When Nobody Knows Your Name: Country-of-Origin as a Reputational Signal for Online Businesses

A. Rebecca Reuber
Rotman School of Management, University of Toronto, Toronto, ON, Canada

Eileen Fischer
Schulich School of Business, York University, Toronto, ON, Canada

ABSTRACT

Businesses competing online frequently face crowded markets where customers have low familiarity with most firms. In such markets, does a firm's country-of-origin constitute a reputational signal that will influence customers? We examine the question in the context of consumers making online product trial decisions on the web site Download.com. *We find product risk moderates the relationship between negatively stereotyped country-of-origin signals and product trial, which is taken as a measure of customers' reputational evaluations. These findings suggest that signals arising from negative country-of-origin stereotypes can be consequential, after controlling for other reputational signals about the firm or its products. The implication for managers is that stereotyping signals can influence customers in online markets, and they should be wary of disclosing any potentially stigmatizing information.*

Corporate Reputation Review (2011) **14,** 37–51.
doi:10.1057/crr.2011.2

KEYWORDS: *country-of-origin; customers; online rating; reputation; software products*

In online environments there are many largely unknown firms attempting to sell globally (cf. Loane *et al.*, 2004; Petersen *et al.*, 2002). In order to share in the explosion of economic transactions over the internet, young and regionally limited firms need to be able to establish a sound reputation within this context characterized by numerous competitors, most of or all of which are relatively unfamiliar to customers.

An emerging literature on reputation development has identified various reputation-building signals, such as signals of product/service quality and media rankings and reports (Deephouse and Carter, 2005; Rindova *et al.*, 2006). Familiarity with organizations and/or the individuals associated with them is explicit or implicit in much of this work. One stream of research has studied well-established organizations in mature industries, where the relevant stakeholders are familiar with many of the players and where there are widely published reputational rankings, such as *Fortune* Magazine's list of America's most admired companies (eg Fombrun and Shanley, 1990) and published business school rankings (eg Labianca *et al.*, 2001; Martins, 2005; Rindova *et al.*, 2006). Other research has examined new, unfamiliar organizations, but in industry contexts where firm founders, management team members or their affiliates are relatively familiar to the stakeholders of interest. For example, studies of investors and alliance partners indicate that these stakeholders make reputational assessments

Corporate Reputation Review, Vol. 14, No. 1, pp. 37–51

1363-3589

of new firms by leveraging their familiarity with industry players to evaluate a management team or new organization's affiliations, or to obtain trusted endorsements (eg Higgins and Gulati, 2003; Sacks, 2002; Shane and Cable, 2002; Shepherd *et al.*, 2003; Stuart *et al.*, 1999).

But what if the number of competitors is large and growing and key stakeholders such as customers have a generally low level of familiarity with players in an industry? Prior research has largely neglected consideration of reputational signals in such a context. The omission is significant because the functional role of reputation is to reduce uncertainty about firms (Roberts and Dowling, 2002; Shapiro, 1983; Weigelt and Camerer, 1988). The uncertainties associated with a lack of familiarity increase the difficulty of making reputational assessments while, paradoxically, rendering them more valuable.

In this paper, we investigate country-of-origin stigma as one type of firm-level reputational signal in this context. We argue that there is reputational transfer from a firm's country-of-origin in the same way that there is reputational transfer from a firm's organizational affiliations. We draw on the country-of-origin literature in marketing, which has found that stereotypes of a country's image impact buyers' perceptions of products from that country (Chiou, 2003; Gurhan-Canli and Maheswaran, 2000; Han, 1989). Our dependent variable of interest is reputational evaluation, and the measure that reflects this variable is product trial: we expect that signals contributing to a firm's reputational evaluation will be associated with a greater propensity on the part of consumers to try that firm's products. Product trial is both a reasonable measure of reputational evaluation in a context such as this, and an outcome of managerial relevance because it influences customers' consideration set or the set of products among which the consumer ultimately chooses (Kardes *et al.*, 2002).[1]

In particular, we investigate country-of-origin reputational signals associated with negative stereotypes (stigmatized country-of-origins) and examine the relationship between a stigmatized country-of-origin and reputational evaluation, after taking into account previously documented signals pertaining to product and firm quality. We do so using data collected about software products offered by sellers from over 25 countries on the online market web site Download.com. We identify three countries as having a negative stereotype in this sector on the basis of their ranking as a source of spam (Einhorn, 2004) and software piracy (BSA, 2004): China, Russia and Ukraine. We hypothesize, and find, that after controlling for firm- and product-level quality signals, a stigmatized country-of-origin is more strongly, and inversely, related to reputational evaluation as reflected by product trial for products of higher versus lower risk.

The remainder of the paper is organized into four sections. In the following section, we review past research on signal diagnosticity and reputational signals and develop the hypotheses. Our model is shown in Figure 1. In the next two sections, we describe our research methods and report the results of the analyses. In the final section, we discuss limitations and the theoretical and managerial implications of the study.

THEORY AND HYPOTHESES

Following Fombrun (1996), we define an organization's reputation as its overall appeal to its external stakeholders. A reputation is a social cognition. Although it is a firm-level resource, it consists of the cognitive evaluations of the firm held by external stakeholders. We regard individuals' reputational beliefs about an organization as their attitude toward it and focus on the individual-level cognitive processes leading to attitudes that collectively constitute an organizational reputation. Although attitudes are an

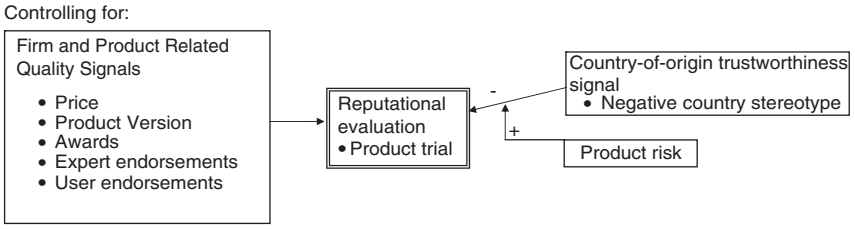

***Figure 1**: Hypothesized relationships between reputational signals and reputational evaluation*

individual-level construct, this approach has been used to understand collective beliefs about new brands and products (eg Keller, 1993) and individuals' power identities (eg Fiol *et al.*, 2001).

