



The incidence of calorie labeling on fast food choices: A comparison between stated preferences and actual choices

Maria L. Loureiro ^{*}, Djamel Rahmani ¹

Departamento de Fundamentos da Análise Económica, Universidade Santiago de Compostela, Spain

ARTICLE INFO

Article history:

Received 31 July 2014

Received in revised form 26 February 2016

Accepted 1 March 2016

Available online 19 March 2016

Keywords:

Stated preferences

Labeling

Self-control

Field experiments

Heuristics

Cognitive dissonance

ABSTRACT

In order to test the effect of calorie information on fast food choices, we conducted a questionnaire employing two types of stated preferences methods (the best-worst-scaling and intentional questions) and a follow-up randomized field experiment in a sample of 119 participants. This combined approach allowed us to test the internal validity of preferences for fast food meals across elicitation scenarios. The results showed that calorie information reduces the probability of selecting high calorie meals only in the questionnaire, while it did not have any significant impact on actual purchasing behavior in the field experiment. Thus, the findings show that there is a clear difference between the role of calorie information on immediate stated preference choices, and the relatively low level of responsiveness in real choices in a restaurant. We believe that the current results are quite suggestive, indicating the limits of predicting actual fast food behavior, and may open the way to using data sources that combine stated methods with field experiments.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

Lifestyle and environmental changes all around the world are leading to new eating habits, characterized by people eating more convenience foods and food away from home. Many studies have shown that eating away from home, especially in fast food restaurants, is one of the most important contributors towards the obesity problem. [Powell and Nguyen \(2013\)](#) associated fast food and full-service restaurants with high daily total energy intake and poorer diet quality for children and adolescents. Exploring the effect of fast food on adolescent obesity, [Chen et al. \(2013\)](#) found that limiting the access to fast food restaurants led to a significant decrease in adolescents'

body mass index (BMI). [Powell and Bao \(2009\)](#) reported that the price of fast food affected children's BMI negatively, but not significantly. Using clinically measured levels of body composition, [Grossman et al. \(2014\)](#) found that increases in the price of fast food improved obesity outcomes among youths.

Improving consumer food choices via labeling is a strategy aimed at reducing obesity ([Arsenault, 2010](#)). The provision of accurate nutritional information is the main reason behind the U.S. Food and Drug Administration rule for mandatory nutrition labeling in chain restaurants and similar retail food establishments. This rule will enter into force in the U.S. on 1st December 2016 ([U.S. Food and Drug Administration, 2016](#)).

In this paper we examine the role of the calorie information in a case study conducted in Europe. Currently, the European fast food market is becoming one of the biggest in the world, with a total revenue of \$34.2 billion in 2009 ([Datamonitor, 2011](#)). This paper analyzes the effectiveness of calorie labeling in order to improve consumers'

^{*} Corresponding author. Tel.: +34 881811674; fax: +34 981547134.

E-mail addresses: maria.loureiro@usc.es (M.L. Loureiro), djamal.rahmani@rai.usc.es (D. Rahmani).

¹ Tel.: +34 881811286; fax: +34 981547134.

food choices in fast food chain restaurants, and attempts to evaluate the consistency of consumers' stated choices (questionnaire context) with respect to consumers' actual decisions in a fast food restaurant. We found that the role of several subjective factors affected behavior, such as the participants' nutritional awareness, as well as some psychological factors, including the degree of self-control and perceived body image.

Questionnaires and simulation studies, mainly based on hypothetical meal choices, have suggested that meal labeling reduces the calories that are purchased or consumed (Avcibasoglu et al., 2011; Wisdom et al., 2010). However, in some studies this effect was only observable for certain subgroups, such as among thin women (Temple et al., 2011), individuals with higher dietary restraints (Girz et al., 2012), individuals motivated to seek nutrition information (Howlett et al., 2009), or in situations when the actual calories exceeded the expected number of calories (Burton et al., 2009).

