



## From the table to waste: An exploratory study on behaviour towards food waste of Spanish and Italian youths



Juan-Antonio Mondéjar-Jiménez <sup>a,\*</sup>, Guido Ferrari <sup>b,c</sup>, Luca Secondi <sup>d</sup>, Ludovica Principato <sup>e</sup>

<sup>a</sup> University of Castilla-La Mancha, Spain

<sup>b</sup> University of Florence, Italy

<sup>c</sup> Renmin University of China, China

<sup>d</sup> University of Tuscia, Italy

<sup>e</sup> Sapienza University of Roma, Italy

### ARTICLE INFO

#### Article history:

Received 28 June 2015

Received in revised form

2 June 2016

Accepted 2 June 2016

Available online 7 June 2016

#### Keywords:

Food waste

Circular economy

Youths

Theory of planned behaviour

PLS-SEM

### ABSTRACT

Over the last few years, much attention has been paid to the phenomenon of household food waste which largely contributes to the total amount of food waste generated in industrialised countries. The reduction of food waste has been also included within the European strategy of circular economy and ambitious objectives have been assigned to the European member states. Youths proved to be the segment of the population most inclined to waste food and therefore they need to be monitored. This exploratory study, based on a survey involving 380 youths residing in Italy and Spain, aims at investigating the complexities of food waste behaviour within the framework of the Theory of Planned Behaviour. By referring to the PLS-SEM approach, we analyse the validity of the relationships between individual habits, attitudes, addiction to marketing ploys and sales strategies, and attitudes towards food waste. It also aims at verifying the existence of mediator effects in order to better understand these relationships. The construction of the Importance Performance Matrix Analysis enables identification of the dimensions which greatly influence positive behaviour, and whether urgent attention and interventions are required. The results confirm that behavioural models are appropriate for explaining youths' behaviour towards food waste with an important role played by the perceived behavioural control. Situational factors which characterize the moment of purchase should be carefully considered and monitored. This paper concludes that marketing and sale strategies negatively influence the waste behaviour of individuals, emphasizing the important role of retailers in preventing the generation of food waste.

© 2016 Published by Elsevier Ltd.

### 1. Introduction

In recent years, policy makers and institutions at various administrative levels have been focusing on the issue of food loss at consumption stage, the phenomenon known as *food waste*<sup>1</sup> (FW)

\* Corresponding author. Faculty of Social Sciences, Avda. Alfares, 44, 16071, Cuenca, Spain.

E-mail address: [JuanAntonio.Mondejar@uclm.es](mailto:JuanAntonio.Mondejar@uclm.es) (J.-A. Mondéjar-Jiménez).

<sup>1</sup> This study concentrates on household food waste, which includes home-grown food, beverages, food purchased from shops and takeaways for consumption within the home (the United Kingdom Waste & Resources Action Programme, WRAP, 2009). There are two classifications for household food waste: i) avoidable and possibly avoidable waste which includes the “edible” food thrown away and ii) unavoidable food waste which is waste deriving from food preparation that is not, and was not edible (WRAP, 2009; Parfitt et al., 2010) such as bones, shells and skins. This study focuses on avoidable and possibly avoidable food waste.

which occurs above all in developed countries (Gustavsson et al., 2011; Katajajuuri et al., 2014; Miliute-Plepiene and Plepys, 2015; Secondi et al., 2015).

At European level, the European Commission is taking measures to reduce the amount of food wasted since it will save money, lower the environmental impact of food production and consumption as well as preventing the social impacts related to this phenomenon (Graham-Rowe et al., 2014; Garrone et al., 2014; Göbel et al., 2015).

The reduction of waste has also been addressed by the EU within the strategy of circular economy, aimed at transforming Europe into a more competitive resource-efficient economy (Beretta et al., 2013). In this respect, the European Parliament recommended that practical measure should be taken in order to halve food waste by 2025.

Despite the high level of attention paid to this issue, as well as numerous initiatives within EU countries, it has been estimated

that household food waste at European level amounts to be approximately 42% of all the food produced (Monier et al., 2011), and two thirds of this amount refers to avoidable, and possibly avoidable, food waste.

In order to limit this phenomenon, surveys and research have been carried out to identify factors associated with FW at consumption level. It was observed that EU-28 youths aged 15–24 are the segment of the population most inclined to waste food, and therefore they need to be monitored more carefully (FAO, 2012) since they are likely to waste more than 6% of the food they purchase per week (European Commission, 2014).

As a result, educating youths to plan their purchases (in the pre-consumption stage), and then how to re-use their leftovers (in the post-consumption stage) can contribute to limiting the issue of FW. However, it is not enough to focus on socio-demographic characteristics since recent studies have demonstrated that this type of behaviour is triggered by personal attitudes, intentions, household habits as well as the context in which the purchase is made (Quested et al., 2013). This type of behaviour is complex in nature since it is the result of a series of attitudes which originate from before the moment of planning food purchases.

