



The Cost of the Double Burden of Malnutrition

*WFP Executive Board
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The cost of the double burden of malnutrition: Social and economic impact. Pilot study in Chile, Ecuador and México



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BACKGROUND

Main purpose: To place in the public agenda the importance of addressing malnutrition in all its forms, showing its negative impacts, both social and economic.

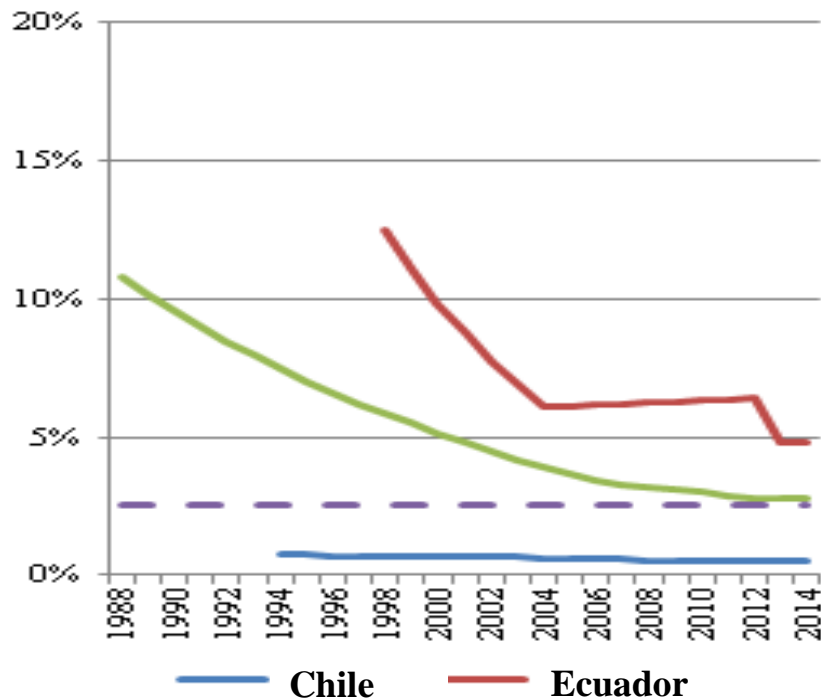
- ❖ A model was designed and applied to estimate the **effects of the double burden of malnutrition** (undernutrition and overweight-obesity) on health, education and productivity throughout the life cycle.
- ❖ General coordination by ECLAC, WFP and the National Institute of Public Health of Mexico.
- ❖ Advise and collaboration of an international Technical Advisory Group.
- ❖ Implementation with intersectoral National Teams.
- ❖ It is part of an ECLAC - WFP partnership initiated in 2003.



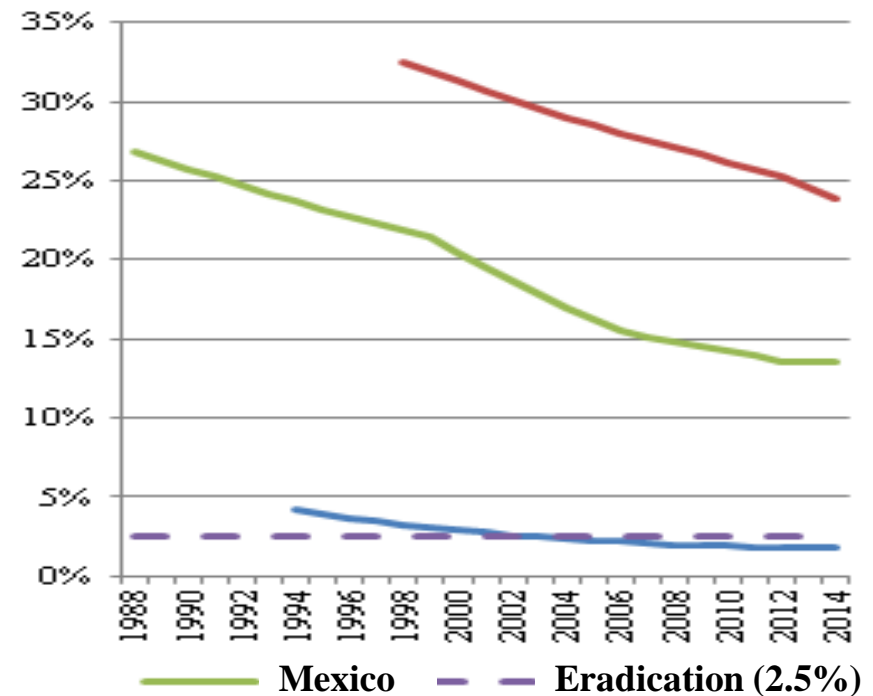
Nutrition status in pilot countries

- ❖ Underweight in **Mexico** is very close to eradication, with a prevalence of 2.8% while stunting reached 13.6% (2014).
- ❖ In **Ecuador**, underweight declined to 4.8% while stunting stood at 23.9% (2014).

