



School meals and pupil satisfaction. Evidence from Italian primary schools



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ABSTRACT

This paper aims to analyse to what extent pupils value the characteristics of the state school foodservice and identify which variables affect the degree of pupils' satisfaction with the quality of school meals. A representative sample of 33 state primary schools providing meals was extracted for the metropolitan city of Naples. Two questionnaires were distributed, one to the headteachers concerned and the other to 5th grade pupils (10–11 years old). Information about the catering companies was mainly sourced from the AIDA database. Pupil satisfaction was measured by two key variables: pleasantness of eating at school and food tastiness. Controlling for pupil, family, school, foodservice and catering company characteristics, the paper shows that the catering company size negatively impacts upon pupil satisfaction with the foodservice, whereas the estimated meal average production cost is positively associated with pupil satisfaction. The study could assist city boroughs in devising meal quality indicators to be taken into account in designing competitive tendering.

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1. Introduction

The question of how well their children eat at schools concerns many parents worldwide. The current situation is far from reassuring: extensive pupil dissatisfaction with school meals clearly emerges in media reports. For example, a blog called NeverSeconds was created and run by the Scottish schoolgirl Martha Payne, collecting pictures of uninviting school meals worldwide. In Italy, the activities of a catering company in Ragusa were temporarily suspended four times after the parents' protests and the intervention of food-safety inspectors (Gubbini, 2015). The scarce scientific literature on the topic also shows a fairly low level of student satisfaction with the palatability of school meals (Jung et al., 2009; Lülfs-Baden et al., 2008; Miele and Bastia, 2007).

School meals have a resonance in the public procurement debate which is higher than other public food services: schools have long been considered sites of responsibility regarding the intellectual development and the social and physical wellbeing of

children, hence of future generations (Truninger et al., 2014b). Further, school nutrition has played the role of an equalising force for access to food or to correct specific nutritional deficiencies among less fortunate children (Galli et al., 2014). School meals have also gained the attention of the scientific community (see Truninger et al., 2014a).

This discourse applies both to more developed and less developed countries. In the latter, the school meal is often the main, or only daily meal children can secure, and school meal programmes, which raise school attendance rates and reduce illiteracy, contribute to food security and human capital investment. Particularly, home-grown school feeding programmes may link the right to food, especially for the urban poor, and the right to produce food in local rural communities, through sustainable technologies, by connecting targeted populations of producers and consumers (Sumberg and Sabates-Wheeler, 2011).

Examples of school feeding programmes can also be found in the history of more developed countries, i.e., the National School Lunch Program and the School Breakfast Program in the USA, established respectively in 1946 and 1966, the School Milk Scheme in the EU, established in 1977 or the School Food Plan in the UK, released in 2013 (Graham et al., 2014; Peterson, 2011;

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Weible et al., 2013). As a consequence of the recent increase in nutritional poverty in developed countries worldwide, which has become an issue in mainstream politics, it is even more important to enhance nutrition standards of school meals to reaffirm the right to good food (Morgan, 2014).

How school food policies have used national funding to meet this objective worldwide depends on several factors (Boni, 2014; Morgan and Sonnino, 2008; Smith et al., 2016; Truninger and Teixeira, 2015). Such factors include: the level of decentralisation of decisions regarding school meal service in state schools; the provision to schools of agricultural surpluses to prepare school meals; the possibility of buying junk food in school cafeterias or vending machines; the provision of single option menus; the involvement of parents, school cooks and serving staff; the interaction with local producers who pledge to meet school food demand and, in the case of foodservice privatisation, the national culture which may push the interpretation of public procurement legislation towards cost reduction, on the one hand, or health safeguards, on the other.

Good food means healthy nutritious food. However, the focus on a safe and nutritionally balanced meal has tended to overshadow pleasurable and sensory aspects of the school eating experience, such as those related to the quality and palatability of food served (Torralba and Guidali, 2014).

Satisfaction with school meals is a pre-condition for improving the effects of school meals on students' nutritional status. Total estimated food wastage amounts to 35–40% of the number of meals distributed in schools in Italy where the daily calorie supply from school meals corresponds to 40–50% of the age-adjusted recommended dietary allowance (RDA) (Rossi et al., 2006; Vairano, 2011; Vania et al., 1992; Verducci et al., 2007). However, given the large quantity of leftovers (49% reported by D'Addesa et al., 2002, and 37% found by Iappello et al., 2011), actual intake during school meals is less than half the level of the expected energy and nutrient daily intake (Martone et al., 2013).

