



Marketing Strategies and Grape Farmers' Welfare Improvement: Evidence from Afghanistan

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Abstract The role of marketing channels in agribusiness has been extensively studied in the last decade. While most studies have focused on the general impact of marketing channels on sales, the impacts of different choices of marketing channels on net returns has not been widely studied. Focusing on Afghan grape farmers, this paper studied the determinants of marketing channels, as well as the impact of marketing channel choices on net returns. The marketing channels considered in this paper were channels through farmer's organizations, local traders and farmers who do on spot selling. Using survey data from 150 grape farmers in Kabul, Parwan, and Kapisa provinces in Afghanistan, the results showed that grape farming experience, selling price, province, distance to markets and internet use were some of the factors that affected the choice of marketing channels. In addition, marketing channels through local traders had a positive impact on returns as compared to channels through farmer's organizations and on spot selling. The selectivity correction terms for all marketing channels were significant indicating the existence of selectivity bias from unobserved factors.

Keywords marketing channels, Afghan grapes, MNL model, BFG method, selectivity correction

INTRODUCTION

Marketing channels act as a bridge between producers and consumers. According to Bowersox et al. (1986), marketing channels are mediators that are responsible for taking products through the marketing system. Marketing channels are purposed to reduce transaction costs and enhance competitiveness on the market. Therefore, marketing channels will ensure that products are at the right place, at the right time, hence poor choices in marketing channels would in turn result in unwanted costs.

It has been shown in literature that economic factors, social factors, and demographic factors are some of the determinants of marketing channels (Jari, 2009; Safi et al., 2019). Specifically, factors like access to information, the distance the nearest trading center, age, the level of education, income, experience and land holding have shown statistical significance in determining the choice of marketing

contracts (Jari, 2009; Safi et al., 2019). Furthermore, Chiang (2016) and Uematsu and Mishran (2011) reported that the choice of different marketing channels affects the net returns from farm produce.

Afghanistan, being one of the low income countries whose economy relies mainly on agriculture, still faces financial and agricultural related challenges in the grape industry (USAID, 2016). In addition, there is no proper marketing system for fruits, especially grapes in Afghanistan with less than 3 percent of grape farmers having access to formal marketing systems Afif (2015). This has led to 30-40% of the grapes getting destroyed due to poor marketing techniques with a lot of farmers opting for poppy farming. This research therefore aims at finding the determinants of marketing channels and the impact of marketing channels on net returns. Focusing on three major grape producing provinces, this research aims at drawing a light on the marketing channels farmers can opt for to maximize their returns.

DATA AND METHODS

The study aims at finding factors that influence the choice of marketing channels by grape farmers in Afghanistan. Three marketing channels considered were marketing channels through contracts with farmer's organizations, contracts with local traders and on spot selling (farmers with no marketing contracts). The study focused on farmers cultivating grapes for commercial purposes. From the 7 main commercial grape growing provinces, a random sample of three provinces was drawn, leading to the study provinces of this research which are Kabul, Kapisa and Parwan. Using the adjusted Cochran's formula, a sample size of 164 was drawn and randomly sampled from a list of commercial grape farmers from the agricultural departments of Kabul, Kapisa and Parwan provinces. The study used a questionnaire which consisted of closed-ended questions and it captured information on farmer's demographic information, agricultural status and information on the marketing strategies, marketing channels and net returns. All data analysis was done in excel, SPSS and STATA.

Model Description

Data was analyzed using a two stage model proposed by Bourguignon, Fournier, and Gurgand (2007) (hereinafter BFG), which controls for selectivity biasness. The first stage of the BFG method employs a multinomial logistic regression (MNL), which analyses the determinants of marketing channels. The second stage BFG uses the Linear Logit model to assess the impact of marketing channels on net returns while controlling for selectivity bias.

RESULTS AND DISCUSSION

Data from 164 households was collected in which 14 households were dropped because of incompleteness, leaving the total number of households at 150. From the 150 farmer, 40 (26.67%) had contracts with farmer's organizations, 68 (45.33%) had contracts with local traders and 42(28.00%) did on spot selling. The mean age of farmers was 30.9 years and the average number of grape farming experience in years was 10.4.

Table 1 shows that internet use and farm distance have a significant positive impact on the choice of local traders. This means that farmers with access to intern and long farm distances respectively, are more likely to choose local traders. However, both internet use and farm distance do not have any impact on the choice of farmer's organizations. In addition, experience in grape farming contribute to choosing local traders, unlike farmer's organizations, which are negatively affected by grape farming experience. Furthermore, the negative marginal values of selling price and province indicate that an increase in selling price reduces the probability of farmers choosing local traders and farmers from Kabul are less likely to choose local traders unlike farmers from Parwan and Kapisa.