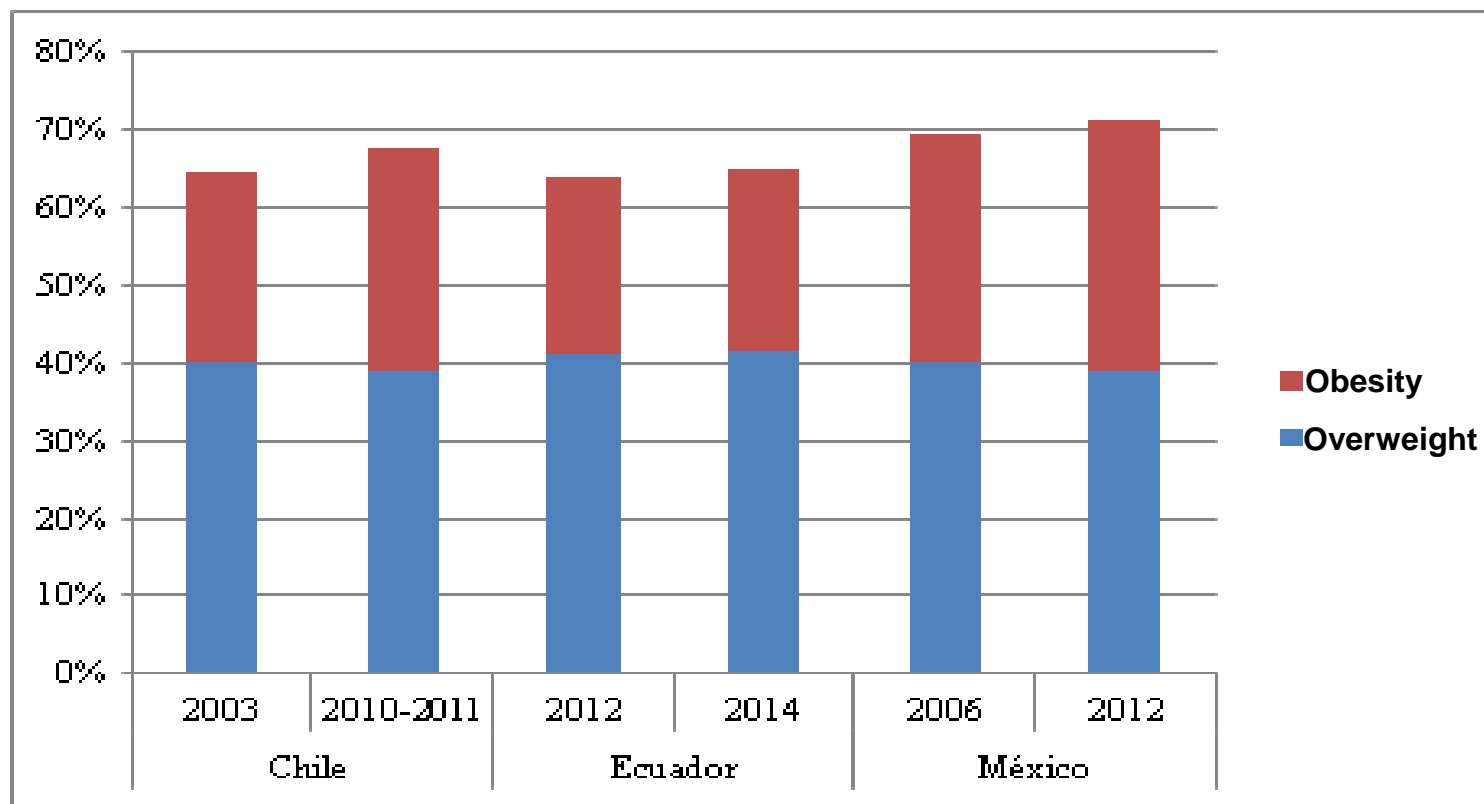
Underweight



Stunting



Malnutrition due to excess has been increasing steadily in the region, reaching alarming figures. For the population aged 20 and over, the prevalence of overweight and obesity is around 70% in Chile and Mexico and slightly more than 65% in Ecuador.