The accessibility-diagnosticity framework (Feldman and Lynch, 1988) serves as a theoretical underpinning for our study because it helps to explain how new information is processed cognitively by stakeholders such as customers. The framework, which has previously been applied to people's judgments about products (eg Herr *et al.*, 1991; Berens *et al.*, 2005) and firms (Desai *et al.*, 2008), proposes that the use of one piece of information versus another in making judgments is a function of the relative accessibility in memory of beliefs about the firm or product and the diagnosticity of the information. Accessibility refers to the ease with which the piece of information can be retrieved from memory. Diagnosticity refers to the extent to which a piece of information is useful in the judgment process. When accessibility is high, as is the case of beliefs about well-known firms or products, beliefs already stored in memory can dominate judgments, even when new signals are diagnostic. This helps to explain why firms' standings in reputational rankings such as those published by *Fortune* tend to persist (cf. Schultz *et al.*, 2001). However, when accessibility is low, as is the case here, where customers are unfamiliar with firms in a market space, we expect signal diagnosticity to dominate judgments.

Diagnostic signals are those which enable stakeholders to distinguish between good and poor performers (eg Folkes and Patrick, 2003; Skowronski and Carlston, 1987). Negative information has more frequently been found to be diagnostic (Baumeister *et al.*, 2001): good performers rarely perform poorly, whereas weak performers are expected to perform at a satisfactory level some, but not all, of the time. A negativity bias is also a result of people weighing potential costs more heavily than potential gains in decision making (Kahneman and Tversky, 1979).

A stigmatized country-of-origin represents a negative signal.[2] The marketing literature has found that stereotypes of a country's image impact buyers' perceptions of products from firms that are based in that country (Chiou, 2003; Gurhan-Canli and Maheswaran, 2000; Han, 1989). Such stereotyping is facilitated through categorization: when we slot a product into a category, we infer additional information about it from our socially constructed perceptions of attributes relevant to that category (Jones *et al.*, 1984: 156). When the category is associated with a negatively perceived attribute, these generalized inferences are negative. In this way, stereotyping projects undesirable qualities onto products, accurately or not, thereby stigmatizing them (Biernat and Dovidio, 2000), and so a stigmatized country-of-origin should negatively impact assessments of a firm's products.

But is a stigmatized country-of-origin a diagnostic signal in the context of low familiarity

studied here? Samiee *et al.* (2005) are critical of prior country-of-origin research, arguing that it tends to overstate considerably the importance of country-of-origin as a signal to consumers. One factor leading to such overstatement is that the level of buyers' attention to country-of-origin in real world settings is significantly less than the level of attention that is produced in experimental settings (eg Liefeld, 2004; Liu and Johnson, 2005). Since we have data on real world demand, we do not need to be concerned about experimental effects. However, a second factor contributing to overestimates of the importance of country-of-origin signals is that there are competing signals in the market (Pharr, 2005; Purohit and Srivastava, 2001). This is an issue we do need to take into account when considering whether a stigmatized country-of-origin is likely to be a diagnostic signal in this online research context of low familiarity.

Prior research has established that firm- and product-related *quality* signals, such as awards and endorsements are related to a firm's reputation (eg Hendricks and Singhal, 1996; Rao, 1994; Stuart *et al.*, 1999). By defining a negative country-of-origin stereotype on the basis of the country's visibility as a source of spam and software piracy, however, we are emphasizing the *trustworthiness* dimension of organizational reputation (cf. Scott and Walsham, 2005). We know that evolving from an unfamiliar to a familiar seller involves building a trustworthy identity (cf. Aldrich and Fiol, 1994; Shepherd and Zacharakis, 2003; Zimmerman and Zeitz, 2002). We also know that trustworthiness is expected to be particularly important in online environments, where there are few repeated ties because most buyers interact with a seller in only one transaction (Resnick and Zeckhauser, 2002), and there is an inherently low level of trust among parties (Scott and Walsham, 2005). Because of the importance of trustworthiness in this context, we expect that a negative country-of-origin stereotype will be diagnostic, over and above quality signals. This leads to the following hypothesis:

H1: *After controlling for quality-related reputation signals, the signal of a negatively stereotyped country-of-origin is negatively related to a firm's reputational evaluation.*

Further, we expect a greater impact when products are of higher risk, which renders trustworthiness more important. Gurhan-Canli and Batra (2004) posited and found that firm-level signals have a greater effect on product-level judgements when products are riskier. In their study of familiar products and firms (high-definition televisions produced by Sony and Samsung), they found that signals of firm quality and firm trustworthiness had a greater effect on consumer evaluations of high-risk (statistically less reliable) products than on low-risk (statistically more reliable) products. The explanation for the finding is that the possibility of negative outcomes is heightened in higher-risk situations. For this reason, the diagnosticity of a firm-level signal related to such outcomes is perceived as greater and the signal is therefore likely to be more consequential to judgments being made about riskier products. This leads to the following hypothesis:

H2: *After controlling for quality-related reputation signals, product risk moderates the negative relationship between the signal of a negatively stereotyped country-of-origin and a firm's reputation.*

RESEARCH METHODS

Research Setting, Sample and Data Collection

We collected data from the Download.com web site. Download.com is a web site owned by CNET Networks. It is an international

market space and lists thousands of software products that people can download for free, at least for a trial period. Products are categorized and sub-categorized by their function; for example, the category Audio & Video has sub-categories Jukeboxes, DVD Tools and so on.

