In the context of animal health and food safety, economic impact assessment tools are increasingly important to quantify the probable impacts of risks and to aid decision making in times of increasingly tight budget constraints (Rich and Ross 2011). However, the risks and impacts associated with both food safety and animal health can take place at multiple parts of the food value chain, and have different short-term and long-term effects. This suggests a need for better impact assessment tools that take the impacts at the whole chain level into account. This paper applies a quantitative value chain approach to assess the impacts of interventions in selected pig value chains in Viet Nam, highlighting both short-term and long-term dynamic effects.

RESULTS

Two scenarios were analysed (1) applying Good Agricultural Practices (GAP, which the VietGAHP guidelines are derived from) whereby farm costs increase 10%, leading to productivity gains of 30% and mortality losses reduced by 50% and (2) a food safety scenario where slaughtered meat margins rise 20% to cover food safety infrastructure and there is a 20% rise in consumer income due to positive health effects. Sensitivity analyses were conducted on reduced costs in scenario (1) and lowered increases in consumer income in scenario (2).

Applying GAP in the high-cost scenario was not beneficial for farmers in mixed systems that combine farm-waste and fattening activities. On the other hand, the low-cost scenario led to positive benefits in all systems. Food safety scenarios revealed higher demand for safe pork, offsetting the higher prices paid in the baseline. However, in the lower income increase scenario, income and health gains by consumers are not enough to cover the higher margins and prices for safe pork.

For GAP to play a positive role in the value chain depends crucially on its cost of implementation. Identifying cost-effective solutions, such as a “VietGAHP lite” could positively influence adoption in the smallholder pig systems context in Viet Nam. These could include improved feeding practices in pigpens, simple ventilation systems, drinking water through taps, and regular cleaning and disinfection. The role of extension is to create awareness in consumers.

The food safety scenarios highlight the potential role of the public sector in supporting value chain upgrading, especially as income goes associated with better public health do not provide adequate consumer incentives for buying safe pork. This public support could include assistance with finance and training programs to improve slaughter practices. Better capacity in the regulatory arena, in terms of inspection and compliance standards, could further increase the returns to private sector investments in food safety. System approaches provides a template for decision making in value chains that could be applied in a variety of different agricultural and livestock contexts, including those in mountainous regions of Viet Nam. This approach can help to overcome policy resistance that hinders decision making towards immediate solutions that overlook the unintended consequences of those decisions in the future.

REFERENCES


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