

Elements of Women Empowerment in the Potato Value Chain: A Study on Kushtia District in Bangladesh

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Abstract

The impact of women participation in agricultural value chains into their empowerment is poorly understood. This paper explores the linkage between women's participation in Potato value chain development activities and their empowerment. The study involved 402 women of whom 207 (51.2%) were participating in the Potato value chain development activities and 195(48.5%) were non-participants. Data was analyzed using SPSS program, four index scales were constructed to measure women empowerment (personal autonomy, household decision making, economic domestic consultation and freedom of movement). A composite women empowerment index was developed to gauge women empowerment. Women in Kushtia District were categorized in medium level of empowerment (mean score on CEI = 0.6033). Empowerment was found to increase with education attainment, age at first marriage and women income. Generally, women participating in the value chain development program were more likely to be empowered than their counterparts. The study recommends to the government, non-governmental organization and farmers groups to introduce gender and life skills education in value chain programs to sensitize and mobilize actors to challenge gender inequalities and promote women empowerment.

Key words: Women empowerment, empowerment indices, Potato value chain, rural women.

1.0 Introduction

Women empowerment has a different implication which depends on social, economic, and political context in which it is used. World Bank (2001) defines "the expansion of the freedom of choices and action, which could increase women authority and control over resources and decision regarding their life. Similarly, Women empowerment is a process through which women achieve the ability to control, take ownership over resources and make strategies of life choices (Kabeer 2001). However, the process itself depends on women, through education, capacity building, skills and trainings and changes in legal and structural framework. Women empowerment covers many dimensions including social, economic, cultural, political, legal and psychological (Malhotra et al. 2002). This explains a broad variation in the concept of women empowerment. Although, these definitions are clear but there are some constraints to measure women empowerment due to lack of standardized ways. We can argue that, people are empowered, or disempowered, relative to others and in relative

to themselves at a previous time. All definitions of women empowerment stress the importance that women empowerment is a process of change in which women are significant actors. Therefore, the definitions of empowerment reveal both diversity and commonality. Many definitions focus on issues of gaining power and control over decisions and resources that determine the quality of one's life. There are also tendencies by NGOs and other development organizations espousing for women empowerment to focus on structural inequalities that affect entire social groups, which take an assumption that women are a homogeneous group rather than focus only on individual characteristics (World Bank, 2002:16).

2.0 Review of Literature

The literature on whether women participation in value chain development activities impacts on their empowerment lacks consistency (Lastarria, 2006:1). While some studies have found that women's involvement in agricultural value chains does not always translate into women empowerment (e.g. Laven et al. 2009:10; Riisgaard et al. 2010:203); others have found that women involvement in value chain development results into women empowerment at household and community levels (KIT et al, 2006:123; Coles and Mitchell, 2011:1, Shackleton et al., 2011:136). For example Coles and Mitchell (2011:26) reported the findings from seven action research projects which analyzed gender issues and related upgrading strategies in seven countries: Bangladesh, Viet Nam, Mali, Philippines, India and Mali where six out of the seven projects showed positive impacts on women empowerment and gender equality. For example in the Bangladeshi case (processing and commercialization of cassava); it was found that placement of women in strategic organizational positions helped to correct household and chain power imbalances, which implies that women had increased control of the value chain and its improved output. However, Barrientos et al, (2003:1523) and Coles and Mitchell (2011:11) also argue that the impact of value chain development into empowerment depends on complex context-specific socio-cultural norms, which varies from location to location as they can also vary with time. Therefore, applications of development intervention using generic value chain approach are more likely to exacerbate gender inequalities. The authors further propose that development interventions that use value chain approach need to be done on case to case basis after thorough analysis on the particular location, hence the essence of this study. Given this gloomy picture in agricultural value chains, the focus of this research was to understand where women empowerment occurs in agricultural value chains and their determinants.