Download.com is an ideal setting for investigating reputation in a crowded market context where customers are likely to have low familiarity with competitors. Only a small percentage of the firms and products listed on Download.com are recognizable and so the markets in which these businesses compete are primarily populated by firms that do not have household names, such as Awinsoft, ConquerWare, FlarpDotNet, Kephyr, Pollen Software and so on. It is very unlikely that many of the millions of customers visiting the site each month will be familiar with even a sizeable subset of all possible offerings. Not only would they need to incur the cost of acquiring familiarity with hundreds of producers and products, they would need to incur the cost of maintaining this familiarity while products are continually being added and dropped, and replaced with newer versions.

The web site is an international market used by large numbers of online shoppers. At the time of data collection in August 2005, ranking.com, which ranks web traffic, ranked Download.com ninth among all sites in terms of unique visitors (in contrast, Google was ranked fifth). It was the highest ranked download site. It claimed an estimated 38 million users per month to based on Nielson Netratings. Firms can list their product free-of-charge, in return for a percentage of their gross revenue from the site. If they paid a monthly fee for a listing, they passed on a lower percentage of revenue and received some additional services. Finally, Download.com made product-level and firm-level information readily available to shoppers. Each product listing showed highly visible product ratings and had a link to the firm's web site in an easily accessible and standardized location.

It should be noted that in collecting data from Download.com, we are examining downloads of products and not actual uses or purchases of products. While product trial influences customer decision making (Kardes *et al.*, 2002) and we know how many times a product was downloaded, we do not know whether the people who downloaded products used them or bought a copy once the trial period was over. However, while a person may download more than one product, to compare them, they are very unlikely to download all 100+ products in a category. Accordingly, they need to make evaluative judgments. Indeed, even though all products can be downloaded for free, there is a wide range of demand across the products in each category. Further, we do not address customers' decisions to engage in e-commerce (cf. Salam *et al.*, 2005) or to select one web site over another (cf. Bart *et al.*, 2005). To maintain focus, we assume that customers have already decided to download a particular category of software product from the Download.com web site, and investigate their choice once there.

We collected data from three categories of products: Adware & Spyware Removal ($n=165$), Authoring Tools ($n=133$) and Font Tools ($n=45$), for a total of 343 products. We included all products listed in the three categories. These product categories were chosen because they reflect two different levels of product risk. Adware & Spyware Removal products are of higher risk to computer users for three reasons. First, they have no substitutes. To reap their functional benefit, each computer needs the software. In contrast, people can outsource the functionality that authoring and font tools provide. Second, they are riskier because they affect a computer's core functioning, by changing registers, while authoring

and font tools operate on files. Finally, they are riskier because of their complexity. No single system has full functionality (to clean all known adware and spyware) and computer users have a very incomplete knowledge of how they work and of their benefits (Lee and Kozar, 2005).

In collecting data from the Download.com web site, there were three main concerns. The first was that the set of listed products changes over time, and we needed to be able to calculate relative demand for all products in a product category at one point in time. We handled this issue by collecting an inventory of the products in a category, as well as their demand and rating data, in a short period of time (over one day). The second concern was that since the dependent variable (based on online product demand) was collected for all products at one time, it was necessary to collect the remainder of the data afterwards. Thus, it is possible that the values for the independent and control variables changed during this period. Since it was impossible to collect all the data simultaneously, we handled this issue by minimizing the data collection period for each product category as much as possible (over a month). We tested a subset of the sample to see the extent to which data fields changed over a month, and found little change overall (nine changes in seven data fields for 135 products). Third, in order to collect the data over as short a period as possible, we had two people doing the data collection and it was important to make sure that they were coding variables in the same way. In order to safeguard data integrity, we had both people collect data for 30 Adware & Spyware Removal products and discuss any differences in the values coded. After this training period, they both collected data on 133 products in the Authoring Tools category. We found that 95.7 percent of the data elements had been coded identically and resolved the inconsistencies through discussion.

Measures

Dependent variable

Reputational evaluations: Strategy and organizational scholars have proposed a number of different ways to operationalize the reputation construct: surveys of stakeholders (eg Shane and Cable, 2002), published ratings (eg Fombrun and Shanley, 1990), media coverage (eg Deephouse, 2000) and market share (eg Shamsie, 2003). Since the firms we are investigating are primarily small, unfamiliar players in a crowded market, it was not possible to use the first three types of measure. Stakeholders would not recognize the firms in surveys, there are no published ratings capturing the majority of them, and media coverage is scant and covers only a small percentage of firms in the sample at best. Accordingly, we measured customers' reputational evaluations with a market share approach, and so the meaning of reputation is akin to market dominance (cf. Shamsie, 2003). It is a comparative measure to reflect the comparative nature of reputation, and reflects a firm's relative standing among its peers (cf. Shenkat and Yuchtman-Yaar, 1997). Specifically, we conceive of a firm's reputational evaluation as being reflected by the number of product trials it attracts from prospective customers. Product trial is an important outcome for firms because it influences customers' consideration set, or the set of products among which the consumer ultimately chooses (Kardes *et al.*, 2002). As such, it is an appropriate indicator of reputational evaluation, as consumers' consideration sets are likely to consist only of vendors they assume to be reputable.

The extent to which there has been customer trial with a particular product is measured by the total number of downloads of the product in the past week (the week preceding data collection), which is available on the web site. This variable ranges from zero to 1,104,119, with a mean of 8,388. Because the variable is positively skewed, a

logarithmic transformation was used in analyses. We used the number of downloads in the past week, rather than total downloads for the product, because products are listed for different lengths of time and we did not want a value to be high solely because the product had been listed on the web site for a longer period of time.

