

How Access to Credit Facilities Affects Youth Participation in Agro-Pastoralism in Mandera County, Kenya

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Abstract

Credit facilities drive economic development in most sectors of the economy. However, due to the uncertainty of weather and other risks, agricultural sector has been disadvantaged in terms of access to credit. Access to credit, particularly by youth who lack a steady source of income is even more challenging since they are considered high risk borrowers by financial institutions. This study sought to establish factors that influence access to credit by youth in Mandera County. The study adopted a descriptive survey research design, and as was guided by Push and Pull theory. The target population was 2900 youth registered in youth groups in Mandera County. A sample size of 351respondents was obtained from the 145 registered youth groups through purposive sampling technique. Structured questionnaires were distributed to the respondents through drop and pick method were used to collect data. The questionnaire was tested for face and content validity during piloting in the neighboring county of Wajir. Reliability was assessed and a Cronbach alpha coefficient of 0.77 was realized. Results were analyzed using descriptive and inferential statistics. Regression analysis was carried out and results for F-tests and Analysis of Variance (ANOVA) at a 95% confidence generated. The null hypothesis for credit access was rejected (β =0.273, P=0.000)). This meant that lack of credit access had a significant effect on youth engagement in agro pastoralism. Further, a positive and significant correlation between credit access by youth (or lack of it) and their engagement in agro pastoralism was reported (r=0. 541, p=0.000). It was concluded that credit access was critical to adoption of agro pastoralism by youth in Mandera County. The study recommended that the county government of Mandera creates an enabling environment to encourage more participation of youth in agro pastoralism, and to work out modalities of easing restrictions to credit access.

Keywords: Credit Access, Agro pastoralism, Youth

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1.0 Introduction

Agro-pastoralism is critical to solving issues of unemployment among the youth living in arid and semi-arid parts of Kenya, and contributes to food security and economic growth (World Bank, 2016). The youth population is anticipated to continue increasing, thereby aggravating the existing problem of unemployment (World Bank, 2015; World Bank, 2016). Agriculture remains the most appropriate means of job creation, poverty reduction and economic growth. Food and Agriculture Organization (FAO, 2017) indicated that agro-pastoralism among youth in Sub-Saharan Africa (SSA) could reduce poverty, create employment and improve economic growth. Pastoralist groups in arid and semi-arid areas are nomadic, and rely on livestock like cattle, sheep, goats, and camels for their subsistence. Their survival is dependent on access to pasture land and water, both of which are becoming increasingly scarce. Further, their activities are regulated by the demands of the urban people, as well as those of ranchers, farmers, and the wildlife (Ahmed et al., 2023). This delicate balancing has often given rise to conflicts. There are a number of factors that contribute to conflicts among the pastoral communities including cattle rustling, small arms proliferation, inadequate security agencies, weakening traditional governance systems, poor government development policies, inadequate land tenure systems, and and social-economic political marginalization of the pastoralists (Abebe et al., 2023).

The wider inclusion of youth, particularly in the development of income diversification

activities, including agro-pastoralism, helps in solving these conflicts (Eselebor, 2019). Globally, contribution the of agropastoralism practices to rural development and food security hinges on the involvement of the energetic youth who are the budding labor force (Pervez et al., 2021). According to Wang and Beltagui, (2023), youth are characterized by their inventive conduct, which anchors on technological know-how, aversion. minimum risk less conservativeness, and physical strength. It is critical to encourage agro-pastoral techniques in areas where crop production is scarce in order to ensure food sustainability (Tian et al., 2023). Youth continue to be the primary victims of rising unemployment, which can only be averted by encouraging them to participate in agro-pastoralism in the arid plains where livestock keeping is the predominant practice (Adebajo, 2022). Crumpler et al. (2022) found out that agropastoralism is one of the foundation pillars of Sub-Saharan African (SSA) society's food security, and argued that it can only function if effective programs are set for more youth inclusion and involvement.