Feeding conveys a symbolic link between the food supplier and the food eater: when their eating preferences and tastes are taken into account, pupils trust the school as a care provider and educational institution (Gravante et al., 2000; Truninger and Teixeira, 2015). For this reason, some Italian municipalities (Milan, Genoa and Cesena) have adopted the slogan "Turning school canteens into restaurants for kids" (Spigarolo et al., 2010).

Satisfaction with school meals becomes a pre-condition for developing school meal systems that empower young consumers by building their capacity to eat healthily (Morgan and Sonnino, 2007). With the increase in maternal labour force participation, primary schools have been asked to provide extra-familial care services, such as childcare during lunchtime at school (Filippini et al., 2014). With the problem of overweight and obesity in young people becoming a major public health issue in many economies (Mazzocchi et al., 2009; Miele, 2011), public health specialists have identified schools as a priority setting to promote food literacy and healthy eating and lifestyle habits among pupils (Galzerano, 2011). These aims can be achieved by integrating home economics, food and nutrition education into the curricula (Slater, 2013), in some cases also through the intervention of professional chefs teaching cookery (Caraher et al., 2013), by providing a healthy well-balanced lunch (Gleason and Sutor, 2003), by offering greater opportunities for physical activity (Cawley et al., 2007), by monitoring snack time food and beverage choice (Calabrese et al., 2005) and by increasing fruit and vegetable knowledge and consumption through school-based gardening, farm visits and campaigns providing fruit and vegetables to schoolchildren (Bontrager Yoder et al., 2014; Brunello et al., 2014; Parmer et al., 2009). Snacks, drinks and meals at school have also been a successful and innovative vehicle for conveying sustainability principles and habits to pupils and their families (Morgan and Sonnino,

2010) through, in some cases, involvement in their production and generally through everyday consumption of local, organic and/or fair trade products (Becchetti and Bustamante, 2008; Becchetti et al., 2008; Tanganelli, 2014).

Due to the high cost of running their own canteens (Giacosa et al., 1989), most state schools put the contract out to tender to external catering firms. Public regulations on school food procurement influence and may enhance the quality of school meals in some "best practice" cases (Bocchi et al., 2008; He et al., 2014; Spigarolo et al., 2010). However, current bidding procedures in public sector catering generally tend to favour large catering companies and often lead to poor service quality (Taylor, 2005), even when aspects of quality, other than food tastiness, such as those related to safety standards and nutritional requirements of school meals, receive the highest relative weighting among award criteria (Tikkanen and Kaleva, 2011).

The purpose of this paper is to analyse to what extent pupils value the characteristics of the state school foodservice and investigate the determinants of pupils' satisfaction among catering company characteristics, such as size, meal price and estimated meal production cost, after controlling for individual, family, neighbourhood, school and foodservice characteristics. Our data were sourced from a stratified sample of 33 state primary schools offering foodservice in the metropolitan city of Naples. The choice of an Italian case study stems from Italy being considered a model of how EU public procurement directives could be circumvented to guarantee the quality of school meals (Morgan and Sonnino, 2008). Two long purpose-made questionnaires were designed and distributed to the headteachers of the sampled schools and to all pupils enrolled in the 5th grade. Information about the catering companies was sourced from Agra (2008) and the AIDA database.

Pupil satisfaction is summarised by two key variables: the level of pleasantness of eating at school and the level of school food tastiness. A bivariate ordered probit was applied to the two dependent variables, where the regressors are pupil, family, neighbourhood, school, foodservice and catering company characteristics.

The remainder of the paper is divided into five sections. The second section reviews the literature which addresses the issues discussed herein. Section 3 focuses on the procurement of school meals in Italy and on the Italian catering industry. Section 4 describes the survey, the variables and the empirical model that were used in the regressions. Section 5 presents the results of the present analysis which are discussed in order to derive some recommendations for designing competitive tendering in Section 6. Concluding remarks are provided in Section 7.

2. Literature review

2.1. School meal quality and public procurement

Current bidding procedures in public sector catering often lead to a school foodservice quality that is unlikely to rise above being very basic, particularly for aspects of service not covered by targets (Taylor, 2005). A 'quality-shading hypothesis' has been advanced for competitively tendered contracts. In other words, a trade-off exists between lower winning price and contract performance (Domberger et al., 1995).

Poor ex-post contract performance could derive from adverse selection, when bidders differ along their cost of failing to honor the contract (Spulber, 1990), or moral hazard, when the contract is incomplete (McAfee and McMillan, 1986), or winner's curse, when large numbers of bidders (6–7) produce more aggressive bidding than with small numbers (3–4), resulting in negative profits (Kagel and Levin, 1986). Adverse selection occurs when bidding

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