Nevertheless, studies conducted in restaurants regarding food purchases or meal choices have provided mixed results. Some studies found that food labeling improved consumer food choices (Bassett et al., 2008; Brisette et al., 2013; Downs et al., 2009; Krieger et al., 2013; Roberto et al., 2010; Bollinger et al., 2011; Pulos and Leng, 2010), while others showed that it had no significant effect on behavior (Elbel et al., 2009; Elbel et al., 2011; Downs et al., 2013; Dumanovsky et al., 2010; Holmes et al., 2012; Tandon et al., 2011; Harnack et al., 2008; Finkelstein et al., 2011; Vadiveloo et al., 2011; Vyth et al., 2011).

A number of studies have reported that consumers do not behave in accordance with their stated intentions (Ajzen et al., 2004; Toporoff et al., 1997), justifying this difference by the fact that participants may give in to temptations, or attempt to show themselves as being more politically accepted. Ajzen et al. (2004) justified this discrepancy between intentions and behavior as a result of the activation of more favorable beliefs and attitudes in the context of a hypothetical rather than a real scenario. They suggested that exposing participants to corrective entreaty improves behavior prediction. Testing the validity of intended food choices among Native American school children, Toporoff et al. (1997) compared the children's purchase intentions collected with a questionnaire to their actual purchases during breakfast and lunch meals served in the school cafeteria. They found that their intended food choices were not associated with their actual food choices. Broussolle (2005) indicated that individuals may make decisions without being conscious of their real motivations, or may not want to express their real intentions. Chang et al. (2009) suggested that individuals may feel obliged to provide 'socially acceptable' answers.

Due to the major discrepancies found in the previous literature in terms of food labeling effects, and the different role played by socio-demographic factors, this study attempts to assess the potential effects of calorie information on consumers' food choices employing different data sources that are generated from the same individual at roughly the same point of time. Our paper contributes to this literature by analyzing the correspondence of stated preferences and actual choices from the same sample of

individuals, while designing a questionnaire with stated choices that were identical to the potential actual choices. Our research subjects took part in a questionnaire that collected both, intentions about fast food choices, and preferences about fast food choice menus via a choice experiment. In a follow-up experiment, we analyzed these subjects' real market behavior. As far as we know, this is the first study using the same sample of participants in various settings. We therefore assessed the impact of calorie labeling, and to what extent the potential different results of calorie labels are based on different methodological approaches and data sources, or on other socio-economic and psychometric variables that also influence choices and behavior and which are not usually considered in economic studies.

2. Methods and data

2.1. Methods

Stated preferences methods are mainly elicited via questionnaires (Carlsson, 2011), providing an adequate test of a hypothesis; however, their results may not always be generalizable to real environments (Ajzen et al., 2004). In the present study, we use two stated preference methodologies, both included in a face-to-face questionnaire. The first is based on a choice experiment employing the Best-Worst Scaling (BWS) approach, while the second consists of an intentional behavioral direct question about desirable meals.

Revealed preference methods are based on analyzing agents' actual behavior in the marketplace. These research techniques reveal how people make their choices from amongst the available alternatives in the real market, taking into account market imperfections, budgets and time. We collect actual market data via a follow-up randomized field experiment, in which subjects did not know they were part of an experiment. During the experiment, actual food choices were recorded by collecting individual cash receipts from the participants. Each of the cashier receipts was accompanied with a discount voucher offered as gratitude to participate in the questionnaire. We investigated whether consumers' stated preferences in the questionnaire are reliable as predictors of market behavior, and tested the consistency between preferences, intentions and actual behavior.

To analyze the effect of calorie information on consumers' most preferred fast food choices in the questionnaire context, we used the BWS approach (Louiére and Woodworth, 1990; Finn and Louiére, 1992). Although BWS has been mainly applied in business management and in the design of marketing strategies (Cohen, 2009; Coltman et al., 2011), it is also gaining prominence in new fields such as health care (Coast et al., 2006; Flynn et al., 2007; Louiére and Flynn, 2010). This current paper hopes to contribute to the use of BWS as a methodology of preference elicitation in fast food choices. As noted above, this technique is particularly useful for identifying participants' priorities in stated preferences.

The BWS approach is a discrete choice task. In this specific study, respondents are invited to choose the best

Download English Version:

<https://daneshyari.com/en/article/5056888>

Download Persian Version:

<https://daneshyari.com/article/5056888>

[Daneshyari.com](https://daneshyari.com)