European Economic Review 53 (2009) 401–416

Contents lists available at ScienceDirect

European Economic Review

journal homepage: www.elsevier.com/locate/eer

Market experience eliminates some anomalies—and creates new ones

Jacinto Braga [a], Steven J. Humphrey [b,*], Chris Starmer [b]

[a] Department of Economics and International Development, University of Bath, Bath BA2 7AY, UK
[b] School of Economics, University of Nottingham, Nottingham NG7 2RD, UK

ARTICLE INFO

Article history:
Received 11 December 2006
Accepted 9 June 2008
Available online 11 July 2008

JEL classification:
C91
D81
D83

Keywords:
Preference reversal
Vickrey auction
Refining
Loss experience
Price following

ABSTRACT

We report two experiments which investigate whether experience of decision making in repeated markets purges behaviour of preference reversals. We investigate two behavioural mechanisms that may be shaping bids in repeated auctions: A tendency to adjust bids towards previously observed market prices, and a tendency to reduce bids following bad market outcomes. We find little support for the former but strong support for the latter. Also, whilst 'just enough' market exposure eliminates the typical preference reversal phenomenon, continued exposure fosters the mirror image anomaly. Therefore, although market experience shapes behaviour, in our experiments, it does not generally promote consistency with standard preference theory.

© 2008 Elsevier B.V. All rights reserved.

Experimental research spanning over 50 years has documented a wide range of behavioural phenomena running contrary to core economic theories of preference such as expected utility theory and Hicksian consumer theory (Camerer, 1995; Starmer, 2000). At face value, these 'anomalies' challenge the descriptive validity of those theories and a broader set of economic models constructed using them. Some suggest that these anomalies prompt questions about the welfare evaluations of market outcomes and corresponding policy judgements (see the symposium in Environmental and Resource Economics, 2005, pp. 1–181).

Emerging evidence, however, suggests that some preference anomalies subside with experience in particular types of experimental market. The strongest evidence of this relates to the disparity between willingness to accept (WTA) and willingness to pay (WTP). Studies consistently reveal that WTA exceeds WTP by an amount that is hard to rationalise with standard preference theory (Bateman et al., 1997). However, the disparity tends to close when valuations are elicited in experiments featuring various kinds of repeated market (Coursey et al., 1987; List and Shogren, 1999; Shogren et al., 1994, 2001; Loomes et al., 2003; Plott and Zeiler, 2005). Recent work by List (2003) provides some complementary field evidence for a naturally occurring market.

Related, though more sparse, findings have been reported for the preference reversal phenomenon. Preference reversal (PR for short) is a *systematic* inconsistency in the preference ranking over a pair of alternatives when elicited using different, but theoretically equivalent, methods (usually choice and monetary valuation). PR is a particularly troubling anomaly for economics because it challenges not only particular classes of preference theory, but also the more

* Corresponding author. Tel.: +44 115 951 5472; fax: +44 115 951 4159.
E-mail address: steve.humphrey@nottingham.ac.uk (S.J. Humphrey).

0014-2921/$ - see front matter © 2008 Elsevier B.V. All rights reserved.
doi:10.1016/j.euroecorev.2008.06.005

fundamental assumption that human choices can be adequately modelled in terms of stable preferences (Grether and Plott, 1979). It has also proved to be robust to a wide range of experimental controls (Seidl, 2002; Cubitt et al., 2004). However, paralleling the evidence related to the WTP/WTA disparity, Cox and Grether (1996) observe that PR decays when valuations are elicited in a repeated Vickrey (1961) auction. Although earlier studies have shown that it is possible to erode PR by explicitly punishing inconsistent preferences (Chu and Chu, 1990), the results of Cox and Grether represent an important landmark in providing the first evidence that PR might decay simply as a consequence of participation in something resembling a *naturally occurring* market.

Such evidence has prompted some to conjecture that the experience of participation in markets might have some general tendency to erode preference anomalies. Plott's (1996) *discovered preference hypothesis* is an explicit conjecture of this form and, more recently, Loomes et al. (2003) discuss the closely related *refining hypothesis*. As we interpret them, these hypotheses share the following core assumptions: (i) Agents have stable underlying preferences which (ii) are 'anomaly-free' (i.e., expected utility risk preferences; Hicksian consumer preferences); (iii) preferences stated in the context of particular elicitation mechanisms may not always coincide with underlying preferences; (iv) market experience, by giving agents incentives and feedback, tends to promote greater consistency between stated and underlying preferences. We will use the label 'refining' for any theory satisfying (i)–(iv) above. If markets have general refining tendencies, that would have significant implications for the development and use of economic theory: it could, for instance, vindicate the use of standard preference theories for modelling behaviour in real markets, despite the laboratory anomalies.