Statement of the Problem

In Mandera County, pastoralism is the primary source of livelihood for many rural families. However, a number of families engage in crop production as well. The harsh environmental conditions make normal crop farming difficult since most crops require mild to moderate temperatures to grow. The youth rare reported to be developing disinterest in agro-pastoralism due to factors like lack of access to factors of production especially land in communal areas, low



resource base, bad weather and a restrictive culture. Non-traditional income streams for livestock keepers have been becoming more and more difficult to come by as communal grazing areas continue to shrink and pastures denuded. Further, insecurity plays a role in discouraging youth engagement in farming in arid and semi-arid areas. The county governments in these areas have been engaging police reservists and other security personnel in maintaining security (Sharamo & Mohamed 2020) in order to encourage agro-pastoralists to do their business. Mandera Countyis home to the River Daua, which is tapped by the government for irrigation. The major challenge has been limited credit access by youth since most of them feel agricultural activities are a drudgery and a low remunerative venture that is not worth working in. Mandera County has limited relevant studies on agro-pastoralism, particularly with regard to credit access for the business. This study sought to plug in this gap.

Objective

To examine the extent to which access to credit facilities affects youth involvement in Agro-pastoralism in Mandera County, Kenya.

Hypothesis

There is no effect of credit access on youth participation in agro-pastoralism in Mandera County, Kenya

Literature Review

Credit is a critical factor in development of any business and its access and cost are major considerations in any venture. Government,

financial institutions and development partners have put in place several strategies to ensure easy and quick access to loans; however, regardless of these strategies, credit facilities are not easy to get (FAO, 2015). A study by Bexell and Jönsson (2017) indicates that youth are experiencing difficulties in operating agricultural activities due to limited finances. Financial institutions are unlikely to lend loans to young people because youth are seen as high-risk borrowers since they have limited sources of income hence limited financial capabilities (Atkinson & Messy, 2012; Word Bank, 2018)). A study by Wongnaa and Babu (2020) posits that credit access is a major deterrent to youth participation in agricultural activities.

> "The factors that contribute to conflicts among pastoral communities include: cattle rustling, small arms proliferation, inadequate security agencies, weakening traditional governance systems and inadequate land tenure svstems"

In Nigeria, a study on agricultural production by Bexell and Jönsson (2017) also revealed that the youth shy away from agriculture as it is perceived to be a tedious process of acquiring credit facilities, which may not be available. On the contrary, a report by Gokmenoglu and Rustamov (2019) supposes that many institutions are interested in giving loans to youths for agricultural projects.



Gramfort (2013) argues that financial institutions should solve young people's problems on financial constraints by easing credit access process and allowing many types of collateral when giving credit facilities geared towards agriculture. Youth with family responsibilities and limited avenues for getting money to save affect their credit worthiness, which in return affect their access to loans, and may eventually halt their engagement in agro-pastoralism practices.

Lack of access to credit facility is not new to Kenyan youths. Studies indicate that access to financial assistance in form of loans has remained a nightmare to youths who want to engage in agriculture (Maritim, 2020). According to Muthomi (2017), youths are willing to engage in agro-pastoralism activities in rural areas but access of credit from banks and SACCOs hinder them.

2.0 Materials and Methods

Descriptive survey research design was adopted for this study. The population of the study was the youth who were out of school in Mandera County, as well as the organized youth businesses and opinion leaders from both governmental and non-governmental organizations. The study employed Sloven's formula to purposively select 351 youths from a population of 2900. Questionnaire was constructed with statements on a 5-point Likert scale on which the respondents expressed their opinions. Pilot testing was carried out in the neighbouring county of Wajir which had the same conditions as

Mandera. This ensured face and content validity. Reliability was ascertained on the main constructs of the independent variable using Cronbach alpha coefficient. The researcher sought permission from KeMU and National Commission for Science. Technology and Innovation (NACOSTI) to data. The researcher collect briefed respondents on the study's purpose and assured them of confidentiality of the data collected. To conduct statistical study, the collected data was checked for completeness and consistency. Before regression analysis was carried out using Statistical Package for Social Sciences version 26, preliminary tests for normality, absence of multicollinearity and autocorrelation were carried out to confirm that the data was amenable to regression. Correlation between the dependent and the independent variable was established from the regression. The results were presented in tables and both descriptive and inferential statistics used to explain the findings. The researcher ensured the research was conducted in an ethical manner and that respondents' rights were respected and their confidentiality maintained.

3.0 Results and Discussion

Response Rate

A total of 351 questionnaires were administered to the respondents, out of which 307 were dully filled and returned. This represents a response rate of 87.5 percent. The results are tabulated in Table 1.



Table 1

Response Rate

	Frequency	Percent
Response	307	87.5
Non-Response	44	12.5
Total	351	100

Reliability of the research instrument was tested and the results are presented in Table 2.

