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Consumers' valuation of sustainability labels on meat

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ABSTRACT

There are various sustainability certifications and claims for food products that focus on environmental or ethical benefits. These claims empower consumers to make informed purchasing decisions that take environmental and ethical considerations into account. This paper compares consumers' preferences for four types of sustainability claims related to organic meat, free range, animal welfare and carbon footprint. Using a choice experiment on a chicken breast product, our results show that nine in every ten Belgian consumers favor free range claims, which are also valued the most highly, attracting premiums ranging from 43% to 93%. Our study also shows that a vast majority of consumers (87%) would welcome the introduction of an EU level animal welfare label. The carbon footprint labels and the organic labels are less appealing to consumers, who have lower willingness to pay for these labels. Belgian consumers prefer the national Belgian organic food logo, certified by a private organization, to the newly-introduced EU organic food logo.

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Introduction

Consumers are increasingly concerned about the way their food is produced: while they care about the physical properties of their food, they also increasingly consider its social, ethical and environmental attributes (Briggeman and Lusk, 2011; Vermeir and Verbeke, 2006). However, consumers' interest in such labeling cannot be taken for granted (Verbeke and Ward, 2006). While there has been an increase in sustainability labeling, the difficulties of signaling the sustainable properties of food products is a major challenge for producers, policy makers, and non-governmental organizations. Properties of sustainability are credence attributes which can only be taken into account by consumers if the attributes are properly signaled at the point-of-sale, e.g. by means of claims. This paper assesses consumers' preferences, and willingness to pay (WTP), for a set of sustainability claims on chicken breasts using a choice experiment (CE). It also investigates and quantifies the size of the various taste (preference)-based consumer segments for the different sustainability claims.

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Several sustainability labeling standards for food have been developed in recent years covering different aspects of sustainability. Some are public initiatives, others private. Sustainability is a broad term that includes several dimensions (Hanss and Böhm, 2012) generally categorized into environmental, social/ethical and economic aspects. The United Nations Conference on Trade and Development (UNCTAD, 2013) defines sustainability claims as "distinctive marks, marketing labels and brands, developed by public and private sector institutions and placed on products and services attesting that their products and supply chains incorporate the pillars of sustainability (economic, social and environmental) into their agricultural production, processing, manufacturing and export processes and services". Claims about the ethical or social dimension of sustainability include animal welfare, free range and Fair Trade labels. Other sustainability claims that address the environmental dimension of sustainability refer to local food production, carbon footprint, food miles or sustainable aquaculture and fisheries. Organic food labeling addresses both environmental and ethical aspects.

Increasing demand for sustainable food products has led to a growth in the number of sustainability food claims with food manufacturers using sustainability claims to differentiate their products. Such claims can include textual, pictorial, graphic or symbolic representation, which states, suggests or implies that a food has sustainability characteristics and is backed up by a

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certification system. For producers and others in the food supply chain, it is important to know about consumers' preferences towards, and valuation of, sustainability claims. Making sustainability claims and changing production practices to meet these claims is not a cost-free option owing to the more stringent production standards imposed as compared to conventional production. The study on which this paper is based assessed consumers' preferences and WTP for a set of sustainability claims on chicken breast. The claims selected were free range claims, organic labels, a European Union (EU) animal welfare label, and carbon footprint labels. To our knowledge, no other study has examined how consumers value such a set of sustainability claims on meat products. We specifically chose a meat product as the sustainability of meat consumption is highly contested, both for ethical and environmental reasons (de Jonge and van Trijp, 2013a; FAO, 2006). The valuation of these claims is useful not only for food marketers but also for public policy makers, who are currently looking into labeling regulations related to the sustainability of food products. No research has compared consumer preferences and WTP for the three existing EU free range claims on poultry meat and little research has examined the WTP for carbon footprint labels on meat. This paper gives more insights on these issues and allows comparison between different sustainability claims. It also quantifies the sizes of the various taste-based consumer segments.

