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Beyond the Headlines: What the Lancet Study on Chile's Warning Labels Actually Demonstrates

A critical assessment of effectiveness, proportionality, and policy implications.

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Executive Summary

This note reviews the Lancet study "*The impact of Chile's multipronged food labelling and advertising law on early childhood excess weight*" by Guillermo Paraje et al. and assesses its implications for nutrition policy.

The work is important because it is among the first to attempt to examine a health outcome rather than changes in purchases, reformulation, or marketing exposure. However, its findings should be interpreted with caution and appear far more limited than the way the paper has been presented and amplified through media and social channels.

It evaluates a multi-component regulatory package rather than warning labels in isolation. It reports modest effects in a specific population of young children, partly linked to a very estimated reduction in daily calorie intake. It does not assess long-term health outcomes and leaves major questions unanswered regarding proportionality, external validity, equity, cost-benefit analysis, unintended consequences, and alternative prevention strategies.

Key Takeaways

- The study evaluates a multi-component regulatory package, not warning labels in isolation.
- The public narrative around the study is stronger than the evidence itself: a limited, context-specific result is being communicated as proof that the Chilean warning label model works.
- The observed effect is statistically significant but quantitatively modest, affecting a specific population of children aged 4–6 years.
- The analysis refers to an estimated reduction of only about 16.4 kcal per capita per day during the first phase of the law, raising questions about proportionality and practical relevance.
- The findings do not demonstrate long-term effects on obesity, diabetes, cardiovascular disease or population health.
- No significant effects are observed in rural areas, raising questions about equity, transferability and effectiveness among vulnerable populations.
- The research does not evaluate costs, unintended consequences, health literacy, behavioral autonomy or alternative prevention approaches such as education, physical activity, and personalized prevention.

- The evidence presented may support a narrow academic claim, but it does not provide a sufficient policy case for warning labels. Any assessment of the Chilean model must include socioeconomic costs, benefits, proportionality, unintended consequences, and comparison with smarter, less restrictive prevention strategies.

Why This Analysis Matters

The study published in The Lancet, "*The impact of Chile's multipronged food labelling and advertising law on early childhood excess weight*" by Guillermo Paraje et al., argues that the first phase of Chile's Food Labelling and Advertising Law (FLAL), best known for the introduction of warning labels, plausibly contributed to a reduction in excess weight among children aged 4–6 years.

The paper enters the debate at a politically significant moment: only a few weeks after the Argentine government proposed repealing Law 27.642 on so-called warning labels. In Chile as well, the new political environment has not yet taken a concrete direction, but it signals a less favorable climate toward prescriptive tools such as taxes, warning labels, and regulatory restrictions.

The research, funded by Bloomberg Philanthropies, also received unusually broad and rapid international media coverage for this type of scientific work, appearing within days across media outlets, social media platforms, and advocacy networks in numerous countries. This makes it even more important to distinguish between the actual content of the study and the broader conclusions being drawn in public communication.

This analysis stems from a precise need: to distinguish the study's actual findings from the way they are being communicated publicly. The work is being presented by authors, media, and stakeholders as confirmation of the "success" of the Chilean model and as an argument in favor of exporting warning labels to other regulatory contexts. However, this interpretation appears stronger than the evidence produced by itself, which remains limited in scope, methodologically constrained, and quantitatively modest.

The study is relevant, but it does not allow the conclusion that the Chilean system produces proportional and lasting benefits for public health. There is no evidence that warning labels alone reduce obesity or overweight rates. The paper does not document weight loss expressed in kilograms. It does not measure long-term effects on obesity, diabetes, cardiovascular disease, or overall public health. For this reason, policymakers should avoid premature conclusions and evaluate the Chilean model to a broader assessment: real-world outcomes, cost-benefit analysis, proportionality, distributive effects, unintended consequences, and comparison with alternative prevention strategies.

Strengths of the Study

It represents an important contribution to the literature because it attempts to address one of the main weaknesses of previous evaluations: the transition from market outcomes to health outcomes. Therefore, before analysing its limitations, it is important to recognize several valuable aspects of the work.

- It is among the first studies to link the FLAL to a health outcome rather than only to changes in purchasing behavior, marketing, or product reformulation.
- It uses an exceptionally large dataset and nationally collected administrative data.
- It applies advanced statistical methodologies and conducts several sensitivity analyses to test the robustness of the findings.
- It helps shift the debate from market outcomes to health outcomes, which is a necessary direction for evaluating any public policy.

Given the importance of the topic and the influence this study could have on the international debate, it is essential to carefully assess its methodological, interpretative, and policy limitations as well.