Table 2

Reliability Test Results

	Cronbach's Alpha	Comment
Credit Accessibility	0.77	Reliable

From Table 2, the constructs for credit access were reliable as depicted by alpha coefficient of 0.77 which was greater than 0.7. The research sought to find out how credit access affected youth participation in Agropastoralism in Mandera County, and the descriptive statistics are as shown in Table 3.

Descriptive Statistics on Credit Access

Table 3

Descriptive Statistics for Credit Access

	SD	D	М	А	SA		
	f %	f %	f %	f %	f %	Μ	SD
I can access credit as and when I need it	139			50	47		
from lenders to finance my agro-	45.3	40	31	16.3	15.3	2.4	1.6
pastoralist activity	%	13%	10.1	%	%		
	117	47		51	52		
Youth access credit facility in Mandera	38.1	15.3	40	16.6	16.9	2.6	1.5
County is easy and affordable.	%	%	13%	%	%		
Easy access to credit facilities motivates	47	50			78		
youth like me to participate in agro-	15.3	16.3	49	83	25.4	3.3	1.4
pastoralism	%	%	16%	27%	%		





Lack of credit facility for youth is the main factor hindering their involvement into agro-pastoralism in Mandera county	39 12.7 %	85 27.7 %	82 26.7 %	55 17.9 %	46 15%	2.9	1.3
Money lenders are many, varied and lend at affordable interest rates which makes credit access easy in Mandera County.	54 17.6 %	69 22.5 %	66 21.5 %	59 19.2 %	59 19.2 %	3.0	1.4
It is very difficult for youth in Mandera County to access credit facilities since they have no guarantors or property to serve as security.	28 9.1%	72 23.5 %	65 21.2 %	69 22.5 %	73 23.8 %	3.3	1.3
There is shortage of lenders to the youth since they do not have collateral hindering their engagement in agro pastoralism since they lack investment funds.	18 5.9%	45 14.7 %	45 14.7 %	102 33.2 %	97 31.6 %	3.7	1.2

On the statement on access to credit as and when needed from lenders to finance agropastoralism, 97(31.6%) of the respondents agreed, 179(58.3%) disagreed and 31(10.1%) were undecided with a mean of 2.4 and standard deviation of 1.6, an indication that the respondents were not in agreement generally. Furthermore, 164(53.4%)disagreed that access to credit was easy and affordable while 103(33.6%) were in agreement but 40(13%) were undecided. The mean and standard deviations were 2.6 and 1.5. On ease of access to credit motivating youth to participate in agro-pastoralism, 161(52.4%) of the respondents were in agreement, 97(31.6%) disagreed while 49(16%) were neutral with a mean of 3.3 and a standard deviation of 1.4. A large number of respondents at 124(40.4%) disagreed that lack of credit was the main factor hindering their involvement in agro-pastoralism, 82(26.7%) were neutral while 101(32.9%)

were in agreement with mean and standard deviation being 2.9 and 1.3 respectively. The 2.9 mean fell in the undecided category. On whether money lenders were many, varied and lent at affordable interest rates which made credit access easy, 123(40.1%) of the respondents disagreed, 66(21.5%) recorded a neutral stand, whereas 118(38.4%) were in agreement with a mean of 3.0 and a standard deviation of 1.4 implying moderate. The findings showed that financial institutions view agriculture as risky due to its great sensitivity to environmental factors like unfavorable weather, outbreaks of diseases and pests, and seasonality. Lenders are unwilling to create agricultural finance products or extend loans to young people as a result (Cull and Hartarska, 2023).

A total of 142(46.3%) of the respondents agreed that it was very difficult for youth in Mandera County to access credit facilities since they had no guarantors or property to



serve as security, while 100(32.6%) were in disagreement and 65(21.2%) recorded a neutral stand with a mean of 3.3 and a standard deviation of 1.3. In addition, 199(64.8%) of the participants agreed that there was shortage of lenders to the youth since they did not have collateral hindering their engagement in agro-pastoralism for they lack investment funds (Dolma, 2020). However. 63(20.5%)disagreed and 45(14.7%) were neutral. The mean and standard deviation were 3.7 and 1.2 in that order, implying an agreement. The findings further indicate that credit facility was not the only primary driver of youth participation in agro-pastoralism in Arid and Semi-Arid areas, but there were others like insecurity and use of technological capacity in agropastoralism (Rice & Khanin, 2019).

Diagnostic tests

Diagnostic tests are preliminary analytics that are done to confirm that data is amenable to regression analysis. The following tests were carried out.

