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RESEARCH ARTICLE OPEN ACCESS

PARTNERSHIP WITH PRODUCERS AND IT'S ROLE IN LIVESTOCK SECTOR IN BANGLADESH

Manab Chakraborty*

Department of Finance and Business Economics, University of Delhi

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Corresponding author: Manab Chakraborty

ABSTRACT

Livestock plays a significant role in traditional farming, supply of animal protein, manure for the fields and full time employment for 20% of the labour force and part-time employment for another 50% of the population. The process of modernisation of the livestock in Bangladesh will require healthy dose of capital investment and technology transfer so that small producers – who constitute 90% of the animal keepers – can play their due role. The public private producer partnership (4P) is one step towards attaining holistic modernisation. This paper is an effort to propose the possibilities of 4P in the field of livestock in Bangladesh. The lack of capacities and resources within the public system has hindered last mile veterinary care, improving cattle breeds, meat processing, and value addition in by-products. 4P offers a viable and tangible solution to address the complex environmental and technical challenges and demands for socially balanced growth.

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INTRODUCTION

Public-private-producer partnerships (4P) offer potentially important prospects for small producer centric livestock research, development and productivity interventions in developing countries. Traditional governments have provided veterinary services in Bangladesh, however, declining budgets, and higher expectations drives the need to utilize private companies and producer organisations. Government interventions have failed to correct the market and government failures. Livestock producers suffer from volatile supply, and monopsony power of animal and milk purchasers. There are also environmental costs of intensive farming (negative externalities) which is hardly addressed. The benefits of government schemes often do not reach the poor because of elite capture, and the fact the small producers are not organised to assert their claims on entitlements. Bangladesh has witnessed major success through public-private-partnership (PPP) to construct and operate large ticket road, bridge, and port projects (Bangladesh Planning Commission, 2020). Livestock has not attracted PPP investment because typically the capital requirements are considerable smaller. Livestock industry is unique in the sense that small producers hold most of the assets (land, and live animals) but do not have investible surplus to expand their business. Small businesses and private-sector companies provide financial services, technology, capital and information needed to modernise livestock production, improve productivity, marketing, distribution, and meet the standards laid out by government agencies.

Public sector has at its disposal large workforce engaged in extension services, veterinary care and vaccine production. The Government also command over regulations and its enforcement. Producer organisation can be defined as a legally recognised body such as cooperatives formed with the aim to improve the standard of their living and support producer-owned businesses. A partnership of public, private and producer entities stand a good chance to bridge the gap in expertise and knowledge, generate capital, access state of the art technologies, invest in R&D, reduce duplications and costs, and tap new business opportunities. An important aspect of 4P is that social equity and empowerment is ensured when producers themselves steer their business ventures.

Research Question

The main research question discussed here are a) the characteristics of public-private-producer partnership; b) the status of such partnerships in Bangladesh; and c) recommend measures to boost public-private-producer partnership in Bangladesh.

LITERATURE REVIEW

In a review of 70 PPPs in agriculture sector, FAO concluded PPPs are decent instruments for improving livestock investment, as well as for the diversification of value chains, expanding physical infrastructure, and outreach to producers. Agricultural research and development has also benefitted from public and private collaboration (Rankin *et al*., 2016). FAO also noted that the institutional framework behind the agri PPP is often weak. Most agriculture and livestock ministries' neither have regulatory framework nor dedicated personnel to manage PPPs. Lack of transparency, absence of mandatory disclosure requirements, and intra-departmental power struggles compound coordination challenges. Politically connected, and wealthy partners often accorded greater weight than their contribution warrants. In-kind and labour contributions of producer groups are generally not accounted for, leading to marginalisation in decision making process. The public-private-producer partnership (4P) approach places producers at the driver seat forging closer collaboration between private companies, and government agencies. The private sector often perceive working directly with smallholder producers as loss making, and not commercially viable. While smallholders often accuse private companies of offering low prices and stiff conditions they cannot cope with (Roy *et al*., 2021). The facilitating role of the government agencies brokering deal is essential to establish meaningful relationship between the prospective partners (Thorpe & Maestre, 2015) and tapping the market at the base of the pyramid. The 4P approach, popularised by the International Fund for Agriculture and Development (IFAD) is a locally implemented approach through national governments stresses strong inclusion of local (sub-national) governments, private companies and producer organisations as equal partners. 4P approach calls for a vision on sustainability post-project by capacity building for public institutions on the way markets function and how market players think and act different from public services (Campagni *et al.* 2016). The 4P approach stresses the importance of focusing particularly on price-discovery mechanisms in procurement, close monitoring of contractual performance, clear terms and conditions payment, training, technical assistance, financing of producers and producer organisation, and marketing of their outputs of producer organisations. In an IFAD publication Campagni *et al.* (2016, pp. 3) defines 4Ps in agricultural value chains as *"... cooperation between a government, business agents and small-scale producers, who agree to work together to reach a common goal or carry out a specific task while jointly assuming risks and responsibilities, and sharing benefits, resources and competencies."*