Independent variable

Country-of-origin signal: We identify three countries as having a negative stereotype in this sector on the basis of their ranking as a source of spam (Einhorn, 2004) and software piracy (BSA, 2004): China, Russia and Ukraine. Country-of-origin information was sought from the web sites of each firm. Just over half of the firms (54.8 percent) disclosed their country-of-origin, and so the variable has a missing value for the other firms. Since online sellers are more likely to disclose information that favors them (Resnick *et al.*, 2000), we expect this measure to underestimate the products from these three countries. For firms that disclosed country-of-origin, we assigned a value of 1 to those based in negatively stereotyped countries of origin and a value of 0 for those based elsewhere.

Moderating variable

Perceived product risk: As discussed previously, we measured product risk by whether the product was in a higher-risk category (1 = Adware & Spyware Removal products; $n = 165$) or a lower-risk category (0 = Authoring Tools and Font Tools products, $n = 178$).

Measures of firm and product quality signals

Prior research has identified firm- and product-level quality signals that are positively related to firms' reputations. We control for these in order to examine the impact of a stigmatized country-of-origin after positive signals have been taken into account.

Number of awards: The winning of awards is an established reputational signal of perceived firm quality in off-line environments (eg Rao, 1994; Reuber and Fischer, 2007), and we expect them to have a similar impact in online environments. We measured a firm's awards by counting the awards listed on the web site of each firm. It is not difficult or time-consuming to get to a firm's web site – the address is listed with the product description on Download.com. In constructing this variable, we limited the count to awards *per se* and did not include other third-party recognitions such as appearing on a 'pick of the week' list, a 'best of the best' list or a 'top ten download' list because we considered these recognitions more transient. However, we cannot determine the extent to which the individual awards listed are perceived as credible by potential customers. Instead, we rely on the argument that the award designation is itself an important signal which can help build reputation and encourage product trial even if it comes from a source that is unknown or low in prestige (eg English, 2005). Receiving an award is rare and so is expected to be diagnostic: only 27.7 percent of the products are associated with a firm receiving even one award. The range of this variable is 0 to 200, with a mean of 2.6 awards. Because the variable follows a Poisson distribution, we used a square root transformation (Cohen and Cohen, 1983).

Expert endorsement of product: As with awards, we expect expert product ratings to be perceived quality signals. The expert product rating in this context is the CNET Editor product rating, indicated on a colored scale from one star to five stars. If a product has a CNET Editor rating, it is immediately obvious on the Download.com web site beside the product's name. A CNET Editor rating is exclusive: only 19.2 percent of products in our sample had one. The range of this variable is zero (no rating) to five, with a mean value of zero.

User endorsement of product: We also expect user product ratings to be reputational signals. Although user endorsements are subject to distortions (Admati and Plfeiderer, 2001; Dellarocas, 2003, 2006), online consumers perceive both experts and 'other consumers' as being credible sources of product recommendations, with human experts perceived as more expert and 'other consumers' perceived as more trustworthy (Senecal and Nantel, 2004).

We have two measures of user endorsement. We measured the consensus among users with respect to product assessment with the 5-point average user rating on the Download.com web site. This is consistent with Welch's (2000) 5-point measure of the consensus among security analysts. The average user rating is indicated by a colored scale from one star to five stars. If the product has an average user rating, it is immediately obvious on the web site, beside the product name. User ratings are more common than CNET Editor ratings: 64.7 percent of the products had one. To take into account the credibility of user endorsements, we also measured the popularity of the product – the size of its word-of-mouth network (Dellarocas, 2003) – by the number of user ratings that had been posted. The mean number of user ratings is 37.38, with a range of 0 to 2,246.

Beyond these perceived quality signals that have documented in prior literature in online markets, there are other potential quality signaling variables we believe should be controlled for in this setting as well.

Product price: In established markets, higher prices have long been considered a firm-controlled signal of higher product quality (eg Milgrom and Roberts, 1986), and so we include it as a control variable. We measure product price using a binary variable to indicate whether the buyer has to pay to use the product after a trial period (yes = 1; no = 0). There was a fee charged after a trial period for 65.6 percent of the products.

Version: In this context, we expect that version is a positive indicator of product and firm quality. That is, firms that release updated version of products are signaling that they are investing in product refinement and improvement, and firms that make such investments are regarded as being of higher quality. Further, the signal created by higher version is of higher quality than earlier versions. In order to control for the version as a quality indicator, we recorded the version number of each product.

RESULTS

Descriptive statistics and zero-order correlations are shown in Table 1. As can be seen, there is some multicollinearity among the independent and control variables. We tested the seriousness of the multicollinearity by examining the Tolerance statistics of the regressions. Menard (1995: 66) states that a Tolerance statistic of less than 0.20 is cause for concern. The lowest Tolerance statistic generated before the interaction term is added is 0.84, and even when the interaction terms are added, no Tolerance statistic is less than 0.61.

The price and version measures of quality signals are entered into Equation (1), as shown in Table 2. While the coefficient for version is not significant, the coefficient for price is significant, but, contrary to expectations, negative. A plausible explanation for this unexpected result is that people are so reluctant to pay for digital products over the internet that the quality-signaling effect of price is diminished in this context. In addition, people may be reluctant to invest in learning how to use a product if they know they will have to pay for it later and alternate, free products exist. The control variables of price and version account for 9.6 percent of the variance of product trial and the equation has a significant *F*-value.

The awards, editor ratings and user endorsements measures of perceived quality signals are next entered in to Equation (2).