Testing for Normality

This was done through Kolmogorov-Smirnov statistic. In order to carry regression, the assumption of normality should be tested and put into consideration (Brooks & Condori, 2018). For a p value <0.05, the data is not normally distributed and for a p value >0.05, the data is normally distributed. The normality test results are shown in Table 4.

Table 4

Normality Test Results

	Kolmogorov-Smirn	ova	
	Statistic	df	Sig.
Credit Accessibility	0.061	307	0.207

From the results, the estimated p values for credit access was greater than 0.5 (p =0.207) thus, the estimated P value met the criteria for the Kolmogorov-Smirnova test and confirmed that the population was normally distributed.

Autocorrelation was als

Tests for autocorrelation

Autocorrelation was also tested to confirm the data was amenable to regression analysis. Table 5.

Table 5

Autocorrelation Test Results

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.776a	0.602	0.595	0.39508	2.012



From the results in Table 4.30, the estimated Durbin Watson value for the study is 2.012, which is approximately 2 implying that the data do not suffer from severe autocorrelation. Thus, the study concludes that the data set in the study is fit for model estimation.

Table 6

Model Summary

Regression Analysis between Credit Access and Youth Participation

A regression inquiry was done to find out the linear relationship between credit access and youth participation. The results are shown in Table 6.

R	R Square	Adjusted R Square	Std. Error of the Estimate
.541a	0.293	0.291	0.52315

It is important to note that the results summarized in Table 6 show that the calculated model accounts for 29.3% of all changes in youth involvement in agro farming agriculture in Mandera County. The estimated R Square value in the model **Table 7** (0.293) corroborates this. Therefore, the level of youth involvement in agro farming agriculture in Mandera County is greatly influenced by loan availability. The analysis of variance results are shown in Table 7.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.57	1	34.57	126.312	.000b
Residual	83.474	305	0.274		
Total	118.045	306			

The examination of modification results in Table 7 indicate that the estimated model is statistically significant as evidenced by the estimated P value 0.000<0.05. This can also

be illustrated by the estimated F value in the mode F $_{1,305}$ = 126.312 that is greater than the F critical value of 1.8473. Table 8 shows the regression coefficients.

Table 8

	Unstand	lardized Coefficients	Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	1.671	0.144		11.606	0.000

Regression Coefficients



0.541

Credit Accessibility 0.51 0.045

The study concluded that credit access was a key determinant of youth engagement in agro-pastoralism in Mandera County, rejecting the null hypothesis that there was no influence of access to credit on youth involvement in agro-pastoralism in Mandera County.

Lenders are therefore reticent to promote agricultural loans. Additionally, because of the lack of financial history, poor saving habits, lack of collateral, and inadequate financial capacity, financial service providers view youth loans as risky. As a result, the current financial solutions do not effectively target young people and are difficult to access.

Other intrinsic obstacles to credit access include limited access to financial institutions low in some locations. levels of understanding of credit availability and an unwillingness to take advantage of the sources of credit that are available. Due to the fact that the people residing in Mandera want sharia compliant loans as a result of their faith and that the majority of the listed lending institutions are not sharia compliant, credit access has become more challenging. High

interest rates on credit that is made accessible, low levels of literacy, high unemployment, a lack of connections to the sources of business funding that were available, and a lack of comprehensive support for specific groups were other factors that contributed to the limited access to credit.

11.239

0.000

The findings are in congruence with those of Bexell and Jönsson (2017) on cultural operations. Young people steer clear of agriculture because they believe it involves a difficult process for obtaining loans, which may not be accessible. According to a study by Atkinson and Messy (2012), youth have limited access to credit since they are viewed as high-risk due to their insufficient sources of income and consequently low financial capacity. According to Smith et al. (2013), financial institutions should make credit facilities more accessible to young people who are experiencing financial difficulties by streamlining the application procedure and permitting a variety of collateral.

Correlation Results

Correlation results are presented in Table 9.

		Youth Participation	Credit Accessibility
Credit			
Accessibility	Pearson Correlation	.541**	
	Sig. (2-tailed)	0.000	
	Ν	307	307

Correlation Results

Table 9



These results were consistent with the findings of Maritim (2020) who pointed out that access to financial assistance in form of loans had remained a nightmare to youth who wanted to engage in agriculture. Youths were willing to engage in agro-pastoralism activities in rural areas but access of credit from banks and SACCOs hindered them.

