



Institutional factors influencing the integration of small-scale mohair Farmers into the markets in Mafeteng, Lesotho

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Abstract

The paper investigated the institutional factors influencing the integration of small-scale mohair farmers into the mohair markets in Mafeteng, Lesotho. Data were collected from 200 small-scale farmers selected through multi-stage sampling techniques and a structured questionnaire was used to solicit data. The descriptive results revealed that around 52% of Basotho mohair farmers are integrated into the formal economy while 48% are integrated into the informal sector. Binary Logistic regression results showed that government support ($\beta=1.987$), ($p=0.036$), market infrastructure ($\beta=1.895$), ($p=0.046$), tenure security ($\beta=1.992$), ($p=0.032$), membership in farmer groups ($\beta=1.950$), ($p=0.038$), path dependency ($\beta=2.824$), ($p=0.044$) and contractual agreements ($\beta=2.765$), ($p=0.040$) enhanced integration into the formal mohair economy while culture ($\beta=1.784$), ($p=0.047$), marketing arrangements ($\beta=1.390$), ($p=0.024$), social networks ($\beta=2.402$), ($p=0.030$), delayed payments ($\beta=1.347$), ($p=0.041$), and power imbalances ($\beta=1.378$), ($p=0.022$) limit integration of Basotho mohair farmers into the formal mohair economy. Based on the results, it is concluded that the integration of small-scale mohair farmers into the mohair markets is influenced by various institutions. Recommendations are that both observable and unobservable institutional factors be considered during design of marketing policies and strategies for smallholder producers, the representation and participation of farmers in decision making and resuscitation of advance payment be effected.

Keywords: Farmers; Mohair; Integration; Commercial; Economy

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1. Introduction

Integration of smallholder farmers into the economy is critical for the economic transformation of developing countries as it increases economic growth and income of the smallholder farmers. The participating small-scale farming households receive more income due to increased demand and cash sales (Kissouly et al., 2017). This process is influenced by multiple factors, including government policies relating to infrastructure development, price controls and taxes. Cultural factors and external factors, such as the political stability of the nation and natural disasters, also affect their integration into the economy (Amare et al., 2019; Kissouly et al., 2017). The decision to participate lies with the individual household and, under the New Institutional Economics (NIE), which is an economic paradigm that attempts to include the social and institutional aspects that guide economic activity into mainstream economics (Sheleme, 2019), integration of small-scale mohair farmers into the economy is influenced by both formal and informal institutions and also influenced by factors such as risk and preferences, factors which affect household production and the level of costs associated with market transactions (Dube, 2020; Ghandi and Johnson, 2020).

Under New Institutional Economics (NIE), consideration is given to issues related to policy goals, human behaviour, learning and beliefs, and identifies the influence of the social aspects on economic activities (Sen, 2018; Sheleme, 2019). Shared values, norms, rules, beliefs and procedures of the formal and informal institutions of the society influence economic action and decision making among people (Ghandi and Johnson, 2020; Sen, 2018).

In Europe, Asia, America and parts of Latin America, around 90% of the smallholder farmers are integrated into the commercial agricultural commodity markets and they are integrated in both the domestic and export markets (Tsakok, 2021). The integration is predominant in livestock and horticultural commodities whereby farmers are integrated into business models that are driven by various economic factors such as processors, aggregators, wholesalers and retailers, among others. The smallholders are mainly engaged in formal agreements with buyers through various forms of contractual agreements including out-grower schemes, multipartite, intermediary and centralised models (Tsakok, 2021; Hongfoga et al., 2018). In Africa, integration of smallholder farmers is relatively low and mostly in the domestic markets particularly informal markets which account for more than 65% of agricultural commodity transactions in most countries. Nevertheless, there are sectors such as tea, coffee, cotton, wool and mohair, among others, which are characterised by high participation of smallholder farmers in the export markets (Hongfoga et al., 2018; Ngenoh et al., 2019).

