

# Socio-economic Impact of Paddy's Threshing Machine Utilization In Rice Production Area: Case Study In Serang District Banten Province

インドネシアのバンテン州米生産地における機械脱穀展開の影響分析

Mulyaqin Tian (農業経営経済学分野)

## 【Objective】

This paper studies the impact of threshing machine utilization of adopter farmer compare to non adopter farmer in socio-economic view in Serang District as case study. There are three objectives in this study; first, to study availability and requirement of powered-thresher, second, to study factors influencing the adoption of powered-thresher, and third, to study socio economic impact of powered-thresher utilization.

## 【Method】

Primary and secondary data were used in this study. Primary data was collected using survey to 103 farmers respondents, including 61 farmers as adopter and 42 farmers as non adopter of paddy's threshing Machines in 4 (four) Subdistrict (Ciruas, Lebak Wangi, Pontang, Tirtayasa) in Serang District area from May – June 2015. Also additional information was collected from various source relate to this research. The study used a quantitative and a qualitative approach to address the problem.

## 【Result】

Introducing and disseminating threshing machine such as powered-thresher to rice farmer is one of government effort to reduce yield loss and labor cost especially on threshing stage. Study shows that most of farmer respondents do not have their own powered-thresher. They will just rent to other farmer, or farmer groups, or persons who provide powered-thresher for rent. However, availability of powered-thresher is still limited. The availability of powered thresher in Serang District only 10.1 percent from ideal availability, so they have to compete with other farmer to rent this machines, especially when harvesting time coming.

Adoption of powered-thresher in Serang District shows the slow adoption but increasing. Inline with Swastika, 2012; the slow adoption of powered-thresher utilization in Serang District could be caused by several factors: (i) There is still no information about the technology to the farmer and agriculturist; (ii) the price of the machine is not affordable by farmer individually; (iii) the absence of rental service of the machine; (iv) there is social conflict with the workers, because they are worried that they might lose their job. The empirical analysis shows the positive significant factors influencing the adoption of powered-thresher are farm size and financial source, and the negative significant factors that influencing the adoption of powered-thresher are the labor availability (the number of household member who are working in other farm and having a side job), and threshing cost.

Adoption of threshing machine already impacted on institutional change in hiring and harvesting system, from *Bawon* system to cash wage system in hiring and from opened harvesting system with no limited number of labor to closed harvesting system with limited number of labor. Economically, adopters of powered-thresher provide higher wage rate than non-adopters, also adopters achieve the lower cost on harvesting activity significantly and higher income than non-adopter farmer in rice farming.

## 【Conclusion】

Availability of powered-thresher in Serang District is still limited, but adoption of powered-thresher is increasing. The significant factors influencing powered-thresher adoption are farm size and financial source and the negative significant factors that influencing the adoption of powered-thresher are the labor availability (the number of household member who are working in other farm and having a side job), and threshing cost. Then, powered-thresher adoption has socio-economics impact that changes labor hiring and harvesting system which is change *bawon* system to cash wage system and limit harvesting workers, on the other side, powered-thresher adoption provide higher wage rate, saving time and labor, also achieve lower cost and higher income for adopter.