We may conclude that Public-Private-Producer Partnership (4P) is a collaborative endeavor of public, private and producer entities to share responsibilities, resources and risks to achieve common objectives that is beneficial to all the parties involved in the process. The main characteristics of a 4P (as opposed to PPPs) include the following:

1. In both PPP and 4P, the main driver is the government. Under 4P, the government assumes the role is to set the rules of the partnership, facilitate coming together of partners, and balance asymmetry of power between private companies and producers.
2. A central tenet of the 4P model is to use public funds provided by governments and donor agencies to leverage financing and investments from the private agribusiness and financial sectors, and producers themselves. The aim is to ensure the long-term financial viability of the 4P. In the PPP approach, the main financiers are the government agencies and private companies.
3. A major goal of 4P to enhance benefit flows to the producers and balance that with the interest of public and private stakeholders. The pro-farmer orientation is maintained throughout the project design and implementation, and systematically monitored and evaluated partnership results are systematically monitored and evaluated as part of the project's results framework.
4. The selection of the private-sector partner is made after thorough due diligence under a transparent, competitive procurement process. The selection process emphasises the project's social, economic and environmental objectives, along with financial return. Under PPP, economic viability is given a higher weightage, compared to other socio-economic objectives.
5. Producer organisations play are integral to the negotiations and partnership arrangements (both formal and informal), governance and monitoring. A feature of many 4Ps is community procurement as opposed to centralised public procurement .
6. A 4P model is an efficient way for each constituent partner to share risks and benefits. Both public and private-sector partners are expected to allocate additional financial resources to support the activities under partnership.
7. Since 4P model follow a business logic and generate greater ownership of projects, the interventions are more likely to be sustained beyond the project lifetime A 4P offers a good starting point to scaling up project results by bringing private sector talent, financial and organisational resources.

METHODOLOGY

The present study is exclusively based on a variety of qualitative methods for data collection and building up insights. The methods used are:

Secondary research: Collecting existing data in the form of texts, images, audio or reports, and articles etc.

Interviews: holding one-to-one conversations with over 100 producers, government officials, business persons.

Focus groups: using structured questionnaires to generate discussion among livestock producers. In all 6 focus group discussions were held between June and December 2022.

FINDINGS AND DISCUSSION

A 4P approach offers both advantages and challenges. These advantages and challenges are outlined below. In general, a well-designed and well-governed 4P will prevail over the challenges.

Advantages

- Value for Money: 4P create value for money. Projects of superior quality are delivered at lesser costs by pooling resources from partners.
- Risk Sharing: When risk is shared, the burden on any single party is less than whole. Risk under 4P is shared by 2 or more parties.
- Popular buy-in: With broadened participation of producers and private players, public buy-in for projects is higher. Stakeholders are positively inclined towards proposed projects under partnership
- Government support: 4P being pro-poor receive preferential treatment from government agencies.
- Harnessing private sector: 4P approach allows projects tap private sector capital, technology, and know-how.
- Time Savings: 4P projects do not follow conventional public procurement which cuts down both cost, and time taken for delivery.
- Bundled financing: 4P projects are financed by producers, private sector, and public agencies, this reduces the burden on public exchequer.

Disadvantages

- Inefficiencies: Leaders of producer organisations often do not have the training, experience, or qualification to manage projects. This leads to inefficiencies in management due to procrastination in decision making, and/or short sightedness.
- Lack of synergy: As there are two or more parties involved in 4P each with their own strategic objectives and priorities, collaboration suffers due to lack of synergy and coordination.