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Main impacts of the double burden



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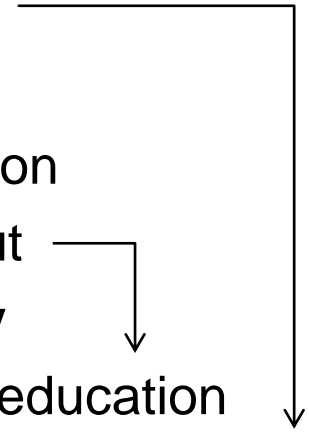


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The impacts of malnutrition

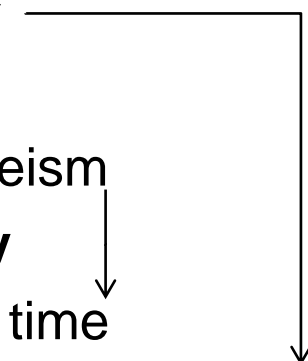
Undernutrition

(stunting and underweight in children under 5 years of age)

- ✓ **Health:**
 - Morbidity - CD
 - Mortality
 - ✓ **Education**
 - Repetition
 - Drop out
 - ✓ **Productivity**
 - Level of education
 - Working age population
- 

Overweight

(overweight and obesity in adults over 19 years of age)

- ✓ **Health:**
 - Morbidity - NCD
 - Mortality
 - ✓ **Labor:**
 - Absenteeism
 - ✓ **Productivity**
 - Working time
 - Working age population
- 



The impact of stunting on mortality

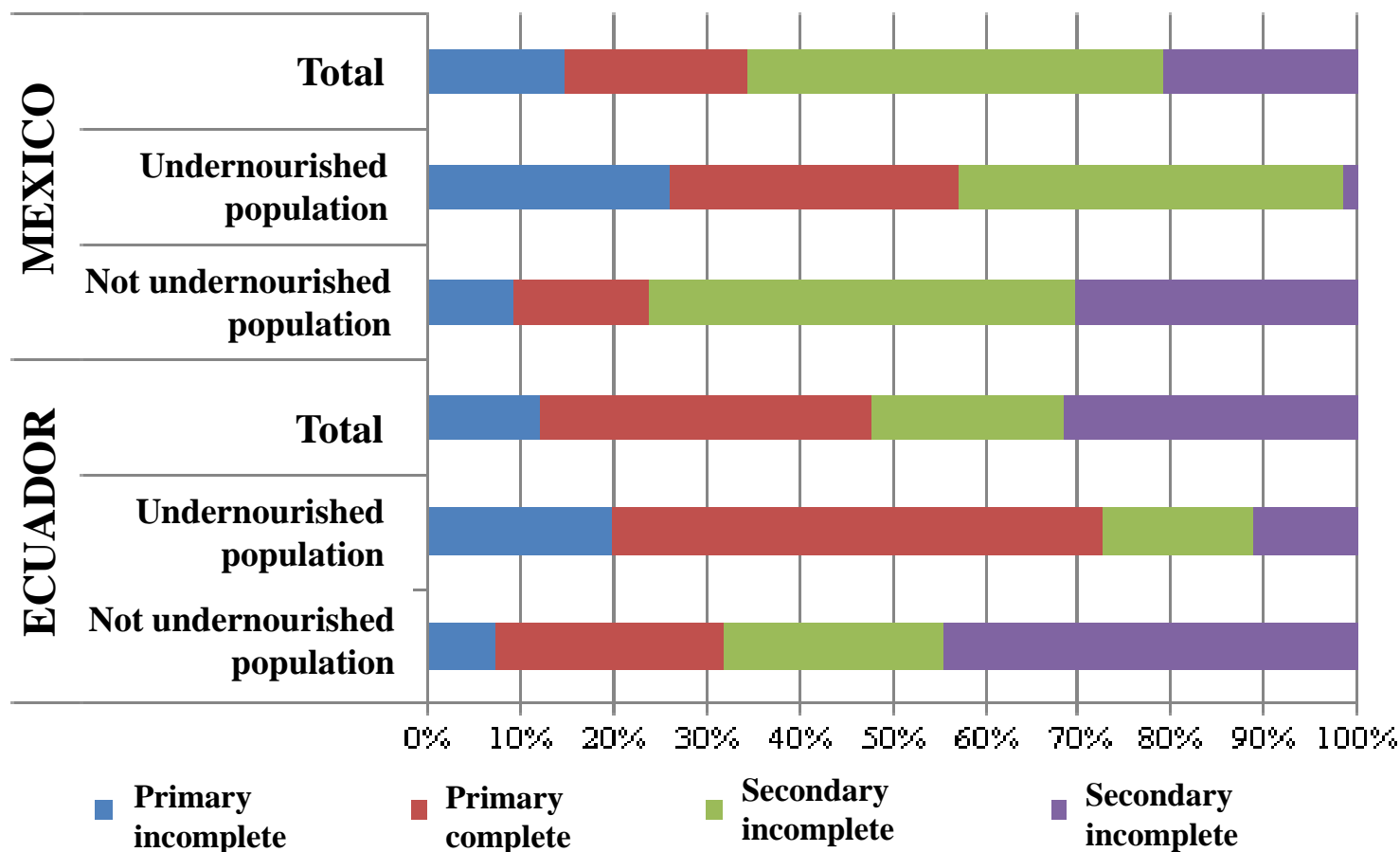
The incremental relative risk of mortality due to stunting generates the main impact of undernutrition on health.

