Three Essays on Consumer Search Behavior in Experimental Market Environments

BY

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THESIS

Submitted to the University of Adelaide
in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy

in

Economics

February 2010

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Abstract

This thesis investigates consumer search behavior in different contexts and its implications on certain market outcomes. It consists of three self-contained essays.

Part one investigates if people search optimally and how price promotions (such as the provision of price discounts) influence search intensity and risk-taking behavior. We start with a typical sequential search task in a finite time horizon (with exogenously determined price dispersion) as the baseline treatment. In the two experimental treatments, exogenous discounts are introduced to the search process. The treatments differ in the amount of information on the discounts revealed to the subjects. Subjects' search behavior is roughly consistent with optimality for a risk-neutral agent, but significantly influenced by the introduction of discount vouchers. We find that subjects' search intensity is significantly reduced if they are in a shop that offers discounts, even when the monetary benefit induced by the discount has been taken into account. This suggests that people seem to gain extra non-monetary utility from buying a discounted product. Alternatively, subjects might overestimate the value of a discount.

Following the findings in part one, we focus on price-framing effects of discounts on consumer search behavior in part two. In order to isolate the price-framing effect from all other possible influences, we adopt an extremely simple two-shop search model in which a consumer who sees the price for an item in a shop has to decide either to buy it or to incur a search cost to learn the *ex-ante* uncertain price in a second shop. The experiment is designed such that a rational buyer should make identical decisions in the base treatment (where prices are posted as net prices in both shops) and in the experimental treatments (where the price in one of the shops is framed as a gross price with a discount, holding the net-price constant). Using structural estimation of the observed risk preferences, we find that people tend to be more risk-averse and hence buy from the initial shop more often in

the discount treatments, regardless of where the discount is offered. The seemingly trivial change to a discount-framing increases the complexity of the decision problem. Subjects reveal a tendency to stick with the comparatively less complex options more frequently as the complexity of the decision problem increases. However, this bias declines with experience, as subjects become more and more familiar with the framing.

In part three, we study search behavior in a market experiment, where prices are determined endogenously by human players. More specifically, we examine the behavioral factors and the underlying mechanism which drive the widely observed asymmetric price adjustment to cost shocks (in a world with costly search behavior and information asymmetry). We show that price dispersion, as well as asymmetric price adjustment to cost shocks, arises in experimental markets, even though the standard theory predicts neither. We find that after controlling all the potential theoretical factors, the observed price dispersion can be explained by the presence of bounded rational play. Under price dispersion, asymmetric price adjustment arises naturally, as it is harder for buyers to learn that a negative cost shock has taken place. Learning is much quicker after a positive shock.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to Changxia Ke and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Acknowledgments

Writing this thesis is by far the most challenging but rewarding work I have done. It would not have been possible without the help of many people. I first extend my utmost gratitude to my supervisor, Dr Ralph-C Bayer, for his continuing encouragement and inspiration, valuable guidance and support throughout my Masters and PhD study since 2004. My appreciation also goes to my Game Theory lecturer, Dr Ludovic Renou, for his guidance during my coursework and his support later from Leicester, UK. I also thank Mickey Chan for his technical support in programming and conducting the experiments, as well as the many discussions we have had which helped me to clarify my thoughts.

I thank the participants at the 3rd ESA Asia-Pacific Meeting (2007), the 2nd Australian Experimental Workshop (2007), Centre for Experimental Economics, University of Copenhagen (2007), Australian Annual PhD Conference in Economics and Business (2008), Department of Public Economics, University of Innsbruck (2009), Max-Planck Institute for Intellectual Property, Competition and Tax Law (2009) and the Brainbag seminar and PhD workshops in School of Economics, University of Adelaide. I also gratefully acknowledge the financial support from the School of Economics, University of Adelaide.

Finally, I thank all the friends I have met in Adelaide (Nopphawan, Frances, Pataporn, Tiger, Bin, Tingting, Ranran, Song Ge) for their companionship. I am forever indebted to my family, for whose endless love and support I dedicate this thesis.