This paper examines firms’ incentives to allow pre-purchase product trials and its welfare implication. I first show that when the cost of a trial is negligible, all firms allow product trials in equilibrium, and that consumers are worse-off by the product trial when the number of firms is small, but better-off when large. The former is because the products appear more differentiated as more information is revealed. The latter is because as the number of firms grows, the price increase due to the product differentiation is limited, while the benefit of making an informed decision increases. When the cost of a trial is non-negligible, the private incentive to provide product information is too large when only a few firms are in the market, but too small when many firms are active.

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I. Introduction

For most of products in the modern economy, more than one variety are available in the market. Naturally, when making a purchasing decision, many consumers face products that they have never tried before. Even after observing that other consumers are buying a specific brand of a product, they may be reluctant to buy that brand of the product because people have different tastes. This uncertainty in utility or “match value” can be a major obstacle for firms selling new products, and as an effort to resolve this issue, many firms provide opportunities for consumers to try their product before making the purchasing
decision. Examples include food promotions in supermarkets and test drives in automobile dealer shops.

In principle, pre-purchase trials are likely to increase the social welfare because it helps consumers make informed decisions. Thus, firms may have to be encouraged, or at least not hindered, to give consumers more chances to try their products. However, there are at least two reasons why allowing pre-purchase trials may be socially detrimental: first, when products are differentiated, and consumers do not know which variety they would like most, giving more product information may make the products more differentiated, thus may relax the price competition. Second, when the trial cost is high enough, obviously mandatory trials may not maximize the social welfare. In this case, the question to be asked is whether the market equilibrium level of product trial would coincide with the socially optimal level.

The first issue is addressed by Hahn (2005). In particular, he shows that in duopoly, firms have incentive to allow pre-purchase trials to mitigate price competition, but it may harm the consumers. He assumes that the cost of a trial is negligible, so does not consider the second issue.

This paper extends the model of Hahn (2005) in two ways: first, I consider a general oligopoly instead of duopoly. The number of firms may have an important welfare effect in relation with pre-purchase trials because the value of (full) information is higher when the uncertainty in the match value looms larger. And as predicted, it turns out that when the number of firms is large enough, consumers are better-off although they face higher equilibrium prices with pre-purchase trials being allowed, which contrasts sharply with the conclusion of Hahn (2005). Second, I allow the cost of a pre-purchase trial to be arbitrarily large to examine whether the market provides the optimal level of pre-purchase trials.1) I find that the private incentive to provide product

1) In reality, the cost of information acquisition may not be of single source. For instance, to allow a test drive, an automobile dealer should get the cars ready, and bear the fuel cost. To learn whether a mobile application is what she is looking for, a consumer must download the trial version of it, which obviously takes time and effort. Throughout the paper, I focus on the former, namely the cost incurred to sellers. For an example of