for promotion of
 196 agro-industrialisation [72]. The study's primary respondents were potato farmers (men and women) who
 197 are considered to be principal decision makers in households [39]. Other categories of respondents in-
 198 cluded; District Production Officials, Agricultural Extension workers, members and leaders of farmer
 199 groups, Local council leaders, and potato traders. The inclusion-exclusion criteria for primary respondents
 200 was such that households and therefore members that grew potatoes during the pre- and post-reform pe-
 201 riod were included. Respondents aged below 40 years were excluded since they lacked pre-adjustment expe-
 202 rience and knowledge, while those aged above 90 years were excluded due to memory lapses. The year 1987
 203 is used as the benchmark for adoption of market reforms. However, we underline the fact that 'Structural
 204 Adjustment Reforms' take between 10 to 15 years to produce significant impact at the micro-level (see 15).
 205 Considering the 15-year period, the study based on 2002 as the 'impact year. This provided a basis for
 206 setting 40 years as the minimum age for respondents for surveys, in-depth interviews and FGDS.

207 2.2 Study Design and Sample Size Determination

208 The study employed an explanatory sequential mixed methods design involving quantitative and qualita-
 209 tive data strands. This design was vital in identifying changes in the income relations variable and providing
 210 reasons and in-depth explanations for the changes and trends. It was also key for data triangulation and
 211 contributing to validity of results.

212 Probability and non-probability sampling techniques were used in selecting respondents for the two
 213 phases. To determine the sample size for the household surveys, the [Yamane (1967)] formula was applied;

$$214 \quad n = \frac{N}{1+N(e)^2}$$

215 where n = sample size; N = total number of potato farming households, e = margin of error.

216 Using the formula and computing from a population of 15623 subsistence households (8101 and 7522
 217 for Muko and Bubaare sub-counties respectively) [73] and using 8% margin of error (92% confidence
 218 interval) yielded a sample size of 155 households. This sample size applied to the new town councils that
 219 were recently carved out of Muko and Bubaare sub-counties (Table 1). [40] underlines the fact that 'using
 220 data from both spouses in a single household produces strong results and minimises bias'. Therefore, as
 221 much as it was practically possible, in 46 households, data was obtained from both spouses, making a total
 222 of 92 respondents. In the remaining 109 households, data was collected from either spouse, hence a total
 223 of 201 respondents

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Table 1: Sample Size for the Household Survey.

Sub-county	Parish	Selected Villages	Sample size (n)
Muko Sub-county	Karengyere	Karengyere Central	(n=12)
		Kagano	(n=11)
		Rushekye A	(n=11)
		Rwakamu	(n=12)
		Kaara	Kibungo
Butare-Katojo Town Council	Rurembo Ward	Katete	(n=11)
		Rurembo	(n=11)
		Mufumba	(n=11)
		Rwamigyendezi	(n=11)
		Ruhasa	(n=13)
Hamuhambo Town Council	Bushuura Ward	Rwakayundo	(n=12)
		Kataraga	(n=12)
		Kagarama Ward	Kyarujumba
	Kibuzigye Ward	Munkombe	(n=13)
		Rwarugambwa	(n=12)
		Muyanje	(n=12)
		Kigarama	(n=12)
Total	6	17	201

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230 Multi-stage sampling was employed to obtain survey households as follows (Table 2): From the three (3)
 231 purposively selected sub-counties/town councils – selected on basis of information obtained from the
 232 District Production and Marketing Office, simple random sampling was applied to select six (6) par-
 233 ishes/wards: two (2) from Muko Sub-county and one (1) from Butare-Katojo Town Council (formerly part
 234 of Muko Sub-county) and three (3) from Hamuhambo Town Council (formerly part of Bubaare Sub-
 235 county). Similarly, simple random sampling was used to select three (3) villages from each of the parishes
 236 in the selected sub-counties/town councils. The aim was to obtain 50% of the villages for a representative
 237 sample. The exception was in Kagarama Ward from where only one (1) village was selected, basing on the
 238 information provided by key informants on limited availability of potato farmers in most villages in the
 239 ward. However, this gap was compensated for by selecting an additional village in Kibuzigye Ward, making
 240 a total of four (4) villages from this ward. A total of seventeen (17) villages was selected (Table 1).

241 ‘Proportional allocation’ was used to determine households for each village from which 201 farmers were
 242 selected. This based on the lists provided by Local Council One Chair Persons which formed the study’s
 243 sampling frame. Systematic sampling was subsequently applied to select the households. To determine the
 244 sample size/household units (n_i) for each village, the following formula was applied [74];

245

$$n_i = \frac{N_i}{N} * n$$

246 where N_i =total households in village i ($i=1, 2, 3, \dots, 17$), as provided by Local Council One Chair
 247 Persons; N =Total households in all the 17 villages (1573); and n = pre-determined sample size (155 house-
 248 holds).

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Table 2: Summary of Sampling Techniques and Procedure for the Survey.