Lesotho is perennially ranked amongst the 10 largest mohair producers in the world. Mohair is an important source of revenue and economic growth for Lesotho as it contributes about 20% of the Agricultural Gross Domestic Product (GDP) and contributes significantly to the employment of Basotho and value of exports from Lesotho (Central Bank of Lesotho, 2017). The farmers sell their mohair clip to different buyers in both the formal and informal markets and there are farmers who sell through the illegal channels to the neighbouring Republic of South Africa, thus, channels not permitted by the law. This is illegal because according to the Importation and Exportation of Livestock and Livestock Products (Amendment) Act. 21 of 1984, "no livestock/livestock product shall cross the country borders without issuance of a permit from the Livestock division" (Livestock Products Marketing Services (LPMS), 2019).

In Lesotho, there have been consolidated efforts by the government, South African cooperative, BKB, and development partners which ensured that the Lesotho mohair clip is formally marketed, globally (LPMS, 2019).

Despite the support that the government and development partners provide to mohair farmers in order to encourage them to use lucrative formal marketing channels, some of the farmers still choose to market through the less lucrative informal channels. This has led to the study seeking to determine the influence of institutional factors in integrating small-scale mohair farmers into the mohair markets.

Several international studies have been conducted to assess the importance of smallholder farmers' integration into mohair markets and factors that influenced the decision to participate (Cheleni and Mokhele, 2019; Sheleme, 2019). The study by Mokhethi (2018) focused on the effects of agricultural extension service on the productivity of mohair farmers participating in the formal and informal markets while that of Makalo (2018) focused on the impact of market integration on farmers' welfare among Basotho mohair farmers. These two studies (Makalo, 2018; Mokhethi, 2018) did not discuss institutional factors influencing mohair farmers' integration into mohair markets in Lesotho. Till date, there has not been a study conducted to assess the institutional factors influencing mohair farmers' integration into mohair markets in Lesotho.

The topic is of importance for policy makers in Lesotho where integration of smallholders into commercial economy is lagging compared to the developed world Rantlo (2018). The contribution of this study is twofold. First, it includes various institutional variables as predictors of farmers' integration into mohair markets, which is essential to identify key and even unobservable factors that promote integration of mohair farmers into the markets. Second, this study uses data of the largest (45%) mohair producing area in the country. Therefore, the findings of this study are appropriate to be used as references in policy-making in Lesotho.

Specific objectives of the study include the following;

- To identify market channels used by smallholder mohair farmers in Lesotho
- To identify institutional factors influencing market participation among mohair farmers

2. Methodology

The study was conducted in the Mafeteng province which is in the south-western region of the country, Lesotho. Mafeteng has an area of 2 119 km² and a population of approximately 330 000 (Lesotho Bureau of Statistics, 2017). In the north and east it shares a border with Maseru and in the south, it shares a border with Mohale's Hoek province while in the west it shares a border with Free State province regions of Wepener and Zastron. The province was chosen because of its large numbers of active small-scale mohair farmers that use diverse marketing channels. The district accounts for about 49% of the country's population of small-scale mohair farmers and around 50% of the recorded national mohair production is from the area (Ministry of Agriculture and Food Security, 2019).

The target population was 190 Lesotho National and Wool Mohair Growers Association (LNWMGA) affiliated mohair farmers and 176 Non-LNWMGA mohair farmers. In Lesotho, mohair marketing channels are either public or private channels. Based on this, the study used Lesotho National Wool and Mohair Growers Association (LNWMGA) members as examples of farmers who use the public marketing channel while the farmers who were not affiliated to LNWMGA were classified as farmers who used private marketing channels.

Multi-stage sampling techniques were used in the study whereby in the first stage the stratified sampling technique was used to choose a sample whereby mohair farmers were divided into strata, according to whether they are LNWMGA affiliated or non-LNWMGA members in the district. These categories were

considered because farmers in one stratum use different market channels from farmers in the other stratum (Ministry of Agriculture and Food Security, 2019). In the second stage, simple random sampling was used to select LNWMGA affiliated farmers to come up with 104 farmers for this stratum and 96 non-LNWMGA affiliated mohair farmers, a total of 200 farmers were included in this research. The 200 selected farmers accounted for 55% of the total population which is acceptable in research and also adequate to run various econometric models. Data was collected from these farmers through a structured questionnaire which was pilot tested before the execution of main survey to ensure content validity and internal consistency, hence reliability, which recorded a Chronbach's Alpha coefficient of 0.8.

