INTRODUCTION

The risk or uncertainty perceived on a conduct (e.g. purchasing or consuming of a product, or using an information system) by the individuals has been traditionally identified as one of the main determinants of consumer behavior. In particular, the influence of perceived risk has been specially linked to high involvement products or conducts (Laurent & Kapferer, 1985) which imply a high value or concern for the individual, and that are usually purchased after long and careful consideration. In the specific context of e-commerce, perceived risk has been traditionally identified as one of the main barriers for Internet shopping acceptance and diffusion (Korgaonkar & Wolin, 1999; Goldsmith & Lafferty, 2001; Miyazaki & Fernández, 2001; Wu & Wang, 2005). However, the empirical evidence available regarding this issue is contradictory, and some authors have found that the influence exerted by perceived risk on consumers’ online shopping behavior may not be so relevant (Jarvenpaa & Todd, 1997; Herrero & Rodríguez del Bosque, 2008).

In this context, this paper examines the influence that perceived risk in online shopping has on the process of e-commerce adoption by end consumers. Therefore, first the concept of perceived risk is studied from a general perspective, examining the different theoretical approaches to this construct and how it is defined from each perspective. Moreover, the perceived risk is analyzed as a multidimensional concept, taking into consideration the different risk facets identified in literature. In each case, the empirical evidence available in the field of Inter-
net and e-commerce is examined. Additionally, discussion about the influence of perceived risk on e-commerce adoption by end consumers is presented and future research directions on this topic are proposed.

BACKGROUND: CONCEPT OF PERCEIVED RISK IN E-COMMERCE

Since it was introduced in the marketing and consumer behavior literature (Bauer, 1960), the perceived risk concept has been analyzed from diverse perspectives. Thus, the classical theory of decision conceives this variable as a distribution that reflects the behavior possible results, probabilities and subjective values (Pratt, 1964; Arrow, 1965). From a similar perspective, first analyses of perceived risk in the context of consumer behavior agree in defining this variable as a combination of two factors: the probability of loss as a consequence of certain behavior and the importance attributed to that loss (Kogan & Wallach, 1964; Cunningham, 1967; Cox, 1967). Nevertheless, some authors such as Sjoberg (1980) criticize this conception of perceived risk as they consider it too rigid and specific to cover such an ambiguous variable. Following this approach, Stone & Winter (1987) break away from the expectation-value traditional normative orientation and consider the perceived risk exclusively as a subjective expectation of loss (Mitchell, 1999). Finally, perceived risk has been traditionally linked to the concept of uncertainty. Thus, diverse authors have suggested that both concepts are equivalent (Bauer, 1960; Taylor, 1974). On the contrary, other researchers consider that risk and uncertainty are different concepts (Peter & Ryan, 1976; Stone & Gronhaug, 1993), but acknowledge that the distinctions between both terms have become blurred in consumer research, and risk and uncertainty are used interchangeably.

According to this approach, diverse studies have supported the disincentive effect of perceived risk or uncertainty on e-commerce acceptance and Internet shopping behavior. Hence, several authors have observed that the perceived risk has a negative effect on e-commerce adoption (Korgaonkar & Wolin, 1999; Joines et al., 2003), intention to shop on the Internet in the future (Liang & Huang, 1998; Vijayasarathy & Jones, 2000; Liao & Cheung, 2001; Salisbury et al., 2001; Pavlou, 2003; Kim et al., 2008; Herrero et al., 2009), transactions frequency (Miyazaki & Fernández, 2001), attitudes toward e-commerce (Jarvenpaa & Todd, 1997; Vijayasarathy & Jones, 2000; Fenech & O’Cass, 2001; Van der Heijden et al., 2003; Hsu & Chiu, 2004a; Shih, 2004; Herrero et al., 2009) and e-service satisfaction (Hsu & Chiu, 2004b). However, other authors have not found a significant influence of perceived risk on e-commerce acceptance (Herrero & Rodríguez del Bosque, 2008) or have found contradictory evidence (Wu & Wang, 2005), raising reasonable doubts about this issue.

MULTIDIMENSIONAL APPROACH TO PERCEIVED RISK ON E-COMMERCE

A traditional research stream in perceived risk literature focuses on the identification and analyses of the risk facets that affect consumer behavior. In this sense, it is worth pointing out that, although very different classifications have emerged on this matter (Cunningham, 1967; Roselius, 1971; Jacoby & Kaplan, 1972; Peter & Ryan, 1976; Ingene & Hughes, 1985; Stone & Gronhaug, 1993), it is possible to identify five facets of perceived risk common to most of the approaches: economic, performance, social, time and psychological risks. Furthermore, with the development of information technologies, an additional dimension has been proposed: privacy risk (Jarvenpaa & Todd, 1997; Lim, 2003). Table 1 shows a definition for each one of these facets.

In the context of e-commerce research, few studies have analyzed the influence of perceived