Category	Sampling Technique	Sample Size (n)
Sub-counties/Town Councils	Purposive Sampling	(n=3)
Parishes	Simple Random Sampling	(n=6)
Villages	Simple Random Sampling	(n=17)
Potato Farming Households	Systematic Sampling	(n=155)

250 For the qualitative data strand, purposive sampling was employed to select respondents as follows: First,
 251 were Key Informants (KIIs) selected as follows: District Agricultural Office (1), District Production and
 252 Marketing Office (1), Agricultural Extension Office at sub-county level (1), Farmer organisation/group
 253 leaders (6), and Local Council Leaders (6) (n=15). Second were In-depth interviews in which 9 interviews
 254 were conducted with potato farmers and traders in each of the three (3) sub-counties/ town councils
 255 (n=27). The sample size for in-depth interviews was determined basing on the ‘saturation principle’ [75].
 256 Lastly, were Focus Group Discussions (FGDs) in which 3 FGDs were conducted in each of the sub-counties/
 257 town councils, 3 being exclusively for women, 3 exclusively for men and 3 mixed (n=9). FGDs were
 258 gender segmented to obtain rich information [76] and had sizes of 8-10 participants for ease of control.

259 2.3 Data Collection and Analysis

260 Quantitative data was obtained through household surveys using structured questionnaires administered
 261 to the potato farmers by the researcher with the help of two trained assistants. Qualitative data was collected
 262 through Key Informant Interviews, In-depth interviews with individual potato farmers and traders, and
 263 Focus Group Discussions. Quantitative data was analysed using STATA Version 17 for descriptive and
 264 inferential statistics; the “t”-test was employed to compare changes in income relations on basis of periods
 265 “before” and “after” the reforms, while deductive thematic analysis was used to analyse qualitative data.
 266 Analysis of quantitative data was undertaken at 5% level of significance. The study’s unit of analysis was
 267 the individual smallholder potato farmer while the focus of analysis was gender relations. To minimize bias
 268 during the research process, in the spirit of reflexivity, a critical and reflective stance was taken, with infer-
 269 ences made based on data and not personal values. Moreover, multi-stage sampling and sequential data
 270 collection were employed.

271 3 Results

272 3.1 Respondents’ Socio-demographic Characteristics

273 Table 3 below provides respondents’ age. Although the largest number of respondents fell in the 40-49
 274 age category and the least in the 80-89 age group, accordingly, there was no statistically significant gender
 275 difference across the age categories or groups (p=0.975).

276

Table 3: Respondents’ Age.

Age Group	Female Percentage / Frequency	Male	Total	Chi-value	P-value
40-49	32.9 (26)	32.8(40)	32.8(66)		
50-59	29.1(23)	30.3(37)	29.6(60)	0.4816	0.975
60-69	16.5(13)	18.9(23)	17.9(36)		
70-79	16.5(13)	13.9(17)	14.9(30)		
80-89	5.0(4)	4.10(5)	4.48(9)		
Total	100(79)	100(122)	100(201)		

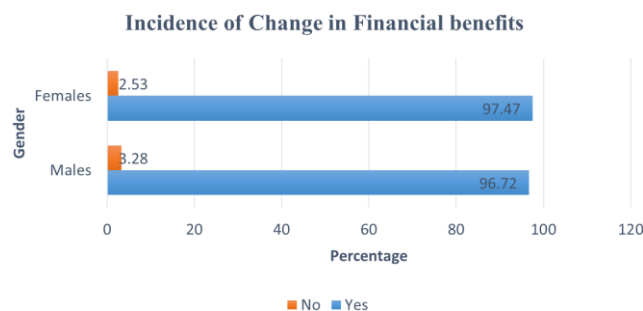
277 Table 4 presents sex-disaggregated data on respondents' marital status, literacy level and occupation.
 278 Results indicate a highly significant gender difference in respondents' marital status ($p=0.000$). Ninety-six
 279 percent of male respondents were married (living with their spouses) compared to 71% females. The pro-
 280 portion of widowed women (28%) was considerably higher than that of widowed men (3%) which implied
 281 a higher existence of *de jure* female-headed households. Similarly, results indicated a statistically significant
 282 gender difference in respondents' education level ($p=0.000$), with female respondents who had not attained
 283 formal education at all (20%) being six times more than their male counterparts (3%), and males that had
 284 attained secondary education (26%) doubling females (13%). Results further indicate a highly significant
 285 gender difference in respondents' occupation ($p=0.001$). Eighty-seven (87) percent of females compared to
 286 90% of males identified themselves as potato farmers. Ten (10) percent of females and none of males were
 287 house workers which implies women's domination of household maintenance and reproduction roles. Four
 288 (4) percent of males and none of the female respondents were in formal/salaried employment as their
 289 occupation. Lastly, 6% of males and only 3% of female respondents reported potato trading or dealing as
 290 their occupation which implies low participation of women in potato marketing, compared to men.

291 **Table 4: Respondents' Marital Status, Education Level and Occupation.**

n=201		Female		Male		Overall		Chi-value	P-value
Variable	Description	F	%	F	%	F	%		
Marital status	Married	56	71	117	96	173	86	25.959	0.000
	Widowed	22	28	4	3	26	13		
	Divorced	1	1	1	1	2	1		
Education level	No education	20	25	4	3	24	12	27.976	0.000
	Primary	48	61	77	63	125	62		
	Secondary	10	13	32	26	42	21		
Main Occupation	Tertiary	1	1	9	7	10	5	13.941	0.001
	Potato Farmer	69	87	109	90	179	89		
	House work	8	10	0	0	8	4		
	Salaried	0	0	5	4	5	3		
	Potato Trader	2	3	5	6	7	5		

292 3.2 Incidence of Change in Income

293 The largest proportion of respondents (96.72% of males and 97.47% of females confirmed having experi-
 294 enced change in income from potato production. This is opposed to only 3.38% of males and 2.53% of
 295 female respondents that reported no incidence of change in financial benefits from potato production (Figure
 296 1). Clearly, these results indicate that almost all male and female members of potato farming households
 297 experienced change in income. The question however remains whether the change was positive or negative,
 298 and to what degree.