What the Study Proves — and What It Does Not

The authors present the work as the first attempt to causally link the Chilean law not only to changes in purchasing behavior, commercial communication, or product reformulation, but also to a health outcome: excess weight in young children.

This makes the study relevant and worthy of attention. However, precisely because it will likely be used as evidence of the "success" of warning labels, it is necessary to clearly distinguish what it actually demonstrates from what it does not demonstrate.

The critical point is this: the study does not evaluate warning labels as an isolated measure, but rather a multi-component law that includes three main pillars: front-of-pack warning labels, restrictions on marketing directed at children, and limitations on the sale of regulated products in schools. The authors describe the FLAL as a food environment policy strategy aimed at modifying demand, supply, product availability, and commercial communication, rather than as a comprehensive intervention addressing lifestyle, physical activity, personalized nutrition education, or other determinants of obesity.

The authors themselves acknowledge that the components of the law were adopted simultaneously and that it is not possible to measure the individual effectiveness of each measure. This is a decisive limitation: the paper does not allow the observed effect to be attributed specifically to warning labels themselves.

Consequently, the study does not provide sufficient evidence to attribute reductions in obesity or overweight solely to warning labels. Rather, it suggests that a broad regulatory package, implemented in a specific context, may have produced a modest and short-term reduction in the probability of excess weight among children aged 4–6 attending public and subsidized schools.

A Limited Effect Within an Epidemiological Context That Remains Critical

The work should be interpreted as an important but limited study, not as definitive proof of the effectiveness of warning labels, nor as automatic justification for exporting the Chilean model to other countries.

Furthermore, it should be emphasised that the epidemiological context in Chile remains

problematic. The paper itself recalls that, according to 2023 national data, 50.9% of schoolchildren under 14 were classified as overweight, while 23.9% were obese. According to the latest data from the Global Obesity Observatory of the World Obesity Federation, by 2025 nearly one in four Chilean children aged 4–14 is obese, while more than one quarter are overweight.

Compared with 2020, a slight decline in the prevalence of overweight and obesity can be observed. However, when the timeframe is expanded back to 2013, a more complex picture emerges: the prevalence of childhood obesity remains significantly higher than in the period before implementation of the law. This does not demonstrate that the FLAL failed, but it prevents it from being presented as a definitive solution to childhood obesity in Chile.

The strategic point is therefore straightforward: this suggests a possible limited short-term effect within a specific child population, but it does not demonstrate a structural reversal in the trajectory of childhood obesity in the country.

The Policy Question: Proportionality and Alternatives

As often happens in the literature on nutrition policies, the study does not provide a genuine cost-benefit assessment or a systematic analysis of unintended consequences.

This point is decisive. If, as the authors themselves note based on previous studies, the first phase of the Chilean law was associated with an estimated reduction of approximately 16.4 kcal per capita per day, it is necessary to ask whether such an effect is proportionate to the economic, bureaucratic, social, and regulatory costs generated by the measure.

This is not an abstract issue. A limited reduction in caloric intake, especially if likely to stabilize over time, should be evaluated against potentially more effective alternatives: nutrition education, physical activity, personalized prevention, digital tools, health literacy, and targeted interventions aimed at genuinely vulnerable groups.

The usefulness of warning labels therefore cannot be automatically assumed or communicated as conclusive evidence. It must be evaluated with the same rigor required for any public health intervention: actual outcomes, proportionality, costs, distributive effects, freedom of choice, and comparison with potentially smarter, more personalized, and more effective prevention strategies.

The Study Does Not Measure the Effect of Warning Labels Alone

The title, communication strategy, and likely much of the media coverage tend to present the work as proof of the effectiveness of warning labels.

In reality, the study evaluates a complex law composed of multiple simultaneous interventions on the food environment:

- front-of-pack warning labels;
- restrictions on advertising and marketing directed at children;
- limitations on the sale of certain food products in schools;
- modifications to the food supply;

- product reformulation;
- changes in the availability and consumption of regulated food products.

The study does not evaluate other fundamental determinants of childhood obesity, such as physical activity, sedentary behavior, screen time, sleep, family context, or overall diet quality.

The authors themselves acknowledge that it is not possible to isolate the contribution of each component of the law. This is a decisive limitation.

Therefore, the paper cannot conclude that warning labels alone reduce obesity or childhood overweight. At most, it suggests that a multi-component regulatory package, implemented within a specific school and food environment, may have produced an observable but limited effect.

Statistically Significant but Quantitatively Limited Effects

The main observed effect is a reduction in the probability of excess weight of approximately 2–3 percentage points. The authors themselves acknowledge that the effect is relatively modest.

Moreover, the study does not report weight reduction expressed in kilograms, nor a change that is easily interpretable from a clinical perspective.

