

# Homework 2 - Mahdi Soleimani

## Child Mortality in Ivory Coast

### Question 1

We only picked one woman in each household and surveyed her. However, it is possible for a household to have more than one woman between 15 and 49, and enumerators were well aware of this. Therefore, they assigned a weight to each woman. As a result, in order to estimate statistics on the population of all women in Ivory Coast, we need to multiply the wighits by the number of women in each household.

### Question 2

(a) The Second method seems more preferable. In the first method, we calculate the ratio of the number of dead children between 0 to 4 years old to the population of children in the same age group. The problem is some of the younger children from 0 to 4 years old may not survive to be 5 years old. Therefore, the first method under-reports the mortality rate.

(b)

Table 1: Mortality Rate by Sex

	Boys	Girls
Method 1	10.35%	8%
Method 2	12.03%	11.7%

As expected, for both girls and boys, the mortality rate increases when we use the second method, which is arguably more accurate.

## Health status, nutritional status and wealth in Ivory Coast

### Question 1

By taking a look at Graph 1, we can see that in 2008, some of the weights were recorded in hektograms, since using hektograms increases the weights tenfold.

However, since most of the observations are concentrated bellow 50 Kg, we can safely ignor the weights above that threshold. Moreover,

### Question 2

As shown in Graph 2, we see that we have a number of unreasonable measurements. We keep the weights that are between 25cm and 150cm.

### Question 3

(a)

Table 2: Stunting Rate by Region

	Country	North	South
1988	-0.82	-1.03	-0.75
1993	-1.78	-1.77	-1.78
2008	-2.22	-2.48	-2.14

(b)

Table 3: Stunting Rate by Sex

	Country	Boys	Girls
1988	-0.82	-0.83	-0.82
1993	-1.78	-1.85	-1.7
2008	-2.22	-2.42	-2.01

We can see an increase in stunting rate for every period. Both in 1988 and in 2008, stunting rate is higher in north. Also, The stunting rate for boys is always higher.

#### Question 4

(a)

We estimate the following linear model for each year:

$$\text{Stuntedness Dummy} = \alpha + \beta (\text{Consumption per Capita in Household}) + \epsilon \quad (1)$$

Table 4: Result of the Linear Model (1)

	<i>Dependent variable: Stuntedness Dummy</i>		
	1988	1993	2008
Consumption per Capita			
1988	-0.0001*** (0.00002)		
1993		-0.0003*** (0.00004)	
2008			-0.0001*** (0.00004)
Constant	0.291*** (0.013)	0.505*** (0.013)	0.502*** (0.013)
Observations	2,828	3,818	2,977
R <sup>2</sup>	0.008	0.012	0.004
Adjusted R <sup>2</sup>	0.007	0.012	0.004
Residual Std. Error	0.406 (df = 2826)	0.499 (df = 3816)	0.507 (df = 2975)
F Statistic	22.287*** (df = 1; 2826)	47.977*** (df = 1; 3816)	11.492*** (df = 1; 2975)

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

(b)

In each year, there is a negative relationship with stuntedness and consumption per capita in household. This result is logical as the more a household consumes, the higher the chance of the children in the household to grow as tall as possible, thereby reducing the stuntedness of the children. All coefficients are meaningful at the 1% p-value. In order to obtain a better result, we should add infectiousness of the environment to the model. Also, the quantity and quality of food intakes are important and consumption per capita does not reflect the entire picture.