299

300

Figure 1: Incidence of change in financial benefits.

301 According to Table 5, majority of respondents (65.25% males and 66.23% females) indicated that market
 302 reforms have caused slight increase in women's income. However, there was no statistically significant gen-
 303 der difference across categories ($p=0.476$). To the contrary, over 55% of males compared to 51.95% of
 304 females reported a substantial increase in men's income, marking a significant difference in income
 305 ($p=0.009$).

306 **Table 5:** Degree of change in financial benefits/income from potato production.

	Gender	Significantly increased	Slightly increased	Neutral	Slightly decreased	Significantly decreased	Chi-value	P-value
Men's income	Males	55.93(106)	38.98(56)	1.69(2)	2.54(3)	0.85(1)	13.592	0.009
	Females	51.95(40)	28.57(22)	14.29(11)	2.60(2)	2.60(2)		
Women's income	Males	26.27(31)	65.25(77)	6.78(8)	1.69(2)	0.00(0)	2.494	0.476
	Females	27.27(21)	66.23(51)	2.60(2)	3.90(3)	0.00(0)		

307
 308 While explaining the variation in increase in men's and women's income, one female respondent stated in a
 309 group interview that:

310 *You cannot expect a woman's income to increase to the level of a man's when her position in potato farming and marketing*
 311 *is 'secondary' and she is ruled and controlled (kutegyekwa) in almost all life aspects!* (FGD Participant, Females Only,
 312 Karengyere, Muko Sub-county).

313 In a different group interview, a female respondent revealed that men do not want women with to hold
 314 more money than them since it is a source of insecurity and a threat to their household power and authority,
 315 thus;

316 *Men fear women who have more money than them. They take such women as a threat to their power and authority. A man*
 317 *will be at peace when the wife begs for everything from him. Most men therefore technically do all that is possible to block*
 318 *women from accessing money.* (FGD Participant, Females Only, Kaara, Muko Sub-county).

319 3.3 Income Sources for Males and Females in the Post-reform Period

320 Table 6 provides descriptive statistics for the income earned from different production-related sources
 321 by male and female farmers in the post-reform period, with the analysis based on the most recent season.
 322 Post-reform male farmers obtained income from the main family land, peripheral land, hired land, farmer
 323 groups and potato trade.

324 **Table 6.** Analysis of Variance (ANOVA) Between Gender and Income from Different Production-related Sources.

Income source	Observations		Average Income (UGx)		F-Test		Bartlett's Test of Equal Variance	
	M	F	M	F	F-Value	P-value	Chi-value	P-value
Main family land	117	26	1292410	699615	4.17	0.043	11.687	0.001
Peripheral land	4	43	156667	318139	8.32	0.006	4.5873	0.032
Hired land	20	15	573000	300000	15.72	0.001	5.5280	0.019
Farmer group	11	15	490000	353333	1.37	0.254	24.757	0.000
Potato trade	5	3	2772000	413333	8.81	0.025	2.6103	0.106

Female farmers on the other hand obtained income from peripheral land, hired land, farmer groups and potato trade. However, sources are not mutually exclusive and overlaps are visible. Averagely, men earned more income from four of the sources than women, namely: main family land, hired land, farmer groups, and potato trade. On the other hand, averagely, women earned more income from peripheral land, that is 318139 compared to men's 156667. These results provided a basis for a one-way analysis of variance (ANOVA).

To compare income averages for males and females earned from different sources, a one-way Analysis of Variance (ANOVA) was conducted (Table 6). The F-test showed a significant difference in income earned from the main family land with males obtaining more income than females ($p=0.043$). Similar results were recorded for income earned from hired land and potato trade as shown by the respective p-values ($p=0.001$; $p=0.025$). On the other hand, a significant difference was recorded in income earned from peripheral land with women earning more income than men ($p=0.006$). The Bartlett's Test of Equal Variance showed non-equal variances in income obtained from the main family land, peripheral land, hired land and farmer groups. Since the respective p-values ($p=0.001$, $p=0.032$, $p=0.019$ and $p=0.000$) are less than 0.05, the null hypothesis that there is equal variance in income from these sources is rejected, but accepted for income from potato trade whose p-value ($p=0.106$) is greater than 0.05.

3.4 Change in Decision-Making and Control Over Income

Four key domains were considered in analysing the changes in decision-making and control over income from potato production, viz: custody of money obtained from potato sales, use of income in production-related activities, and in "small" and "big" household affairs (Table 7). With regard to the first decision domain, survey results indicated a highly significant increase ($p=0.000$) in men's decision-making from 30.85% before market reforms to 52.74% after the reforms. The proportion of individual women making decisions regarding this aspect remained low compared to men's, although there was a significant increase from 15.42% to 19.90% after market reforms ($p=0.002$). Increase in women's decision-making over the custody of income was attributed to ownership of 'separate' potato gardens (*Omwehereko*), as a respondent indicated in an In-depth Interview:

These days it is common for both men and women to own 'separate' gardens (Omwehereko), some on hired land. Years ago, only men used to have 'separate' gardens on ring-fenced plots of land called 'Engaragazi'. Women's gardens have increased chances for them to hold cash and decide on its use. (Male Respondent, 65, Karengyere, Muko Sub-county).