- Elite capture: The benefits of 4P diminish where a section of the producers capture the benefits for themselves, leading to group rivalry and breakdown of mutual interest compacts.
- External thought leadership: Producer organisations are generally formed under patronage of Government agencies and development NGOs. Unless carefully managed, producer organisations may find themselves over dependent on external mentorship.
- Paradigm shift: Partnership represents a paradigm shift in Government working culture from creating a physical asset to delivery of services which the producers need and demand.
- Culture Gap: Public agencies with “command and control” mindset have little understanding on how to manage their relationship with private sector and producers. This cultural gap is accentuated in 4P where Government provide grant in aid, and public sector banks hold large part of debt in producer organisations.
- Policy drifts: Changes in Government or public policies sometimes adversely impact producer organisations, because in initial years they require support from the government.

Experience from India, Indonesia, Ghana, Rwanda, Tanzania, and Uganda shows that private sector/producer organisation participation in areas previously treated as the monopoly of the Government and public sector has made major contributions to livestock sector. However, 4P implementation encounters a number of challenges (Batiargal and Zhang, 2021; The United Republic of Tanzania, 2009). These challenges include: (i) dearth of strong producer organisations with commercial track record; (ii) absence of policy, legal and institutional frameworks that sets out clear guidelines and procedures for development and implementation of 4Ps; (iii) opposition from public agencies to let go functions which was earlier their monopoly; (iv) inadequate funding of 4P projects and unreliable system of risk sharing; (v) suspicion and misgivings among 4P partners due to communication gap; (vi) scarcity of commercially robust, socially sound producer driven projects appropriate for public or private funding; (vii) limited or no capacity within the government for steering 4P projects while ensuring multi-stakeholder collaboration, grievance redressal, and accountability for the investments made. The challenges to 4Ps can be minimised under certain circumstances and through careful management of 4P design. Having clear realistic objective at the outset, promoting shared interests, mitigating risks of all shareholders, flexibility to respond to changing circumstances, and strong sense of ownership by farmers have been observed as key to success of 4P model (Camagni, & Ketting, 2016, pp. 25). Where the public sector is uninitiated to manage farmer-centric development processes, building their capacity and expertise early on will yield positive benefits.

The cycle of partnership formation in 4P: The creation of 4P partnerships occurs in several phases: (1) identifying an opportunity of mutual benefit; (2) negotiating the partnership contract, including roles and responsibilities, financing and organizational design; (3) operating the partnership itself; (4) monitoring and evaluating performance of partnership; and (5) deciding to terminate or renew the partnership.

Phase 1 Identifying Mutual Interest: In this phase, common interest is identified through dialogue informed by market analysis. The potential parties try to see if their strategic interest is in alignment with proposed collaboration. External agencies, consultants, and mentors use their personal relationship to bring concerned parties together.

Phase 2 Negotiating the Partnership Contract: The potential parties begin negotiation in earnest on proposed areas of collaboration, sequencing of activities, resources to be deployed, quantify expected costs and benefit flows. Negotiations normally include issues related to financing of activities, protection of intellectual property, management team, modalities of communication among parties and mechanism for dispute resolution. In Bangladesh, the principal act under which contracts are drawn up is the Partnership Act of 1932 and The Contract Act, 1872.

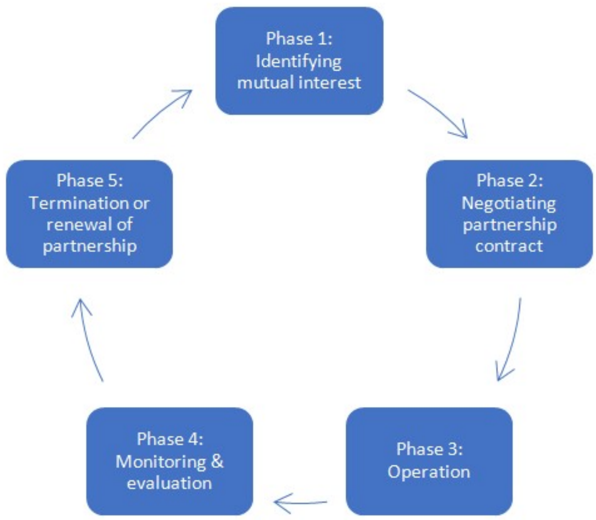

Figure 1. Cycle of Partnership Formulation, Implementation, and Termination

Phase 3 Operation: In this phase, project team is assembled, provided necessary orientation for buy-in, and final touches to the project management plan is given. The project management triangle is made up of three factors: scope, time, and cost. It visualizes the problem of the three constraints and the need to balance these factors to maintain a superior-quality final product. Essentially, operations has a direct impact on the ability of the partnership to make or break profit margins, and due to this reason, it is important to find balance in the expectations around what kind of product or service can be delivered, by when, and at what cost. This phase witnesses continuous adaptation with a view to adjust to changing market, technologies, regulations and socio-economic realities.