The study used descriptive techniques to describe demographic characteristics and marketing structure for mohair in the country while binary logistic regression model was used to identify and determine institutional factors that influenced Basotho mohair farmers' integration into the mohair markets (Table 1). This was because the decision to participate in commercial economy is a dichotomous outcome which can be modelled by a logit or probit model. According to Berger (2017), the binary logistic regression is the suitable model when some of the variables are qualitative rather than quantitative or when the required assumptions for multiple regression analysis (For example, linearity, independence, etcetera.) are not met. The logit model is also able to provide valid estimates, regardless of study design.

The dependent variable is the decision to participate in the formal markets and participation in the formal markets was coded 1, whilst participation in the informal markets was coded 0.

In this study, the probability that a mohair farmer participates in the formal markets is $\text{Prob}(Y=1)$ and $\text{Prob}(Y=0)$ when participating in the informal markets. The farmer's decision to produce and market in the formal economy is an indirect utility derived from participating in formal markets. The conceptual model for the linear function of (X) variables is as given below:

$$Z_i = \beta_0 + \sum_{i=1}^n \beta_i X_{ki} \quad (1)$$

β_0 = intercept

$\beta_1, \beta_2, \beta_3, \dots, \beta_i$ = coefficients of the independent variables.

$X_1, X_2, X_3, \dots, X_{ki}$ = independent variables [institutional factors] that are likely to influence the individual mohair farmer's decision to participate in the mohair markets namely;

X_1 = Government support

X_2 = Access to marketing infrastructure

X_3 = Contractual agreements

X_4 = Path dependency

X_5 = Tenure security

X_6 = Culture

X_7 = Marketing arrangements with buyers

X_8 = Social networks

X_9 = Membership in farmer groups/associations

X_{10} = Power imbalances

X₁₁ = Delayed payments

Given that $P_i = \frac{e^{z_i}}{1+e^{z_i}}$ [Berger, 2017; Muroiwa et al., 2018] where e is the base of the natural logarithm and P_i is the probability that the mohair farmer decides to participate in the formal markets, $1 - P_i$ is the probability that the farmer decides to participate in the informal markets. The odds of the mohair farmer’s decision to participate in the formal markets ($Y=1$) and the odds of decision to not participate in the formal economy ($Y=0$) is expressed as the ratio of the probability of the decision to produce for the formal markets to the decision to produce for informal markets.

The prediction equation for the individual mohair farmer’s choice is derived from the natural logarithms as given by the equation below;

$$\ln \left(\frac{P_i}{1-P_i} \right) = \beta^0 + \sum_{i=1}^n \beta_i X_{ki} = Z \quad (\text{Muroiwa et al., 2018}) \tag{2}$$

Z_i=odds ratio of farmer’s decision to produce mohair for formal markets.

In this study, the binary logistic regression model for the mohair farmer’s decision to participate in formal markets or informal markets is as expressed below:

$$\ln \left(\frac{P_i}{1-P_i} \right) = \beta_1 GOVSUP + \beta_2 MARKINF + \beta_3 CONTR + \beta_4 PADEP + \beta_5 TENSEC + \beta_6 CUL + \beta_7 MAKAREN + \beta_8 SOCNET + \beta_9 POWINB + \beta_{10} MEMGROU + \beta_{11} DELPAYM$$

Table 1. Description of explanatory variables used in the model

Variable name	Variable label	Coding of variable	Expected relationship
Government support	GOVSUP	1 if yes, 0 if otherwise	+
Marketing infrastructure	MARKINF	1 if yes, 0 if otherwise	+
Contractual agreements	CONTR	1 if yes, 0 if otherwise	+
Path dependency	PADEP	1 if influenced , 0 if otherwise	+/-
Tenure security	TENSEC	1 if yes, 0 if otherwise	+
Culture	CUL	1 if influenced, 0 if otherwise	+/-
Marketing arrangements	MAKAREN	1 if yes, 0 if otherwise	+
Social networks	SOCNET	1 if yes, 0 if otherwise	+/-
Power imbalances	POWINB	1 if yes, 0 if otherwise	-
Membership of farmer group	MEMGROU	1 if yes, 0 if otherwise	+
Delayed payments	DELPAYM	1 if yes, 0 if otherwise	-

These selected independent variables are found in the literature to be having influence on the integration of small-scale farmers into the agricultural output markets in both developed and developing countries (Andaregie et al., 2021; Muroiwa et al., 2018) hence, their choice for the regression model employed in this study.