Individual men's decision-making regarding the use of income in production-related activities significantly increased from 20.90% to 36.82% after adoption of market-oriented production ($p=0.000$). A similar trend was reported in joint decision-making by men and women, which significantly increased from 44.28% to 50.75% ($p=0.002$), while a moderately significant increase, from 10.45% to 12.44% was reported in individual women's decision-making ($p=0.043$). One male FGD participant, while responding to the high increase in men's decision-making over income use in production-related activities, enthralingly asked;

Are you talking about equality? Equality over cash? Isn't it a man's responsibility to make decisions and control whatever takes place on his land? What kind of man do you be if you cannot decide how the income from your land should be used? (FGD Participant, Mixed, Kibuzigye, Hamuhambo Town Council).

As far as decision-making regarding the use of income from potato production in "small" household affairs is concerned -buying children's clothes, food and other household items- survey results indicated men's decision-making to have increased almost two-fold from 18.41% before to 35.32% after adoption of market reforms marking a highly significant change ($p=0.000$). A significant increase ($p=0.004$) was also recorded in joint decision-making by men and women from 46.27% to 52.24%, while there was no significant change reported in individual women's decision-making. Increase in joint decision-making by men and women was explained by a male respondent in an in-depth interview that;

In past years, decision-making regarding household roles including acquisition of household items was tagged to culture and

371 *was too rigid. Today there is tremendous change. Whoever has cash at their disposal can make a decision to buy a household*
 372 *item. (Male Respondent, 54, Butare-Katojo Town Council).*

373 With regard to “big” household affairs (paying school fees, medical care, household construction and
 374 starting business), survey results indicated a highly significant increase in decision-making by individual men
 375 from 28.36% before reforms to 47.26% after the reforms ($p=0.000$). Similarly, results indicated significant
 376 increase in joint decision-making by men and women, from 38.81% to 41.29% ($p=0.024$). A female FGD
 377 participant explained increase in joint decision-making in this aspect as follows;

378

379 *Is it logical for a man to stop me from choosing a school for the child when I am ready to pay the biggest portion of school*
 380 *fees? I think such was for past years where most household affairs including children’s education were a preserve for men.*
 381 *Women’s income has increased . . .so, men have to allow them per per take in making some decisions. (FGD Participant,*
 382 *Females Only, Karengyere, Muko Sub-county)*

383

Table 7: Change in decision-making and control over financial benefits.

n=201 (Frequencies in parentheses)					
Decision domain	Gender/ participation	Before (%/F)	After (%/F)	T-value	P-value*
Keeping the money received from potato production	Male	30.85(62)	52.74(106)	8.6323	0.000
	Female	15.42(31)	19.90(40)	3.3649	0.002
	Both	26.37(53)	27.36(55)	1.4275	0.159
	None	27.36(55)	0.00(0)	-	-
Deciding how the money received should be used in production-related activities	Male	20.90(42)	36.82(74)	7.4578	0.000
	Female	10.45(21)	12.44(25)	2.1381	0.043
	Both	44.28(89)	50.75(102)	3.8409	0.002
	None	24.38(49)	0.00(0)	-	-
Deciding how the money received should be used in “small” household affairs	Male	18.41(37)	35.32(71)	8.0202	0.000
	Female	10.95(22)	12.44(25)	1.8091	0.083
	Both	46.27(93)	52.24(105)	3.6632	0.004
	None	24.38(49)	0.00(0)	-	-
Deciding how the money received should be used in “big” household affairs	Male	28.36(57)	47.26(95)	7.9162	0.000
	Female	8.46(17)	11.44(23)	2.7865	0.011
	Both	38.81(78)	41.29(83)	2.2927	0.024
	None	24.38(49)	0.00(0)	-	-

384 *If the p-value is less than 0.05, then the gender change is statistically significant, otherwise insignificant.

385 3.5 Use of Income from Potato Production

386 To further establish the level of decision-making in income between male and female farmers, respondents’ views were sought on the manner in which income earned from potato production was spent (Table
 387 8). Women’s income was shown to be largely spent on “small” household affairs or ‘routine purchases’
 388 including buying children’s clothes, food and other household items such as furniture and kitchen utensils,
 389 as respectively reported by 48.76%, 44.28% and 45.27% of the respondents. Joint spending by men and
 390 women ranked second as respectively reported by 40.80%, 43.78% and 39.80% of the respondents. Men’s
 391

392 income was the least spent under this category. Women's spending on "small" household affairs was at-
393 tributed to their responsibility for 'making the home', as one female respondent indicated;

394 *It is a woman's natural responsibility to organize the house. A man may receive money but all he is focusing on is buying*
395 *land and other things... So, as a woman, you have to use your money to buy household items to avoid looking good in public*
396 *when the situation inside your house is worse. (Female Respondent, 56, Butare-Katojo Town Council).*