Phase 4 Monitoring and Evaluation: As continuous improvement tool, M&E of partnerships provide valuable insights about the performance and outcomes at both the project and partnership levels:

- **Project Level:** provides information about operational effectiveness, financial results, administration, management, leadership, and the synergetic effect produced
- **Partnership Level:** offers insights about the efficiency, relevance, sustainability, and achievement of broader partnership objectives.

Phase 5 Termination or Continuation: Partners may decide to terminate a partnership if they conclude that the expected results have not been satisfactory, or circumstances have changed making it difficult if not impossible to achieve the objectives of the partnership. A partnership can be terminated as per the time period stipulated in the contract. If both parties are happy with the outcome of partnership, they may renew the partnership.

Justification of 4P in Livestock Sector in Bangladesh: The justification for a 4P approach are three folds. Firstly, as data collected by the Department of Livestock Services (DLS), Government of Bangladesh, there are 420, 000cattle farms in the country, 84% of them have only 1-5 cattle heads. Further, these farms are the main suppliers of milk and meat in the country.

The second justification for 4P approach comes from budgetary stress faced by the Government. Thanks to progressive policies of the Government, the total livestock population in 2021-22 was 432.23 million up from 349.47 million in 2012-13. This increase of 24% in livestock population in the last 10 years was not accompanied by an increase in public spending on veterinary services, as a result extension services, research in animal husbandry and disease control, and food safety has suffered. To meet this inadequacy, emphasis in recent years has been shifted over to decentralize veterinary services, cost recovery, withdrawal of selected services and contractual services and encouraging Public-Private-Partnership (PPP) model in for veterinary services, dairy value addition and meat processing. The pressure of dwindling budgets for veterinary services, increasing operation costs, and the need for more capital for investment in infrastructure drives the need to utilize service providers beyond what government can directly employ. The government is encouraging collaboration among, public sector, private sector, NGOs, and producers by creating an enabling environment liberalizing its present policy.

and vaccinations are available either free or at a subsidized cost at Government veterinary hospitals or clinics. These services could be augmented with the support of private practitioners and entrepreneurs who are willing to invest in veterinary hospital and clinic chains. The producers are ready to pay for quality breeding and health care, artificial insemination, vaccination, deworming and emergency services. There are activities for which private sector under Public-Private Partnership (PPP) are eminently suitable. Marketing of inputs and outputs is where private entrepreneurship have excelled itself. There are also areas where private and producer organisations can work together. The government's primary role is to regulate, licenses, monitor and evaluate, the functioning of private players.

Table 1. Cattle ownership in Bangladesh

S/N	Division	1 - 5 heads	6 - 9 heads	10 - 20 heads	Total heads	In %
1	Rangpur	1,32,905	9,742	2,288	1,44,935	9%
2	Rajshahi	1,77,820	39,512	4,689	2,22,021	13%
3	Khulna	2,09,040	9,215	2,571	2,20,826	13%
4	Barishal	39,776	2,667	792	43,235	3%
5	Dhaka	2,10,251	29,239	5,789	2,45,279	14%
6	Mymensingh	86,697	5,970	1,428	94,095	6%
7	Sylhet	29,609	6,310	669	36,588	2%
8	Chattogram	5,42,288	1,47,034	2,374	6,91,696	41%
	Grand Total	14,28,386	2,49,689	20,600	16,98,675	100%
	Total Households	3,00,000	1,00,000	20,000	4,20,000	

Source: Department of Livestock Services, 2020

The third justification for 4P is unless the small producers are organised into larger organisations, the transaction cost involved in servicing them will remain high. The Government of Bangladesh, civil society organisations, and some private companies have taken steps to organise producers into legally recognised cooperatives and societies. The aim is to enhance producers competitiveness and increase their advantages in emerging market opportunities. The producer organisation operations include the supply of feed and fodder, veterinary medicine, collection and chilling of milk, coordinating with AI and veterinary service providers, market linkages, networking and financial and technical advice. There are many successful examples of partnership in Bangladesh. Some of these are mentioned here:

- Kazi Farms have contract growing arrangement with 2000 broiler growers in 16 districts. The Company provides day old chicks and feed and ensures marketing under its brand.
- Bengal Meat, a well-known national meat processor, has more than 1,000 contract producers in its supply chain. Half of its 400 tonnes of annual meat supplies comes from contract beef fatteners. The company assists producers with best practices in fodder cultivation, animal farming, and veterinary services.
- Milk Vita, a government sponsored apex milk cooperative, serves over 40,000 landless, small and marginal milk producers belonging to 390 village primary milk cooperatives. It processes 350 000 L/day liquid milk collection, processing, packaging and marketing.
- organising primary milk cooperatives
- Pran Dairy has organised more than 20 000 small dairy producers under its hub and spoke models. The village milk collection centres (spokes) collect milk, while centralised units produces value added products such as pasteurised and UHT fortified milk, ghee, butter, ice creams etc.
- Green Delta Insurance Company and Brac Bank with support from Swisscontact, a Swiss NGO, has provided crop loss insurance to 233,000 farmers, and livestock insurance to 230,000 cattle owners. for crop and livestock insurance. Brac Bank has given loan to 767 small and medium farmers who are also microinsurance policy holders.

There is a great scope for private service providers and producer organisations to complement government initiatives. Government of Bangladesh currently provide inputs and services needed by the livestock owners, services such as breeding, veterinary health care

The Government should encourage the private companies and producer organisations to provide some of the services delineated in Table 2 below.

Types and preference of 4P Model variants in Bangladesh: In Bangladesh livestock sector, some of the commonly adopted forms of partnership include performance-based contracts, and lease contracts. The build-operate-transfer (BOT) and its variants — design-build-finance-operate-transfer (DBFOT) and operate-maintain-transfer (OMT) have not yet occurred in livestock sector in the country.

Performance based contracts: There are approximately 30 corporates that supply day old chicks, feed and medicines while growers get a remuneration of USD 0.11 cents (Tk12) per kilogram of chicken as growing charges only <u>IF</u> the production cost remains at Tk88. Currently, an estimated 5,000 farms are operating under such contracts with the corporates.

Lease Contracts: Under leasing agreements, assets are leased, by the public entity to another public entity or in rare cases to a private partner. Several of Milk Vita chilling units are on land leased by the Land Settlement Office. A part of Bengal Meat, Pabna plant is located on Government leased land. The lease for land last for 10 to 15 years.

Viability Gap Financing Model: Innovations like livestock microinsurance promoted by Green Delta Insurance Company, Brac Bank and Swisscontact does not proven business models in Bangladesh. This is the reason why Swiss Development Cooperation is providing grant in aid support to all the three concerned entities so that they are not subjected to any loss. The livestock farmers are charged a user fee to cover part of the insurance cost.

Recommendations and way Forward: A number of gradual, incremental steps are needed to advance 4P in Bangladesh. These are the building blocks to eliminate waste, improve productivity, and achieve sustained continual improvement in the livestock sector. Driven by strong domestic demand, Bangladesh's livestock segment of the economy is clocking a growth rate above 3% per year and it would grow at an even faster pace if it implemented economic reforms.

Build strong producer organisations: It is a stark reality that Bangladesh does not have strong producer organisations with a track record of sustaining business.

Table 2. Scope for Promoting PPP and 4P for Taking up Delivery of Various Services and Inputs

S/N	Scope	PPP	4P
I	**Services**		
a	Livestock breeding	√	√
b	Pregnancy diagnosis	√	√
c	Vaccine production and distribution		
d	Vaccination/AI	√	
e	Deworming		√
f	Veterinary services (hospitals, clinics, diagnostic labs)	√	
g	Nutritional analysis of various feed ingredients	√	
h	Village milk collection, chilling, and marketing	√	√
i	Slaughter house establishment and operation	√	
II	**Inputs Production**		
a	Feed mills	√	
b	Mineral mixture and vitamins	√	√
c	Fodder cutting and seed distribution	√	√
d	Various farm equipment manufacturing	√	
e	Various farm equipment leasing		√
f	Milking vessels, milking equipment manufacturing	√	
III	**Capacity Building**		
a	Training of paravets, and higher veterinary professionals	√	
IV	**Financing and investment**		
a	Purchase of livestock and building cow sheds	√	
b	Refrigerated vans	√	
c	Veterinary pharmacy	√	√
d	Producer groups as banking agents	√	√

