



# Sustainable business models with a gender-sensitive approach for cattle artificial insemination services in NWH Vietnam

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## Introduction

- ▶ The swift evolution of the Vietnamese cattle value chain can be attributed to a convergence of factors, e.g. public policies favoring a market-based economy, an expanding population, improved living standards, and geographical proximity to dynamic and ever-changing markets.
- ▶ The process of modernizing livestock production in Vietnam has exhibited distinct patterns based on the type of products (chickens, pigs, and cattle) and geographical regions (north, central, and south). As a result, beef production in NWH Vietnam is predominantly carried out by smallholders who have adopted technology to a limited extent.
- ▶ The central government and multilateral organizations have initiated mechanisms to advance beef production in Vietnam. These efforts are centered around enhancing the productivity of local breeds through genetic improvement and the implementation of cattle artificial insemination (CAI), utilizing specialized crosses that possess significant adaptability to the conditions prevalent in the region.
- ▶ Nevertheless, enduring disparities in the adoption of CAI among cattle farmers persist due to constraints such as inadequate supply, restricted accessibility, and challenges related to the affordability of CAI services.

## Objective

To assess the existing AI business model for cattle in NWH Vietnam and to provide actionable recommendations for enhancing the model, thereby addressing the issue of supply shortages.

## Methodology

- ▶ A qualitative and gender-sensitive methodology was employed to gather information, facilitating an examination of the prevailing AI service delivery model.
- ▶ Nine Key Informant Interviews were undertaken in Son La Province, involving AI cattle providers. The participants comprised seven men and two women, ensuring a gender-sensitive approach.
- ▶ The conceptual framework is founded on the innovative business model design principles presented by Osterwalder and Pigneur (2010). Additionally, the triple-layered canvas business model introduced by Joyce et al. (2015) was employed, with specific emphasis placed on the social layer.

