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**Chapter XIII**

**Lemon Problems in the  
Internet Transactions and  
Relative Strategies**

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**ABSTRACT**

*Based on some new traits of the Internet environment, this chapter discusses lemon problems in the Internet transactions. It points out that the information asymmetry does not disappear, but develops to be even worse under the new Internet environment. By virtue of mathematical tools, the authors analyze products and services' lemon problems in the new environment. It is found that many new traits of digital products and services lead to new appearances of "lemon" problems. In the end, relative strategies are provided in order to lessen these problems. The authors further hope that through the discussion, some implications can be made to e-sellers and online service providers.*

## INTRODUCTION

Lemon problems were initially proposed by Akerlof in the 1970s (Akerlof, 1984). He discussed the existence of the information asymmetry in American second-hand car markets and relative results caused by the problem. Based on his discussion, many scholars have conducted related research during these years. In the Internet environment, market conditions involve some new changes when comparing with that of the old economy. Consequently, lemon problems will also vary somewhat. In this chapter, the lemon problems in the Internet transactions are to be discussed. The chapter also takes related results of Akerlof as the research ground, through insight in the unique traits of the Internet transactions and by virtue of relative mathematical tools, new forms of lemon problems are discussed.

Akerlof suggests that it was the information asymmetry in the market to push the superior goods out of the market and leave only the inferior ones. On the other hand, the advent of the Internet seems to bring an era of fast information communication, more selection opportunities and much better matching. However, things do not go as it appears. Information asymmetry not only exists in the Internet environment, but also increases because of some unique traits.

In this chapter, some strategies for avoiding or lessening lemon problems in the Internet transactions are provided. These suggestions are especially useful to e-sellers and online service providers.

## BACKGROUND

There is no denying that information is very important in our daily life. One presupposition of the perfect market's existence in microeconomics is the full information between buyers and sellers (Edwin & David, 1988). Coase (1990), on the other hand, divided companies' costs into manufacturing costs and transacting ones in his company-origin research. He further points out that the transacting costs of one individual company are used mainly to solve the information communication problems and to end up with successful businesses. Information economics (Meheroo & Helene, 1984) explores this field even further. One paramount concern of the information economics is the information asymmetry. Due to the existence of the asymmetric information in each transaction, dealing partners have to input more extra efforts in searching information, assessing materials, negotiating and setting restrictions during the whole process. All those steps will undoubtedly lead to the inefficiency of the market.

The advent and widespread use of the Internet have changed not only the commercial activities companies are conducting, but also the outside environment people are living in. This has turned out to be an incontestable fact all over the world. The Internet develops in an unusually rapid speed. In only four years, Internet users have reached 50 million; whereas the spread of computers to the same level took

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