It is essential to have an in-depth understanding of the factors driving food waste-related consumer perception and behaviour, both in the household as well as at the point of purchase (Aschemann-Witzel et al., 2015). Parfitt et al. (2010) stressed that as FW mainly occurs at the end of the Food Supply Chain, retailers, food services and consumers are those who are able to reduce FW in the developed world.

This exploratory study focuses on two groups of youths residing in Italy and Spain where there is a high adherence to the Mediterranean Diet – a dietary pattern recognized as an environmentally-sustainable diet, and characterized by a high consumption of perishable products such as fish, fruits and vegetables. It is therefore important that these purchases be correctly planned, then stored or immediately consumed, as applicable, in order to avoid generating waste.

By adopting the Partial-Least Squares Structural Equation Modelling (PLS-SEM) which has been used for analysing social consumer behaviour and waste behaviour, this paper has a three-fold aim:

- Firstly, inspired by the Theory of Planned Behaviour (TPB) introduced by Ajzen (1991) which has been proved to play a central role in explaining social consumer behaviour, it is essential to determine the validity of the relationships between the “classical” TPB components – Intention, Attitude, Social Norms and Perceived Behavioural Control – and the correct (“conservative”) behaviour towards food waste. The objective being to assess if and to what extent marketing and sales strategies can affect an individuals' behaviour towards FW. As a novelty in the analysis concerning FW behaviour, this study extends the PLS-SEM results as an opportunity to gain knowledge and development on this important topic;
- Secondly, by extending the PLS-SEM results the aim is to explore if the Intention to reduce waste could act as a *mediator* in the relationships between each TPB component and behaviour, by means of mediation analysis; and
- Thirdly, the Importance Performance Matrix Analysis (IPMA) is constructed in order to facilitate discussion and draw conclusions by identifying the components (dimensions) characterized by a high level of importance and a high/low level of performance. In fact, focusing on these factors can assist policy makers to implement activities, and education campaigns with the aim of counteracting the FW phenomenon.

The remainder of the paper is structured as follows. The theoretical framework, the studied positive behaviour towards FW and the Research Hypotheses (RHs) are presented in Section 2. Section 3 reports summary information on the data collected in Italy and Spain and illustrates the specified PLS-SEM. In Section 4 the PLS-SEM results are presented and the mediation analysis and IPMA are carried out. In Section 5 the results are discussed and ideas for further research are provided.

## 2. Background

Since FW at consumer level is a recent research topic, the factors driving FW are still under analysis and discussion (Secondi et al., 2015; Papargyropoulou et al., 2016).

Previous research has demonstrated that there are many reasons and multiple types of behaviour which cause food waste, which can be considered as a complex behaviour (WRAP, 2011a; 2011b; Quested et al., 2013; Papargyropoulou et al., 2014). It is therefore not an easy task to find a one-fits-all framework that can explain this issue. Quested et al. (2013) suggested that a model for analysing FW behaviour must bear in mind the context in which behaviour occurs, the individuals' awareness of FW, their attitudes and values, motivation, habits, subjective norms and perceived behavioural control. It was therefore decided to start constructing this conceptual framework from the Theory of Planned Behaviour (TPB) proposed by Ajzen (1991).

The TPB hypothesizes that the intention to perform a particular behaviour can be predicted by attitudes, subjective norms and perceived behavioural control. The key principle of the TPB is that Intention strongly influences behavioural performance. The TPB proposed by Ajzen (1991) as an extension of the theory of reasoned action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975), is a prominent framework in studies aimed at predicting consumer decisions concerning the minimization and recycling of waste (Biswas et al., 2000; Knussen et al., 2004; Davis et al., 2006), as well as for studying various types of food-related behaviour (Conner and Armitage, 2002; Rezai et al., 2012). It is also a basis for exploring emerging consumer behaviour (Barr et al., 2001).

It was shown that the conceptualization of the relationship between attitudes and behaviour, according to the TPB principle, seemed to be suitable even when behaviour was self-reported. On this issue, Armitage and Conner (2001) found that when behaviour measures were self-reported, the TPB accounted for 11% more of the variability in behaviour than when behaviour measures were objective or observed (Ghani et al., 2013).

The TPB also proved to be easily adaptable and flexible for analysing the additional role of concepts not included in the original model (Collins and Mullan, 2011). Regarding the FW issue, Stefan et al. (2013) included the dimension regarding routines and habits related to the everyday food choice in their model. It divided consumers' attitudes towards FW into two groups of measured variables, *moral aspects and concern-based variables*, based on Barr (2007) and Stefan et al. (2013). The moral aspects of attitudes also seem to affect FW since wasting food makes consumers feel guilty (Bolton and Alba, 2012; Evans, 2011; Stefan et al., 2013).

It also hypothesized that the marketing strategies carried out by retailers (such as promotional offers on food products) can affect both the intentions and behaviour of consumers since special offers can lead consumers to purchase excessive quantities of food which is one of the major factors behind FW (see Brook Lyndhurst, 2007; WRAP, 2007).

### 2.1. The behaviour under analysis

A “positive” behaviour towards FW was created from three

Download English Version:

<https://daneshyari.com/en/article/5481578>

Download Persian Version:

<https://daneshyari.com/article/5481578>

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