Table 1: Descriptive Statistics and Zero-order Correlations

Variable	*Mean*	*SD*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Product trial[a]	4.09	2.28	−0.315**	0.006	0.169**	0.488**	0.293**	0.514**	−0.091*	0.304**
2. Price	0.66	0.48		0.089	0.077	−0.002	0.063	−0.148**	0.117*	−0.298**
3. Version	2.8	3.6			0.045	0.055	0.001	−0.036	−0.012	−0.045
4. Number of awards[b]	0.69	1.46				0.073	0.093*	0.043	−0.001	−0.066
5. Average CNET Editor rating	2.18	1.92					0.271**	0.355**	−0.083	0.259**
6. Average user rating	37.38	211.81						0.177**	−0.013	−0.011
7. Number of user ratings	0.67	1.46							−0.010	0.150**
8. Negative country-of-origin stereotype	0.10	0.30								−0.105*
9. Product risk	0.48	0.50								

*$p<0.05$; **$p<0.01$; ***$p<0.001$

[a]Logarithmic transformation

[b]Square root transformation

As expected, the coefficients are all significant and positive, indicating that the number of awards a firm has received, the product's CNET Editor rating, the average user rating and the number of user ratings are all predictors of product trial. The addition of these variables increases the adjusted R^2 to 0.521 and the equation has a significant *F*-value.

The measure indicating a negative country-of-origin is entered into Equation (3), and the moderator and the interaction terms are entered into Equation (4). Equation (3) shows that negative country-of-origin is not a significant direct predictor of product trial, while Equation (4) shows that it has a moderated relationship: a negatively stereotyped country-of-origin has a significant negative relationship to product trial for higher-risk products but not for lower-risk products. Thus, our results support our second, but not our first, hypothesis.

DISCUSSION AND CONCLUSIONS

We investigated the reputational evaluations, as reflected by product trial, of software vendors listed on the web site Download.com, a context where online shoppers have low familiarity with the competitors in the market. Specifically, we examined the impact on reputational evaluation of a firm being located in a negatively stereotyped country-of-origin by first taking into account signals related to firm and product quality. Our findings suggest that a negative country-of-origin stereotype is diagnostic, over and above quality signals, but only for riskier products.

Before discussing the implications and conclusions of this research, we note its key limitations. First, the measure of reputational evaluation is product trial, which is a behavioral rather than a perceptual measure of the construct. Second, we are assuming that the individuals using the Download.com web site are indeed unfamiliar with most of the firms and products listed. This assumption seems valid given the number of downloaders and products, the generally

Table 2: Results of the Hypothesis Testing

	Equation (1)	*Equation (2)*	*Equation (3)*	*Equation (4)*
Price	−0.321***	−0.229***	−0.227***	−0.198***
Version	0.033	0.012	0.011	0.016
Number of awards		0.143***	0.143***	0.149***
CNET Editor rating		0.341***	0.339***	0.300***
Average user rating		0.180***	0.180***	0.179***
Number of user ratings		0.347***	0.347***	0.350***
Negative country-of-origin stereotype			−0.020	0.045
Product risk				0.130**
Negative country-of-origin x product risk				−0.111*
Adjusted R^2	0.096	0.521	0.520	0.533
R^2 change		0.429	0.000	0.016
F	17.68	57.84	49.49	40.72
F change		70.06***	0.26	5.28**

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Dependent variable: Number of downloads in the past week

Standardized coefficients are shown

low level of familiarity with software such as this (cf. Lee and Kozar, 2005), and the costs of gaining and maintaining familiarity with such a large number of competing offerings. Third, by necessity the dependent variable was collected temporally prior to the independent variables. This had the potential to affect the results, although when we tested a subset of the sample to examine the extent of changes, we found little change overall.

With these caveats in mind, this study extends theories of organizational reputation by examining stakeholders' judgments in crowded markets where familiarity with competitors is low. In doing so, this study addresses recent arguments that contextual characteristics must be taken into account to refine theories such that they are sensitive to variables that take on distinct values in different settings (Johns, 2006; Zahra, 2007). Most prior reputation research has been conducted using familiar firms and/or stakeholders who are knowledgeable industry insiders (eg Heil and Robertson, 1991; Deutsch and Ross, 2003; Shane and Cable, 2002; Shepherd *et al.*, 2003; Stuart *et al.*, 1999). Our findings suggest that when risk is low, stakeholders making judgments in product categories in which they are unfamiliar with most vendors, appear to be influenced by signals, which can reassure them that the firm whose products they are sampling is itself of high quality. As this finding contrasts somewhat with earlier results produced in a setting where firms were familiar to consumers (ie Gurhan-Canli and Batra, 2004), these findings suggest that reputational signals can have a distinctive impact in low familiarity contexts, and that future research must take this contextual characteristic into account.

In addition, our study supports the notion that signals that suggest a lack of firm trustworthiness can be salient for customers making product assessments in contexts where there are many unfamiliar firms. Much of the prior research on organizational reputation

has focused on signals that take on ranges from positive to neutral in relation to quality and visibility (eg Rindova *et al.*, 2006). Our firm-level country-of-origin measure of perceived trustworthiness, by contrast, took on ratings that were either negative (stigmatized country-of-origin) or neutral (non-stigmatized country-of-origin). Our findings that lack of trustworthiness is salient for riskier products supports Scott and Walsham's contention that establishing trust with stakeholders is a key element in managing reputation risk (2005). Interesting, the non-significance of the trustworthiness variable in the low-risk condition suggests that there may be contexts in which the trustworthiness dimension of reputation is less important. More broadly, our research suggests that researchers should systematically examine not just reputation-building but also reputation-*threatening* signals, and should consider the possibility that reputation-threatening signals may have effects that are not perfectly symmetric with those of reputation-building signals. As the research reported here shows, at least in the context and with the signals under investigation in this study, reputation-building signals may have unmoderated effects while reputation-threatening signals may have effects that are moderated by other factors. We note, however, that the magnitude of the impact of reputation-threatening signals may be more modest that those of reputation-enhancing signals. In the context investigated here, the portion of variance explained by our measure of country-of-origin stigma was modest relative to the variance explained by measures of firm and reputation quality. Future research with other reputation-threatening signals in other contexts is vital if we are to understand theoretically and practically the role that reputation-threatening signals may play in influencing reputational evaluations.