Kabeer (1999:435) defines empowerment as a process by which those who have been denied ability/power to make strategic life choices acquire the ability to do so. For women, strategic life choices may include the capacity to choose a marriage partner, a livelihood, whether or not to have children. This definition views women empowerment as both a process and an end result. The author further argues that, for this power to come about, three interrelated dimensions are needed: access to and control of resources; agency (the ability to use these resources to bring about new opportunities) and achievements (the attainment of new social outcomes). Therefore, poverty levels may affect or act as barrier for one to make strategic life choices. In the context of value chain development, empowerment is viewed as a process of reducing inequalities and enhancing people's ability to make choices on issues of interest which impact on one's life; such changes may result into changes in gender roles and relations

(Coles and Mitchell, 2011:1; Laven et al., 2009:5). In this study woman empowerment is viewed as a process in which women become aware of their rights and potentials and are able to take control over material assets (e.g. access to and control of income) and acquire knowledge, information and ideas to challenge beliefs, attitude and behavior that contribute to their subordinate position in their families and societies.

Oxfam GB (2005:7) argues that “women’s empowerment is important for reasons of both principle and pragmatism; it’s the right thing to do because women have the same rights as men, but it’s also a necessary thing to do, because it will make the world a better place and help many countries to attain human development”. Empowering and investing in rural women is anticipated to increase productivity, reduce hunger and malnutrition and improve rural livelihoods for women and men. Women’s empowerment is ranked third in the Millennium Development Goals (MDG) and endeavors to promote gender equality and empower women (UN, 2011:20). According to Basu and Basu (2001:4), women are less empowered compared to men in many aspects such as education attainment, income, control over own income, bargaining power in selling their own produce and labor, participation in decision making bodies, access to production inputs and employment opportunities. Throughout the world; Governments, NGOs and development organizations are concerned with women empowerment in order to enable them to gain power to challenge their subordinate position or oppressive situation in their families and societies. Many efforts to empower women at household and community levels have been focused on raising women’s status through education, training, access to health, and family planning services as well as legal counseling and support. Politically, efforts have been made to increase women representation in decision making organs such as setting quota for women political posts (URT, 2010:18). Economically, the most popular strategy, especially since the 1990s, has been to involve women in credit and microfinance programs to help them acquire capital needed in production (Malhotra et al., 2002:12; Mayoux, 2000:7; Makombe, 2006:59). In recent years government and non-government organizations have started implementing projects and programs that aim to empower women involved in agricultural related livelihoods using value chain approaches.

3.0 Methodology

The study was conducted in Kushtia District located in Khulna Region in Bangladesh. The area was selected as it has some wards that are actively involved in Potato production in western Bangladesh. The District has both government and Non-Governmental Organizations promoting Potato production and marketing using value chain approach. There are many farmer groups organized for Potato production and marketing and women are the majority in these groups.

3.1 Data for the study

The study adopted a cross-sectional research design, where data were collected only once. Four wards and eight villages that had women participating in Potato value chain development activities were selected purposively. The sampling unit for this study was the individual women participating and those not participating in Potato value chain development activities. Data were collected during October, 2015 to February, 2016 using a structured questionnaire where 402 respondents participated in this study, 207 (51.2%) of whom were participating in

Potato value chain development activities and 195 (48.5%) were non-participants. Qualitative data was collected using focused group discussions and key informants interviews which were conducted at village and ward levels.

3.2 Data analysis

A combination of qualitative and quantitative methods was employed to analyze the collected data. Qualitative analyses were used to describe the characteristics of the respondents. Women empowerment was measured by developing women empowerment index (WEI). Four women empowerment indices were developed and used to construct a composite empowerment index (CEI). Personal autonomy index (PAI) sought to understand whether a woman was able to visit parental home, hospital, market, help a relative with money, seek financial help or set money for personal use without seeking permission from her husband. The household decision-making index (HDMI) sought to know who makes decisions over: children's education, family planning, day to day expenditure, purchase of permanent items, going outside home, medical treatment, spending personal income, use of family income, marriages of sons/daughters, selection of crops to plant in the field, food purchase, and purchase of clothes and entertaining guests. Domestic consultation index (DCI) sought to assess whether women are consulted by their husbands when they want to spend family income on: purchasing furniture and utensils, land, medicine, clothes, food, consumer durables, spending money for children education, spending money accrued from Potato sale, opening up a bank account, and spending up a personal salary. The freedom of movement index (FM) included items regarding women's freedom to visit market, medical facility, relatives/friends, parental home, meetings, social functions e.g. marriage ceremonies, going to a distant places for shopping and visiting financial institutions e.g. banks. For the PAI, DCI, FM, and PoA indices the response weights were generally (1.0), occasionally (0.5) and never (0). For the household decision making index the scores were wife alone (1.0), joint decision (0.5) and husband alone (0). Since all these indices relate to different aspects of empowerment they were combined into a single index for use in multivariate analysis. In accordance with the construction methods of the Human Development Index (UNDP, 2005 cited by Varghese, 2011:45) the CEI was computed by averaging these four indices.

$$Y = 1/4(PA + HDM + DCI + FMI) \dots\dots\dots(1)$$

Human development can be measured on an index ranging between the value of 0 which indicates one is deprived of development and value one (1) shows the full development (UNDP, HDI, 2005; cited by Varghese, 2011:44). IFPRI (2012:4) has also developed Women Empowerment in Agriculture Index (WEAI) where women empowerment is also measured on an index ranging from a value of 0 to 1. According to UNDP, HDI scale the human development is further categorized into three levels: minimum level of development (0 - 0.5), medium level of development (0.6 - 0.7) and high level of development (0.8 and 1). Since empowerment and women empowerment is considered to be important aspects of human development; this study adopted the UNDP classification of human development index, where empowerment was classified into four levels. Respondents scoring (0) on the composite empowerment index were categorized as "No empowerment", scores of (0.1 - 0.5) "low empowerment", (0.6 - 0.7) "medium/moderate empowerment" and a score higher than (0.8) was classified as "high empowerment". Other scholars (Varghese, 2011:43; Tayde and Chole,

2010:34; Handy and Kassam, 2006:70) also used similar methods to estimate women empowerment using index scales.

This research also sought to underscore the contribution of value chain development activities into women empowerment among women participating into value chain development program versus those not in the program. Therefore, the contribution and the net effects of value chain development activities on women empowerment was assessed using ordinal logistic regression model. The dependent variable (Y) was categorized into four levels (no empowerment, low empowerment, medium and high empowerment) based on individual scores the CEI. The independent variables included a mixture of socio-demographic variables and value chain intervention variables such as access to credit, increase in income, access to extension services and participation into Potato value chain activities.

The ordinal logistic regression model took the form:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + b_8 X_8 + b_9 X_9 + b_{10} X_{10} + U \dots (2)$$

a = Constant b_1 ---- b_{10} = Regression coefficient representing the amount of change in the depended variable U = error term

X_1 = Age of respondent measured in years

X_2 = Marital status of the respondent (married/cohabiting 1, 0 otherwise)

X_3 = Education level of respondent measured in years of schooling

X_4 = Age at first marriage (married at >18 =1 and 0 if married < 18 years)

X_5 = Age of husband (measured in years)

X_6 = Income level of women compared to spouse/husband (Tshs) (higher income than husband=1, 0 otherwise)

X_7 = Land owned/cultivated by respondent's family (measured in acres)

X_8 = Access to credit (Ever received credit 1, 0 otherwise)

X_9 = Participation into Potato value chain program (Participant 1 and 0 for non-participant)

X_{10} = Access to extension services (average number of visits by extension officer)

4.0 Results and Discussion

4.1 Profile of the respondents

The respondents' ages ranged between 18 and 80 years; the mean age of the respondents was 37.6 years. Majority of respondents were in their active productive and reproductive age; 76.3% of the sample was in the 18 - 45 age range (see Table 3). Women empowerment is usually associated with education attainment. In this study found it was found that a significant percentage (18.2%) of the respondents had no formal education and three quarters of respondents (75.6%) had only attained primary education. About half of the respondents (56.5%) depended on agricultural production as their main economic activity followed by 24.6% who depended on both agricultural production and livestock keeping. These characteristics represent a true picture of many rural societies in Bangladesh, where many people derive their livelihood in agriculture and related activities. Monogamy was found to be the common form of marital arrangements in Kushtia District (86.9%) and Muslims were more numerous than other religions. The data in Table 1 reveal that age difference between spouses was very high; about over-third of the respondents (35.2%) were married to husbands

who were more than ten years older than them. The average incomes of women were reported to be equal or higher than husbands' incomes (42.2% and 47.7% respectively).

Table 1: Percentage Distribution of Socio-demographic Characteristics of the Respondents (N=402)

Variable	Frequency	Percent
Age		
<20 years	22	5.5
21-25 years	40	10.0
26-30years	79	19.8
31-35 years	62	15.5
36-40years	68	17.0
41-45years	34	8.5
46-50years	33	8.3
51+ years	61	15.3
Education level		
No formal education	73	18.2
Primary education	304	75.6
Secondary education	19	4.7
Technical education/Diploma	6	1.5
Economic activity		
Farmer/crop producer	227	56.5
Livestock keeper	32	8.0
Farming and livestock keeping	99	24.6
Pet trader self employed	15	3.7
Wage laborer	13	3.2
Civil servant	2	.5
Housewife	6	1.5
Farm/crop trade & pet trade	1	.2
Fishing	7	1.7
Type of marriage		
Monogamy	319	86.9
Polygamy	48	13.1
Age of husband		
Younger than	18	5.2
Same age	11	3.2
1-3 years older	65	18.9
3-6 years older	71	20.6
6-9 years older	58	16.9
More than ten years older	121	35.2
Income level of husband		
Lesser than	158	47.7

Equal to	139	42.0
Higher than wife	34	10.3

4.2 Status of Women Empowerment

The mean score on the composite empowerment index was found to be 0.6033 which is the medium level. These results imply that, generally, women in Kushtia District were categorized in the medium level of empowerment. Less than half of the study sample (45.8%) had attained a higher level of empowerment, and about a quarter (24.2%) of the sample was categorized as having medium empowerment; the rest were categorized into low and no empowerment (16.4% and 13.6% respectively).

Further analysis (using F - test) and comparison on the composite empowerment index revealed that attainment of empowerment varied with some socio-demographic variables. Table 2 presents the status of women empowerment by selected socioeconomic and demographic variables. The data in Table 2 show that, generally, the relationship between age and women empowerment was not statistically significant ($P=0.394$). However, mean score on women empowerment was observed to increase with age up to the 31-35 age brackets where it started to fall below index mean. Similar trend has also been observed by Mostofa et al. (2008:419) in Bangladesh. This study found that women empowerment was the lowest in women with younger ages and for those aged above 50 years. This low status of women empowerment in this aspect is contributed by the nature of questions asked, most of which sought to understand women decision making and power relative to their male partners or husbands of whom those aged above 50 years were mostly widows, whereas women with younger ages were mostly living as singles. Other studies (e.g. Amin et al. 1995:111; Mostofa et al. 2008:419) also found that women empowerment increased with women age. During focus group discussion it was emphasized that women married at relatively older ages were more likely to participate in household decision. Older women as opposed to young ones, have more autonomy over themselves and closer relationship with their spouses; their experiences enable them to have better ways to do what they want without causing conflicts to their spouses.

This study found that there was a significant relationship between marital status, education level and type of marriage of the respondents ($P<0.05$). Education attainment is frequently cited (Malhotra, 2002, Malhotra et al, 2002; Chaundrly and Nosheem; 2009 and Varghese, 2011) as one of the key variables that positively impact on women's empowerment by increasing women's self-confidence, decreasing dependence from other family members as a result of new skills acquired and to enhance women's value on the labor market and hence their income. This study also found that women empowerment increased with increase in education attainment; the scores on the CEI index scales were highest among those with secondary level education and above. Although age at first marriage and age difference between spouses were not statistically significant, the mean score on the CEI index reveals that low levels of empowerment were found among women who were married at their adolescent age than their counterparts.