The first step is to build at least one strong producer organisation per division in the country. The lead for this lies with civil society organisation in collaboration with government agencies. The more organised or commercialised the livestock is, the more is the demand for veterinary services, vaccine, and veterinary medicine (Sarker *et al*., 2020). Hence, strong producer organisations is in the interest of Government and business.

Producer group as banking agents: Experience in India shows that producer groups and farmer group can serve rural people as banking agents in an effective manner to extending banking services to its members, and unbanked population. The banking agents can collect small savings, pay out cash, generate loan applications and follow up on loan payments.

Start with small reforms such as Cattle Market Reform: The cattle markets in Bangladesh lack basic hygiene, civic amenities, and facilities to conduct trade. The nexus of officials, trader cartels and others extract 3-5% fees from sellers as fees without providing any services in return. A cattle market management company could be established in each division with responsibility of operating existing cattle markets and improve facilities and livestock trading environment. Each cattle market management company would provide general public, traders and farmers:

- Free water, electricity, veterinary services, shade (sheds), loading and unloading services, parking, security, cleanliness and toilets
- Provision of banks and secured cash transactions through banks.
- Other available services offered through outsourcing in the market are fodder shops, straw and stubble points, manual machine used to chop fodder for cattle canteen and hotels, small grocery stores, tea stalls, ornamental shops, lodging and boarding.

The main source of revenue of the cattle market companies will come from auction fees collected from outsourcing the operations of animal levy, parking fee and allied services. Online, transparent bids have curbed corruption and leakage of user fees.

Let the Government Focus Minimum Intervention and Maximum Governance: The Government may focus on core activities, and let private companies and producer organisations assist it in delivery of services. Ministry of Fisheries and Livestock (MoFL) has 6 Institute of Livestock Sciences and Training (ILST) which provide in-service training to government staff and provide para vet training. There are many competent private players and NGOs who can provide the same service at a lesser cost. Likewise, American Dairy, Brac, ACI Limited, and Lal Teer Livestock Limited are providing reliable artificial insemination services in Bangladesh. The Government of Bangladesh may enter into partnership with them and others for widening and deepening AI services countrywide. New slaughter houses could be set up under PPP in various parts of the country. Private companies will bring new technology, management and work force. The slaughter houses can link up with producer organisation for livestock fattening, and add value in their integrated meat processing centres.

Ramp up Veterinary Medicine and Vaccine Production: According to the Animal Health Companies Association of Bangladesh (AHCAB), about 60 percent of the demand for veterinary medicine is being supplied by 34 local manufacturers. The country imports the remaining 40 percent. The veterinary medicine market is now worth around USD 280 million. The Government owned Bangladesh Livestock Research Institute and produce only a small quantity of veterinary medicine that the country needs. Bangladesh imports 60% of its vaccine requirements. According to trade journal Volza's Bangladesh data, the country imports most of its vaccine from Hungary, United States and Spain. To achieve self-sufficiency in vaccine production, the government could promote public-private partnerships, and use advanced purchase agreements, capacity subsidies, grants, and "concessional loans" with favourable terms to encourage vaccine manufacturers to expand capacity.

CONCLUSION

A variety of new partnership models are needed in Bangladesh that deepens services for the livestock producers. PPP and 4P both hold significant promise of contribution. The public-private partnership is well proven. In livestock sector, private veterinarians and paravets under supervision of qualified vets can provide a wide range of services for government through formal contracts. Effective use of the private sector requires mutual trust, clear delineation of roles and responsibilities, and an effective mechanism for dispute resolution. Overall success of efficiency and effectiveness of veterinary services depends on performance of veterinary statutory bodies, quality of veterinary education, and collaboration between producers, private players, and public agencies. Wherever possible, Government may reduce its involvement in direct service provision, and facilitate, and create space for private service delivery providers. The organisation of producers into viable organisations will increase outreach for veterinary services, reduce transaction cost, and mainstream the unorganised into formal systems.

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