The existing evidence, however, reveals that while some forms of market experience may drive out anomalies, others do not. For instance, Knetsch et al. (2001) found that while the WTA/WTP disparity disappeared in a second-price Vickrey auction (henceforth SPA), it persisted in a strategically equivalent, second-to-last price Vickrey auction. Similarly, while Cox and Grether found that PR subsided in the SPA, it persisted in the Becker, DeGroot, Marschak (1964) variant of the Vickrey mechanism (henceforth BDM). This evidence of mechanism dependence shows that it is not market experience per se that drives out anomalies. So, to understand the dynamics of stated preference, it is necessary to explore which particular aspects of market experience promote changes in stated preferences, and the extent to which they foster consistency with standard preference theory.

To this end, we have looked for causal factors which might explain the observed dynamics of stated preference in existing studies. In order to establish purchase on the problem, in this paper, we confine attention to a single anomaly (studies of PR) and a particular class of market mechanism (variants of repeated Vickrey auctions). Focussing in this way, we have identified two behavioural mechanisms which might contribute to explaining the existing data: *Price following* and *loss experience*. Price following is a hypothesised tendency for participants in repeated markets to adjust their 'bids' towards previously observed market prices.[1] Loss experience involves subjects adjusting their bids following an aversive outcome in the previous market period.

We report two new experiments that test for the operation of these mechanisms. We find only weak support for price following, but strong support for the operation of loss experience. In the second study, we exploit PR as a vehicle for investigating whether loss experience leads to anomaly-free stated preferences. Our results suggest that it does not. With 'just enough' exposure to loss experience, our markets engender the disappearance of the standard asymmetric pattern of PR, but with longer exposure a new anomaly emerges which is the mirror image of typical PR. In what follows, Section 1 introduces our hypotheses; Sections 2 and 3 report the experiments and Section 4 concludes.

1. Background—formulating hypotheses for the case of preference reversal

In the classic PR setup, subjects choose between paired bets and place separate monetary values on them. One of the bets, the '*P*-bet', offers a relatively large probability of a moderate positive outcome, while the other, the '$-bet', offers a relatively small chance of a larger win (for compactness, we sometimes refer to these bets as simply '*P*' and '*$*', respectively). Experiments implementing variants of this basic design reliably reveal systematically different preference rankings of the two gambles:[2] Many subjects choose *P* and value *$* more highly (a 'standard reversal') but very few do the opposite, that is, choose *$* and value *P* more highly (a 'non-standard reversal'). Interest in PR stems largely from the fact that observed inconsistencies tend to be patterned in this highly predictable way.[3]

While there is no generally agreed theory of what causes PR, a common interpretation (see Tversky et al., 1990) is that it arises as a consequence of biases in the valuation of bets and, in particular, a tendency towards relative 'overvaluation' of $-bets.[4] Overvaluation might stem from the anchoring of valuation on the positive outcome and insufficiently adjusting

[1] In this paper, we deal only with auctions where the auctioneer is buying from the subjects, and throughout 'bid' means the minimum selling price stated by a subject.

[2] Early examples include Lichtenstein and Slovic (1971, 1973) and Grether and Plott (1979) but the literature is large and an extensive review is available in Seidl (2002).

[3] The existence of some inconsistency between an individuals' reported rankings in choice and valuation tasks, by itself, is not especially surprising. People might, for instance, make a mistake in one or more task leading to some inconsistent rankings. The fact that inconsistencies are concentrated on standard reversals, however, renders their interpretation as 'mistakes' less convincing.

[4] To fix the notion of 'overvaluation' suppose that for any lottery L, an individual has a well-defined certainty equivalent C^L which we define behaviourally: Given a direct choice between L and a sure amount of money M, the agent strictly prefers L if $M < C^L$ and does not strictly prefer L if $M \geq C^L$. An agent overvalues a lottery L when their reserve in a selling task is greater than C^L.

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات