

**From labour demand to business prospects for rural youth: A study in the Fanteakwa district of Ghana**

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**Abstract**

Ask cocoa farmers in Ghana whether they would like their child to be a cocoa farmer and they will often respond 'no'. Now, ask if they would like them to go into cocoa business, and the vast majority will say 'yes' (Wagner et al., 2015). But what cocoa business opportunities do youth see for themselves within the rural communities? This paper identifies and maps out potential enterprises for youth within some cocoa farming communities in the Fanteakwa District of the Eastern Region of Ghana. A survey was conducted with 251 respondents including adult farmers, young cocoa farmers, and youth not in cocoa. Descriptive and regression analysis were performed on the survey data. The findings suggest a high demand for agricultural services by cocoa farmers mainly for activities such as land preparation and farm maintenance activities (e.g., pesticide spraying, regular weeding and mistletoes removal). Over 59% of the time, the farmers were willing to pay for individual farming activities ranging from land clearing to harvesting. These could be business opportunities for youth employment in rural cocoa communities. However, the youth did not perceive business opportunities in services provision to the same extent as demanded by the older cocoa farmers. Most youth were also interested in Holing and Planting cocoa seedling as a business (52%), while other in Harvesting and Gathering of cocoa pods as a business (39%), and pruning as a business (30%). Yet, the prices that older farmers were willing to pay for such services though highly demanded by them were up to Gh¢40.00 (\$10.00) lower than expected by the youth. It is concluded that, there is obvious demand on the side of farmers, mostly for land clearing and maintenance activities. With some level of interest among the youth on business opportunities along the local cocoa production chain, some mechanisms to structure agricultural labour into professional labour could be encouraged to promote youth entrepreneurship in rural cocoa economies.

**Introduction**

In recent years, there has been awareness in Ghana of the potential role of young men and women to enhance the sustainability of the cocoa sector (Barrientos et al., 2008). For instance, the government of Ghana through the Ghana Cocoa Board in 2014 set an agenda to promote youth in Cocoa farming and hence, introduced a 'Youth in Cocoa Farming Initiative' under a 'Cocoa Sector Transformation Agenda'. In addition, under the 'Cocoa Action' strategy, led by the World Cocoa Foundation (WCF), the goal was to nurture a 'next generation of farmers that are trained and motivated to stay in cocoa' (WCF, 2016). However, attempts to encourage young people's greater participation in cocoa farming could be broadened to getting them into cocoa businesses along the cocoa production chain. Very little attention is given to business opportunities that may exist along the local cocoa production chain (Sumberg et al., 2012). Yet, entrepreneurship opportunities in the professionalization of agricultural service delivery in cocoa farming could be explored to enhance youth involvement in cocoa productivity as aimed by WCF and the Ghana government.

A feature of the cocoa production in Ghana is the use of intensive physical labour in the core activities ranging from land preparation, maintenance, post-harvest management, supply of inputs, and produce transportation from farm gate to point of sales (Nkamleu and Kielland, 2006; Mull and Kirkhorn, 2005). In Ghana, this has resulted in farmers either soliciting for additional labour from family members or through various farm labour arrangements (Sutton, 1983). Such labour arrangements include "by day" (contracting of casual labour), the "abunu" (1:1), and the "abusa" (2:1) ratio sharecropping systems (Mull and Kirkhorn, 2005). This demand for agricultural services and labour by cocoa farmers can be turned into business prospects and hence result in diversification within the rural space with youth taking opportunities of professionalizing agricultural service delivery. However, willingness of young people in rural communities in Ghana to venture these opportunities is not known. There is also no consensus in the literature on farmers'

willingness to pay for agricultural services as this depends in part on the nature of the crop and of the kind of services (E.g., Ajayi, 2006; Ulimwengu and Sanyal, 2011).

The purpose of this study was to basically determine whether there are business opportunities within the local cocoa production chain for the youth. In addition to assess the levels of interest of the youth to venture into these business opportunities. There are a number of variables that will determine whether a young person can actually start a business, including skill, capital and a range of personality traits such as risk tolerance, locus of control and optimism (Alsos, 2003; Landstrom and Johannison, 2001; Carter, 1998; Greene and Brown, 1997). However, in this study we focus on the existence of demand.

## Methodology

### *Study area*

The study site was Fanteakwa administrative district in the Eastern Region (Figure 1). The district is 1150 square kilometers in size and has a very youthful (15 to 35 years old) population of over 60% (Ministry of Youth and Sports, 2010; Ghana Statistical Service, 2014). Agriculture remains the predominant occupation that employs majority of the population (Ghana Statistical Service, 2014). However, most of the youth are unemployed and only few are involved in cocoa farming (Ghana Statistical Service, 2014). The district has one of the largest groups of registered cocoa farmer associations under one umbrella as the Fanteakwa Cooperative Cocoa Farmers with about 3000 farmers registered.

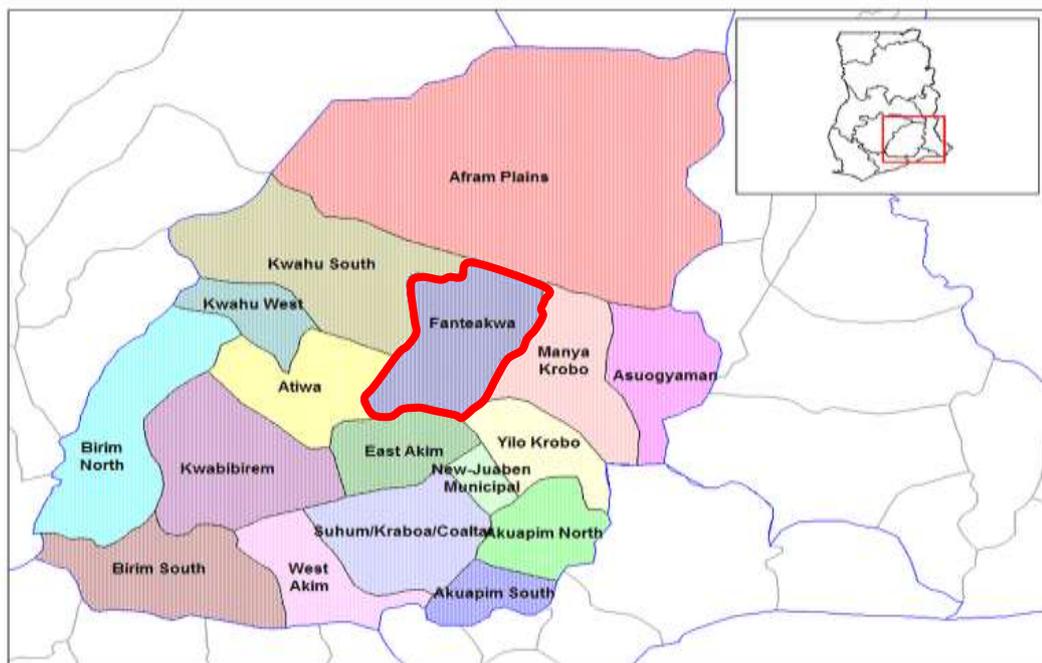


Figure 1: District map of Fanteakwa  
Source: Ghana Statistical Service, 2014

### *Data collection*

Survey research methodology was employed in accessing data for this study. Initially, Focus Group Discussions (FGDs) were conducted to generate research information. A questionnaire was then designed based on information derived from the FGDs. The questionnaire mainly focused on activities within the local cocoa production chain (Table 1), and whether farmers were willing to outsource these activities and how much they would pay for them. Similarly, youth were asked specifically to respond to a series of activities in a multiple response format indicating their interest in each as ‘a business from which they could earn some income’ and the minimum fee they would accept for undertaking each activity. Data was collected in September and October 2016.

Table 1: Activities within cocoa production chain in Ghana

Land preparation activities	Farm maintenance activities	Post-harvest activities
Land clearing – tree felling	Weeding	Heaping of pods Pod breaking and placenta removal
Land clearing – weeding	Pruning	Carrying of wet beans to fermentation site
Lining & pegging	Removing mistletoes	Fermentation
Holing & planting of plantain suckers	Removing black pods	Carrying of fermented beans to drying site
Holing & planting of cocoa seedlings	Spraying (pesticide)	Drying of beans
	Harvesting and gathering of pods	Carrying of dried beans to cocoa shed

### ***Sampling Procedure***

Sampling was done in several stages for the survey. In the first stage three cocoa producing communities—Bususo, Owusukrom and Ehiamankyene were randomly sampled. However, particularly for the youth cocoa farmers, youth resident in adjoining smaller villages were included in the sampling frame in order to obtain the targeted sample size of at least 20 youth in each main location. At the second stage, a sample of respondents was drawn, which involved obtaining Fanteakwa Cooperative Cocoa Farmers list with their ages. Forty older cocoa farmers (above 35years old) and 20 youth cocoa farmers aged between 18 and 35 years were randomly selected within each of the three communities. Due to the unavailability of a list of non-cocoa farming youth, one non-cocoa farmer youth from the household of each youth cocoa farmer was also selected. In total, 251 respondents were interviewed, consisting of about 70% males and 30% females (Table 2).

Table 2: Distribution of respondents by sex and respondent category

Respondent	Sex			Total (%)
	Male	Female	Total	
Adult farmer	93	34	127	50.6
Youth cocoa farmer	55	8	63	25.1
Non-cocoa farmer youth	28	33	61	24.3
Total	176	75	251	100.0

Source: Survey data, 2016.

### ***Data Analysis***

Frequencies were generated of the activities to assess their demand by farmers and the youth's interest in business opportunity, resulting in a sub-set of activities for which there was both demand on the farmers' part and interest on the part of young people. Binomial logistic regression was employed to identify some demographic factors that could significantly predict interest of young people in these activities (Table 3). Lastly, the difference between the price that farmers were willing to pay (WTP) for a service to be provided and the fee youth were willing to accept (WTA) to provide a service was estimated.

## **Results and discussions**

### ***Farmers' demand for services and youth interest in service provision***

Farmers were willing to hire youth for several activities within the cocoa production chain. A majority of farmers (>50%) expressed willingness to pay for 15 activities out of 18 listed (Table 4). This suggests demand by cocoa farmers for agricultural services. The demand for these production chain activities potentially offers opportunities (Harris et al., 2003) for youth employment in the local cocoa value chain.

The greatest expressed need by farmers was for land preparation and farm maintenance services such as land clearing, spraying and weeding (Table 1). There appears to be an association between the energy-intensive nature of the activities and felt demand, such that 88% of farmers' responses were interest in land clearing services (which is very laborious) to 3.2% for fermentation (much less laborious) (Table 4). This is consistent with findings in other studies that the majority of cocoa farmers want services for farm work that requires physical exertion and fitness (Blowfield, 1993, 2003; Blowfield et al., 2001). This observation is not surprising considering that the average age of farmers in this study was 54 years, while other studies

also report the average age of Ghanaian cocoa farmers as 50 years (Hainmueller et al., 2011; Muilerman, 2013).

