



Assessing the Vernacular Knowledge and Financial Business Models Innovations of Shepherding Entrepreneurs in Swat

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ABSTRACT

The study aims to assess the vernacular business model sustainability approaches used by the agropastoral shepherds for earning a sustainable livelihood in district Swat. These small-scale entrepreneurs inhibit the issues of metabolic rift and contribute to economic well-being of the residents, although not without exhibiting rent seeking behaviour by way of consuming common natural resources. The study uses a Big Q qualitative research approach with thematic analysis done for data collected through semi-structured interviews done with 12 participants of the study. The findings of the study entails that these people living at the bottom of pyramid most of the time work for their landlords from upper regions of Swat. Due to economic exigencies, they rely on Kameetis for their financial sustainability. There is a decline in the homesteading practices by these people due to the fact that they are mobile in nature. Despite their advantages they lack access to quality animal care and often seen as vectors of zoonotic diseases in target area of study. Their income is variable due to economic fluctuations and their operations are unbanked which does not augur well with formal banking operations during the Eid- Azha season of the year. The study concludes that shepherd use vernacular indigenous knowledge to manage their business models and willing to undertake formalization of their practices which will not only enhance the financial sustainability but also enhance productivity in terms of meat, leather, wool sectors of economy Thus, contributing to the improvements in public health and food security. The contributes to broader discussions regarding the preservations of centuries old vernacular knowledge of shepherding but also proposes a simple yet magnanimous framework for inclusion of these shepherds in the formal economy through pathways supported by policy interventions.



Introduction

Pakistan is an agrarian society with more than 70 % of the its GDP associated with agriculture (Shah et al., 2021). Most of the people whether directly or indirectly are associated with subsistence agriculture in the rural areas of the country such as District Swat. These people strive to earn a livelihood through vernacular practices of raising cattle and homesteading for economic viability using indigenous knowledge they have learnt from their ancestors. However, due to their small scale, informal and off the book practices these people often are overlooked in policy formulations despite their contributions to various sectors such as wool, leather, meat and other sectors which contributes to public health (Bissell et al., 2025; Massa, 2022).

These shepherding entrepreneurs are confronted with a variety of challenges such as erosion of centuries old trekking routes, unbanked practices, and lack of formal range management which poses severe financial limitations on their earning capacity (Yousafzai et al., 2024). Since most of the time these people are tenants who do the shepherding work for their landlords. The agency theory of principle and agents best categorize their relationship in the context of business and management sciences terminology. However, considering their contributions to ongoing ecological crisis face by humanity the best theoretical lens for the purpose of this study is metabolic rift theory (Pisinas & Papageorgiou, 2025).

There is lack of research studies on financial viabilities and business models of agropastoral agents such as shepherding entrepreneurs (Yousafzai et al., 2024). Prior studies had mainly focused on the role of government to examine the ecological benefits of agropastoral systems (Yazew, 2024). This study adopts an interdisciplinary approach to examine the contributions of people living at the bottom of pyramid who delve in rural entrepreneurship for earning livelihoods yet help combat anthropogenic global warming (Nawaz et al., 2021). Their approaches are mixed as it involves agriculture farming, economic sustainability, utilize natural resources such as sun, water, land and air (Tura, 2023).