## Results

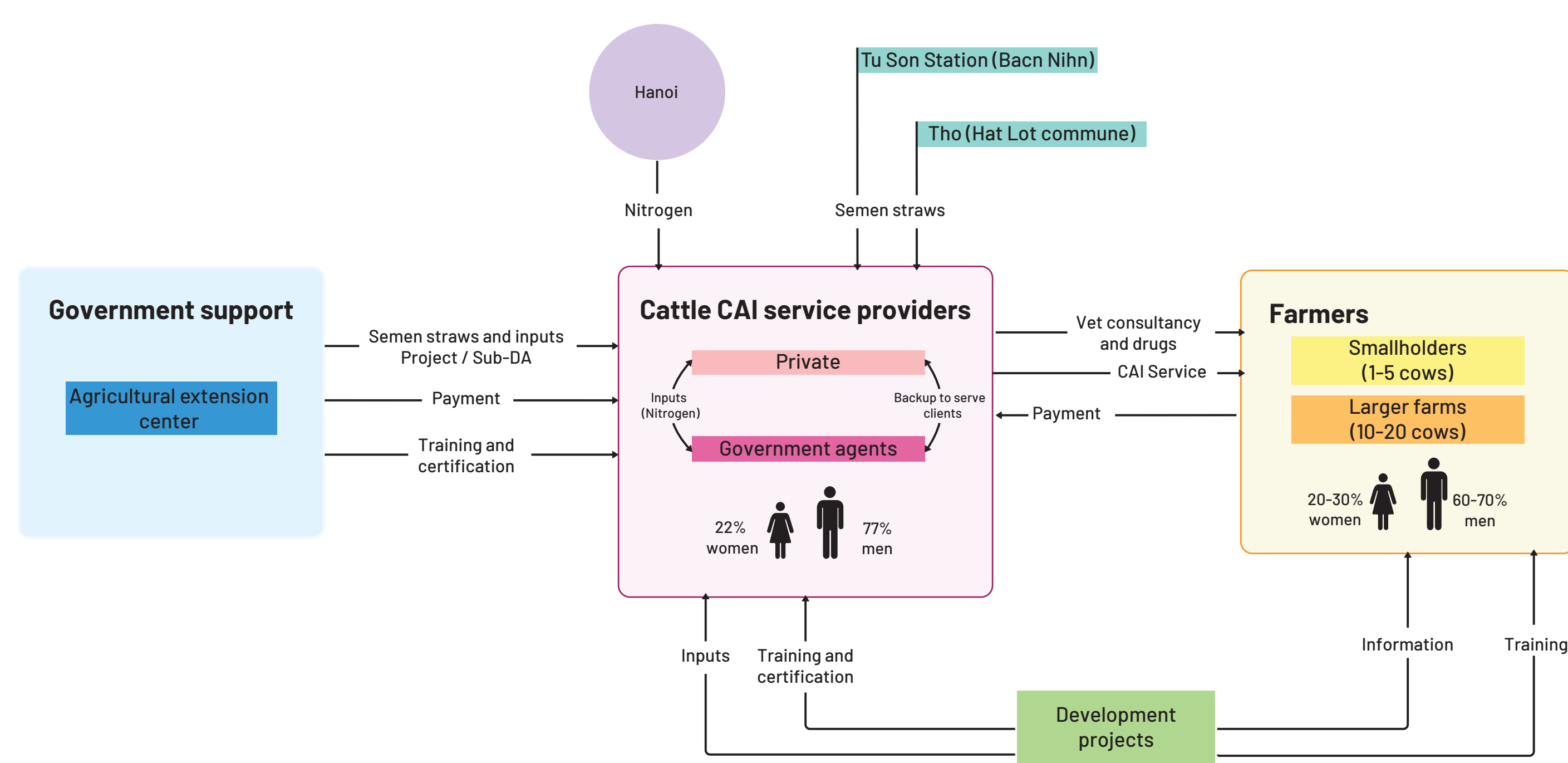


Figure 1. The general structure of the current business model of cattle AI in Son La Province, Vietnam.

The prevailing value proposition of CAI service provision primarily revolves around the service itself, encompassing inputs and labor. Notably, success rates ranging between 60-80% are achieved for specific animal breeds. Moreover, the value proposition includes guidance on optimal breeds and crossbreeds to enhance local breeds, as well as veterinary consultations and services encompassing aspects like disease diagnosis and treatment, obstetric assessment, and nutritional guidance during pregnancy and post-delivery. The service package also features a guarantee that offers 2-3 additional attempts at a reduced price or even free of charge.

The social value acknowledged by suppliers is centered around several key aspects, including:

- Enhancing the genetic traits and overall productivity of local breeds.
- Focusing on cattle with substantial economic value, characterized by larger body frames and higher carcass rates.
- Decreasing the time required for rearing.
- Lowering the vulnerability to diseases, encompassing both infections and the risks associated with inbreeding.

- CAI business heavily relies on support from both government and development projects, offering training and certifying the technical skills, as well as providing essential inputs (Figure 1).
- Most participants within the service provision network, are men who engage in CAI service as a supplementary occupation.
- The existing provider network remains underdeveloped, with restricted geographical coverage. Mobility, as well as difficulties in reaching more remote and mountainous regions, constitute the primary obstacles.
- CAI service providers are required to possess a nitrogen flask for their operations. However, not all providers have the financial means to acquire one, nor procuring high-quality semen and liquid nitrogen.
- Several providers expressed concerns about the origin and quality of semen available in the market. They are typically obtained from Hanoi or Bac Ninh province, contributing to elevated transportation costs.
- Liquid nitrogen utilization falls short of its full capacity. To optimize its usage, a provider needs to offer services for 15-20 cows per month.

## Conclusions

- ▶ Enhancing the provision of CAI services requires the establishment of a local supply source for equipment, e.g. semen and liquid nitrogen.
- ▶ Initiating a strategy involves a preliminary phase of bolstering the CAI service provision network in collaboration with farmer groups.
- ▶ The expected influence on the social layer could manifest in terms of end users, social value and benefits, and the expansion of outreach.
- ▶ Comprehensive and advanced training to CAI technicians is necessary to enhance their proficiency and understanding of veterinary aspects, such as synchronization, obstetric examination, among others.
- ▶ It is critical to train farmers regarding the advantages of CAI and equip them with the skills required for precise heat detection.

## References

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