Table 1 Determinants of marketing channels (First stage BFG)

Variable	On spot selling		Channel with traders		Channel with farmers organization	
	Marginal effects	Z-value	Marginal effects	Z-value	Marginal effects	Z-value
Experience	0.008195	0.254	0.014967	1.75*	-0.02316	-3.69***
Sales volume	-7.00E-06	-0.71	9.67E-06	1.02	-2.67E-06	-0.57
Selling price	0.905188	0.147	-0.61295	-3.04***	0.707764	2.71***
Province	0.043652	0.46	-0.2764	-2.38**	0.232751	2.85***
Loans	0.0385	0.78	0.089493	1.5	-0.12799	-3.04***
Distance	-0.00532	-3.8***	0.004321	3.02***	0.001002	0.146
Internet	-0.26078	-2.87***	0.318437	3.25***	-0.05765	0.336
Training	-0.1369	-1.51	-0.00068	-0.01	0.137588	2.16**
Area	0.008411	0.25	-0.05485	-1.39	0.046441	1.87*
vehicle	-0.03844	-0.72	0.03992	0.69	-0.00148	0.963
Age	0.00373	0.97	-0.00321	-0.69	-0.00052	0.844
Education	-0.01832	-0.47	0.018808	0.44	-0.00048	-0.02

Source: own survey data. *, **, *** represent significance at 0.1, 0.05 and 0.01 significant levels, respectively. The base group is on spot selling.

Every increase in selling price and planting area increases the probability of farmers choosing farmer's organizations. On top of that, farmers from Kabul have a higher probability of choosing farmer's organizations unlike farmers from Parwan and Kapisa. Farmers who undergo training also have a higher probability of choosing farmer's organizations as compared to farmers without training. On the other hand, the significant negative value of access to loans indicates that farmers who take loans from farmer's organization are less likely to choose farmer's organizations as their marketing channels, as compared to the farmers with loans from friends, family and banks.

The results presented in Table 2 show that the selectivity terms are significant in the choice of channels through contracts farmer's organization, channels through contracts with traders and no spot selling. The selectivity coefficient of channels through contracts with farmer's organizations as compared to channels through contracts with traders is positive, meaning that the expected revenue for a farmer with a contract with farmer's organization will increase if they switched from farmer's organizations to local traders.

Likewise, the significant negative coefficient for on spot selling relative to contracts with farmer's organization indicate that the expected revenue for a farmer who does on spot selling will decrease if a farmer switched from on spot selling to having a contract with farmer's organization.

The results for the OLS indicate that farming vehicle has a positive significant impact on the net returns of farmers who choose farmers organizations. In addition, sales volume, internet use, planting area, loans and education have a positive impact on the net returns of farmers who do on spot selling. However, age has a negative impact on the net returns of farmers who do on spot selling. Furthermore, sales volume, training participation and education have a positive impact on the net returns of farmers with contracts with traders while planting area has a negative impact.

Table 2 Impacts of marketing channels on net returns (second stage BFG)

Variable	Channel with farmer's organization		On spot selling		channel with traders	
	coefficient	z-value	coefficient	z-value	Coefficient	z-value
Experience	-397.92	-0.11	-0.14	-0.25	-2731.29	-2.09
Volume	1.98	1.71	0.99	1328***	8.28	10.56***
Price	-138042.50	-0.27	-219.38	-0.94	138721.10	0.34
Province	-38662.15	-1.09	-1.23	-0.14	19460.29	0.83
Loans	2421.51	0.13	13.07	3.15***	-5447.20	-0.59
Distance	265.52	1.45	0.62	1.66	-263.05	-0.56
Internet	22279.50	0.97	42.17	1.90*	5689.33	0.17
Training	21013.61	1.05	7.86	1.00	35033.67	2.0*
Area	-559.30	-0.06	4.68	2.19**	-17112.90	-3.87***
Vehicle	3929.92	0.69*	4.99	0.89	-6764.24	-0.81
Education	7398.88	1.87	2.85	0.86**	16860.50	2.86***
Age	-659.71	-1.25	-0.50	-2.19*	971.28	1.28
_m1	23899.37	0.63	-104.36	-1.78*	166337.40	1.45
_m2	28801.98	0.39	-91.87	-2.5	140147.60	0.96
_m3	153988.40	2.12**	-19.51	-0.33	95157.10	1.85*
_cons	125075.60	0.61	43.42	0.48	-37630.50	-0.46

Source: own survey data. *, **, *** represent significance at 0.1, 0.05 and 0.01 significant levels, respectively.

CONCLUSION

The study used the BFG methods to analyze the factors that influence the choice of marketing channels and the impact of marketing channels on net returns of grape farmers in Afghanistan. Focusing on three Afghan provinces, the results of the study showed that selling price, province, participation in training and planting area are some of the factors that influence the choice of marketing channels. In addition, the results showed that marketing channels through local traders would improve the overall net returns of farmers. However, future studies would incorporate management structures of farms, and focus on all commercial grape growing provinces in Afghanistan to give a clearer picture.

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