



Do all suppliers dislike electronic reverse auctions?

Marjolein C.J. Caniëls^{a,*}, Erik M. van Raaij^{b,1}

^a Faculty of Management Sciences, Open University of the Netherlands, Heerlen, The Netherlands

^b Rotterdam School of Management, Erasmus University, Rotterdam, The Netherlands

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ABSTRACT

Electronic reverse auctions (ERAs) are a controversial sourcing tool. While it is said to have many advantages to buyers, and even some to suppliers as well, it is also heavily criticised for damaging cooperative buyer–supplier relationships. It is often suggested that suppliers experience more disadvantages than advantages from the use of this tool and therefore many, if not all suppliers dislike ERAs. In this paper, we investigate whether all suppliers indeed dislike ERAs and we explore the relationships between supplier characteristics and supplier opinions of ERAs. We find that a small group of suppliers is actually positive about ERAs and that by far the strongest predictor of ERA opinions of a supplier representative is the supplier country.

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1. Introduction

The electronic reverse auction (ERA) first appeared in the mid-1990s and has established itself since as a standard item in the sourcing toolkit of many organisations (Beall et al., 2003; Jap, 2003). Despite its widespread use, the tool is not without controversy (Emiliani, 2005). Those who are in support of the tool have hailed it as a means for buyers to obtain lower prices, reduce sourcing cycle time, and make the sourcing process repeatable. Benefits for suppliers are said to include lower selling and customer acquisition costs, access to new markets and new customers, and increased market transparency (see e.g., Smart and Harrison, 2003; Smeltzer and Carr, 2003). Critics have argued that ERAs are detrimental for trust-based buyer–supplier relationships, and induce abuse and opportunistic behaviour by buyers. Furthermore, they are said to lead to long-term additional costs which offset much of the savings gained from an auction (e.g., Emiliani, 2005).

While much of the literature about ERAs has emphasised the buyer perspective, there is a small but growing number of empirical studies that addresses the suppliers' view on this tool (e.g., Carter et al., 2004; Emiliani and Stec, 2004; Jap, 2003). While some studies suggest that suppliers see ERAs as an opportunity for new business and a more transparent way of bidding than the traditional sealed bid (e.g., Smart and Harrison, 2003; Smeltzer and Carr, 2003), other studies find that suppliers generally view

ERAs as a tool that increases buyer opportunism and damages buyer–supplier relationships (e.g., Emiliani and Stec, 2005; Tassabehji et al., 2006). All in all, there is evidence that some suppliers may value the transparency created in ERAs and the opportunities they represent, while others may see it as a threat, and as a tool that buyers use to increase and exploit a position of power in the relationship.

The question that will be addressed in this paper is to what extent supplier opinions of ERAs vary, and if so, how such opinions are related to characteristics of the supply market, the supplier, and the individual. Specifically, we investigate whether opinions vary with factors such as supply market capacity, supplier country of origin, supplier size, supplier strategy, as well as factors such as respondent age, education, tenure, and position.

The specific novel contribution of this paper is the focus on suppliers' opinions on ERAs, a perspective that hitherto has solicited scant attention in empirical ERA research and has a crucial impact on ERA success. Evidence on the above issues will yield managerial insights for buying firms about when the use of an ERA is likely to meet resistance. When an ERA is used on a supplier base with unfavourable characteristics, this might be a waste of time and effort for a buying firm. Competitive and good-quality suppliers might not want to participate in the ERA because of their negative opinions about ERAs. In an analysis of over 14,000 ERAs organised by one buyer, Millet et al. (2004) show that supplier acceptance rates of ERA invitations can be as low as 11% (with a mean of 71.5%) and subsequent rates of attending the auction and bidding in the auction are on average 94% and 65.7%, respectively. Supplier participation is crucial for the success of an ERA (Hartley et al., 2006), and therefore it is instructive to understand the characteristics of suppliers that have an (un)favourable view on ERA's.

* Corresponding author. Tel.: +31 455762724; fax: +31 455762103.

E-mail addresses: marjolein.caniels@ou.nl (M.C.J. Caniëls), eraaij@rsm.nl (E.M. van Raaij).

¹ Tel.: +31 104081948; fax: +31 104089014.

Besides the managerial implications generated by this study, our research contributes to e-business research in general by clearly showing which characteristics of the supply market, the supplier, and the individual weigh profoundly in the supplier's perception about ERAs. Furthermore, our research gives impetus to further research and it shows which factors should be taken into account in the data sampling in future studies on ERAs.

In the remainder of this paper we review the literature on supplier views on ERAs and we develop propositions about the relationship between supplier characteristics and ERA opinions. Subsequently, we present the methodology used in our paper, as well as sample characteristics. The data analysis is reported on three levels. First, we present descriptive information on the dependent and independent variables. Second, we perform bivariate analysis on the variables. Third, we investigate multivariate relationships between supplier characteristics and ERA opinions. We conclude the paper with a discussion of our findings.

