Corks and Risk Perception by Consumers: Experimental Investigation
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You ceremoniously pull the cork on your bottle of wine and…. it is another “corked” wine! It is generally agreed that 3 to 5 percent of all bottles with natural corks show some degree of spoilage. This happens when the wine reacts with a substance called Trichloroanisole; commonly known as TCA (some say up to 5 to 10 percent of corks will have TCA in them). This complex chemical comes from reactions within corks, which involve natural molds and the chlorine bleach used in cork manufacture.

Over a period of 11 years, the CIVB (Interprofessional Council of Bordeaux wines) organized a survey on the quality of Bordeaux wines to present an analysis of corked wines. Samples were collected in supermarkets, in wine shops and wholesalers in France. Over the period, 2.38% on average of the wines tasted were considered altered by cork taint or musty, by tasters. Depending on the year, this rate can vary from 1.5% (the minimum was reached in 2010) to 3.22% (the maximum reached in 2002), although with a declining trend over the years (CIVB, 2013).

Buying a bottle of wine is often marked by expectations and uncertainty as to its quality. Consumers are confronted with an enormous amount of changing information on brands and vintages, which impacts on perceived risk (Speed, 1998). In an experimental design, Desrochers and Outreville (2013) examine the decision to purchase a bottle of wine when information is provided on the risk of purchasing a corked bottle. Participants (students) were asked if they had prior experience with a corked bottle of wine (on average 39% of participants answered positively) and to reveal their perceived probability of a bottle of wine to be corked (the average probability was 6.1%). However, in the study, the risk was assumed to be constant and not related to the price of the bottle.

The influence of price has been studied as one of the most important cues used consistently by consumers to predict quality, across a wide range of products (Verdú Jover et al., 2004; Kardes et al., 2004; Veale and Quester, 2008; Mastrobuoni et al., 2014). This price/quality relationship reflects consumers’ strongly held belief that ‘you get what you pay for’ (Lee and Lou, 1996). Beyond the attributes of the wine and the situation, different consumers choose wine differently. Therefore, given the incomplete information on quality, price is probably used in this context by some students to overcome any perceived risk.

The purpose of this paper is to examine the purchase decision of people when faced with a perceived risk relative to a corked wine for different levels of price. It provides an example of a study of human behavior in the context of risk aversion. Research in the loss domain has developed considerably (L’Haridon, 2009), but no study (to our knowledge) has ever investigated the behavior of people when asked to reveal their perceived risk and purchase decision. Studies investigating known-risk gambles have systematically used the urn context (Camerer and Weber, 1992; Pulford and Colman, 2008). Rather than using the usual urn context, the experiments were conducted with business students using a questionnaire similar to the one originally tested by Desrochers and Outreville (2013).

In the proposed experimental design, it is possible that subjects do indeed believe that they have some knowledge in the domain and that the situation they are dealing with is known to some extent. Therefore, participants in the study are asked if they have prior experience with a corked bottle of wine and...
to reveal their perceived probability of a bottle of wine to be corked. To assess the extent of risk taking related to the price of a bottle, subjects are required to indicate whether they accept to buy $L$ Euros a bottle of wine against the functional risk of buying a corked bottle and losing eventually $L$ Euros. Each question required a choice between buying and not buying one bottle. The answer is a statement of preference for which there is no right or wrong answer *per se*.

Experiments have been undertaken in the fall tern of 2014 at INSEE Bordeaux Business School and a replication of the experiment was undertaken with students in wine marketing at ESC Dijon. The paper is organized as follows. In the next two sections, we present a review of related literature and a detailed explanation of the context that is used for the experiments and the experimental designs. We continue in section 4 with a discussion of our findings. Finally, in section 5, we draw conclusions and discuss the practical impact of our findings.