ABSTRACT

Fahmi Riadi. Integrated Natural Rubber Agroindustry Model Development. Supervised by Dr. Ir. Machfud, MS as the advisory committee chairman, Dr. Ir. Tajuddin Bantacut, M.Sc., Dr. Ir. Illah Sailah, MS, and Prof. Dr. Ir. Marimin, M.Sc. as the members.

This study was aimed to develop an integrated and sustainable model for natural rubber agroindustry. Agroindustrial development was very strategic when integrated and sustainably managed i.e. there’s linkage among upstream and downstream sectors synergically and productively, and also there’s linkage among regionals, sectors and commodities. Industrial integration and agglomeration had been known for long time to save transportation and transaction cost, proximity to supplier and market, labor market pooling, and optimizing comparative advantages. Development factors were gained from experts judgment aggregated using pairwise comparation and analytical hierarchy process (AHP) technique. Institutions interaction and development constraints analyzed using interpretive structural modeling (ISM) technique. Investment feasibility on each business unit partially showed that all activities were feasible to be conducted and integration of every stage of business activities vertically showed improving of all feasibility indicators such as NPV, IRR, Net B/C and PBP and also saved total initial investments. The local government was the most influence key element followed by rubber industry and finance institution. The main constraint were lack of government policy support then inadequate of capitals and absence of farmer adviser. This study concluded that direct contract farming model combined with rubber agroforestry system (RAS-1) in replanting was preferred and more profitable for the integrated and sustainable agroindustrial development based on latex and rubberwood. The farmers had a chance to participate and invest their capitals even playing the main role in the project. This study also introduced a new perspective and approach on agroindustrial integration theories.

Keywords: integrated, agroindustry, natural rubber, rubberwood, furniture development