

## INTISARI

Perkebunan rakyat relatif lebih banyak dihadapkan pada keterbatasan akses dan sumberdaya dibanding perkebunan besar. Upaya perbaikan kinerja perkebunan rakyat diupayakan melalui kemitraan dengan perusahaan besar. Yang menjadi pertanyaan adalah bagaimana kondisi perkebunan rakyat kelapa sawit saat ini ditinjau dari sisi produksi, pendapatan serta keberlanjutannya sebagai bagian dari industri kelapa sawit yang ada. Penelitian ini bertujuan untuk; i) Mengetahui produksi perkebunan rakyat kelapa sawit dan faktor-faktor yang mempengaruhinya, ii) Mengestimasi tingkat efisiensi teknis, ekonomis, dan alokatif berbasis produksi kelapa sawit di perkebunan rakyat, beserta sumber-sumber inefisiensinya, iii) Mengestimasi pengaruh efisiensi terhadap pendapatan petani pada perkebunan rakyat kelapa sawit, dan iv) Mengetahui kondisi perkebunan rakyat saat ini serta menghasilkan model dinamis bagi industri kelapa sawit berbasis perkebunan rakyat di Kabupaten Mamuju Utara.

Penelitian ini dilakukan di Kabupaten Mamuju Utara, kabupaten ini dipilih karena memiliki areal perkebunan rakyat kelapa sawit terbesar di Pulau Sulawesi. Terdapat tiga pola perkebunan rakyat kelapa sawit di kabupaten ini, yakni; pola plasma, pola IGA (*Income Generating Activity*), dan pola mandiri/swadaya. Selanjutnya dipilih kecamatan dan desa yang terdapat tiga pola perkebunan rakyat. Pemilihan sampel petani menggunakan *snowball sampling*, pada masing-masing pola perusahaan. Sampel petani meliputi; 35 petani plasma, 70 petani IGA, dan 55 petani mandiri/swadaya, sehingga diperoleh 160 petani sampel. Efisiensi teknis dan inefisiensi dalam penelitian ini dianalisis menggunakan pendekatan fungsi produksi stokastik frontier dengan *software Frontier 4.1*. Model dinamis bagi industri kelapa sawit berbasis perkebunan rakyat dianalisis menggunakan pendekatan model sistem dinamis, dengan *software powersim studio 10*.

Hasil penelitian menunjukkan, bahwa i) pola IGA memiliki produktivitas paling tinggi dan pola mandiri memiliki produktivitas terendah, ii) input luas lahan, penggunaan pupuk NPK, umur tanaman kelapa sawit, penggunaan tenaga kerja luar keluarga, frekuensi sanitasi kebun dan jarak kebun ke sungai mempengaruhi produksi kelapa sawit, iii) input luas lahan merupakan faktor produksi yang paling elastis, iv) tingkat efisiensi produksi, baik efisiensi teknis, alokatif, dan ekonomi, telah cukup tinggi dan tidak ada masalah inefisiensi. vi) variabel efisiensi dan pola perusahaan IGA mempengaruhi pendapatan petani perkebunan rakyat kelapa sawit, vii) neraca TBS kelapa sawit saat ini cenderung kelebihan penawaran sehingga diperlukan langkah dan kebijakan yang dapat menjamin keberlanjutan industri kelapa sawit umumnya dan perkebunan rakyat khususnya.

**Kata kunci :** efisiensi, model sistem dinamis, pendapatan, produksi

## ABSTRACT

Smallholder plantations are relatively more exposed to limited access and resources than large plantations. Efforts to improve the performance of smallholder plantations are pursued through partnerships with large companies. The question is how is the current condition of smallholder oil palm plantations in terms of production, income, and sustainability as part of the existing palm oil industry. This research aims to; i) Determine the production of smallholder oil palm plantations and the factors that influence them, ii) Estimating the level of technical, economic and allocative efficiency based on oil palm production on smallholder plantations, along with the sources of its inefficiencies, iii) Estimating the effect of efficiency on farmers' income on plantations people of oil palm, and iv) Knowing the current condition of smallholder plantations and producing a dynamic model for the palm oil industry based on smallholder plantations in North Mamuju District.

This research was conducted in North Mamuju District, this district was chosen because it has the largest oil palm smallholder plantation area in Sulawesi Island. There are three patterns of smallholder oil palm plantations in this district, namely; plasma patterns, IGA (Income Generating Activity) patterns, and independent patterns. Subdistricts and villages were then selected which contained three patterns of smallholder plantations. The sample selection of farmers uses snowball sampling, in each pattern of cultivation. The sample of farmers includes; 35 plasma farmers, 70 IGA farmers, and 55 independent farmers so that 160 farmers were sampled. Technical efficiency and inefficiency in this study were analyzed using a stochastic frontier production function approach with Frontier 4.1 software. The dynamic model for the palm oil industry based on smallholder plantations was analyzed using a dynamic system model approach, with powers studio 10 software.

The results showed that i) the IGA pattern had the highest productivity and the independent pattern had the lowest productivity, ii) input of land area, use of NPK fertilizer, age of oil palm plantations, use of labor outside the family, frequency of garden sanitation and distance to the river affecting the garden palm oil production, iii) input land area is the most elastic factor of production, iv) the level of production efficiency, both technical, allocative and economic efficiency, has been quite high and there is no problem of inefficiency. vi) efficiency variables and patterns of IGA exploitation affect the income of smallholders in oil palm plantations, vii) the oil palm FFB balance currently tends to be oversupplied so that steps and policies are needed that can guarantee the sustainability of the palm oil industry in general and smallholder plantations in particular.

**Keyword:** efficiency, dynamic system model, income, production