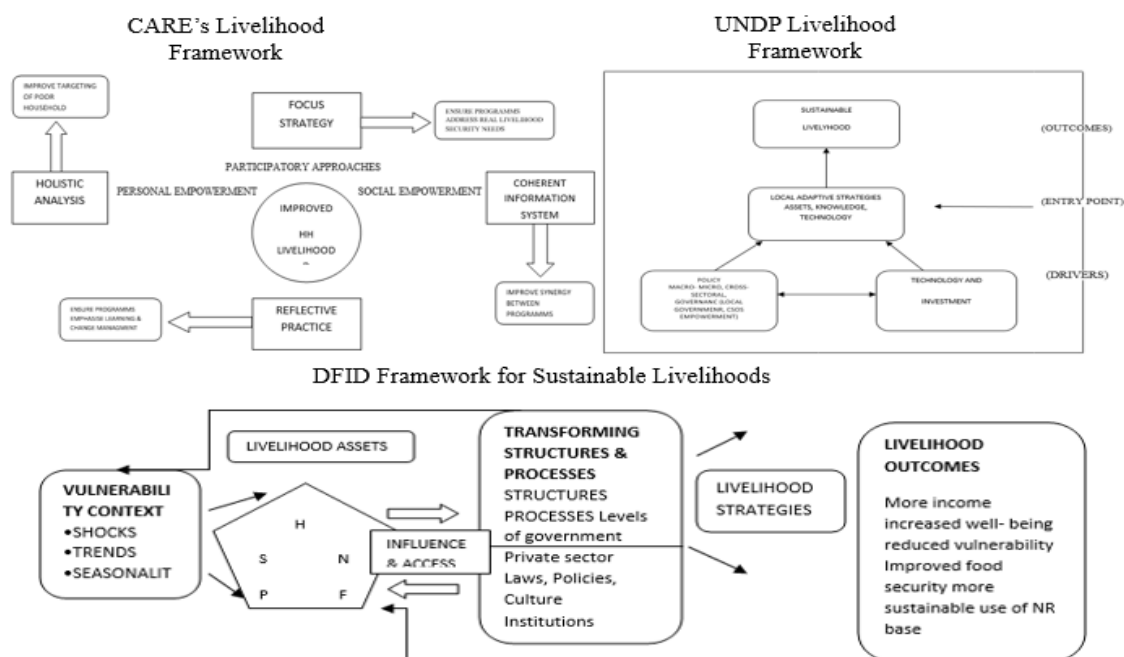
Their business models are very vernacular yet effective. The concept of vernacular sustainability entails that practices of naturally adapted living in harmony with natural environment by using traditional methods, indigenous knowledge which are cost effective yet environmentally sustainable (Kazimee, 2008). According to (Geissdoerfer et al., 2018) a business model refers to means and ends combination for creation of value from business operations. These people have varied revenue streams for value creation such as wool, meat, leather and fertilizer as well as breeding cycles management services (Lutta et al., 2023). According to (Umair et al., 2024) on average between 8-10 million animals are sold during feat of sacrifice season offering a lot of recurrent income. However, there are several value eroding threats to their business models such as price volatility, prevalence of sudden animal diseases and middlemen or commission making agents (Parshina, 2024). Moreover, their business value is contingent upon the Eid Al Azha feat of sacrifice which unfolds only once in a year in Muslim countries which confine their earning window a spot-based value creation that opens only once in a given calendar year.

Their financial positions are prone to vulnerability shocks. There are various microfinance options in the informal sector which utilize the social capital such as “Village Savings and Loan Associations” which are called Kameetis in local dialect (Rubyutsa et al., 2024). These arrangements do not involve interest and therefore preferred in Muslim faith-oriented countries as interest is forbidden in Islam. There is also issue of mobility which creates issues for them in securing microfinance from leading institutions as they lack permanent resident and face difficulties in paying monthly instalments due to their far-off locations. There is a dire need for

formalization of these shepherders as they lack cooperatives as well as educated leadership to bargain with Governments in their behalf, yet they delve in pro-environmental works. Hence in the backdrop of preceding state of the art the purpose is to Assessing the Vernacular Sustainability Approaches and Financial Business Models Innovations of Shepherding Entrepreneurs in Swat.

There are various models in vogue for studying the livelihoods of people living at the bottom of pyramid. These include CARE model which is basically concerned with rights of people and strives to ensure the livelihoods and is applicable to both urban and rural settings. In the same vein, there another approach to studying livelihood approaches of UNDP and Oxfam Great Britain with the later useful in planning and assessments and former strives for overall human development in sustainable manner. However, for this study we used the DFID’s framework of suitable livelihoods which emphasizes the role of capital assets of various types such as natural, human, financial, physical and social assets (Stevenson, 2009) as shown in figure below

Figure 1: Various Livelihood Models of Leading Agencies



Source: (adapted from (Stevenson, 2009))

Methodology

The study utilizes an inductive qualitative research design to achieve the exploratory purpose of the study. The study uses the Big Q qualitative approach with thematic analysis (Braun & Clarke, 2019) done to the data collected from semi structured interviews from 12 participants of the study in the field work. The data was collected in the field and mostly at veterinary clinics during their appointment wait time as these shepherds are time strapped throughout the year (Yousafzai et al., 2024). They are highly mobile and on the move all the time, therefore data collection is more a challenge in this regard. The big qualitative approach uses a value based approach to qualitative research in comparison to more positivist oriented approaches of standards such as COREQ Consolidated criteria for reporting qualitative research, SRQR Standards for reporting qualitative research and others such as BQQRG, QARI, ENTREQ, and CASP standards.(Clarke et al., 2024).