Our study also serves to link prior research on off-line reputational signaling with studies regarding online reputation systems (cf. Resnick *et al.*, 2000). Much prior research on off-line reputation signals emphasizes source credibility: endorsements from high status players (eg Stuart *et al.*, 1999), credentialed, stable rating systems, such as the *Fortune* ratings, the *Business Week* ratings, *Consumer Reports*, J.D. Power & Associates ratings (eg Fombrun and Shanley, 1990; Martins, 2005; Rhee and Haunschild, 2006; Rindova *et al.*, 2006) and media coverage (eg Deephouse, 2000; Rindova *et al.*, 2007). In contrast, online reputation systems are largely based on anonymous ratings and source credibility is difficult to discern. The eBay feedback mechanism is the most studied, but there are online rating and review mechanisms for an enormous variety of activities. Studies of such systems have provided useful insights about how online buyers use such information (for example, Ba and Pavlou, 2002; Bolton *et al.*, 2004; Chevalier and Mayzlin, 2006; Dellarocas, 2003; Standifird, 2001), but focus on signals that firms can manipulate to a greater extent. Since multiple types of reputational systems coexist, if we are to fully understand reputation development, we need to take into account the full range of signals available, both online and off-line, and understand the contexts in which they are substitutes and/or complements.

We conclude by highlighting implications of this research for business managers in crowded online markets where customers lack familiarity with competitors. Our study suggests that it is not sufficient for managers to monitor and attempt to influence product ratings and reputation-building firm-level quality signals. Unfavorable associations or stereotypes, even if unwarranted, may be detrimental, and these unfavorable reputation-threatening signals may emanate from factors that owner-managers themselves regard as irrelevant – such as their firm's regional basis of operation. The challenge facing managers, then, is to become sensitized and responsive to the full range of signals, at both product- and firm-levels, that are salient to

relevant stakeholders. This research suggests that country-of-origin is one such signal (albeit one that accounts for a relatively modest portion of the variance in reputation a evaluation in the present study); it is likely that others exist as well, and it is possible that stigmatized country-of-origin may play a greater role in other contexts.

Managers may be unwilling or unable to control the release of information about such matters as country-of-origin or firm age, but if such information is apparent to stakeholders, then managers may want to seek means of mitigating its impact by offering assurances that counter-balance or altogether alleviate negative inferences.

Acknowledgments

The authors are grateful for the research assistance of Anthony Lu and Nataliya Nebrat and the comments of participants at the Queen's University Organization Behavior Brown Bag Workshop. Financial support from the University of Toronto's Work-Study Program, the Entrepreneurship Research Alliance II and the Social Sciences & Humanities Research Council of Canada (grant number 720-142-07) is also acknowledged with thanks.

Notes

1 It should be noted that there is a large body of literature on how customers make trial and purchase decisions. However, it tends to focus on markets where customers are choosing from among more limited choice sets where producers are attempting to differentiate themselves from a much smaller set of competitive offerings than in the type of context examined in this paper. For example, a recent study of consumer packaged goods product categories found that the average number of brands in a category is eight, with a standard deviation of four (Steenkamp and Gielens, 2003), compared to the 100+ offerings in a product category in the context studied here. To our knowledge, scholars studying customer perceptions and decision making have not addressed the question of what kinds of reputational signals differentiate among firms when customers are unfamiliar with large numbers of producers.

2 Please note that in making these arguments, we are not claiming that the converse is true. To our knowledge, there is no theoretical basis to believe that there are positive country-of-origin stereotypes in this research context, that any positive stereotypes will be diagnostic, or even that all countries in this market context are associated with relevant stereotypes. For example, we explored whether there might be a bias in favor of sellers from English-speaking countries since the web site is in English. Specifically, we investigated whether being from a country with English as an official language advantaged a firm in terms of the probability of being rated (number of user ratings) and the valence of ratings (both average user rating and CNET Editor rating), as well as our measure of reputation, product trial. *T*-tests comparing sellers from countries where English is versus is not an official language indicate that there are no differences in the means of these four variables: number of user ratings ($t = 0.80$, $p = 0.424$), valence of average user rating ($t = 0.155$, $p = 0.909$), valence of CNET Editor rating ($t = 0.317$, $p = 0.752$) and product trial ($t = 0.505$, $p = 0.615$).

References

Admati, A.R. and Plfeiderer, P. (2001) 'Noisytalk.com: Broadcasting opinions in a noisy environment', Working Paper 1670R, Graduate School of Business, Stanford University.

Aldrich, H. and Fiol, M. (1994) 'Fools rush in? The institutional context of industry creation', *Academy of Management Review*, 19(4), 645–670.

Ba, S. and Pavlou, P.A. (2002) 'Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behavior', *MIS Quarterly*, 26(3), 243–268.

Bart, Y., Shankar, V., Sultan, F. and Urban, G.L. (2005) 'Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study', *Journal of Marketing*, 69(October), 133–152.

Baumeister, R.F., Bratslavsky, E., Finkenauer, C. and Vohs, K.D. (2001) 'Bad is stronger than good', *Review of General Psychology*, 5(4), 323–370.

Berens, G., van Riel, C.B.M. and van Bruggen, G.H. (2005) 'Corporate associations and consumer product responses: The moderating roles of corporate brand dominance', *Journal of Marketing*, 69, 35–48.

Biernat, M. and Dovidio, J. (2000) 'Stigma and stereotypes', in T. Heatherton, R. Kleck, M. Hebl and J. Hull (eds.), *The Social Psychology of Stigma*, The Guilford Press, New York, pp. 88–125.

Bolton, G.E., Katok, E. and Ockenfels, A. (2004) 'How effective are electronic reputation mechanisms? An

experimental investigation', *Management Science*, 50(11), 1587–1602.

