Does calorie labelling need the green light?
Findings from an eye-tracking experiment
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What is the motivation for this study?
- The obesity epidemic around the world has made healthy diets and healthier food choices a topic of increased interest and the target of public policies
- Policymakers use the provision of information on the nutritional value and content of pre-packaged foods to incentivise healthier eating patterns
- Traffic light colour coding (TLCC) displays red, amber or green labels to indicate whether foods contain high, medium or low amounts of key contents such as fat, saturated fat, sugar and salt as well as information on energy (kcal)
- The current policy recommendation is for calories NOT to be colour coded

What are the objectives?
- Analyse aspects which consumers focus on when looking at the TLCC label nutrition information, focusing on the impact that colour coding calories has on consumer’s choices

What are the methods used?
- Pilot study with an opportunistic sample of volunteers (n=36)
- Discrete choice experiment (DCE) methodology to assess how consumers react to TLCC information regarding fat, saturated fat, sugar, salt and calories, as well as price, when purchasing a sandwich
- A DCE is an attribute-based survey method where respondents are presented with a sequence of hypothetical choice sets composed by two or more competing alternatives that vary along several attributes and are then asked to choose their preferred scenario, for each choice set
- Respondents completed the DCE while using eye-tracking software

What is eye-tracking?
- An eye tracker is a device which tracks the location and duration of visual attention using high-resolution, high speed cameras
- Eye movements provide an objective indicator of where a person’s attention is focused
- Participants’ gaze is recorded to better understand how information on TLCC labels is processed

How does eye-tracking work?
- Figure 1: Visual record of the eye movements of a participant in the pilot study when presented with a DCE choice set
- Figure 2: Eye-tracking Heat Map of a DCE choice set with calories colour coded
- Figure 3: Eye-tracking Heat Map of a DCE choice set with calories NOT colour coded

Does colour coding calories matter?
- (1) Looking at the choice sets: the heat maps below (red means more attention) suggest participants look at their choice sets in different ways, depending on calories being colour coded or not
- Table 1: Frequency of choices for the different alternatives

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Colour coded</th>
<th>NOT colour coded</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>26%</td>
<td>33%</td>
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<tr>
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<td>29%</td>
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<tr>
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Chi-2 test 17.7, df=4, p-value=0.0018

- (2) Choosing the preferred alternative: participants not only look at the choices differently but they also then make different choices regarding the alternatives they prefer, as shown in the table below, with significantly different choices between the colour coded and not colour coded sets, for every alternative

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What are the main findings and what’s next?
- There is a significant difference in the way consumers process the nutritional information displayed in TLCC labeling, with the colour coding of calories having a significant impact on how consumers look at the nutritional information and what choices they make
- These are still preliminary results from a small pilot study, the next step will be to do a larger scale study where further research can be conducted

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