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## Introduction

In many OECD countries, the growth in obesity rates among children and adults is rapidly becoming a major public health concern. In the US, where more than 3 out of 10 adults are now obese, a recent study estimated that the cost related to obesity now exceeds the cost related to smoking for a set of chronic health problems (including asthma, diabetes and others) (Sturm, Health Affairs, 2002).

In my intervention, I will present the most recent estimates of obesity rates in OECD countries, stressing the fact that, in most countries, the reported figures generally under-estimate the real prevalence of the problem. I will then summarise briefly some of the economic consequences of the growing obesity "epidemic", with a focus on its consequences on health systems now and in the future. I will then touch on some of the potential reasons which have been put forward to explain the rise in obesity over the past two decades. Finally, I will mention a range of possible levers that governments might wish to consider if they want to curb the growth of obesity.

### 1. The relentless rise in obesity in nearly all OECD countries

The 2004 edition of *OECD Health Data* (to be released in early June) highlights the trend rise in adult obesity rates over the past two decades. Although obesity rates have risen in nearly all OECD countries, they seem to be particularly high in certain English-speaking countries:

- the US is “leading the way”, with obesity rates among adults now exceeding 30 percent, twice the level of the late 1970s;
- in Australia, obesity rates have more than doubled over the past 20 years, to reach 22% of the adult population now.
- and in the United Kingdom, obesity rates among adults have tripled, up from 7% in 1980 to 22% in 2002.

In continental European countries, obesity rates appear to be significantly lower. But it is very important to keep in mind that OECD estimates of obesity rates in continental Europe are based on self-reported data which is not the case for the US, Australia and the UK, where estimates are based on the actual measurement of people’s height and weight. Many studies in different countries have shown that self-reported data on height and weight are not as reliable as actual measures (because some people tend to over-estimate their height, while others tend to under-estimate their weight). To give one example, the obesity rate among adults in Germany was only 11.5% in 1999 according to self-reported data but, based on the actual measurement of height and weight, it stood at 20% at the end of the 1990s. In sum, the estimates of obesity rates in many OECD countries under-estimate considerably the true prevalence of obesity because of reporting biases.

## 2. Economic costs of obesity

Obesity is a known risk factor for many chronic diseases (such as diabetes, hypertension, cardiovascular diseases, respiratory problems/asthma and musculoskeletal diseases). As such, it implies significant economic costs as well as personal suffering.

For example, in the US, healthcare costs which can be attributed to obesity were recently estimated to be in the order of US\$75 billion per year (Obesity Research, Jan. 2004). This represents about 5% of total health spending in the US (equivalent to about 0.7% of GDP). In other countries (e.g., Canada, Australia and New Zealand), the cost of obesity is estimated to account for 2 to 3% of total health spending, and these costs are rising. One worrying feature is

that there is a time lag of several years between the onset of obesity and related health problems, suggesting that the steep rise in obesity over the past two decades will mean higher healthcare costs in the future.

### 3. Causes of the rapid rise in obesity

Two obvious questions arise at this point: why has obesity grown rapidly in most OECD countries over the past two decades? What might explain the cross-country differences in obesity rates?

A recent paper by David Cutler, Edward Glaeser and Jesse Shapiro "Why have Americans become more obese?" (Harvard Institute of Economic Research, Discussion paper no. 1994, Jan. 2003) addresses both questions<sup>1</sup>. This study argues that the main driver of weight gains among U.S. adults has not been a cut in calories expended (e.g. via less physical activity), but rather an increase in calories consumed. Interestingly, it finds that 90% of the increase in calorie intake over the past 20 years in the US is not due to higher consumption during the main meals, but instead arises from more "snacks" per day. The theory which is put forward to explain this increase in calorie intake is based on changes over time in methods of food preparation – the advent of mass production for food in the post-war period. The underlying hypothesis is that it takes less time now for people to prepare and consume their food, and so they tend to consume more (see Box 1).

The cost of food consumption includes time and money costs. Conventional microeconomic theory predicts that lowering the relative cost of food should increase its consumption, all other things being equal. The recent paper by Cutler et al. did find some international evidence in support of this prediction in relation to obesity. They related obesity rates across countries to the price of a Big Mac (taken from the Economist), controlling for a

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<sup>1</sup> Another version of this paper with the same title is published in the Journal of Economic Perspectives, Vol. 17, summer 2003, pp. 93-118.

number of other factors. Big Mac prices were taken as an approximate measure of relative food costs in a common currency in different countries. They found that countries in which Big Macs cost more have lower obesity rates than countries in which they cost less<sup>2</sup>. But these correlations obviously need to be taken with great caution, given problems of data availability and comparability, particularly concerning the reporting biases in obesity rates mentioned at the beginning of my talk.

Box 1. The French Fry Phenomenon

Cutler et al. illustrate their theory by the evolution of potato consumption in the US in the post-war period. While Americans have always been heavy consumers of potatoes, the mass production of French fries has made it today the dominant form of potato consumed by Americans and America's favourite vegetable. They report that, from 1977 to 1995, total potato consumption in the US increased by about 30 percent, accounted for almost exclusively by increased consumption of potato chips and French fries.

4. Policy levers to address the rise in obesity

So what might governments do if they want to curb the growth of obesity and the related health and economic costs?

Let me point out first that the OECD has not carried out yet any rigorous study on the cost-effectiveness of different measures to prevent obesity or treat its health consequences, and so the OECD does not have a ready-made "global strategy" to tackle the epidemic of obesity. However, in the related area of alcohol consumption, we have carried out a recent review of the experience in several OECD countries which shows that a combination of instruments can help

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<sup>2</sup> Part of the relative food cost differences across countries arise from border protection which drives a wedge between domestic food prices and world prices.

achieve the goal of reducing alcohol consumption<sup>3</sup>. These instruments include public education campaigns, curbs on advertising, restrictions on sales to young people, and increased taxation. Similar instruments are often suggested as prime candidates to curb obesity, but there is little evidence as to their likely effectiveness in this task.

To conclude, it is not scaremongering to talk about an impending “epidemic” in obesity given the relentless rise in obesity rates over the past two decades. This trend rise is costly both in terms of personal suffering and the associated economic costs. In order to minimise these costs, it is urgent to devote more research to finding cost – effective responses to obesity.

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<sup>3</sup> See Bennett, J. (2003), “Investment in Population Health in Five OECD Countries“, OECD Health Working Papers, No.2, Paris.