FEM 11087 - Applied Microeconometrics

Assignment 1: Empirical Analysis

Regression Analysis with Cross-Sectional Data, Endogeneity and Instrumental Variable Estimation

Group 23

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Question 1 [0.6 points]

First generate the variable BMI, where BMI equals weight in kg divided by height in meters squared (BMI = weight/(height^2)). Construct a categorical variable for BMI that considers the commonly used categories: i) underweight, BMI below 18.5; ii) normal weight, BMI larger or equal to 18.5 and lower than 25; iii) overweight, BMI larger or equal to 25 and lower than 30; iv) obese, BMI of 30 or higher. Compute and report the prevalence of overweight and obesity by ethnic group (black vs non-black). What differences do you observe?

```
gen height_m = height / 100
gen bmi = weight / (height_m^2)
```

```
gen bmi_cat = .
replace bmi_cat = 1 if bmi < 18.5 & !missing(bmi)
replace bmi_cat = 2 if bmi >= 18.5 & bmi < 25 & !missing(bmi)
replace bmi_cat = 3 if bmi >= 25 & bmi < 30 & !missing(bmi)
replace bmi_cat = 4 if bmi >= 30 & !missing(bmi)
```

a) Compute and report the prevalence of overweight and obesity by ethnic group (black vs non-black). What differences do you observe?

```
gen overweight = (bmi_cat >= 3) if !missing(bmi_cat)
gen obese = (bmi_cat == 4) if !missing(bmi_cat)
```

```
tab black overweight, row missing
tab black obese, row missing
```

```
hist income, by(black) ///
    title("Income Distribution by Ethnic Group") ///
    xtitle("Household Income (Euros)") ///
    percent
```

```
graph box income, over(black) ///
        title("Income Distribution by Ethnic Group") ///
        ytitle("Household Income (Euros)")
```

```
gen bmi_miss = missing(bmi)
tab black bmi_miss, row missing
```

```
sum income
```