Double-Sided Moral Hazard Problem on the Continuity of Contract Farming: An Integrated Approach of Theory and Qualitative Case Study Analysis

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Thesis Summary

Contract farming (CF) is becoming increasingly popular in developing countries. It is described as the principal–agent relationship where a firm (the principal) contracts the farmers (the agent) to produce a commodity. CF has many potential benefits that can bring to both; it has been promoted as a 'win-win' strategy for firms and farmers. However, it encounters several challenges in practice, raising concerns about its ability to continue. The continuity problems need to be explored more in literature; it is an important aspect for promoting the success of CF.

Many researchers might acknowledge the potential harmful effect of moral hazard (MH) that can disturb the contractual relationships and the continuity of CF. However, notably, there are two research gaps in literature. Firstly, many empirical studies adopted a one-sided approach (either firm's MH or farmers' MH), and most of them largely focused on farmers' MH and solving them. There is a limited no. of studies that address double-sided MH; however, they did not explicitly address the limitation of a one-sided approach to solving the continuity problem and did not show how double-sided MH undermined the CF continuity. Secondly, MH problems have been addressed through different approaches in empirical and theoretical research. However, each approach has its limitations. Using qualitative approach, some empirical studies can widely detect MH and the underlying mechanisms, but mostly in descriptively and they often miss to provide a systematic explanation or analysis of MH situation using theory. Consequently, the evidence to prove MH is still weak. On the other hand, theoretical research systematically analyzes MH and its causal mechanisms using models. However, some argue that due to oversimplification, this approach sometimes may not be sufficient in dealing with complex real-world contracts. To summarize, the qualitative research and theoretical research address MH in unique ways, with the former allowing for the exploration of all relevant aspects of MH in case studies and the latter allowing for a systematic analysis of MH, but they are frequently implemented separately. Consequently, it may fail to systematically detect and prove MH situations from both sides and important mechanisms, in a complex real-world. Even if a few studies investigate MH using both qualitative approach and theoretical viewpoints, due to the complicated and implicit nature of contracts, it might be difficult to visualize and completely comprehend MH. A better understanding and investigation of MH are essential in CF to prevent or lessen contract failures.

To bridge these gaps, the main aim of this study is to systemically address the effect of information problems on CF continuity problems from a double-sided approach using an example of a formal contract. This study was undertaken in three main parts to achieve this aim. For the first part of this study, the contract theory and a qualitative case study approach were applied. In addition to these two, a direct acyclic graph, causal diagram which visually depict causal relationships among nodes or variables and the complicated mechanism was employed for the latter two parts. This study investigated a spinach written seasonal contract in Myanmar, where the farmers' continuity problem

was a concern by a processing company (hereafter Company X) that exports frozen vegetables mainly to Japan. Data were collected through in-depth interviews, observations, and the contents of contract agreements in the study period (from 2016/17 to 2021/22 contract season). A holistic understanding of the contract and its operations was gained through company interviews. The main problems were collected in detail (about farmers' contract discontinuity, not only from their own experiences but also the observed experiences of other neighboring farmers) through farmer interviews with a total of 10 key, active contract farmers (who represent spinach contract farmers and are knowledgeable about spinach contracts) from the main procurement area.

The first part of this study addressed why the farmers' continuity problem occurred in a contract from a double-sided viewpoint. It was analyzed in three steps. First, how the contract was designed by principal (Company X) to procure raw from agent (spinach farmers) were analyzed using four theoretical countermeasures. Second, the main problems of farmers under such contracts were descriptively investigated through interviews. Finally, the mechanism of the principal's moral hazards and farmers' continuity problem was examined from a double-sided moral hazard viewpoint through the results of case and theoretical perspectives. The results showed that the spinach contract design was unilateral that was biased to cope agent's MH. A unilateral contract design overlooked the need to control principal's MH, although it properly controlled farmers' moral hazard. Consequently, a moral hazard situation that arose from the company's side (delayed harvest, manipulative quality assessment, and delayed payment) was detected and such a mechanism generated the farmers' continuity problem.

The second part of this study is to prepare a new approach that not only allows to link the qualitative research and theoretical research but also provides visual evidence for analysis of MH and inclusive causal mechanism systematically. Especially, the moral hazard causal diagram (MHCD)which can be used for analysis of a case study was constructed by integrating contract theory into a DAG causal diagram. How to construct MHCD for agent and principal was explained in detail using three steps: 1) merging the concept of MH into DAG, 2) expanding the diagram by introducing mediating nodes and multiplier effect for analysis of the practical situation and 3) introducing the countermeasures into agent's conceptual MHCD.

The third part of the study, using a spinach contract, the applicability of MHCD was tested in two cases: the first is to analyze a particular situation and confirm if MH exists or not (farmers' MH regarding the harvest) using step 1-2 and the second is to evaluate a specific MH countermeasure's effectiveness (Company X's centralized decision for harvest to control farmers' MH) using steps 1-3. The first result showed MHCD can detect and prove farmers' MH situation by providing an effective and visual understanding of why and how the causal mechanism of farmers' harvest action appeared as MH. The second result revealed that MHCD well revealed that there was no longer farmers' MH because of the company's countermeasure, but how the mechanism completely changed and gave rise to the company's MH.

In conclusion, this study suggests that asymmetric consideration of MH, especially only on farmers' MH that was prevalent in literature is not enough to solve the CF continuity problem. This study also introduces a new approach, MHCD which can be applied for systemically detecting double-sided MH situations and effective understanding of it in real-world contracts. Moreover, using a case, this study not only validates the different applications of MHCD but also systemically provides the evidence how the effect of double-sided moral hazard was hindering the continuity of CF.