BSA (2004) *First Annual BSA and IDC Global Software Piracy Study*, July Business Software Alliance, Washington, DC.

Chevalier, J.A. and Mayzlin, D. (2006) 'The effect of word of mouth on sales: Online book reviews', *Journal of Marketing Research*, 43(August), 345–354.

Chiou, J.-Y. (2003) 'The impact of country-of-origin on pretrial and posttrial product evaluations', *Psychology & Marketing*, 20(10), 935–953.

Cohen, J. and Cohen, P. (1983) *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 2nd edn., Lawrence Erlbaum Associates, Hillsdale, NJ.

Deephouse, D. (2000) 'Media reputation as a strategic resource: An integration of mass communication and resource-based theories', *Journal of Management*, 26(6), 1091–1112.

Deephouse, D.L. and Carter, S.M. (2005) 'An examination of differences between organizational legitimacy and organization reputation', *Journal of Management Studies*, 42(2), 329–360.

Dellarocas, C. (2003) 'The digitization of word of mouth: Promise and challenges of online feedback mechanisms', *Management Science*, 49(10), 1407–1424.

Dellarocas, C. (2006) 'Strategic manipulation of internet opinion forums: Implications for consumers and firms', *Management Science*, 52(10), 1577–1593.

Desai, P., Kalra, A. and Murthi, P.B.S. (2008) 'When old is gold: The role of business longevity in risky situations', *Journal of Marketing*, 72, 95–107.

Deutsch, Y. and Ross, T. (2003) 'You are known by the directors you keep: Reputable directors as a signaling mechanism for young firms', *Management Science*, 49(8), 1003–1017.

Einhorn, B. (2004) 'A new Chinese speciality: Spam', *Business Week*.

English, J.F. (2005) *The Economy of Prestige*, Harvard University Press, Cambridge, MA.

Feldman, J.M. and Lynch, J.G. (1988) 'Self-generated validity and other effects of measurement on belief, attitude, intention and behavior', *Journal of Applied Psychology*, 73(3), 421–435.

Fiol, C.M., O'Connor, E.J. and Aguinis, H. (2001) 'All for one and one for all? The development and transfer of power across organizational levels', *Academy of Management Review*, 26, 224–242.

Folkes, V. and Patrick, V. (2003) 'The positivity effect in the perception of services: Seen one, seen them all?' *Journal of Consumer Research*, 31(2), 390–402.

Fombrun, C.J. (1996) *Reputation: Realizing Value from the Corporate Image*, Harvard Business School Press, Boston, MA.

Fombrun, C.J. and Shanley, M. (1990) 'What's in a name? Reputation building and corporate strategy', *Academy of Management Journal*, 33(2), 233–259.

Gurhan-Canli, Z. and Batra, R. (2004) 'When corporate image affects product evaluations: The moderating role of perceived risk', *Journal of Marketing Research*, 41(May), 197–205.

Gurhan-Canli, Z. and Maheswaran, D. (2000) 'Determinants of country-of-origin evaluations', *Journal of Consumer Research*, 27(1), 96–108.

Han, C.M. (1989) 'Country image: Halo or summary construct?' *Journal of Marketing Research*, 22(2), 222–229.

Heil, O.P. and Robertson, T.S. (1991) 'Toward a theory of competitive market signaling: A research agenda', *Strategic Management Journal*, 12(6), 403–418.

Hendricks, K.B. and Singhal, V.R. (1996) 'Quality awards and the market value of the firm: An empirical investigation', *Management Science*, 42(3), 415–436.

Herr, P., Kardes, F. and Kim, J. (1991) 'Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnosticity perspective', *Journal of Consumer Research*, 17(4), 454–462.

Higgins, M.C. and Gulati, R. (2003) 'Getting off to a good start: The effects of upper echelon affiliations on underwriter prestige', *Organization Science*, 14(3), 244–263.

Johns, G. (2006) 'The essential impact of context on organizational behavior', *Academy of Management Review*, 31(2), 386–408.

Jones, E., Farina, A., Hastorof, A.H., Markus, H., Miller, D.T. and Scott, R.A. (1984) *Social Stigma: The Psychology of Marked Relationships*, Freeman, New York.

Kahneman, D. and Tversky, A. (1979) 'Prospect theory: An analysis of decision under risk', *Econometrica*, 47, 263–291.

Kardes, F.R., Sanbonmatsu, D.M., Cronley, M.L. and Houghton, D.C. (2002) 'Consideration set overevaluation: When impossibly favorable ratings of a set of brands are observed', *Journal of Consumer Psychology*, 12(4), 353–361.

Keller, K. (1993) 'Conceptualizing, measuring, and managing customer-based brand equity', *Journal of Marketing*, 57, 1–22.

Labianca, G., Fairbank, J.F., Thomas, J.B., Gioia, D.A. and Umphress, E. (2001) 'Emulation in academia: Balancing structure and identity', *Organization Science*, 12(3), 312–330.

Lee, Y. and Kozar, K.A. (2005) 'Investigating factors affecting adoption of anti-spyware systems', *Communications of the ACM*, 48(8), 72–77.

Liefeld, J.P. (2004) 'Consumer knowledge and the use of country-of-origin information at the point of purchase', *Journal of Consumer Behavior*, 4(2), 85–96.

Liu, S.S. and Johnson, K.F. (2005) 'The automatic country-of-origin effects on brand judgments', *Journal of Advertising*, 34(1), 87–97.

Loane, S., McNaughton, R.B. and Bell, J. (2004) 'The internationalization of Internet-enabled entrepreneurial firms', *Canadian Journal of Administrative Sciences*, 21(1), 79–96.

Martins, L.L. (2005) 'A model of the effects of reputational ratings on organizational change', *Organization Science*, 16(6), 701–720.

Menard, S. (1995) *Applied Logistic Regression Analysis*, Sage Publications, Thousand Oaks, CA.