The reduction is presented as a variation in the probability of excess weight or as a change in BMI-for-age z-score. This makes it more difficult to assess the practical and clinical relevance of the observed effect.

It should also be remembered that BMI, even in the form of BMI-for-age z-score, is a useful indicator for population studies but does not directly measure body composition. It does not distinguish between lean mass and fat mass, does not capture fat distribution, and does not account for indicators such as waist circumference or central adiposity, which are often more informative regarding metabolic risk. This does not invalidate the use of BMI in the study, but it reinforces the need for caution before translating a statistical variation in BMI-for-age into broad conclusions about improvements in children's metabolic health.

Statistical significance should not be confused with policy significance. A result may be statistically detectable in a large dataset while remaining too small to justify broad regulatory conclusions. The relevant policy question is not whether an effect exists, but whether it is large enough to justify the costs and restrictions associated with the intervention.

No Evidence on Long-Term Obesity, Diabetes, or Chronic Diseases

The study measures an intermediate outcome.

It does not measure:

- adolescent obesity;
- adult obesity;
- diabetes;
- cardiovascular disease;
- mortality;
- quality of life.

Therefore, it cannot be used as proof that the law improved overall public health. Reductions in purchases, product availability, marketing exposure, or even limited changes in BMI are intermediate outcomes. Public policies should instead be evaluated primarily on their ability to improve final health outcomes.

Effects Concentrated Among More Advantaged Social Groups

One of the most interesting findings emerges from the subgroup analyses.

The effects are more evident:

- in urban areas;
- in subsidized schools;
- among children of mothers with higher levels of education.

Conversely:

- no statistically significant effects emerge in rural areas;
- effects are generally absent among children of mothers with lower levels of education.

This suggests that the measure may be less effective precisely among the social groups facing greater vulnerabilities and higher risks of health exclusion.

No Statistically Significant Effects in Rural Areas

This is probably one of the least discussed but most important findings.

The authors observe no statistically significant effects in rural areas for either girls or boys.

This raises a fundamental issue regarding equity and policy transferability.

If the effect depends on urban contexts, greater availability of alternative products, higher educational levels, and better access to information, the generalizability of the model may be lower than suggested.

The Study Uses a Very Limited Caloric Exposure Indicator

The study uses a very limited caloric exposure indicator. The authors refer to previous studies according to which the first phase of the Chilean law was associated with an average reduction of approximately 16.4 kcal per capita per day. This is an extremely limited reduction.

To provide context, this is equivalent to a few tens of grams of sugary beverages or a minimal snack portion per day.

This reinforces a central question:

- To what extent can such a limited variation in energy intake alone explain the observed results on excess weight?

The point becomes even more relevant when considering the comparison between the two exposure periods analysed in the study: approximately 6 months and approximately 18 months. The results show an effect already observable after 6 months, but only moderately larger after 18 months, especially among boys. This does not allow one to conclude that a true plateau effect

exists, but it does suggest caution regarding the intervention's ability to generate progressively larger effects over time.

In other words, the study does not clarify whether the observed effect is likely to increase, stabilize, or diminish in the medium to long term.

It should also be remembered that the study does not translate the observed reduction into body weight changes expressed in kilograms. Results are presented as reductions in the probability of excess weight and changes in BMI-for-age z-score, indicators that are useful statistically but less immediate for assessing clinical and practical relevance.

The issue is not to deny the result, but to assess its proportionality: a very limited caloric reduction, a short-term effect, a non-proportional increase in impact between 6 and 18 months, and the absence of quantification in kilograms all require caution before presenting the law as conclusive proof of success in preventing childhood obesity.

Important Sample Exclusions

The initial dataset included more than 525,000 children. The final analysis was conducted on approximately 321,000 subjects.

The following were excluded:

- children who repeated or skipped grades;
- observations with missing data;
- individuals without records in the Vulnerability Survey;
- records containing incomplete information.

The authors argue that sensitivity analyses confirm the robustness of the findings. However, more than 200,000 observations were excluded from the final analysis.

This does not automatically invalidate the study, but it does require caution in interpretation and raises questions about the representativeness of the final sample.

Plausible Causality, Not Proven Causality

The authors repeatedly use the expression "*plausible causal effect*." They do not claim certain causality.

They themselves acknowledge:

- limitations in testing parallel trends;
- impossibility of fully verifying the counterfactual assumption;
- absence of a true contemporary control group;
- inability to fully separate age, period, and cohort effects.

Limitations in External Validity

Another limitation concerns the transferability of the findings. The study analyses children aged 4–6 in public and subsidized schools during the initial phase of implementation of the law, between 2012 and 2017. It does not evaluate the entire child population, does not include

private schools, and does not observe adolescents or adults.