3. Results and discussion

3.1. The marketing structure for mohair in Lesotho

There are two market channels that are predominantly utilised by small-scale mohair farmers in the area. The formal marketing channel is the predominant type and is used by slightly more than half (52%) of the respondents. There is gender inequity in this segment as females dominate at 64.2% and the probable explanation is that women are forced to supervise mohair farming activities as men go to the business districts and even South Africa to look for jobs. This agrees with Rafoneke et al. (2020) that most agricultural activities are supervised by women as men go to the cities to look for jobs. The majority of farmers using the formal market channels were above the age of 60 and have been in farming for a relatively longer period and it is assumed that more experience increases the knowledge about marketing systems. This knowledge may put the older and experienced farmers in a better position to choose the more rewarding markets in their contexts.

The other category of farmers (42%) used informal marketing channels and sell their mohair clip through traders who collect the mohair clip in the villages. Majority (76.9%) of these farmers are below the age 40 years and the explanation is that younger farmers are not content with the administration and management of the public channel (LNWMGA), hence their use of private traders to sell their mohair clip. There is gender inequity in the informal markets as males dominate at 63.7% and the probable explanation is that a large number of females indicated negative perceptions of informal business dealings especially when involving export products such as mohair and wool (Makalo, 2018). It is argued that gender-based perceptions and preferences have negatively influenced females' participation in the informal markets.

The educational level of mohair farmers was low in both categories as more than 70% had not gone beyond primary level. The educational level has an influence on their ability to access, interpret, understand and use market information which can help to make informed marketing decisions. The statistics revealed that there was an insignificant relationship between education level and participation in the mohair markets with a p-value of 1.654 and correlation coefficient of 0.029.

The rate of unemployment was high in both categories as 45% was unemployed and 12% were pensioners depended on the old age grant while only 2.5% was formally employed. Furthermore, the remaining households were entirely depended on smallholder farming for their livelihood. The employment status has the potential to influence market participation because the income obtained may enable smallholder farmers to purchase agricultural inputs that would enable them to produce more and decide to sell more portion of their produce (Andaregie et al., 2021).

In Mafeteng, the interaction between smallholders and mohair buyers has been dynamic and there are various institutional arrangements that have potential to influence market integration of small-scale farmers. In the formal markets, 90% of small-scale mohair farmers indicated to have access to government support in the form of shearing sheds, government paid staff, training and subsidised inputs and 80% indicated that they

have access to marketing infrastructure such as storage, grading, sorting, packaging equipment and also have secure land rights while all (100%) indicated to have contractual agreements with South African broker BKB. These farmers are characterised by collective action in marketing and production as they are all members of the LNWMGA and their business decisions are path dependent as 95% of them indicated that they simply used the public channel that was used by their forefathers.

Table 2. Demographic characteristics of the Respondents

	Formal market channel	Informal market channel
Number of farmers involved		
	104	96
Gender (%)		
Female	64.2	36.3
Male	35.8	63.7
Age (%)		
19-29 years	0	13.6
30-39 years	3.5	63.3
40-49 years	3.5	13.6
50-59 years	14.2	5
above 60 years	78.8	4.5
Education level (%)		
No education	50	22.7
Primary	42.8	50
Secondary	3.5	22.7
Tertiary	3.7	4.6
Employment Status (%)		
Employed (formal)	0	4.5
Unemployed	50	31.8
Pensioner	10.7	13.6
Farmer (self-employed)	39.3	50.1

Nevertheless, around 90% of farmers indicated that power imbalances which lead to conflicts increase the costs associated with participation in these markets which in turn led to some members leaving the association. Moreover, according to 80% of the respondents, the public and formal channel has been perennially plagued with delayed payments which led to high costs associated with follow up on payment. Furthermore, the delayed payment negatively affected the welfare of farming households as they are unable to timely meet financial obligations of the households.