Literature review on sustainability labels on meat and consumers' WTP

An overview of sustainability claims on meat

The most common sustainability claims on the food market are organic food labels. The main one in use in Europe today is the EU organic logo, the standards for which are defined in Regulations EC 834/2007 and EC 889/2008 (EC, 2007a, 2008a, respectively). In 2010, the European Commission developed a new harmonized EU organic food logo, the use of which became mandatory in 2012 on pre-packaged organic food produced in the EU following a 2-year introductory period when its use was voluntary. Most countries have their own organic food logos (sometimes several in one country) which are either certified by governments, private organizations (farmers' and organic sector associations) or a combination of the two (Janssen and Hamm, 2012). Organic animal products have to fulfil certain requirements related to animal feed, foodstuffs, disease prevention, veterinary treatments, animal welfare, and livestock breeding. The market for organic products in Europe was valued at 21.5 billion euros in 2011, an increase of 9% on the previous year (FiBL, 2013 and IFOAM, 2013). Organic meat sales are increasing in Western Europe and were estimated to account for nearly 2% of total meat sales in Western Europe in 2009 (Organic Monitor, 2010 cited in Naspetti and Zanoli, 2012). In Belgium organic chicken has a 1.9% market share (GfK, 2012). The number of buyers of organic meat has doubled in Belgium since 2005 (Samborski and Van Bellegem, 2013), making organic meat one of the fastest growing segments of the organic food market.

Another category of sustainability claims includes ethical claims related to farming systems such as free range and animal welfare labels. The European Commission (EC, 2008b) regulates poultry meat marketing standards according to the farming system used. Examples of these claims include free range, traditional free range, and free range-total freedom (EC 543/2008). Products carrying these free range claims must comply with specific requirements related to feed, stocking density, age, amount of area, etc. For example, for free range poultry products, birds need to have had access to the outside for at least half of their lives. The more

stringent traditional free range has requirements for greater minimum age for slaughter (81 days as opposed to 56 days), more extensive open-air access and a lower stocking density. The free range-total freedom is the strictest claim, and has similar requirements as traditional free range but requires open-air runs of unlimited area (Table 1). The requirements for organic livestock production are more stringent than those for all the free range farming systems and cover more areas (see comparison in Table 1) (EC, 2008a,b; DEFRA, 2010).

Several studies in recent years have highlighted consumer concerns about animal welfare (Bennett et al., 2012; de Jonge and van Trijp, 2013a,b; EC, 2007b; Hanss and Böhm, 2012; Lagerkvist and Hess, 2011; Vanhonacker and Verbeke, 2014) and the need for a harmonized animal welfare labeling scheme at the EU level, that could also act as a communication and marketing tool (EC, 2009a; Ingenbleek et al., 2012; Nocella et al., 2012; Vanhonacker and Verbeke, 2009). Due to the success of the EU's organic program, the EC is considering a similar approach of creating a harmonized EU animal welfare label, modeled on the EU organic labeling regulations (EC, 2009a).

There are also labels that focus on the environmental dimensions of sustainability such as carbon footprint, food miles, and local food production. Consumers are becoming more interested in these labels as concerns grow about the environmental impact of food (Caputo et al., 2013a,b; Gadema and Oglethorpe, 2011; Grebitus et al., 2013; Onozaka and McFadden, 2011). A carbon footprint label can provide consumers with information about a product's environmental impact by taking the carbon emissions at every stage in its lifecycle into account. With increasing concerns about global climate change and its effects (Vanhonacker et al., 2013), carbon footprint labels could become more widespread. Gadema and Oglethorpe (2011) reported a strong consumer demand for products with carbon footprint labels. The Eurobarometer study on sustainable consumption and production (EC, 2009b) showed that 72% of a sample of EU citizens believe that a label indicating a product's carbon footprint should be mandatory in the future. No harmonized carbon footprint labeling regulations exist yet in the EU although recent private sector initiatives are emerging in several countries (Carbon Trust, 2012).

WTP for sustainability claims

A number of studies have investigated consumers' WTP for organic foods. However, only a few studies have focused on organic meat (Gifford and Bernard, 2011; Nocella et al., 2012; Van Loo et al., 2012; Zanoli et al., 2013). The most important drivers for purchasing organic meat are the perception that it is safer, healthier, more environmentally-friendly and has better animal welfare standards (Aertsens et al., 2009; Mondelaers et al., 2009; Van Loo et al., 2010).

O'Donovan and McCarthy (2002) reported that 44% of participants in their Irish study were willing to pay 1–5% extra for organic meat while 29% of the participants were willing to pay a premium of 6-10%. A US study reported a WTP premium of 35% (\$1.2/lb) for chicken breast with a generic organic food logo and 105% (\$3.5/lb) for the USDA organic logo (Van Loo et al., 2011). Regular consumers of organic chicken reported values of twice this level (147% for the general label and 244% for the USDA organic label). The WTP for organic meat depends on the information given about the production method (Gifford and Bernard, 2011) and also on the type of meat (Krystallis et al., 2006). Krystallis et al. (2006) reported a WTP premium of 85-130% for organic chicken, 103-125% for organic pork, and more than 115% for organic beef in Greece. Nocella et al. (2012) reported that 74% of their European participants preferred organic meat to conventional meat with 49% willing to pay €0.65/kg extra for organic meat and 26% willing to spend

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