Table 3: Levels of categorical independent variables used in logistic regression

Independent Variables	Levels
Marital status	Married Single Widow Divorced Co-habitation
Educational level	No formal education Basic education Junior High School or equivalent Senior High School or equivalent Post-secondary education
Migration Status	I was born and grew up here I was born but I didn't grow up here I only grew up here I just moved here
Type of youth	Youth cocoa farmer Not a cocoa farmer
Sex	Male Female

Table 4: Willingness to pay for activities by older farmers versus the business interest of the youth

Cocoa value chain activities	Farmers' willing to pay for activity			Youth interested in activity as a business		
	N (Responses)	Male (%)	Female (%)	N (Responses)	Male (%)	Female (%)
Land clearing – tree felling	111	73.0	27.0	14	92.9	7.1
Land clearing – weeding	111	71.2	28.8	12	83.3	16.7
Spraying (pesticides)	75	69.2	30.8	26	90.0	10.0
Regular weeding	84	72.8	27.2	28	77.8	22.2
Removing mistletoes	83	66.7	33.3	60	83.3	16.7
Holing and planting of plantain suckers	103	70.2	29.8	18	71.4	28.6
Pruning	84	64.3	35.7	35	88.6	11.4
Holing and planting of cocoa seedlings	90	73.5	26.5	12	66.7	33.3
Harvesting and gathering pods	80	74.1	25.9	6	88.9	11.1
Removing and managing black pods	104	66.3	33.8	30	100.0	0.0
Lining and pegging	81	65.3	34.7	45	80.8	19.2
Carrying of fermented beans to drying site	66	72.2	27.8	20	83.3	16.7
Carrying of dried beans to cocoa shed	68	72.2	27.8	28	83.3	16.7
Pod breaking and placenta removal	36	73.5	26.5	9	64.3	35.7
Heaping of pods	4	78.8	21.2	1	25.0	75.0
Carrying of wet beans to fermentation site	72	80.6	19.4	6	33.3	66.7
Drying of beans	6	83.3	16.7	14	64.3	35.7
Fermentation	72	100.0	0.0	6	0.0	100.0
<b>Total</b>	<b>1330</b>			<b>370</b>		

Source: Survey data, 2016.

The youth did not perceive business opportunities within the cocoa production chain to the same extent as the older cocoa farmers. Planting of cocoa seedlings was of the greatest interest as a business opportunity across the sample of youth (52%) (Table 4). The top three activities of high interest to the youth were ‘holing and planting of cocoa seedlings’ (52%), ‘harvesting and gathering of cocoa pod’<sup>1</sup> (39%) and ‘pruning’ (30%). The least desired entrepreneurship opportunities indicated by the youth included ‘fermentation’ (0.9%), carrying fermented beans to the drying site’ (5.2%) ‘removing black pod’ (5.2%), ‘carrying of dry beans to sales point’ (5.2%) and carrying wet beans to fermentation site (7.8%) (Table 4).

The preferences of the youth could be explained in part by the physical nature of the work and the potential financial reward of the activity. The findings suggest that young people are not drawn to activities that seem to be strenuous (e.g. carrying of dry beans to sales point) nor to ones that are not physically demanding and might, further, attract low fees (e.g. preparing beans for fermentation, carrying of wet beans to fermentation site, managing the fermentation process). The latter could be explained by the social norms around these activities (Dejene, 2008; Vigneri and Holmes, 2009). For instance, the three least desired business opportunity activities (i.e., fermentation activity, carrying of wet beans to fermentation site and heaping of harvested pods) are seen as women’s work in most cocoa growing communities and confirmed by the results (Table 4). While these activities were mostly demanded by the older men, most young people who were willing to take these opportunities as businesses were young women. For instance, the older farmers who demanded fermentation services were all men, while the youth who were willing to provide such activity were all women (Table 4). The study thus confirms other research that find that low income livelihoods and post-harvest activities are mostly left to women (Dejene, 2008).