4.0 Conclusions

The survey involved young people in registered youth groups in Mandera County. After the data was reviewed, a correlation between the availability of loans and the involvement of young people in agropastoralism was discovered. The regression results also suggested a positive and linear relationship between finance access (and lack thereof) and youth involvement in agropastoralism. Financial institutions view agriculture as risky due to its great sensitivity to environmental factors like unfavorable weather, outbreaks of diseases and pests, and seasonality. Lenders are unwilling to create agricultural finance products or extend loans to young people as a result.

Young people are viewed as dangerous by financial service providers in part because they lack a credit history, have bad saving habits, no collateral, and limited financial resources. The current financial solutions are therefore challenging to access and do not properly target young people. Additionally, limited access to banking institutions in some places, cultural norms like sharia banking, and a lack of knowledge about the availability of credit all contribute to young people's lack of access to credit. Poor youth participation in agro-pastoralism is also a result of high interest rates on the available credit, low literacy rates, and general apathy about agriculture. The absence of comprehensive social assistance for specific groups exacerbates the lack of credit availability among youngsters. The study also comes to the conclusion that youth involvement in agro-pastoralism in Mandera County is positively and significantly correlated with their ability to acquire loans from any source, whether banks, SACCOs, friends, or group banking.

5.0 Recommendations

The study recommends that financial institutions develop youth friendly products that solve young people's problems on financial constraints by easing credit access process and allowing many types of collateral when giving credit facilities geared towards agriculture. Easy access to credit is an incentive towards the adoption of agropastoralism. This also reduces the level of unemployment in the long run, decreases dependency and improves on productivity.

Implications on Policy and Practice

The study is significant to both policy and practice. To policy, the study is significant in that it informs the government on improving its commitment to assisting youth get into meaningful livelihoods in order to reduce rampant unemployment by engaging in agropastoralism. Such government incentives would include the existing youth funds, funds to special groups, and county government budgetary allocation to youth activities. The results of the study are also provide insight to the County Government of Mandera on the need to provide incentives that increases



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agro-

participation of the youth in pastoralism.

Further Research

References

Abdul Aziz, A., & Norhlilmatun Naem, S. (2013). Factors that influence the interest of youths in agricultural entrepreneurship. *International Journal of Business and Social Science*, 4(3), 1-15. http://eprints.unisza.edu.my/id/eprint /2818

Abebe, F. G., Adamtey, R., & Owusu-Ansah, J. K. (2023). Understanding protracted resource-based conflicts in the horn of africa: The case of North Wollo Amhara and zone 4 of Afar in Ethiopia. *African Journal of Land Policy and Geospatial Sciences*, 6(1), 79-93. https://ageconsearch.umn.edu/record/ 334624/

Adebajo, A. A. (2022). Pastoralist-farmer Conflicts in Nigeria: A Human Displacement Perspective. Rowman & Littlefield

Ahmed, M., Mohamed, M. D., & Muhammad, F. (2023). Pastoralists Adaptation Strategies, and Resilience Capacity to Climate Change in Somalia: A Scoping Review. https://www.researchsquare.com/arti cle/rs-2535309/v1

Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study. Further research is recommended on factors influencing youth resilience and persistence in agro-pastoralism as a fulltime and meaningful livelihood sustaining activity, instead of pass time or alternative venture when other economic activities fail.

https://www.oecd-ilibrary.org/finance-andinvestment/measuring-financialliteracy_5k9csfs90fr4-en

Bexell, M., & Jönsson, K. (2017).
Responsibility and the United Nations' sustainable development goals. Forum for development studies, 44(1), 13-29.
https://doi.org/10.1080/08039410.20 16.1252424

Brooks, C. D., & Condori, A. A. (2018). A resolvent criterion for normality. *The American Mathematical Monthly*, *125*(2), 149-156. https://doi.org/10.1080/00029890.20 18.1401855

Crumpler, K., Gagliardi, G., Otieno, Z., Dino Radin, M., Berrahmouni, N., Federici, S., & Bernoux, M. (2022). Regional analysis of the nationally determined contributions in sub-Saharan Africa: Gaps and opportunities in the agriculture and land use sectors (Vol. 94). Food & Agriculture Org. https://books.google.co.ke/books?hl= en&lr=&id=-

Dolma, M. C. (2020). Factors Affecting Youth Participation in Agribusiness. https://www.carlep.gov.bt/wpcontent/uploads/2021/03/Factors-Affecting-Youth-Participation-in-Agribusiness-Ms.Choeying-Dolma.pdf