397 On the other hand, men's income was largely spent on "big" household affairs or occasional purchases
398 including household construction and repair, paying school fees and starting new business, as respectively
399 reported by 70.15%, 51.75 and 53.23% of the respondents. Joint spending by men and women under this
400 aspect dominated children's medical treatment as reported by 50.75% of the respondents. Similarly,
401 production-related activities including buying more land, obtaining new farm equipment, buying fertilizers
402 and pesticides, and paying farm workers dominated men's income spending, as respectively reported by
403 59.20%, 52.24%, 62.19% and 48.26% of the respondents. Women's income spending on "small" household
404 affairs was largely attributed to cultural norms and ideologies to which women largely submit and the notion
405 that men's income is taken as 'personal money' while women's income is for the entire household. While
406 justifying men's spending on "big" household affairs and 'adult goods', reasons such men's 'natural
407 differences that give men superiority over women were advanced, as indicated by a male FGD participant;

408 *Men and women are created differently. Even our responsibilities differ. Can a woman personally construct or thatch a house?*
409 *We men spend most of the time out there looking for money while women are at home. How do you then expect me not to*
410 *eat a piece of meat or a beer on the money I have made?(FGD Participant, Males Only, Karengyere, Muko Sub-*
411 *county).*

412 **Table 8: How Income from potato production is spent.**

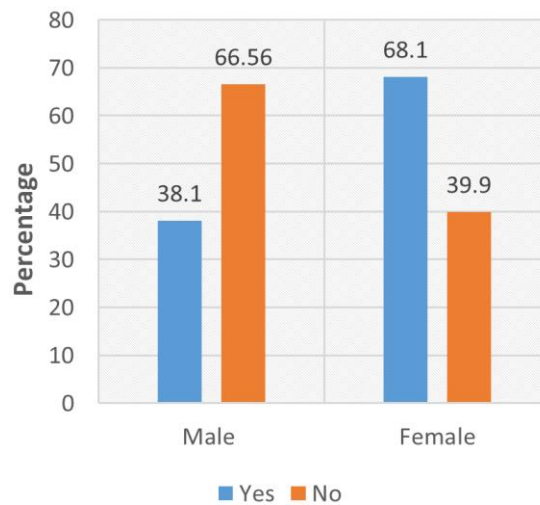
n=201 (Frequencies bracketed)			
Way of Expending Income	Husband's Income	Wife's Income	Both
Household affairs/routine			
Buying children's clothes	10.45(21)	48.76(98)	40.80(82)
Buying food for the household	11.94(24)	44.28(89)	43.78(88)
Buying other household items (furniture, kitchen utensils)	14.93(30)	45.27(91)	39.80(80)
"Big" household affairs			
House construction /repair	70.15(141)	5.47(11)	22.38(46)
Children's medical treatment	37.31(75)	11.94(24)	50.75(102)
Paying school education /fees	51.75(104)	8.96(18)	39.3(79)
Starting new business	53.23(107)	6.47(13)	27.86(56)
Production-related activities			
Buying more land	59.20(119)	5.47(11)	35.33(71)
Buying farm equipment	52.24(105)	12.44(25)	35.32(71)
Purchasing fertilizer and pesticides	62.19(125)	11.44(23)	26.37(53)
Paying farm workers /labourers	48.26(97)	12.44(25)	38.81(78)

413 3.6 Ownership of Separate Potato Gardens

414 The study found market reforms to have led to a common practice of male and female members of
415 households undertaking potato farming on separate potato plots, termed as *Omwereke*. This necessitated
416 a detailed analysis of the gendered effect of the practice in regard to decision-making and

417 control over income from such gardens. Survey results indicated that more women than men undertook

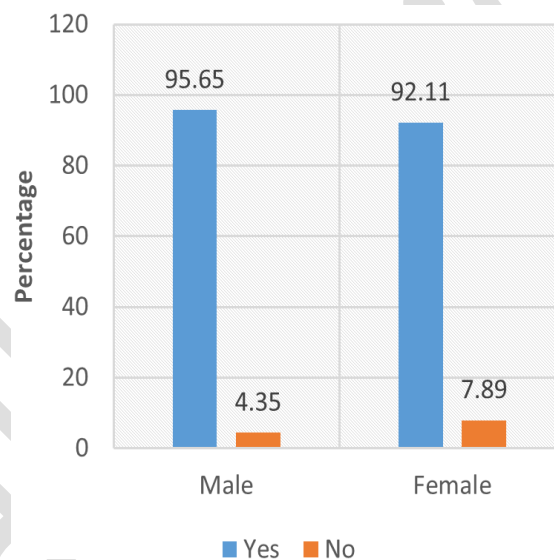
418 farming on separate plots as respectively reported by 68.1% of females and 38.1% of male respondents
 419 (Figure 2). The biggest proportion of respondents (95.65% men and 92.11% women) that owned separate
 420 potato gardens confirmed marketing potatoes independently from joint family potato harvests (Figure 3).
 421



422

423

Figure 2: Farming on 'separate' garden.



