

Estimation of Consumers' Demand Function

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Abstract

In this thesis, we test the existence of the behavioral component in the consumer's decision-making process that captures the direct influence of other available products and their characteristics on the consumer's utility. We introduce this behavioral component to the empirical demand model and show that it plays an important role in the widely used approach of employing rival products' characteristics as instruments to overcome the price endogeneity problem in demand estimation. To do so, we use a dataset on individuals' choices of the red wines from an experiment. The obtained results show that the exclusion condition is not satisfied for some of the rival products' characteristics, but is satisfied for other rival products' characteristics.

We extend the choice model by allowing the subjective evaluations of the products' quality in the consumer's utility function. We exploit the unique survey design of the discrete choice experiment on wine choice with random prices to estimate the coefficients of consumers' demand function for wines. The consumers form their subjective evaluations of the quality of the new wine from the bottle design and label information. Consumers' subjective evaluations of the wine's quality may be correlated with unobserved product characteristics. To solve the endogeneity problem of the subjective evaluations, we use characteristics of other wines from the randomly formed choice set as instruments. The existence of the individuals' behavioral bias allows us to use other product characteristics as instruments. Additionally, we study how the purpose of consumption affects individuals' choices of the wines.

CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Evgeniya Goryacheva, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Business School at the University of Technology Sydney. This thesis is wholly my own work unless otherwise indicated in the references or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution. This research was supported by the Australian Government Research Training Program.

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PREFACE

This is a conventional thesis structured as a series of chapters. This thesis includes an introduction to the research study, a review of the literature, three chapters and a conclusion. The first chapter describes the experimental design and the dataset that was used in this thesis. The second chapter introduces a demand model that describes the direct influence of the characteristics of other products in a choice set on consumer's utility and the estimation results. This chapter also tests the instrumental validity of rival products' characteristics. The third chapter is devoted to the demand models that capture the role of quality's subjective evaluations and the purpose of consumption in consumer's choice.

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