In terms of the informal markets, all small-scale mohair farmers indicated that they did not have access to the advantages (e.g. government support, marketing infrastructure, etc.) that their counterparts in the formal markets receive. Around 95% indicated that they have access to marketing arrangements with informal traders in the markets and all of them indicated that they relied on social networks for production, price and market information. All of them indicated that they did not like the way the elders mismanage the public channel (LNWMGA) and some decided to leave that channel and others decided not to join the LNWMGA as they did not want to argue and clash with their elders which is a taboo according to Basotho culture. Furthermore, they indicated that the formal channel is characterised by policies and practices that discriminate against smaller mohair farmers (e.g. LNWMGA committee members and larger farmers stock are shorn first, and clip dispatched for early auctions that usually fetch high prices) hence, power imbalances that have led them to participate in the informal markets.

Moreover, around 90% of mohair farmers in this category stated that they opted to sell through traders as this channel is not characterised by delayed payments which are common in the formal LNWMGA channel. In addition, in the informal sector they indicated that they knew prices before the day of sale which enables them to look for the buyer who offers better prices for the clip. They indicated that the advance payment, which is a proportion of the expected price of the mohair on the auctions, is no longer paid to the small-scale mohair farmers, despite it being one of the terms and conditions of the LNWMGA. This had detrimental effects on their wellbeing as they were no longer able to cope with delayed payments which led to them switching to the informal markets where payments are made instantly.

3.2. Institutional factors influencing integration of small-scale mohair farmers into the markets

This section presents the results of the binary logistic regression model and discusses the results of the significant variables that influence the integration of Basotho mohair farmers into the markets. The variables that were discussed in the previous section were considered for the model and tested for their significance. The binary logistic regression results are presented in Table 3. The table shows the estimated coefficients (β values), standard error, significance values and odd ratio of independent variables in the model.

3.2.1. Factors influencing integration into the commercial mohair markets in Lesotho

3.2.1.1. Government support

The variable was found to be significantly influencing integration into formal markets with a p-value of 0.036 and correlation coefficient of 1.987. The results imply that there is enough evidence to suggest that an increase of a unit in government support to farmers resulted in an increase of 1.9 units in the integration into formal markets. This support enables the smallholders to be integrated into the formal markets as it reduces the smallholders' operational and production costs and increases their productivity and mohair quality to the

levels accepted by these markets. These findings are supported by Poole (2017) when indicating that Government support enhances farmers' participation in the formal markets as farmers are capacitated to improve quantity and quality of output required in the formal markets.

3.2.1.2. Marketing infrastructure

The variable was found to be having a significant and positive relationship with integration into formal markets with a p-value of 0.046 and correlation coefficient of 1.895. The finding implies that there is enough evidence to support that a unit increase in access to marketing infrastructure led to an increase of 1.8 units in the integration into formal mohair markets. The storage facilities help to avoid mohair wastage and quality deterioration while the packaging technology and packaging materials help to preserve the mohair produce and prevent contamination of the product so that it is maintained until it can be sent to the market. The farmers are enabled to meet standards and grade requirements of the formal markets hence the realisation of the potential benefits of the commercial markets such as higher prices and net incomes.

The grading and weighing facilities enable these smallholders to properly grade and weigh the produce which are some of the determinants of receiving due prices. The results are consistent with Barret et al. (2017) who stated that farmers with access to proper housing, storage, grading, processing and information and communication infrastructure are able to deliver quality and quantities at times required by the buyers hence, ability to meet the terms and conditions of the formal markets.

3.2.1.3. Membership in farmer groups

The variable was found to have a significant and positive relationship with the integration into formal mohair markets recording a p-value of 0.038 and correlation coefficient of 1.950. The results mean that there is enough evidence to support that a unit increase in participation in farmer groups resulted in a 1.9 unit increase in the integration of farmers into formal markets. The explanation is that the rules and regulations of the LNWMGA foster collective action in procurement of inputs, production, marketing and transportation of mohair clip. Collective action reduces barriers that prevent the small-scale mohair farmers from being integrated into the formal economy. The findings are consistent with Nyanguru et al. (2021) who assert that membership in farmer association reduces transaction costs among Basotho farmers, hence participation in formal agricultural output markets.