#### ***Effects of some demographics on youth interest in a cocoa related business opportunity***

The effect of some demographic characters on the likelihood that a young person between the ages of 18 and 35 years would be interested in any of the top three business opportunities of interest to the larger sample of youth was assessed. The regression model for ‘pruning’ business was statistically significant ( $\chi^2(15) = 35.20, p = 0.002$ ) similar to that of ‘harvesting and gathering of cocoa pod’ business ( $\chi^2(15) = 38.16, p = 0.001$ ). However, the model was not statistically significant,  $\chi^2(15) = 16.58, p = 0.344$ , for ‘holing and planting of cocoa seedling’ business. Focusing therefore on the first two activities—‘pruning’ and ‘harvesting and gathering’—sex was a significant predictor for a young person’s interest in these activities as businesses (Table 5); males were about 18 times and 5 times more likely interested in pruning and harvesting respectively (Table 5). The number of dependents of a young person was also a significant predictor of interest in harvesting; an increase in number of dependants was associated with reduction in the likely interest in harvesting as a business activity.

#### ***Farmers’ willing to pay amount (WTP) and youth’s willing to accept (WTA) amount***

Farmers suggested a maximum man-day wage they were willing to pay to receive a service. On the supply side, each youth mentioned a minimum daily wage they would accept to provide the same services. Differences between these prices were estimated suggesting three clusters of opportunities (Figure 2). The first category includes opportunities that could be viable based on a positive price difference, with farmer’s wage was more than youth’s asking wage. The second includes opportunities for which farmers’ WTP amount is within Gh¢ 20.00 (US\$ 5.00)<sup>2</sup> difference of young people’s WTA amount. The third category includes activities for which farmers’ WTP amount differs from young people’s WTA amount by more than Gh¢ 20.00 (US\$ 5.00).

Only fermentation activity falls within the first category where the adult farmer’s WTP amount exceeded or was equal to youth’s WTA amount (Figure 2). However, this activity is the least demanded by farmers as well as the least of interest to the youth as a business venture (Table 5). The second category consist of six activities. These activities have the potential as business enterprises for the youth if there are negotiations between the youth and farmers. More than 50% of farmers had demand for these category of activities (Table 5), however, farmers were not willing to pay high amounts as daily man-day wages (Figure 2) for them. For instance, farmers were willing to pay about Gh¢ 60.00 (US\$ 15.00) less than the acceptable wage acceptable to the youth for land clearing business activity.

Table 5: Effect of some demographic characteristics of youth on the interest in two business opportunities of interest

<sup>1</sup> Harvesting and gathering of cocoa pods means harvesting of the pods and making smaller heaps of the pods under the cocoa trees. This does not include transfer and heaping of the pods at the pod breaking point.

<sup>2</sup> Exchanged rate for US dollar to Ghana Cedis used is 3.9735 as at 30<sup>th</sup> September 2016 from the Bank of Ghana (<https://bog.gov.gh/markets/daily-interbank-fx-rates>) during the period of the survey.

Demographic variables	Pruning Business			Harvesting and Gathering of cocoa Business		
	Beta	Sig.	Odds ratio	Beta	Sig.	Odds ratio
Age	-0.055	.396	.947	.059	.325	1.061
Sex(1)	2.910	.001**	18.354	1.694	.007**	5.440
Type of youth(1)	0.015	.980	1.015	.384	.495	1.468
Marital status		.162			.951	
Marital status(1)	1.426	.036	4.161	-.424	.495	.655
Marital status(2)	-1.745	.264	.175	18.524	.999	110884929.738
Marital status(3)	-23.609	.999	.000	20.268	.999	633996476.778
Marital status(4)	1.534	.189	4.637	.288	.759	1.334
Number of dependants	0.169	.096	1.184	-.239	.020*	.788
Education		.845			.983	
Education(1)	0.326	.730	1.385	.473	.609	1.605
Education(2)	-0.283	.683	.754	.195	.755	1.216
Education(3)	-.721	.392	.486	.404	.605	1.498
Education(4)	20.518	.999	814318934.764	20.418	.999	736826592.953
Migration status		.187			.128	
Migration status(1)	-1.869	.032	.154	.827	.341	2.286
Migration status(2)	.016	.980	1.016	.246	.687	1.279
Migration status(3)	-.561	.392	.571	-1.033	.081	.356
Constant	1.158	.572	3.185	-.638	.745	.528

(\*\*) denotes significance at  $p < \alpha = 0.001$  and (\*) denotes significance at  $p < \alpha = 0.05$

Source: Survey data, 2016.