- F. A. O., World Health Organization, & WHO Expert Committee on Food Additives. (2017). Evaluation of certain contaminants in food: eightythird report of the Joint FAO/WHO Expert Committee on Food Additives. https://apps.who.int/iris/bitstream/ha ndle/10665/254893/9789241210027eng.pdf
- Gokmenoglu, K. K., & Rustamov, B. (2019). Examining the World Bank Group lending and natural resource abundance induced financial development in KART countries. *Resources Policy*, 63(1), 101433. https://www.sciencedirect.com/scien ce/article/abs/pii/S030142071830626 3
- Gramfort, A., Luessi, M., Larson, E.,
 Engemann, D. A., Strohmeier, D.,
 Brodbeck, C., & Hämäläinen, M.
 (2013). MEG and EEG data analysis
 with MNE-Python. *Frontiers in neuroscience*, 7(1), 1-13.
 https://doi.org/10.3389/fnins.2013.0
 0267
- Maritim, K. D. (2020). Assessment of factors influencing youth participation in agri-business in Kericho County, Kenya [Master's Thesis, Kenya Methodist University] Kenya. http://repository.kemu.ac.ke/bitstrea m/handle/123456789/934/
- Muthomi, E. (2017). Challenges and opportunities for youth engaged in agribusiness in Kenya. https://d1wqtxts1xzle7.cloudfront.ne t/81450159/ERIC_20

- Pervez Bharucha, Z., Attwood, S., Badiger, S., Balamatti, A., Bawden, R., Bentley, J. W., & Pretty, J. (2021). The Top 100 questions for the sustainable intensification of agriculture in India's rainfed drylands. *International Journal of Agricultural Sustainability*, *19*(2), 106-127. https://www.tandfonline.com/doi/abs /10.1080/14735903.2020.1830530
- Rice, J., & Khanin, D. (2019). Why do they keep coming back? The effect of push motives vs. pulls motives, and attribute satisfaction on repeat visitation of tourist destinations. *Journal of Quality Assurance in Hospitality & Tourism, 20*(4), 445-469. https://www.tandfonline.com/doi/abs /10.1080/1528008X.2018.1553117
- Sharamo, R. D., & Mohamed, A. A. (2020). Countering violent extremism in Kenya: experiences and innovations. *ISS East Africa Report*, 2020(36), 1-16. https://hdl.handle.net/10520/ejcisear-v2020-n36-a1
- Smith, R. A., Brooks, D., Cokkinides, V., Saslow, D., & Brawley, O. W. (2013). Cancer screening in the United States, 2013: a review of current American Cancer Society guidelines, current issues in cancer screening, and new guidance on cervical cancer screening and lung cancer screening. *CA: a Cancer Journal for Clinicians*, 63(2), 87-105. https://doi.org/10.3322/caac.21174



- Tian, Y., Jiang, G., Wu, S., Zhou, D., Zhou, T., Tian, Y., & Chen, T. (2023). Cropland-grassland use conversions in the agro-pastoral areas of the Tibetan Plateau: Spatiotemporal pattern and driving mechanisms. *Ecological Indicators*, *146*, 109819. https://www.sciencedirect.com/scien ce/article/pii/S1470160X22012924
- Wang, Y., & Beltagui, A. (2023). Does intergenerational leadership hinder the realization of innovation potential? A resource orchestration perspective. *Journal of Small Business Management*, 61(4), 1704-1735. https://www.tandfonline.com/doi/full /10.1080/00472778.2020.1866764

Wongnaa, C. A., & Babu, S. (2020).
Building resilience to shocks of climate change in Ghana's cocoa production and its effect on productivity and incomes. *Technology in Society*, *62(1)*, 101288. https://doi.org/10.1016/j.techsoc.202 0.101288

- World Bank (2017). World development report 2017: Governance and the law. The World Bank. https://elibrary.worldbank.org/doi/ab s/10.1596/978-1-4648-0950-7
- World Bank Group (2016). World development report 2016: Digital dividends. World Bank Publications. https://books.google.co.ke/books?hl= en&lr=&id=dAl-CwAAQBAJ&oi=fnd&pg=PP1&dq =World+Bank,+2016&ots=E6dPtfbd aB&sig=K_HTEQIVXmewj1jazzKl u4n9M1Y&redir_esc=y#v=onepage &q=World%20Bank%2C%202016& f=false