3.2.1.4. Contractual agreements

The variable was found to be significantly and positively influencing integration of small-scale mohair farmers into formal markets with a p-value of 0.040 and correlation coefficient of 2.765. These findings imply that there is enough evidence to suggest that a unit increase in access to contractual agreements resulted in a 2.7 unit increase in integration into formal markets. This agreement provides guaranteed access to the markets as it enables the exchange partners to know the preferences and expectations of each other in terms of quality and quantities. The contract renders integration into these markets less costly and more beneficial to this group of smallholders, hence, use of such markets. These results agree with Ali (2018) and Arouna et al. (2019) who stated that contractual agreements reduce transaction costs related to search, monitoring and enforcement hence, enhancement of participation in the lucrative formal markets.

Table 3. The regression model results for factors influencing integration of small-scale mohair farmers into the commercial agricultural economy in Lesotho

Variable	Formal Markets				Informal Markets			
	B	Std. Error	P-value	Odds Ratio	β	Std. Error	P-value	Odds Ratio
Government support	1.987	1.092	0.036*	1.993	0.442	1.765	0.133	1.663
Marketing infrastructure	1.895	0.414	0.046*	2.092	0.282	0.424	0.090	2.232
Contractual agreements	2.765	0.590	0.040*	1.682	0.398	0.033	0.078	1.743
Path dependency	2.824	0.604	0.044*	2.584	0.414	1.976	0.764	2.114
Tenure security	1.992	0.480	0.032*	2.178	0.490	0.309	0.081	1.622
Culture	0.462	0.541	0.912	1.567	1.784	0.417	0.047*	1.851
Marketing arrangements	0.321	0.677	0.098	1.984	1.390	0.791	0.024*	1.034
Social networks	0.297	0.875	0.187	2.356	2.402	0.862	0.030*	2.923
Membership in farmer groups	1.950	0.484	0.038*	2.466	0.083	2.138	0.071	1.654
Power imbalances	0.322	1.943	0.191	2.543	1.378	0.496	0.022*	3.408
Delayed payments	0.499	1.876	0.083	1.979	1.347	0.842	0.041*	2.561

Number of observations = 200; LR chi2 (40) = 52.23; Prob > Chi2 = 0.0787; Pseudo R2 = 0.2646; Log likelihood = -77.00859

* $P \leq 0.05$

3.2.1.5. Path dependency

The variable was found to have a significant and positive relationship with integration into the formal markets with a p-value of 0.044 and correlation coefficient of 2.824. These findings imply that there is enough evidence to support that a unit increase in path dependent decisions resulted in a 2.8 unit increase in farmers' integration into the formal markets in the study area. The explanation is that they are characterised by path dependency which determines the action situation in the mohair industry in the country as it reflects that information and knowledge are shared among participants and between generations. This attribute influences marketing choices as these smallholders chose formal markets because they have been used and trusted by their forefathers. These smallholders continue to participate in the formal markets because, according to them, these formal mohair markets offer more benefits and changing to the alternative markets will impose immediate and high costs on their mohair farming business. These findings agree with Rantlo et al. (2020) who stated that path dependency is one of the factors influencing marketing decisions among small-scale farmers in some of the developing countries of Africa.

3.2.1.6. Tenure security

The variable was found have a significant and positive relationship with integration into formal markets with a p-value of 0.032 and correlation coefficient of 1.992. The findings imply that there is enough evidence to support that a unit increase in tenure security led to a 1.9 unit increase in integration of mohair farmers into formal markets. The explanation is that the tenure security has led to the relatively high investment in the mohair farming aspects such as supplementary feeding and disease control because these farmers were assured of their property rights to the grazing lands and returns to investment being made. This situation has encouraged them to invest in the growth and development of their mohair farming that has led to the attainment of relatively better mohair quality that has been acceptable in the commercial mohair markets. The finding is supported by Nahayo et al. (2017) who stated that secure property rights to land led to high investment in farming activities hence attainment of quality and quantities of produce necessary to participate in the formal markets.