Table 5: Inflows of Asylum Seekers

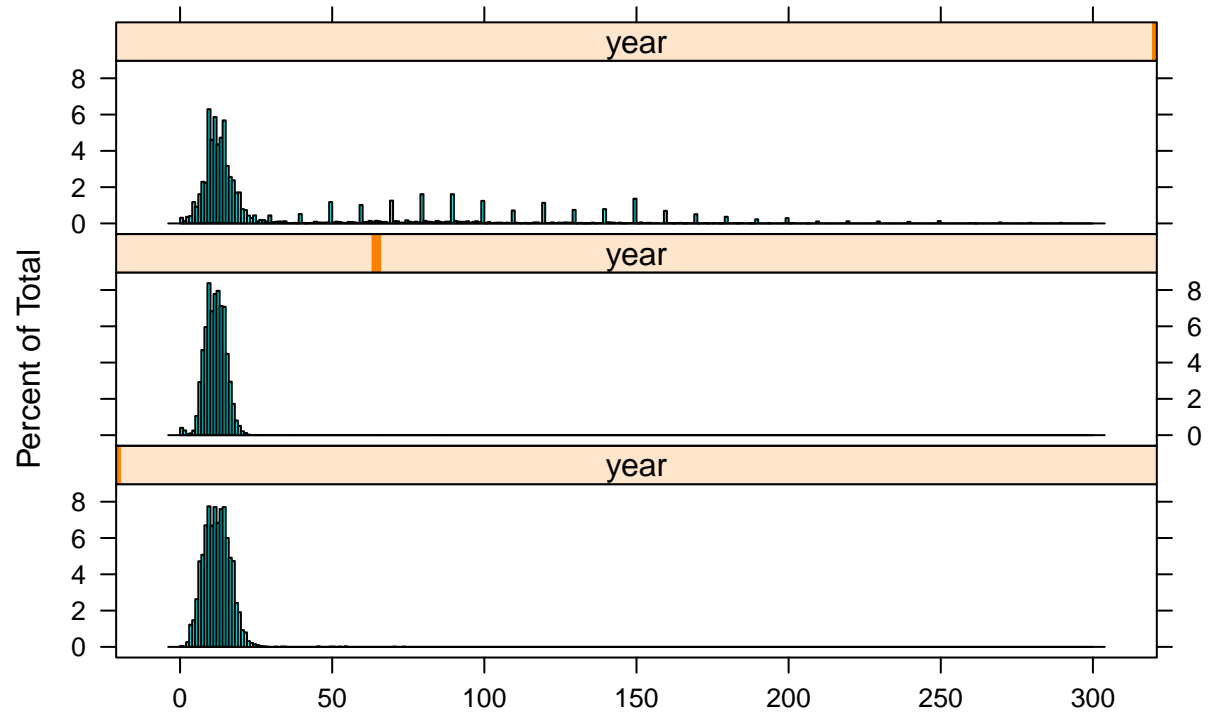
Country	2014	2015	Growth (%)
Austria	28060	85620	205.1
Belgium	13876	38700	178.9
Czech Republic	914	1250	36.8
Denmark	14774	21230	43.7
Finland	3517	32270	817.5
France	59041	74300	25.8
Germany	173072	441900	155.3
Greece	9432	11370	20.5
Hungary	41111	174430	324.3
Ireland	1448	3280	126.5
Italy	63657	83240	30.8
Luxembourg	973	2300	136.4
Netherlands	23850	43100	80.7
Poland	6810	10250	50.5
Portugal	442	900	103.6
Slovak Republic	228	270	18.4
Spain	5947	13370	124.8
Sweden	75096	156460	108.3
United Kingdom	32344	39970	23.6
Estonia	143	230	60.8
Lithuania	406	290	-28.6
Slovenia	361	260	-28.0
Latvia	364	330	-9.3

*Note:*

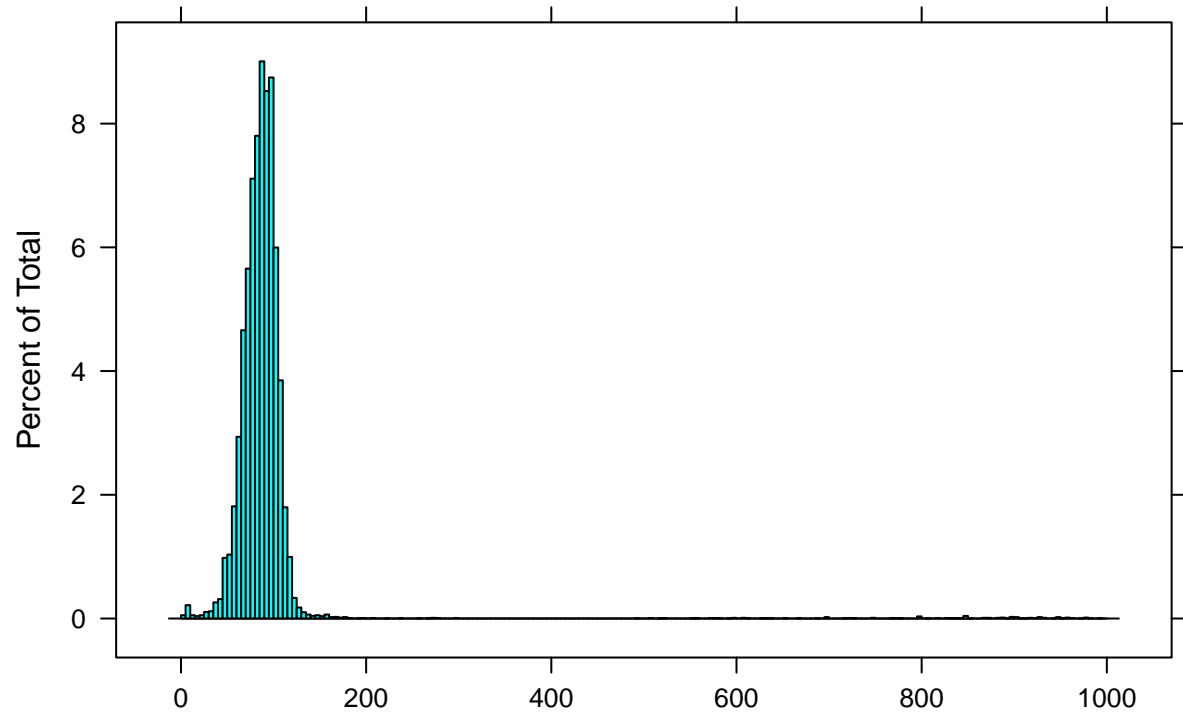
This table shows the inflows of of asylum seekers  
 OECD members of the European Union, taken from  
<https://stats.oecd.org/Index.aspx?DataSetCode=MIG>.  
 All data are based on annual submissions.

## TABLE

The wars in the Middle East and Africa created a large number of displaced people. Many of the fled to Europe to seek asylum. As a result, we see a dramatic increase in the inflows of asylum seekers from 2014 to 2015- the peak of the refugee crisis.



Graph 1: Distribution of weight (Kg) in 2008,1993 and 1988 (downwards)



Graph 2: Distribution of height (cm)