- In **Ecuador**, 338.986 people was not alive in 2014 due to the stunting rates of the last seven decades. In addition, four thousand would be dying between 2014 and 2018 due to the same reason.
- In **Mexico**, the figures rise to 2.13 million and to 12.8 thousand children, respectively.



Impact of stunting on educational attainment

An educational difference of about 2.3 years in Ecuador and 2.4 years in Mexico is associated with stunting.



Economic impact associated with undernutrition

Total costs in 2014:

- ❖ USD 21.5 billion in Mexico (equivalent to 1.7% of GDP)
- ❖ USD 2.6 billion in Ecuador (2.6% of GDP).

About 95% corresponds to the loss of productivity, due to the lower educational attainment and premature mortality.

The future costs due to productivity losses are:

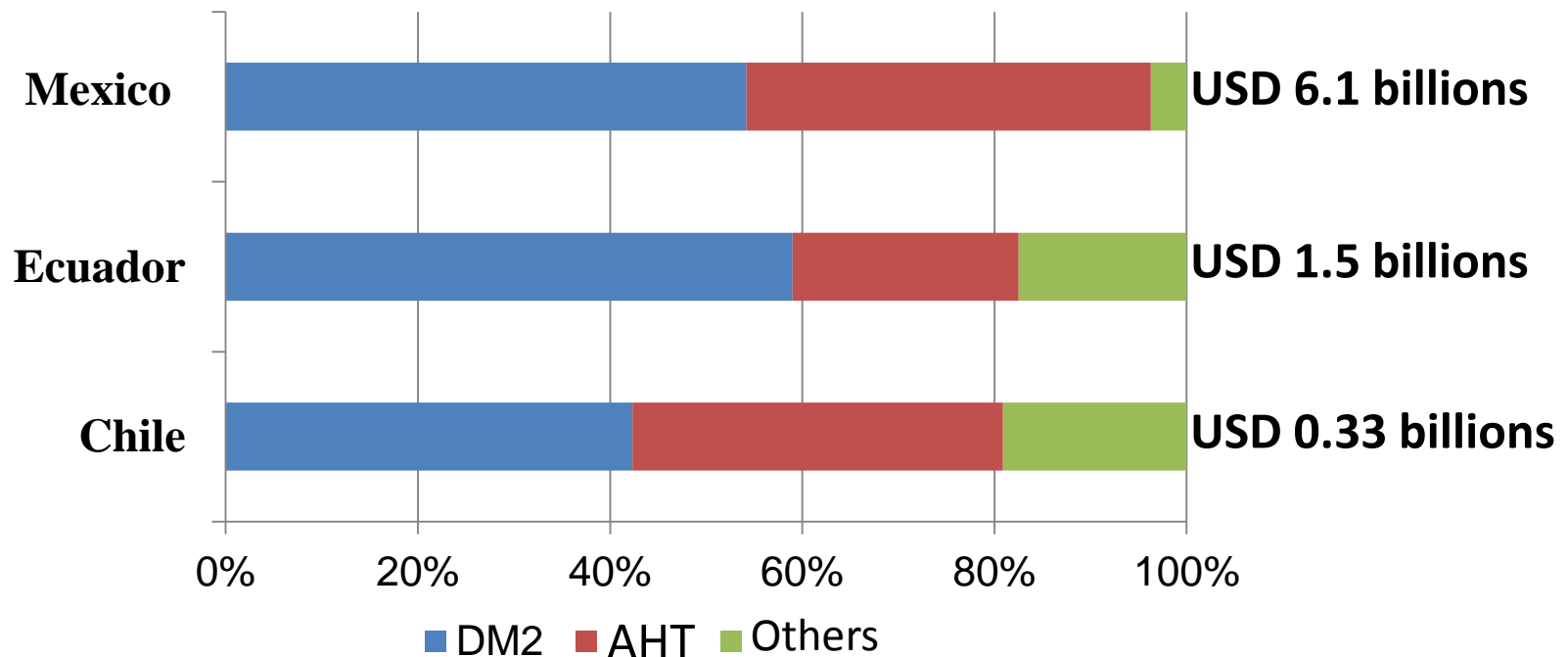
	NET PRESENT VALUE (USD billions)	ANNUAL COST (USD millions)
MEXICO	11.4	403.9
ECUADOR	1.8	60.4