This point is particularly relevant because the study is being interpreted within the debate surrounding the "10 years" of the Chilean model. However, the analysis only concerns the initial phase of the FLAL and does not measure the cumulative, adaptive, or long-term effects of the law after the full tightening of thresholds in 2018 and 2019.

Consequently, generalising the results to other age groups, social contexts, or countries should be done with great caution.

Additional Substantive Criticisms

The study measures the effect of a regulated environment, not the growth of individual awareness. In other words, it observes whether very young children placed in a school environment with fewer available products, less marketing, and more restrictions show a lower probability of excess weight. However, it does not measure whether those children, or their families, developed greater nutritional knowledge, decision-making autonomy, health literacy, or the ability to make more balanced choices outside the regulated environment.

This limitation is relevant. A prevention policy should be evaluated not only for its ability to modify the environment, but also for its ability to empower individuals. The Chilean model appears to affect primarily the conditions of choice, rather than the understanding of choice.

A decisive question therefore remains open: what happens when children grow older, leave the regulated school environment, and enter less controlled contexts? The study cannot answer this. It does not evaluate adolescents, young adults, or long-term trajectories. Consequently, we do not know whether the observed effect is stable, transferable, and capable of generating conscious behaviors over time.

Furthermore, the study does not adequately consider possible substitution effects. Reduced exposure to or availability of regulated products does not automatically translate into an overall improvement in diet quality. It would be necessary to understand what is consumed instead, how the overall dietary balance changes, and what role is played by physical activity, sedentary behavior, sleep, mental health, screen time, and family environment.

The broader limitation is that childhood obesity is addressed almost exclusively through the food environment. But obesity is a multifactorial condition. Reducing it to packaging, marketing, and school availability risks overestimating the role of regulatory tools while underestimating behavioral, social, and individual determinants.

Furthermore, the paper evaluates a tool built on a standardized logic: the same signal, the same prohibition, the same restriction for everyone. Contemporary prevention is instead moving toward more personalized, adaptive, and individual-centered approaches: education, health literacy, physical activity, digital tools, AI, wearable devices, and personalized prevention.

For this reason, the study is interesting and relevant, but it does not close the debate. On the contrary, it reopens it: do we want policies that induce behavior within regulated environments, or policies that build more aware, capable, and free citizens who can make better choices even

outside those environments?

Finally, the paper raises four policy questions that remain unanswered:

- Is the alleged benefit observed proportionate to the economic, social, and regulatory costs of the measure?
- Does the effect depend on a genuine increase in awareness, or simply on a reduction in the options available?
- Does the measure also work among the most vulnerable groups, in rural areas, and outside the school environment?
- Are there more effective, less regressive, and more freedom-respecting tools capable of achieving better outcomes?

Implications for Policymakers

- Do not confuse intermediate outcomes with final health outcomes.
- Do not confuse statistical significance with relevance for public policy.
- Do not confuse the communicative success of a measure with its real impact on population health.

Conclusions: The Missing Proof Still Has Not Arrived

The study does not close the debate on warning labels. It reopens it. It does not demonstrate the success of the Chilean model. Rather, it shows how fragile it is to transform a limited, modest, and non-isolable result into a general justification for prescriptive policies.

The paper suggests that a multi-component law may be associated with a limited effect in a specific population. However, it does not allow that effect to be attributed to warning labels considered in isolation. This is very different from demonstrating that the policy is effective, proportionate, equitable, and transferable.

For policymakers, the real question should not be whether the Chilean model can be communicated as a success, but whether it is truly better than the available alternatives.

Prevention cannot be measured by the number of warning labels applied, products reformulated, or restrictions introduced. It must be measured by the ability to genuinely and sustainably improve people's health.

Policies aimed at reducing obesity, cardiovascular diseases, and non-communicable diseases should focus on smarter, less prescriptive, and more person-centered tools: education, health literacy, physical activity, personalized prevention, digital technologies, and freedom of informed choice.

Warning labels represent a response designed for a phase of prevention centered on the standardisation of behaviors. The available evidence suggests that the contemporary challenges of obesity and non-communicable diseases require more sophisticated, personalized, and capability-oriented tools focused on strengthening individual capacity.

About Competere

We are an independent advocacy group that develops and promotes public policies to advance innovation, free trade, and real opportunities for individuals.

In today's unstable, emotional, and polarized world, you need solutions grounded in evidence and responsibility, not ideology.

That's why we combine science, critical thinking, and a liberal vision to tackle the major challenges of our time: from public health to sustainability, from food systems to emerging technologies.

We advocate for balanced, actionable policies that foster peaceful coexistence, economic growth, and individual freedom of choice.

We collaborate with international institutions, large and small businesses, the media, and civil society to transform ideas into tangible change.

About the author

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