Table 2: Status of Women Empowerment by Selected Socio-Demographic Variables

Variable	Mean index	F	P
Age			
15-20 years	0.509	1.052	0.394
21-25 years	0.616		
26-30 years	0.634		
31-35 years	0.674		
36-40 years	0.607		
41-45 years	0.598		
46-50 years	0.566		
50 + years	0.536		
Marital Status			
Single	0.180	21.833	0.000
Married	0.674		
Divorced	0.255		
Separated	0.378		
Widow/widower	0.565		
Age at first marriage			
<18years	0.579	1.742	0.140
19-23 years	0.657		
24-29 years	0.682		
30-34years	0.444		
35+ years	0.635		
Type of marriage			
Monogamy	0.645	8.229	0.004
Polygamy	0.497		
Age of husband compared to wife			
Younger than	0.703	1.358	0.240
Same age	0.751		
1-3 older	0.602		
3-6 older	0.696		
6-9 older	0.613		
more than ten older	0.594		
Education level			
No formal education	0.433	9.713	0.000
Primary education	0.629		
Secondary education	0.747		
Technical education/Diploma	0.940		
Economic activity			
Farmer/crop producer	0.618	1.555	0.137
Livestock keeper	0.432		
Farming and livestock keeping			
0.624			

Pet trader self employed	0.497		
Wage labourer	0.669		
Civil servant	0.840		
Housewife	0.520		
Farm/crop trade & pet trade	0.800		
Fishing	0.711		
Income level of respondent (wife/woman)			
Lesser husband	0.587	5.320	0.005
Equal to husband	0.676		
Higher than husband	0.765		

Results in Table 2 also shows that age difference between the spouses had impact on women empowerment; higher mean scores on CEI index were recorded among those with little age difference and relatively lower scores were reported among those with big age difference. The husband's greater experience and self-confidence compared to the wife is argued to deprive women of empowerment which implies the bigger the husband-wife age gap the more likely is the low empowerment status of women. Some scholars (including Mostofa et al., 2008:419) argue that women who are married at relatively older ages are expected to experience more empowerment than those married at their adolescent ages because of their better understanding and experience of marital relationships including fulfilment of certain social obligations like bearing children. The experience acquired may also transform into self-confidence that result from marrying at an older age and thus make older-marrying women more autonomous than those married at their adolescence.

This study also found that there was a significant relationship ($P < 0.05$) between level of income and women empowerment; scores on the CEI index was higher among women with higher income levels than their husbands and relatively low scores were obtained among women with lesser income than their spouses. Women's incomes increase their independency on their husband's incomes and contribute more to household expenditures, which in turn increases their voices in household decision making.

4.3 Value chain development activities and women empowerment

In the study area (Kushtia District), the district council in collaboration with some development organizations (e.g. VECO and World Vision) have facilitated and supported development of Potato value chain. Farmers have established production and marketing groups in villages and have formed a network of farmers' groups at village and ward levels; the farmer's groups and network help farmers to access production inputs, credits, extension services and marketing linkages. The production and marketing groups established under this initiative are also encouraged and supported by the government under different development programs such as Participatory Agricultural Development and Empowerment Program (PADEP) and Farmers' Field School approach (FFS) programs in order to increase farmers' access to production inputs and extension services. It is anticipated that women participation in the value chain development activities will gradually generate reasonable incomes for involved actors and bring a range of benefits that will lead to empowerment within families and societies in general. This study hypothesized that women involvement in the value chain development activities would impact on their empowerment