According to (Clarke et al., 2024) “Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. However, frequently it goes further than this, and interprets various aspects of the research topic”. For the purpose of sampling a convenient sampling procedure is adopted as these people are hard to be interviewed. Overall, 12 interviews were done irrespective of any formulaic equations and N number calculations or saturation points. Rather, the adequacy of information was assessed by the team members in regards to the purpose of the study and scope of student’s research requirements. Generally, the inductive approaches are used in exploratory studies where there no or fewer grand theories and where the context specific nature of research area is of importance (Creswell & Poth, 2016). In the process of data collection and analysis informed consent was collected from participants of the study as ethical standards of research needs to be upheld for fair reporting of results ((Abbas et al., 2015; Tariq, 2018; Yousafzai et al., 2017).

Findings

A recurrent pattern which emerged during thematic analysis of the data collected from participants of the study indicates that almost 100 % of the shepherds do not have bank accounts. Their transactions remain off the books and due to this precious revenue of the Government is wasted. This also makes the shepherds excluded from seeking loans from formal lending institutions which further aggravates their financial worries. In addition to these, the shepherds are illiterate and lack financial skills to manage their savings especially during times of crisis. These findings concur with study by Yousafzai et al., (2022) who contends that such tenants are illiterate and rely on informal credit in order to manage their livelihoods.

On similar lines, another theme identified during the interview guide questions pertains to the fact that there are a number of part timer middlemen in the livestock industry. This creates additional layers of buyers due to which the prices of livestock skyrocket pre-Eid Al Azha season. The markets set by Tehsil municipal administration lack facilities and levy heavy taxes on the customers which further declines their business margins. According to one participant of the study

“There are no jobs nowadays for educated ones [Pause.. Speaking Loudly] Hence, more and more people anticipate the Eid Al Azha season and buy animals in advance. There has to be some form of formal mechanism for uncontrolled dealing of livestock as it is a specialized field”

In the same continuation when asked about financial management of assets and cash. A recurrent pattern which emerged during the analysis pertains to lack of financial management skills. These people rely on Kameetis with friends and relatives in their own circle in order to arrange working capital as well as to make ends meet. These people are strongly against the interest-based banking, yet they are compelled to seek informal credits due to sudden illnesses. Some of these people rely on alternative sources of income such as selling off wool on flea markets, others were engaged in homesteading as well as selling fertilizer to extend their financial life lines.

In regards to the use of technology and indigenous vernacular knowledge a recurrent pattern which emerged during data analysis entails that these people rely on the behaviour of animals and insects to predict weather patterns and safeguard themselves and animals. On occasions they have rescued others in the wake of natural disasters by blowing their vessels to warn residents of the area of the impending crises. The younger shepherds use cell phone in order to break the boredom and monotony of activities.

In the same sequence, other questions posed from the interview guide was regarding the registration of their work. In this regards a recurrent pattern emerged that these people actually are hired by landlord to look after their flocks of sheep's. They do not own anything yet there is an issue of no formal rangelands, no trekking routes for their flocks as well as lack of healthcare facilities. In case, the Government provides these facilities it will not only benefit them but also improve productivity which will lower prices of livestock. Moreover, despite the local perception of free riding a startling fact came to fore that these people actually pay to landlords in downstream area for their grazing lands.

One of the participants narrated,

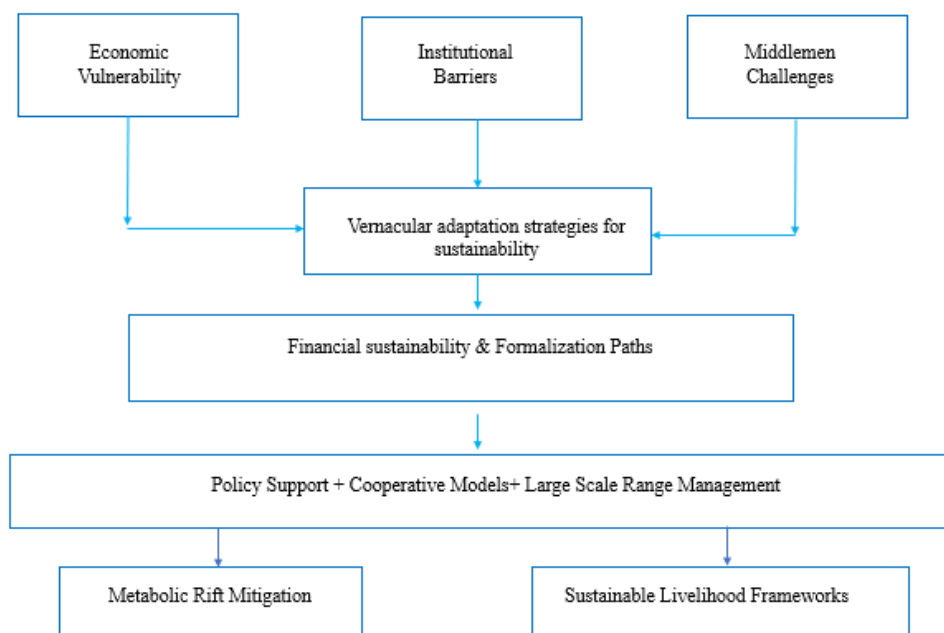
“There is no free lunch [Frowning]. Nothing is for free in this world. We pay a price for everything such as the grazing lands [ijara] to landlords in downstream areas”