2. Literature review

Beall et al. (2003) provide a useful definition of an ERA, it is "... an online, real-time dynamic auction between a buying organization and a group of pre-qualified suppliers who compete against each other to win the business to supply goods or services [...]. These suppliers compete by bidding against each other online over the Internet using specialized software by submitting successively lower priced bids during a scheduled time period. This time period is usually only about an hour, but multiple, brief extensions are usually allowed if bidders are still active at the end of the initial time period." (p. 7). An ERA is a specific method of price determination in a broader sourcing process, which starts with determination of specifications and ends with awarding the contract (see Fig. 1). Alternative methods of price determination include face-to-face negotiations, and sealed bidding.

ERAs cannot replace traditional methods of price determination for every product or service. ERAs are less suitable when the product or service cannot be clearly specified beforehand, when switching costs are high, or when there is little rivalry amongst competing suppliers (Beall et al., 2003; Smeltzer and Carr, 2003). These limitations notwithstanding, ERAs have been used for a wide variety of products ranging from commodity products such as wood pallets to professional services such as consulting.

The advantages for buyers of using ERAs are by and large clear. The high level of competition in the bidding process, created through the real-time format and the visibility of competing bids, generally leads to more fierce bidding by suppliers and hence lower purchase prices (Beall et al., 2003; Emiliani and Stec, 2002). Requests for information, proposal or quotation (RfX) as well as bidding processes can be prepared and completed electronically instead of on paper which is rather time consuming. The reduced cycle time and decreased administrative costs associated with ERAs increase the efficiency of the sourcing process (Smeltzer and Carr, 2003). ERAs do require careful preparations (that cost time), but once digitised, the process is easily archived and repeated, leading to efficiency gains as the tool is used repeatedly (Arnold et al., 2005; Carter et al., 2004). These efficiency benefits may in

fact outweigh price reductions, as it may be difficult to achieve further price reductions in subsequent auctions for the same commodity. A further benefit of ERAs for the buyer is the ease with which suppliers from all over the world can be included in the sourcing process (Hartley et al., 2004). The main drawback of ERAs experienced by buyers is the risk of damaging their relationships with the supplier (Jap, 2003). Using an ERA instead of more traditional negotiations may lead to supplier suspicions of buyer opportunism (Jap, 2007), less supplier commitment to the relationship (Tassabehji et al., 2006), and lower quality products as suppliers try to make a margin on the low-priced business won in the ERA (Tassabehji et al., 2006).

From the suppliers' perspective, the largest drawbacks of ERAs are related to the same aspects that constitute the benefits for buyers. Lower purchase prices for the buyer generally imply lower margins for the supplier (Emiliani and Stec, 2004, 2005). The strong focus of ERAs on price may limit suppliers in their ability to emphasise non-price differentiators, such as quality, innovation capability, or service (Jap, 2003). ERAs are particularly threatening and disheartening to incumbent suppliers (Hartley et al., 2006; Jap, 2003). Years of investments in a long-term relationships with a buyer may be lost in an ERA where the incumbent supplier is suddenly exposed to competition from suppliers all over the world, including low-wage countries (see e.g., Tassabehji et al., 2006).

Although there are many accounts of negative supplier opinions about ERAs (e.g., Emiliani and Stec, 2004, 2005; Jap, 2003; Tassabehji et al., 2006), the literature suggests that there may be advantages to suppliers as well. First of all, suppliers should be able to also benefit from a more efficient bidding process (Smeltzer and Carr, 2003). Furthermore, a buyer's decision to use an ERA generally leads to a wide search for qualified suppliers to participate in the auction, which generates opportunities for suppliers to win new business (Beall et al., 2003). Suppliers can also benefit from the price information an ERA provides. Obviously, this will depend on the degree of bid visibility in the auction and whether so-called 'bird-watching measures' have been taken (Carter et al., 2004). Finally, the transparency of the bidding process generated by an ERA may be perceived by suppliers as more fair as compared to the opaque process of traditional sealed bid tendering (Carter et al., 2004).

Only a small, but growing body of empirical studies on supplier perceptions of ERAs exists. Based on 15 interviews with suppliers from the United States, Germany, France, Scotland, and Taiwan, Carter et al. (2004) found that the vast majority feels that ERAs have a negative impact on their relationships with customers. Many suppliers voiced their concern over ethical issues like phantom bidding in the auction by the buyer, or the fact that non-qualified suppliers are allowed to participate in the auction only to drive prices down (see also Jap, 2002). Tassabehji et al. (2006) performed an in-depth study of five auctions with one supplier and executed additional interviews with 16 suppliers. All suppliers in the study were packaging suppliers from the United Kingdom. They found that suppliers were mainly concerned about inadequate supplier pre-qualification, phantom bids placed by the buyer, opacity in contract awarding, and specifications being changed after the auction. Jap (2003) reports on a

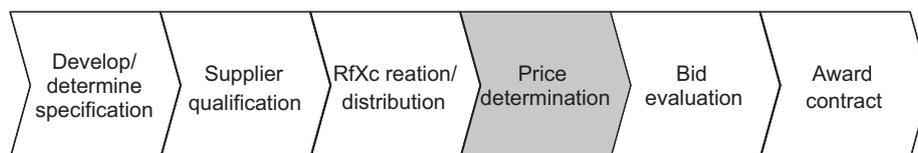


Fig. 1. Overview of sourcing process (source: Gattiker et al., 2007).

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