424

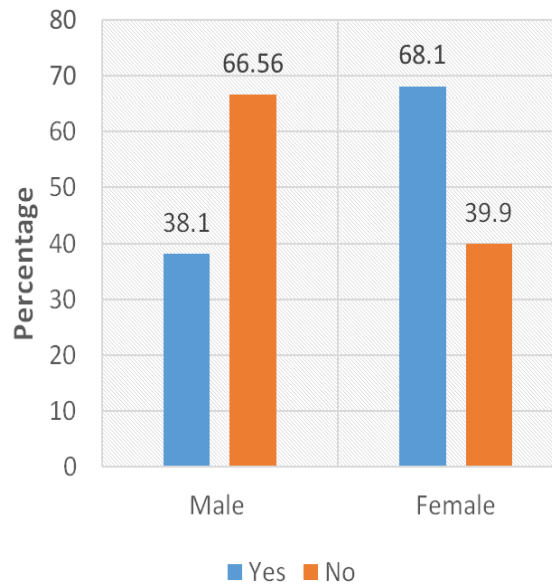
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Figure 3: Marketing Potatoes 'separately' from collective family harvest.

426 As far as the custody of income from sale of potatoes from 'separate' plots is concerned (Figure 4),
 427 majority of male respondents (51.72%) reported men or husbands to hold responsibility for custody of the
 428 income while none of the female respondents reported men to hold such responsibility. Similarly, majority
 429 of female respondents (51.61%) indicated women or wives to hold responsibility for custody of the income.
 430 Only 3.45% of male respondents reported women to hold the responsibility for custody of income. While
 431 this speaks to each spouse keeping income from their 'separate' garden, it also evidences existence of dis-
 432 agreements in control of income, and the tendency for each member of the household to want to hold
 433 custody of the income.

434 Joint custody of the income by husband and wife was reported by an almost equal proportion of males and
 435 females (44.83% and 48.39%, respectively). Almost all male respondents (96.97%) compared to 82.82% of
 436 females reported that they had the liberty to decide how the income from the 'separate' potato garden should
 437 be used (Figure 5). 17.14% of females reported not being at liberty to decide how the income obtained from
 438 sale of potatoes from the 'separate' garden is to be used. Women's limited decision-making regarding use of

439 income from the 'separate garden' – *Omwereko* was attributed to patriarchal norms that bestow upon men
 440 authority over household resources including household income.



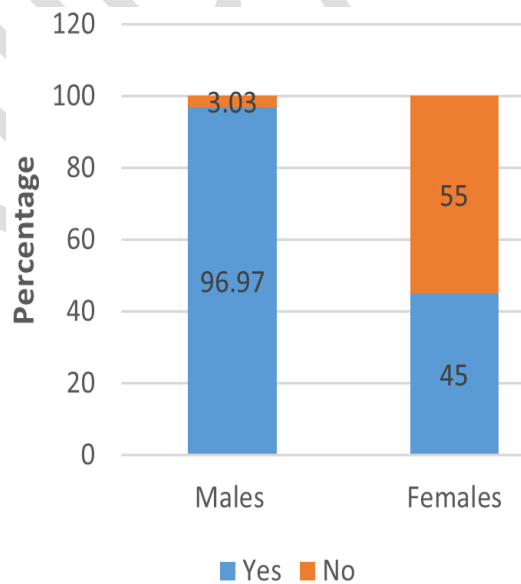
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Figure 4: Custody of income received from 'separate' plot.

443 With regard to the freedom to decide on use of the income from separate plots/gardens (Figure 5),
 444 almost all male respondents (96.97%) compared to only 45% of females reported that they had the liberty
 445 to decide on how the income from the 'separate' potato gardens should be used. Fifty-five percent of
 446 females reported not having the liberty to decide on use of the income obtained from sale of potatoes
 447 from the 'separate' garden. Responses from interviews indicated prevalence of men's authority and control
 448 over women's use of their income emphasizing that they (women) have to obtain permission to buy some
 449 things mostly livestock, as indicated by an FGD participant;

450 *If the woman wants to bring things home, be it a cow, a goat or sheep, she has to inform me as the head of the household...*
 451 *Suppose I refuse as a man; how will she bring it home? Is it her home? Or Am I dead?* (FDG Participant, Males Only,
 452 Kaara, Muko Sub-county).



453

454

Figure 5: Liberty to decide on use of income from 'separate' potato sales.

455 However, contrary to the above situation, qualitative interviews with females respondents indicated ele-
 456 ments of cooperation between husbands and wives, with some females emphasizing that they are given

457 freedom to buy livestock using their own income or their husband's, as one key informant indicated;

458 *'My husband at times tells men: There is some money here...in case you see someone selling a good goat or sheep, please buy*
459 *it'* (Key Informant, Female, Kataraga Women Irish Potato Farmers Group).

460 **4 Discussion**

461 Study results revealed that market reforms have given rise to dichotomous household income streams
462 for males and females, resulting into what [61] termed as "gender division of income". Males' income was
463 mainly obtained from the main family land, hired land, farmer groups and potato trade while females'
464 income was obtained from peripheral/marginal family land, hired land, farmer groups and potato trade.
465 However, this study notes existence of overlaps in income sources. Results further showed positive change
466 in male's and female's incomes, with the 'gendered income dichotomy' although there were varying degrees
467 of change. Unlike men's income which substantially increased, slight increase was recorded in women's
468 income. This however did not imply uniform change in women's income, given their non-homogeneity. For
469 instance, results indicated more widowed and unmarried than married ones to per take in the more lucrative
470 long distance trade. Qualitative results advanced men's governance or "power over" women (*Kutegyekwa*)
471 and the fear for financially strong women as the major factors underlying the skewed increase in income.
472 These gender power relations factors led most men to technically frustrate women's efforts to access, gen-
473 erate or control income 'since women can use their financial power to undermine their husbands' [30].

