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# **“Evaluating gamblers’ self-control in communications encouraging responsible gambling behaviour: a neuroimaging study”**

**Ana Belén Bastidas Manzano** (Universidad a Distancia de Madrid)

**9th June 2023**

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# INTRODUCTION

PRELIMINARY DATA, BACKGROUND AND LITERATURE

# 1. Introduction



Increased interest in local products and sustainable consumption: **72% of Spaniards consider it important to buy local** to reduce ecological footprint.

La Moncloa (2021)  
Greenpeace (2021)



**Economic and social benefits of supporting rural areas.**

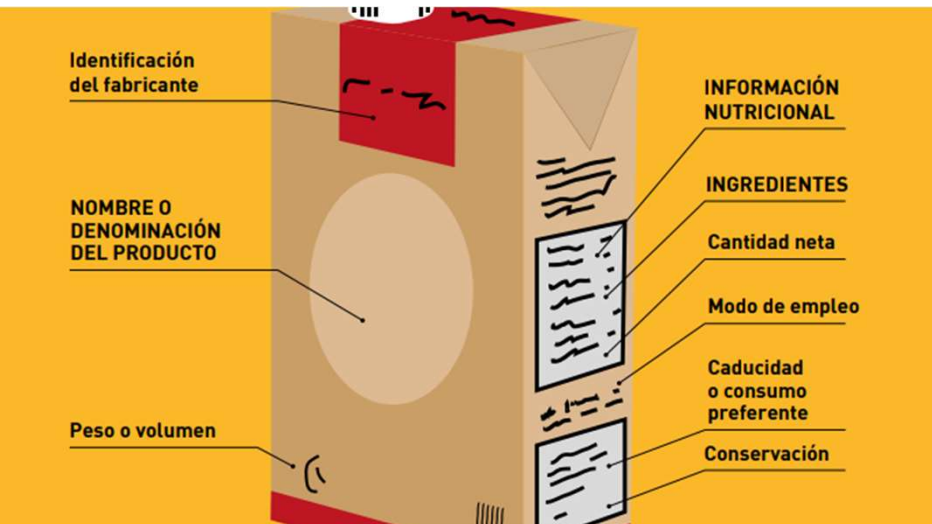
FAO (2021)

**Campaigns and communication elements (labels) on food products to promote local consumption and inform consumers of quality and origin.**

Erraach et al. (2014)



# 1. Introduction



## Labeling as an extrinsic characteristic of products

“ Extrinsic characteristics are those **aspects external to the manufacturing of the product** (e.g. labeling).

**Labeling**, as an extrinsic characteristic, refers to the **information provided on the**

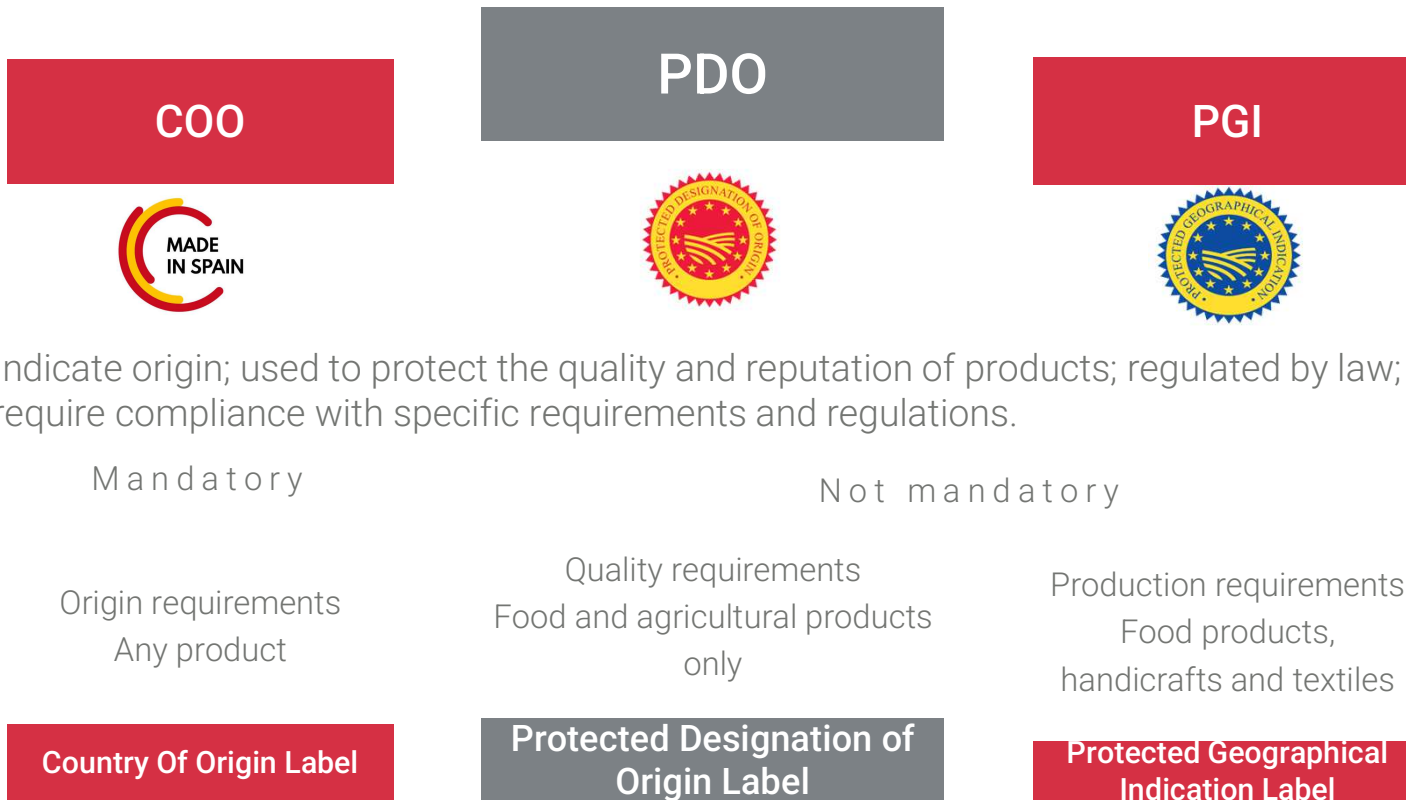
**product label or packaging**, which is used to describe its characteristics, properties, ingredients, **origin**, manufacturing method, among other aspects relevant to the consumer.

*Product labeling has become a particularly valuable extrinsic signal or characteristic in recent years of research on the processing of these stimuli in the consumer*



# 1. Introduction

Origin labelling of products



# 1. Introduction

Effects of origin labelling on consumers

## Cognitive Approach

—  
related to information processing effects.

- Summary effect
- Halo effect
- $\Delta$  Quality perception
- $\Delta$  Loyalty
- $\Delta$  Willingness to pay (WTP)
- $\Delta$  Added value
- $\Delta$  Easier to retrieve
- $\nabla$  Uncertainty
- $\nabla$  Consumers' need for information



- Energetic emotional connection
- Sense of pride
- Sense of belonging
- $\Delta$  Perceived pleasure
- Feeling of local protection

## Affective Approach

—  
related to the emotionally triggered effects of marketing stimuli (origin labelling of products)

# 1. Introduction

## Consumer neuroscience studies on origin labelling

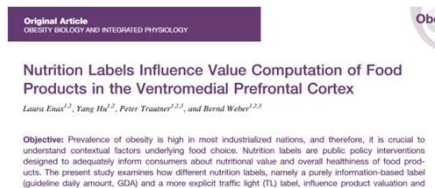


Some conclusions drawn from previous studies on product labelling from a consumer neuroscience perspective:

- VALUE
- REWARD
- RETRIEVAL



Lee et al. (2007)  
Different processing according to type of label



Enax et al. (2015)  
Brain's Value System(BVS)



Plassmann et al. (2008)  
Organic vs. Non organic label



Casado-Aranda et al. (2021)  
Effects on product valuation



Langleben et al. (2009)  
Brain reward system and Willing to pay



Schmidt et al. (2009)  
Reward brain areas



# OBJECTIVES

And hypothesis

## 2. Objectives



fMRI

1. To assess the **neural differences** between **PDO** and **non-PDO** products

2. To contrast behavioural differences on purchase intention, perceived quality, WTP, etc. of PDO and non-PDO products

3. Predict out scanner product decisions

4. Determine whether certain consumer characteristics affect the evaluation of PDO labelling.



## 2. Objectives

**Based on the literature, we hypothesize that ...**

—  
There are neural and intentional differences (higher purchase intention, willingness to pay, perception of quality and feeling of local support) between PDO and non-PDO products.



