Increasing the size of fashion models?

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The facts

• Since 2006 the governments of Italy, Germany, and Spain have signed agreements with the fashion industry to increase the size of fashion models and of mannequins in the shops.
• These measures intend to reduce eating misbehavior by increasing the ideal body weight perceived by the youth, in particular young females.
• The global fashion industry sells $750 billion/year, thus these measures can be paramount at world level.

What do we do? We...

• provide a theoretical economic model of eating behavior
• illustrate the role of social pressure in determining outcomes associated to underweightness and undereating
• consider the effect of increasing the ideal weight of a group of agents
• provide policy implications studying the impact of these policies on the aggregate welfare and health of a target group (e.g. female teenagers)

1. An economic model of individual eating behavior

The dynamic choice

• The individual chooses the level of food consumption at each time t, taking into account the cost of having a non-healthy weight, and of not conforming to the ideal body weight of his reference group.
• The figure below shows the maximization problem we solve with the optimal control technique, and how the ingredients of the problem are captured by the utility function of the individual.

Result 1: Behavior

The solution of the maximization problem is a stable steady state, which depending on the parameters of the individual can belong to one of the four cases:
• Overweight and undereating
• Overweight and overeating
• Underweight and undereating
• Underweight and overeating

2. Policy implications for welfare and health

We aggregate the utility of a target group made up of all the individuals sharing the same social reference on weight, but heterogenous in healthy weight and satiation levels.

• We study from the policy maker stance what would be the optimal social reference on weight:

\[
\max_{w^0} \int U(c(t), \omega^0) \, dt
\]

subject to \(w(0) = \omega^0\) and \(w(t) = c(t) - dw(t)\)

• We also study when the optimal social welfare minimizes as well the health costs of the target group:

\[
\min_{w^0} \int (w^0 - w^*)^2 \cdot \omega^0 dw^0 \, dt
\]

Result 2: Policy

1) If in steady state the representative agent is underweight and undereating, the group on average improves both its overall utility and its health condition. This result supports increasing the models’ size.
2) If in steady state the representative agent is overweight and undereating, increasing the social reference improves overall utility, but not health. If the target of the policies is people health, increasing the models’ size is not the right tool.

3. Future research: empirical evaluations

Creating a data set with data on weight, eating behavior and social references to fine tune and evaluate these kind of policies.