Morbidity burden and health costs associated with overweight and obesity (2014)

The extra burden of disease:

- reaches 20.8 million cases in Mexico, 0.9 million in Ecuador and 2.9 million in Chile.
- 95% are hypertension (AHT) and diabetes mellitus type 2 (DM2).

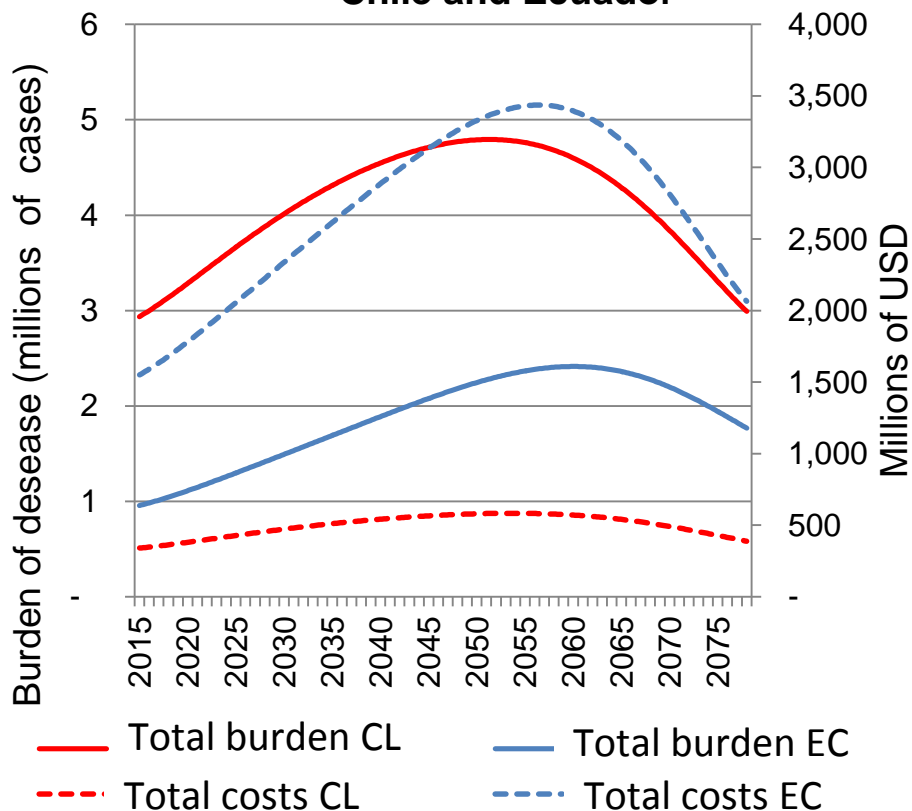


Morbidity burden and future costs for the health system

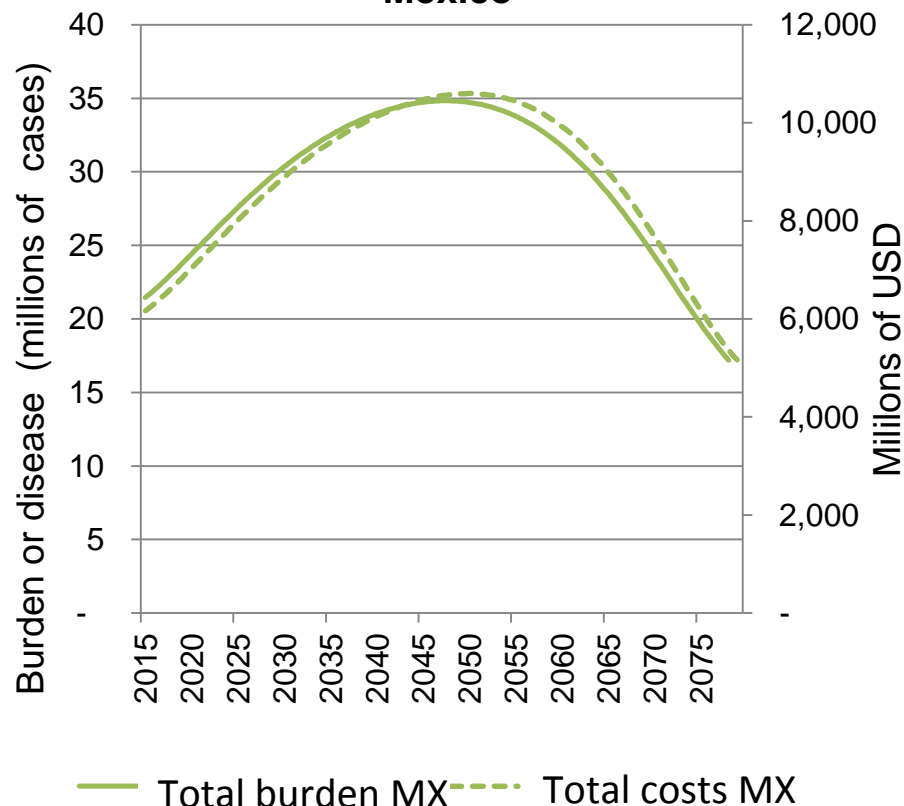
The future costs progress follows the burden of morbidity evolution.

The annual equivalent cost to the health care system (2015–2078 period), is USD 475 millions in **Chile**, USD 2.5 billions in **Ecuador**, and USD 8.7 billions in **Mexico**.

Chile and Ecuador



Mexico



Economic impact associated with overweight and obesity

- The **estimated total cost for 2014** is USD 493 million in Chile (equivalent to 0.2% of GDP), USD 28.8 billion in Mexico (2.3% of GDP) and USD 1.7 billion in Ecuador (3.3% of GDP).

	Chile	Ecuador	Mexico
Health costs	385	1 666	7 338
Education costs	-	27	151
Productivity costs	108	2 651	21 341
Total	493	4 344	28 830
% of GDP	0,2%	4,3%	2,3%

- The cost for the **public health system accounts** for most of the total cost, around 67% in Chile, and nearly 85% in Ecuador and Mexico. That constitutes an important difference compared to undernutrition, where most of the costs are due to productivity losses.
- During the **2015 – 2078 period**, the total cost associated with overweight and obesity, expressed as annual equivalent cost, slightly exceeds USD 1.0 billion in Chile, USD 3.1 billion in Ecuador, and USD 13.1 billion in Mexico.



Final remarks

Malnutrition is changing, from hunger to the double burden; expanding the dimensions of the food insecurity and the inequality.

It is not just an individual nor a moral or a social issue. The data presented are clear indicators of the economic consequences of the social footprint of malnutrition.

The results also allows to discuss on the relevance of social problems and how much it is possible to contribute to the economies of countries when they are effectively and efficiently resolved.

Social investments - in addition to realize the economic, social and cultural rights - contribute to human capacities throughout the life cycle and generate significant gains in terms of productivity.

The 2030 Agenda for Sustainable Development gives the chance to turn these malnutrition costs into a development opportunity, to close this social gap with “no one left behind” ... no one left malnourished.





Thanks



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