A question regarding their business model was posed. A recurrent pattern which emerged during the interviews pertains to the fact that such people have done this business from several generations. Their art and craft of shepherding is learnt by trail and error methods to the younger generations. Their business model is more of a necessity than an innovation, yet they do improvise in times of need to create extra value through postponement of their travel plans to be able to avoid carrying younger lambs and to increase the amount of wool extracted before the trekking season of migration. Their business model has evolved with less room for free riding and utilization of other people resources have literally disappeared with more and more reliance on alternative sources income from homesteading, milk, wool, meat and composted fertilizers.

Discussion

In the light of empirical data analysis conducted through generation of various themes the following framework has been proposed for financial sustainability of shepherding sustainopreneurs in District Swat as shown in Figure 2 below

Fig 2: Proposed Financial sustainability of shepherding sustainopreneurs Framework



Above unidirectional framework has been crystallized from analysis of data collected from participants of the study. As shown in figure 2 above the shepherding entrepreneurs experience economic vulnerabilities due to sudden changes in weather patterns, diseases and sudden onset of natural disasters in the target area of study. In the same vein, there are institutional barriers such as higher paper work and collateral demands by banks and Government bodies which adversely affect the livelihoods of the shepherds working in the area of district Swat. Other than this, there is uncontrolled activity of trading of livestock hoarding prior to the Eid Al Azha which create several additional layers of commission agents. The ultimate price is paid by the end buyer and initial shepherds who suffer due to profiteering by the middlemen. However, due to their survival skills and vernacular sustainability practices of shepherds they have been able to operate their businesses amidst challenges. Their crucial skills are indigenous vernacular knowledge which has been transferred from several generations. Their business is informal but there are no registration avenues available nor the Government offers any facilities. If the concerned departments offer formalization pathways and rangeland management services its will protect their flocks from depredation, diseases as well as improve their productivity and well being of those involved in this sector (Rashid et al., 2023; Yousafzai et al., 2024). Finally, the formation of cooperatives through policy interventions and large-scale range management will not only reduce the financial woes but also improve productivity will enhancing their sustainable livelihood earnings as well as mitigate the effects of metabolic rift resulting in enhanced fertility in the area.

The study findings also goes in sync with studies in other cultures such as Mozambique where rotating savings and credit associations and village savings and loans associations are present (Sherbut et al., 2022). Although in the target area of study and elsewhere in Pakistan such an arrangement which utilizes social capital are called Kameetis (Srinivasan, 2024). Another important reason is due to the fact interest is forbidden in Islam. Hence, these people stay off the book by remaining in the unbanked sector. In many Muslim countries like Turkey, there are provision of interest free loans and Islamic Finance is gradually adopted in Pakistan amidst lack of awareness (Srinivasan, 2024). There is also a need to train the shepherds on the digital platforms in order to reduce the profit margins of middlemen and other dealers who exhibit opportunistic profit seeking behaviours especially during the peak season of feat of sacrifice i.e., Eid Al Azha.

Conclusion

The study concludes that shepherding entrepreneurs living and working in District Swat exhibit pro-environmental behaviours which not only helps combat the anthropogenic global warming but also reduces the metabolic rift. They use primitive vernacular business models yet create value for themselves and others. Their productivity can be enhancement by large scale range management services as well as through extension of interest free financing schemes in the target area of the study. Their advantages by far outweigh their associated disadvantages. For instance, they are seen as free riders of the natural ecosystem by the locals despite evidence to the contrary as they pay rents to landlords in whose graze lands land they take animals in downstream areas. Moreover, they are perceived to be vectors of zoonotic diseases yet they also face issues related to their and associated flocks' healthcare. In addition to their pro-environmental services, they also helped in rescue and early warning dissemination to locals during natural disasters such as floods. Their vernacular knowledge such as weather changes is not only beneficial to them and their flocks but also beneficial to locals who come to know about weather changes once, they see these shepherds trekking to downstream areas.

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