Table 3: Results of the Estimated Ordinal Regression Model

Variable		All women (n=402)		Program women (n=205)		Non-program women (n=197)	
		Coefficient	Wald	Coefficient	Wald	Coefficient	Wald
Age	X ₁	-0.008	0.609	0.012	0.614	-0.028	3.367
Marital status	X ₂	-1.662	34.258***	-1.683	21.544***	-1.665	13.853***
Education	X ₃	0.992	15.233***	1.246	9.384***	0.920	7.511***
Age at first marriage	X ₄	0.065	3.729**	0.020	0.174	0.096	3.915**
Age of husband	X ₅	-0.052	0.434	0.030	0.069	-0.086	0.549
Level of income	X ₆	0.140	0.617	0.174	0.501	0.093	0.113
Land holding	X ₇	0.159	6.758***	0.061	0.737	0.344	5.520***
Access to credit	X ₈	-0.946	9.119***	-1.069	6.823***	-0.536	1.075
Participation in OVC program	X ₉	-0.480	2.623*	-0.338	0.633	-	-
Access to extension services	X ₁₀	-0.018	0.004	0.202	0.305	-1.026	2.885
Model statistic (Pearson)			0.000		0.002		0.000
Cox and Snell R ²			0.287		0.265		0.325
Nagelkerke R ²			0.316		0.298		0.352

Parameter estimate significance: *** at 1%, and ** at 5%

Table 3 shows the results of the ordinal logistic regression model that was employed to explore the factors that can influence women empowerment significantly. The ordinal logistic regression analysis was performed for all women and separately for women participating in the value chain development program and for those not in the program. Generally, the Pearson correlation was statistically significant for both program women and non-program women ($P < 0.05$). This indicates the presence of relationship between the dependent variable (women empowerment) and a combination of independent variables. Results in Table 3, further, show that the Nagelkerke R² which represents the adjusted Cox and Snell R² statistic for the study sample was 0.316 which implies that 31.6% of variation in women empowerment was explained by a combination of the independent variables entered in the model.

The result of ordinal logistic regression model (Table 3) further reveal that marital status, education level, age at first marriage, land ownership, access to credits and participation in Potato value chain were the most important factors for women empowerment in Kushtia District ($P < 0.05$). Among these factors five were related to value chain development activities (i.e. level of income, land ownership, access to credits, access to extension services and participation in Potato value chain), four factors have significant relationship to

empowerment. Access to credit was significant for both women participating into value chain program and non-participants; access to extension services was not significant for both program participants and non-program participants. Conversely, land size ownership had significant relationship for women not participating in the value chain development program ($P=0.019$); than those involved in the program ($P=0.391$), this may be partly explained by the intensive production methods adopted by women participating into the program versus extensive method of production adopted by program non-participants women as the study sought to know the size of land that was actually used for agricultural production. Therefore, the hypothesis that women involvement in value chain development program will significantly contribute to their empowerment is not confirmed.

5.0 Conclusion

The results of this study reveal that women in Kushtia District, based on women empowerment index, are categorized in the medium level of empowerment. Generally, women participating in Potato value chain development program were relatively more empowered than non-participants. Most of the factors contributing for women empowerment in the area were similar for program and non-program women except for access to credits which have been found to have significant difference for the program participants' women than their counterparts. This implies that, value chain development activities have not had direct impact on women empowerment. This study recommends the government, non-governmental organizations, and farmers groups that; apart from focusing on activities that will increase women incomes such as increased production, productivity and marketing; they should also focus on issues and factors that are required to change household decision making and dynamics such as introducing gender awareness and family life education to stimulate and encourage women participation in decision making at their families and community levels. Elders, traditional leaders and religious leaders who usually have high opinion in family matters and decision making need to be especially targeted. Programs espousing to empower women using value chain approach should identify gender and location specific factors for women empowerment and mainstream them in the value chain development activities. Application of generic intervention to value chain development activities like the one from which this paper emanates, may fail to address the underlying causes for gender inequalities or exacerbate gender inequalities. This paper did not establish whether the level of women empowerment acquired were due to program intervention in the area or value chain dynamics among women involved in the program and spillover effects. Therefore, more research is required to explicitly establish causal effects relationship between value chain development and women empowerment.

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