3.2.2. Factors influencing small-scale farmers' integration into informal markets in Lesotho

3.2.2.1. Culture

the variable has a significant and positive relationship with integration of farmers into the informal mohair markets with the p-value of 0.047 and correlation coefficient of 1.784. The findings imply that there is enough evidence to suggest that a unit increase in cultural influence resulted in a 1.7 unit increase in farmers' integration into the informal markets. The explanation is that younger farmers dislike and disapprove of the way the elders run the association. It would be expected that due to the perceived benefits associated with LNWMGA and formal markets, these young smallholders would stay in the association and strive towards improvement in the running of the association. But the local culture is prohibitive of confrontation and negotiations between elders and the young and this leads to the young smallholders giving up the opportunity and benefits of participating in the formal markets and opting for the informal markets instead because of respecting and upholding the cultural principles and values. It is evident that the communities of Mafeteng are deeply rooted in the Basotho culture and this influences the way mohair industry participants govern their relationships, hence action situation which in this setting leads to a move away from the formal mohair markets. This result agrees with Rantlo (2018) that cultural factors have an influence on the farmers' marketing decisions among small-scale farmers in the kingdom of Lesotho.

3.2.2.2. Marketing arrangements

These arrangements have a significant and positive relationship with integration of mohair farmers into the informal markets with a p-value of 0.024 and correlation coefficient of 1.390. This finding implies that there is enough evidence to suggest that a unit increase in access to marketing arrangements resulted in a 1.3 unit increase in integration of farmers into the informal markets. The arrangements were designed such that payments are made on the spot of exchange and that smallholders can sell their mohair in advance. The design of these marketing arrangements recognised the preferences and desires of the small-scale farmers who desperately need cash and are not able to cope with delayed payments associated with LNWMGA and BKB. The marketing arrangements satisfy the smallholders which influences their economic decision to choose the informal markets as these arrangements benefit and enable them to meet their immediate financial and economic obligations. These findings are consistent with Rafoneke et al. (2020) who stated that favourable

marketing arrangements enhance smallholder farmers' participation in markets characterised by such arrangements.

3.2.2.3. Social networks

The variable was found to have a significant influence on the integration of smallholder farmers into the informal markets with a p-value of 0.030 and correlation coefficient of 2.402. This implies that there is enough evidence to support that a unit increase in social capital led to a 2.4 unit increase in integration of smallholders into the informal markets. The explanation is that these institutions facilitate the sharing of information between the small-scale mohair farmers that use informal mohair markets. One of the results of these interactions is the knowledge of mohair prices offered by informal traders prior to the day of mohair sales. The prior knowledge of mohair prices affords the smallholders a chance to select the informal traders that offer better prices thus avoiding the cost of missing out on a relatively high net income. In the formal markets, where the prices are only known during the auctions, the smallholders do not get an opportunity to look for buyers who offer better prices (when offered prices are unfavourable). It is argued that this institutional factor limited these farmers integration into the formal mohair markets. The results agree with Zhang et al. (2020) that social networks play a critical role in the farmers' decision making particularly in the rural areas.

3.2.2.4. Delayed payments

The variable was found to have a significant and positive relationship with integration of farmers into the informal markets with the p-value of 0.041 and correlation coefficient of 1.347. The results mean that there is enough evidence to suggest that a unit increase in delayed payments resulted in a 1.3 unit increase in integration of farmers into the informal markets. The explanation is that these delays in getting paid negatively influence the transaction costs for the smallholders as the farmers have to approach the buyers several times in order to get paid and this follow-up implies that finances, time and effort are spent on the activity hence, increasing transaction costs. This indicates that the operation and organisation within LNWMGA and BKB lead to actions that have detrimental effects on the poor small-scale mohair farmers in the area. This institutional weakness increases the cost of formal market participation and has led to farmers opting for informal markets that pay instantly. These findings are supported by Rafoneke et al. (2020) that delayed payments associated with some formal markets led to smallholders' participation in the alternative markets, informal ones.