474 With regard to decision-making and control over revenue accruing from potato production, analysis
475 based on four key decisions aspects, namely; custody of the income, use of income in production-related
476 activities and in "small" and "big" household affairs.

477 Decisions regarding the first aspect (custody of income accruing from potato production) were domi-
478 nated by men both in the pre- and post-adjustment periods. However, results showed significant increase
479 in individual women's decision-making with adoption of market reforms. The positive change in women's
480 decision position regarding custody of income was attributed to increasing access to income from various
481 sources listed under the 'female stream', namely; peripheral family land, hired land, farmer groups, and
482 potato trade (see Table 6). Of significance is peripheral family land from which women earned more income
483 than men, as confirmed by the F-Test results ($p=0.006$).

484 Results regarding custody of income in the post-adjustment period elicited conflicting responses with both
485 males and females reporting responsibility for the income under their stream. While these results speak to
486 each spouse taking responsibility for custody of the income under their stream, it also evidences disagreements
487 and conflict relating to income control between male and female members of households. It further points to
488 men's increasing interest in maintaining control over income and women's continued struggle to gain control
489 amidst deepening patriarchal power. Qualitative results revealed that men's extravagant behaviour led some
490 men to surrender portions of the income to their wives for custody to avoid losing it to lavish spending. This
491 provided women latitude to decide over release of the kept money conditional on understanding the purpose
492 for which such money was to be released. Studies [30, 65] posit that women's assertion tends to trigger more
493 patriarchal-based power breeding marital discord and violence since "*a man's decision is not supposed to be ques-*
494 *tioned*". This article however maintains that such male power or authority may not produce grave gender rela-
495 tions consequences, in some instances, since it may be a 'secondary formation' against women's already at-
496 tained strong fallback position or "threat point" produced by increasing income earnings. Further, not all men
497 will choose to lose their marital relationships or marriages which implies compromise and 'tolerance' as an
498 option in order to benefit from cooperative relationships as postulated by bargaining theorists [36, 39].

499 Results regarding use of income in production-related activities revealed three types of decisions. First
500 was joint decision-making by men and women which dominated during pre-and post-reform periods. This
501 involved pooling of income, co-operation and joint consultation on how to apply the accrued income in
502 production-related activities [35, 39]. However, joint-decision making did not imply equal decision positions
503 for men and women *per se*. In fact, qualitative interviews seemed to indicate that women's involvement in

504 making income-related decisions, planning and budgeting was 'superficial' and only for "formality" to make
 505 them feel 'not excluded'. In some instances, they were involved where their income savings had been per-
 506 suasively included in the stream of income being budgeted and planned for, but husbands had the final say
 507 in most instances. Decisions pertaining income accruing from the main family land remained male-domi-
 508 nated. This finding corroborates [56] who found men's dominance in what was termed as "joint decision-
 509 making" and that women were expected to respect their husband's final position in income-related matters.

510 The second and third forms included "separate" decision-making by individual men and women which
 511 significantly increased with adoption of market-oriented production, although increase in decision-making
 512 by women was indicated to be marginal ($p=0.043$). Where the accrued income was to be used in activities
 513 on the main potato garden grown on main family land to which both husband and wife had contributed
 514 labour, individual men increasingly dominated. Similar results were reported by [66] in a study in central
 515 Malawi. The reverse applied to women who largely exercised control over income allocation to potato
 516 gardens on hired land and to some extent on peripheral land. However, some women reported that men's
 517 control extended to such income allocation, driven by the justification that "*women are brought into marriage*
 518 *and paid dowry for*", hence the income from the 'female' stream has to be controlled by the man as the head
 519 of the household. After all, such income comes from land acquired and controlled through the male lineage,
 520 since women are regarded as strangers in marital homes and generally "transitory beings" in society [57]. A
 521 statement by one FGD participant speaks to this;

522 *"Are you talking about equality? Equality over cash? Isn't it a man's responsibility to make decisions and control whatever*
 523 *takes place on his land?"*

524 The finding concurs with [22] who indicated commercialisation to be negatively associated with women's
 525 control over crop income in Nigeria and Ethiopia. However, as [77] have argued, this study notes that
 526 commercialisation cannot be taken as a zero-sum game where women totally lose in making income-related
 527 decisions. The different income streams and increasing women's income levels contribute to increased
 528 women's assertion and positive bargaining outcomes. From the results, as argued by [54, 78] in harmony
 529 with the Income Resource Bargaining School [63, 64], we deduce that increasing women's income and more
 530 so from independent plots produces positive bargaining outcomes.