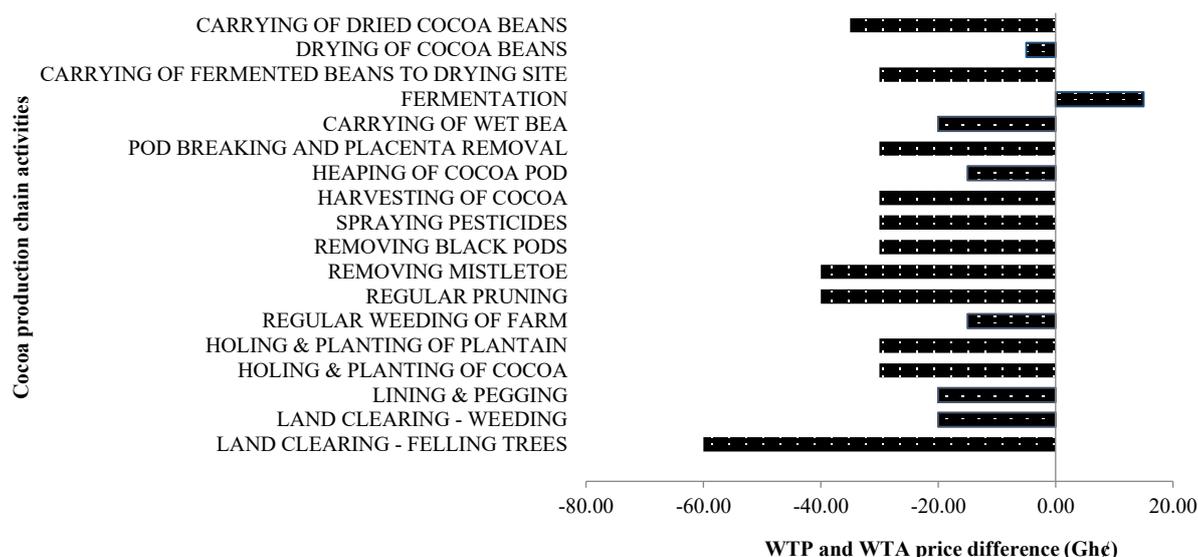


Figure 2: Price difference (Gh¢) (maximum amount willing to pay by farmers minus minimum amount demanded by youth) for each activity.

Moreover, activities such as 'Pruning' and 'Harvesting and Gathering of cocoa pods', which were of interest to some of the youth and demanded by most farmers were in the third category of business opportunities (Figure 2) for which youth demanded much more in wages that farmers were willing to pay, thus suggesting that these activities were not viable as businesses.

## Conclusion and Recommendation

There is obvious demand on the side of farmers, mostly for clearing and maintenance activities in the fanteakwa district. However, in general, the level of interest among young people for either on-farm

activities as businesses was very low considering the low expressions of interest for each category. The reasons for young people's relative disinterest is beyond the scope of the data collected, nevertheless the study can suggest a number of possibilities: young people are inherently not interested in these activities or could be interested but are demotivated by the limited money circulating within the cocoa communities. In regards to the latter, it could be that low cocoa prices make it difficult for older farmers to have effective demand (that is, demand backed by ability to pay for the economic value for services). However, these are conjectures that call for further research.

Given the findings of this study, we can recommend that mechanisms to structure agricultural labour into professional labour for rural youth can be introduced in the district. For instance, the private sector can also look into co-financing to setting up potential cocoa business for the youth and allow farmers to pay for services in advance at the time of the cocoa sales (or 50/50 between current and coming season). Farmers can also receive services as a group and make group payments, as suggested by Ajayi (2006).

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