In addition, we hypothesize that certain consumer characteristics moderate the effects of the PDO label, namely: ethnocentrism, familiarity with the label, product-country image, income level and gender.





# METHODS

Experimental designs

# 3. Methods



## Baseline

PII Scale : equal  
level of involvement  
n = 50

## fMRI



30 PDO and 30 non PDO  
EXPOSURE and  
RETRIEVAL  
Product-country image  
Preference for products  
Ethnocentrism

## Self-report questionnaire

On purchase intention,  
perception of quality,  
willingness to pay, feeling  
of local support...

EXPERIMENTAL DESIGN





# **EXPECTED RESULTS**

## 4. Expected Results

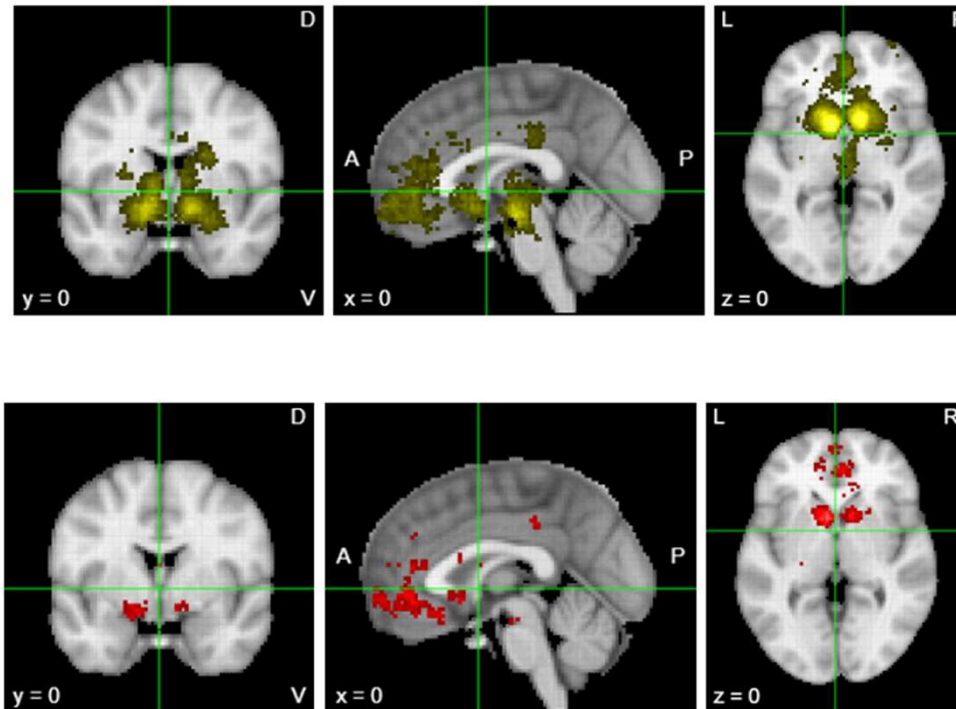
Products with a protected designation of origin are expected to activate ...

### EXPOSURE

#### Brain Value System (BVS)

Ventromedial prefrontal cortex (vmPFC),  
Nucleus accumbens (NAcc),  
Ventral striatum (vStr),  
Posterior thalamus (Pf)

*“value”*



*“reward”*

Dorsolateral prefrontal cortex (dlPFC),  
Ventromedial prefrontal cortex (vmPFC),  
anterior cingulate cortex (ACC), dorsal and ventral striatum,

Source: Neurosynth (Yarkoni et al., 2023)



# CONCLUSIONS

## 5. Conclusions and future research



To reveal the neural origin of the hypothesised preference for local products AND prediction of decisions

To understand the value of the PDO seal as a marketing stimulus to develop more effective political and private strategies and campaigns to promote local products

To provide new methodologies to analyse extrinsic product attributes.





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