



INTISARI

Dengan mengombinasikan Tabel *Input Output* (I-O) dan data pengeluaran rumah tangga hasil Susenas 2010, penelitian ini bertujuan untuk menganalisis pola konsumsi energi dan emisi CO₂ sektor rumah tangga baik langsung (*direct*) maupun tidak langsung (*indirect*) di Indonesia. Tujuan lainnya adalah menganalisis faktor-faktor determinan yang berpengaruh signifikan terhadap konsumsi energi dan emisi CO₂ tersebut berdasarkan analisis regresi berganda metode *Ordinary Least Squares* (OLS).

Analisis I-O dilakukan untuk mengetahui intensitas energi dan CO₂ dalam menghasilkan suatu produk. Intensitas energi adalah besarnya energi yang dikonsumsi per unit *output*. Intensitas CO₂ adalah besarnya emisi gas rumah kaca per unit *output*. Nilai intensitas ini kemudian dikalikan dengan nilai konsumsi/pengeluaran rumah tangga untuk memperoleh besarnya konsumsi energi dan emisi CO₂ tidak langsung.

Hasil penelitian menunjukkan bahwa konsumsi energi final komersial langsung lebih dari dua kali konsumsi tidak langsung. Konsumsi energi final komersial dan emisi CO₂ di perkotaan baik langsung maupun tidak langsung hampir dua kali dari perdesaan. Konsumsi energi final komersial dan emisi CO₂ rata-rata per kapita sebulan baik langsung maupun tidak langsung, baik di perkotaan maupun perdesaan berbanding lurus dengan pengeluaran rata-rata per kapita sebulan.

Hampir seluruh konsumsi energi final non komersial (kayu bakar) ada di perdesaan (80,75 persen). Konsumsi kayu bakar rata-rata per kapita sebulan di perkotaan berbanding terbalik dengan pengeluaran rata-rata per kapita sebulan. Konsumsi tertinggi di perdesaan terjadi pada kelas menengah.

Konsumsi energi final komersial dan emisi CO₂ dipengaruhi oleh pengeluaran rata-rata per kapita sebulan, jumlah anggota rumah tangga (ART), jenis kelamin, umur, dan pendidikan kepala rumah tangga (KRT), persentase ART umur 65 tahun ke atas baik laki-laki maupun perempuan, persentase ART dengan kegiatan terbanyak bekerja maupun mengurus rumah tangga, serta ukuran dan klasifikasi daerah tempat tinggal. Adapun konsumsi energi final non komersial dipengaruhi oleh pengeluaran rata-rata per kapita sebulan, jumlah ART, jenis kelamin, umur, dan pendidikan KRT, persentase ART laki-laki umur 15-64 tahun, persentase ART perempuan umur 65 tahun ke atas, persentase ART dengan kegiatan terbanyak bekerja maupun mengurus rumah tangga, serta klasifikasi daerah tempat tinggal.

Kata kunci: konsumsi energi, Tabel *Input Output*, intensitas energi, emisi CO₂.



ABSTRACT

By combining Input Output Table (I-O) and household expenditure data from National Social Economy Survey (Susenas) 2010, first aims of this study to analyze the pattern of household energy consumption and CO₂ emissions-either directly or indirectly-in Indonesia. The second is to analyze the determinant factors which have significant effect on energy consumption and CO₂ emissions based on multiple regression model by ordinary least squares (OLS) method.

I-O analysis is done to comprehend the intensity of energy and CO₂ in producing a product. Energy intensity is the amount of energy consumed per unit of output while CO₂ intensity values is the amount of greenhouse gas emissions per unit of output. These intensity value is then multiplied by the value of household consumption/expenditure to obtain the amount of indirect energy consumption and CO₂ emissions.

This study show that direct consumption of commercial final energy is over than twice of the indirect. Final commercial energy consumption and CO₂ emissions in urban areas, both directly and indirectly, are almost twice of the rural areas. The final commercial energy consumption and CO₂ emissions per capita of each month both directly and indirectly, either in urban or rural areas are exactly proportional to monthly per capita expenditure.

Almost all non-commercial final energy consumption (firewood) is in rural areas (80.75 percent). The average per capita consumption of firewood per month in urban is proportionally in reverse to the average of monthly per capita expenditure. The highest consumption in rural areas occurs in the middle class.

The final commercial energy consumption and CO₂ emissions are affected by the average monthly per capita expenditure, the number of household members, sex, age, and head of household education, the percentage of household members aged 65 and above for both male or female, the percentage of household members with the most activities of working and taking care of the household, and the size and classification of the area of residence. The non-commercial final energy consumption is affected by the average monthly per capita expenditure, the number of household members, the sex, age, and education of the head of the household, the percentage of male household members aged 15-64 years, the percentage of female household members aged 65 years and above, the percentage of household members with the most activities working and taking care of the household, and the classification of residential areas.

Keywords: energy consumption, Input Output Table, energy intensity, CO₂ emissions.