3.2.2.5. Power imbalances

The variable was found to be significant have a p-value of 0.022 and correlation efficient of 1.378 and these findings imply that there is enough evidence to support that a unit increase in power imbalances led to a 1.3 unit increase in farmers' integration into the informal mohair markets. The explanation is that the committee members of the association and larger farmers had their flocks shorn first which allowed their mohair to be shipped first to BKB organised auctions and therefore to be paid before the smaller farmers. This power imbalance has resulted in inequalities and marginalisation of the smaller farmers. It led to the late shearing and dispatch of the mohair clip of the smallholders in many instances that result in the incurring of transaction costs in the form of opportunity cost of not selling in the early auctions that fetch high prices. The action situation led to the dissatisfaction of the small-scale farmers who left LNWMGA for informal markets. These findings agree with Sheila (2018) who stated that challenges such as agent-principal problem and power

asymmetry have led to the poor performance and collapse of some farmer groups in the continent as some members opt to leave farmer groups plagued by such challenges.

4. Conclusion and recommendations

One of the overriding factors influencing integration into the commercial mohair markets is the support that government provides to the mohair farmers that use the formal market as the institutional support has created a conducive environment for the integration of these small-scale farmers into the commercial agricultural economy. In addition, the associated market infrastructure increased the potential for small-scale mohair farmers to attain high prices for their mohair hence, enhancement of integration of the affected farmers into the commercial markets.

The secure property rights to lands for farmers that use formal mohair markets enhanced the ability to invest more in order to meet the expectations of buyers in the formal markets, which positively influenced their integration into the commercial agricultural economy. In addition, Integration of small-scale mohair farmers into the commercial economy is enhanced by the pro-formal markets path dependent decision making of farmers. Furthermore, the contractual agreement between LNWMGA and BKB renders the formal market a guaranteed market for the small-scale mohair farmers which enhances integration of these small-scale mohair farmers into the formal agricultural economy.

However, the integration into the formal mohair economy is limited and threatened by high transaction costs associated with the perennial delay of payments characterising the formal channel which have rendered the environment conducive for integration into the informal mohair economy. In addition, the power imbalances within the formal LNWMGA channel that result in late dispatch of the smaller farmer's mohair clip for lucrative early auctions have rendered the environment conducive for the integration of the small farmers into the informal mohair economy. Furthermore, the integration into the informal mohair markets is consolidated by the social networks that revolved around informal mohair marketing and enhanced participation in this informal sphere. Moreover, the cultural beliefs and values enhanced this group of small-scale mohair farmers' integration into the informal agricultural economy as they led to participation in the informal mohair markets.

The marketing arrangements between the small-scale farmers and informal traders increased the perceived and actual benefits of informal markets and this renders them markets of choice for these small-scale farmers which increased and enhanced the integration of this group of mohair farmers into the informal mohair economy.

The integration of mohair farmers is influenced positively or negatively by various institutional factors which makes it necessary for policy makers to consider them to develop and design an effective marketing structure for the commercialisation of small-scale mohair producers in Lesotho. Based on this, it is recommended that small-scale mohair farmers be represented on the formal LNWMGA channel by having some positions on the Committees reserved for them so that they can enjoy the advantages as well, hence increased potential for integration into the lucrative formal mohair markets. This representation will again ensure that the association benefits all smaller producers as representative of all mohair producers in the country.

Moreover, it has been realised that the mohair industry of Lesotho lack distributional equity as the provision of various forms of support is focused on the relatively better-off mohair farmers that use formal mohair markets associated with the LNWMGA instead of the needy groups that use the informal mohair markets. It is against this background, that the study recommends the provision of the governmental support and formalisation of the farmer groups that use the informal markets. This support will ensure that this category of mohair farmers hence, benefits to all mohair producers across the country.

Furthermore, it has been discovered that the advance payment, which is a proportion of the expected price of the mohair on the auctions, is no longer paid to the small-scale mohair farmers, despite it being one of the terms and conditions of the LNWMGA. It is in light of this, that the study recommends that the advanced payment be resuscitated in order to help these vulnerable mohair farmers to better cope with the delayed payments, which according to these mohair farmers had detrimental effects on their livelihoods and market integration.

In Lesotho, the policy environment characterised by the exclusion of some stakeholders, particularly small-scale mohair farmers from policy design and discussions. This is not ideal because agricultural commercialisation is a process which require input from all the stakeholders. It is in this light that the study suggests that proper and appropriate measures be put in place to ensure that all the stakeholders, including small-scale mohair farmers, participate in policy discussions and that they contribute towards all-inclusive policies so that economic growth can affect all actors in the economy.

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