531 Finding regarding decision-making on use of accrued income in "small" household affairs including purchase
 532 of children's clothes, food and other household items revealed that decisions were largely jointly undertaken
 533 before market reforms. This finding corroborates results in [77] who indicate decision-making over household
 534 expenditure to be more shared between husbands and wives. Although joint decision-making dominated in the
 535 post-reform period, results also indicate significant increase in decision-making by men. Qualitative interviews
 536 advanced changes in gender-based cultural norms that define gender roles as underlying reasons for increase in
 537 men's making of decisions on "small" household affairs. With this change, men have increasingly participated in
 538 making decisions relating to purchase of items such as kitchen ware, furniture, and some food items, mostly
 539 processed ones, as part of planning for their household. However, in agreement with [55], his study maintains
 540 that reforms have not altered women's decision role in purchasing small household items mainly basic groceries
 541 including salt, soap, cooking oil, and others.

542 Similar to "small" household affairs, decisions pertaining to use of income in "big" household affairs, mainly;
 543 paying children's school fees, medical care, land purchase, household construction and repair, and starting new
 544 business were more jointly undertaken before market reforms, according to results. However, these shifted to
 545 being more male-dominated with splatterings of women's participation after adoption of market reforms. This
 546 finding reinforces previous research [24, 50, 55] which indicated an increasing trend in men's decision-making
 547 and control over income from commercialised farming purchasing 'strategic assets' such as land, financing off-
 548 farm business and paying school fees. It further validates the argument that the shifting of crops production
 549 from subsistence to commercial increases men's authority over management of spending of proceeds from such
 550 a crop, as indicated by studies [22, 53]. However, qualitative results indicated increasing decision autonomy in

551 polygamous households and *de facto* female-headed household, validating the findings by [59] that the stereotyped
552 patriarchal system in which management of income from commercialised crops is male-dominated cannot stand
553 as rule.

554 According to findings, while commercialisation is positively associated with increasing men's decision-mak-
555 ing power, it as well enhances women's financial power and decision position in regard to expenditure on "big"
556 household affairs' with different income streams and women's independent income earnings, as revealed in
557 some households [78]. In such instances, household members embrace joint decision-making, cooperation
558 and income pooling as a 'safe way' for maintaining healthy marriages as part of the conjugal contract [30, 77],
559 although others may prefer non-cooperation. Indeed, qualitative interviews indicated some women to have
560 increasingly financially contributed to expenses such as paying school fees and medical care which seemed to
561 have been a preserve for men in the pre-adjustment period. These findings infer non-homogeneity of women.
562 They further infer positive change in women's decision position in "big" household affairs with increasing
563 income from commercial-oriented production.

564 Lastly, according to study results, much of women's income accruing from potato production was found
565 to be spent on "small" household affairs or routine purchases including children's clothing and collective
566 household consumption. On the other hand, men's income was largely spent on "big" household affairs or
567 'occasional purchases' including household construction and repair, starting new business and other 'personal'
568 things such as meals outside the home and alcohol, referred to as "adult goods" [67]. However, there was
569 evidence of joint spending for example on children's medical care and paying school fees. Women's spending
570 on routine purchases resonates with ideologies such as 'good mothering' to which they largely subscribe and
571 the notion that men's income is 'personal' while women's income is for the entire household [22, 69], which
572 infers women's limited control over income and expenditure choices [66]. We argue that the repetitive nature
573 of small purchases infers high expenditure which keeps women in positions where they cannot economically
574 advance, mostly given that their little income is drained daily. These findings points to the need to change
575 gender-based ideologies and attitudes that lead women to attach priority to spending on domestic consump-
576 tion and increasing reinvestment of women's income in commercialised crops.

577 **5 Conclusions**

578 This study examined the gendered impact of agricultural market reforms and the consequent accelerated
579 commercialisation on financial benefits in Uganda's smallholder farming households. According to findings,
580 although men remain the dominant actors in income decision-making, women's access to independent in-
581 come streams and their increased role in decision-making in a number of aspects signal a gradual but sig-
582 nificant shift in household and production gender power dynamics. The findings underline the fact that
583 market reforms and commercialisation produce not only disempowering outcomes for women but also
584 offer opportunities for increased female agency and autonomy. However, the persistence of patriarchal
585 structures underpinned by men's increasing interest in commercialised potato production as income sources
586 complicates these gains, requiring further attention to how market reforms can more equitably distribute
587 power and resources within farming households. Our results suggest that increasing women's income and
588 more so from independently managed plots produces positive bargaining outcomes. We underline the need
589 for government and other development actors to; 1) formulate gender responsive agricultural policies that
590 protect and promote smallholder women farmers' interests; 2) provide targeted training to women focused
591 on building their capacities to manage income from independently farmed plots. 3) Focus on changing
592 men's negative attitudes and norms towards women's ownership of and control over income.

593 **6 Declarations**

594 **6.1 CRediT Authorship Contribution**

595 **Denis TUSHABOMWE:** Conceptualization, Methodology, Validation, Investigation, Formal analysis,
596 Visualization, Data curation, Writing - original draft, Writing - review & editing.

597 **David Mugambe Mpiima:** Conceptualization, Methodology, Visualization, Validation, Formal analysis,
598 Supervision, Writing – review & editing.

599 **6.2 Acknowledgments**

600 We acknowledge the financial support from the Erasmus+ PhD Exchange Program.

601 **6.3 Informed Consent**

602 In both phases of data collection, informed consent was obtained from respondents through signing con-
603 sent forms prior to being interviewed.

604 **6.4 Competing Interests**

605 No conflict of interest to declare.

606 **6.5 Publisher's Note**

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