Milgrom, P. and Roberts, J. (1986) 'Price and advertising signals of product quality', *Journal of Political Economy*, 94(4), 796–821.

Petersen, B., Welch, L.S. and Liesch, P.W. (2002) 'The Internet and foreign market expansion by firms', *Management International Review*, 42(2), 207–221.

Pharr, J.M. (2005) 'Synthesizing country-of-origin research from the last decade: Is the context still salient in an era of global brands?' *Journal of Marketing Theory and Practice*, 13(4), 34–45.

Purohit, D. and Srivastava, J. (2001) 'Effect of manufacturer reputation, retailer reputation, and product warranty on consumer judgments of product quality: A cue diagnosticity framework', *Journal of Consumer Psychology*, 10(3), 123–134.

Rao, H. (1994) 'The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American automobile industry 1895–1912', *Strategic Management Journal*, 15(Special Issue), 29–44.

Resnick, P. and Zeckhauser, R. (2002) 'Trust among strangers in internet transactions: Empirical analysis of eBay's reputation system', in M.B. Baye (ed.), *The Economics of the Internet and E-commerce*, Volume 11 of Advances in Applied Microeconomics Elsevier Science, Amsterdam, the Netherlands.

Resnick, P., Zeckhauser, R., Friedman, E. and Kuwabara, K. (2000) 'Reputation systems', *Communications of the ACM*, 43(12), 45–48.

Reuber, A.R. and Fischer, E. (2007) 'Don't rest on your laurels: Reputational change and young technology-based ventures', *Journal of Business Venturing*, 22(3), 363–387.

Rhee, M. and Haunschild, P.R. (2006) 'The liability of good reputation: A study of product recalls in the U.S, automobile industry', *Organization Science*, 17(1), 101–117.

Rindova, V.P., Petkova, A.P. and Kotha, S. (2007) 'Standing out: How new firms in emerging markets build reputation', *Strategic Organization*, 5(1), 31–70.

Rindova, V.P., Williamson, I.O., Petkova, A. and Sever, J.M. (2006) 'Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation', *Academy of Management Journal*, 48(6), 1033–1049.

Roberts, P.W. and Dowling, G.R. (2002) 'Corporate reputation and sustained superior financial performance', *Strategic Management Journal*, 23, 1077–1093.

Sacks, M.A. (2002) 'The social structure of new venture funding: Stratification and the differential liability of newness', in M. Lounsbury and M.J. Ventresca (eds.), *Research in the Sociology of Organizations*, Vol. 19, JAI Press, Greenwich, CT, pp. 229–262.

Salam, A.F., Iyer, L., Palvia, P. and Singh, R. (2005) 'Trust in e-commerce', *Communications of the ACM*, 48(2), 73–77.

Samiee, S., Shimp, T.A. and Sharma, S. (2005) 'Brand origin accuracy: Its antecedents and consumers' cognitive limitations', *Journal of International Business Studies*, 36, 379–397.

Schultz, M., Mouritsen, J. and Gabrielsen, G. (2001) 'Sticky reputation: Analyzing a ranking system', *Corporate Reputation Review*, 4(1), 26–41.

Scott, S.V. and Walsham, G. (2005) 'Reconceptualizing and managing reputation risk in the knowledge economy: Toward reputable action', *Organization Science*, 16(3), 308–322.

Senecal, S. and Nantel, J. (2004) 'The influence of online product recommendations on consumers' online choices', *Journal of Retailing*, 80, 159–169.

Shamsie, J. (2003) 'The context of dominance: An industry-driven framework for exploiting reputation', *Strategic Management Journal*, 24(3), 199–215.

Shane, S. and Cable, D. (2002) 'Network ties, reputation, and the financing of new ventures', *Management Science*, 48(3), 364–381.

Shapiro, C. (1983) 'Premiums for high quality products as returns to reputations', *The Quarterly Journal of Economics*, XCVII(November), 659–679.

Shenkat, O. and Yuchtman-Yaar, E. (1997) 'Reputation, image, prestige, and goodwill: An interdisciplinary approach to organizational standing', *Human Relations*, 50(11), 1361–1381.

Shepherd, D.A. and Zacharakis, A. (2003) 'A new venture's cognitive legitimacy: An assessment by customers', *Journal of Small Business Management*, 41(2), 148–167.

Shepherd, D.A., Zacharakis, A. and Baron, R.A. (2003) 'VC's decision processes: Evidence suggesting more experience may not always be better', *Journal of Business Venturing*, 18(3), 381–401.

Skowronski, J.J. and Carlston, D.E. (1987) 'Social judgment and social memory: The role of cue diagnosticity in negativity, positivity, and extremity biases', *Journal of Personality and Social Psychology*, 52(4), 689–699.

Standifird, S.S. (2001) 'Reputation and e-commerce: eBay auctions and the asymmetrical impact of positive and negative ratings', *Journal of Management*, 27, 279–295.

Steenkamp, J.-B.E.M. and Gielens, K. (2003) 'Consumer and market drivers of the trial probability of new consumer packaged goods', *Journal of Consumer Research*, 10(3), 368–384.

Stuart, T.E., Hoang, H. and Hybels, R. (1999) 'Interorganizational endorsements and the performance of entrepreneurial ventures', *Administrative Science Quarterly*, 44, 315–349.

Weigelt, K. and Camerer, C. (1988) 'Reputation and corporate strategy: A review of recent theory and applications', *Strategic Management Journal*, 9, 443–454.

Welch, I. (2000) 'Herding among security analysts', *Journal of Financial Economics*, 58, 369–396.

Zahra, S.A. (2007) 'Contextualizing theory building in entrepreneurship research', *Journal of Business Venturing*, 2, 443–452.

Zimmerman, M. and Zeitz, G. (2002) 'Beyond survival: Achieving new venture growth by building legitimacy', *Academy of Management Review*, 27(3), 414–431.