Utilizing Social Networks to Improve Success Metrics in Social E-Commerce

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ABSTRACT

Social e-commerce highlights the current trend of companies strategically using a multi-platform approach for their marketing plans and selling needs. This approach often consists of a company utilizing one or more social networks, along with a social e-commerce, to create an online community around their products. However, there is limited holistic research on how companies use social networks to maximize their branding and marketing efforts. This study theorizes the strategic social network actions of a social e-commerce platform. We collected data from a random sample of 1,458 social e-commerce users and their chosen social networks, including Instagram, Pinterest, Facebook, and X (formerly known as Twitter). This unique data set and analysis assessed the impact of social network marketing from firms across a wide variety of industries and platforms. The study provides empirical evidence on follower growth and sales and identifies impactful marketing strategies in a multi-platform web environment.

Keywords

Social e-Commerce, Social networks, Econometric analysis, Word-of-Mouth, Social Earned Media

INTRODUCTION

In today's highly connected electronic commerce (e-commerce) environment, many organizations have an online presence across several different digital platforms (Baethge et al., 2016). To stay competitive, a company's website, historically seen as the gold standard for an organization's content delivery, has evolved into a larger, inter-connected web presence (Etter et al., 2017; Okonkwo, 2009; Sipior et al., 2014). The adage of "if you build it, they will come" is not applicable to crowded e-marketplaces. Currently, it is common for a company to maintain a variety of online spaces, including websites, blogs and, most notably, a presence on one or more social media sites (Gallaugher and Ransbotham, 2010; Mangold and Faulds, 2009; Pérez-González et al., 2017).

The rapid rise of social networks is the primary driver for the multi-pronged approach in company web presence. For many individuals, social networks have become equated with the Internet, where people spend much of their time within social network sites (Chen and Lu, 2016; Perrin, 2015). This recent behavioral trend has made participation within social networks essential for companies looking to disseminate information and compete for customers. As a response to the growing popularity of social network sites, the social network industry has differentiated its intended uses and functionalities (Foreman, 2017; Hua et al., 2017).

As a result of social network differentiation, a variety of social networks that offer varied emphases and specialties emerged. Recently, there is a blending of social network functionality with electronic commerce, resulting in hybrid sites that are part social network, part online retailer (Baethge et al., 2016; Li and Ku, 2018). The defining characteristic of these sites is that they combine e-commerce functionality, such as the ability to store credit card information, complete transactions and purchase products and services, with social media metrics, such as reputation, friend networks and popularity metrics (i.e. likes, favorites etc.) (Yamakami, 2014). We examine a social e-Commerce platform (Eisenmann et al., 2006), which we define as an e-Commerce website that supports social interactions and whose primary source of revenue comes from facilitating economic transactions between its members. Examples of these social e-commerce platforms include Venmo, which combines ETF functionality and micropayments with social network metrics; Ravelry, a social network specializing in fiber arts, such as knitting and crocheting, that also facilitates the sale of patterns among its users; and Etsy, a community-based marketplace for handmade or vintage items. In this study, we refer to the social networks that a company utilizes in support of their strategic goals. More specifically, in this study we examine this phenomenon by studying how actions taken by a social e-commerce platform within social networks translate into followers back on the original platform. As such, this paper examines the question: *What is the impact of social network marketing on follower growth within social e commerce platforms?*

The theoretical grounding for our work comes from research streams on electronic word-of-mouth communication and the concept of socially earned media (Schultz, 2016; Stephen and Galak, 2012). Extant research in this area has shown that positive word-of-mouth endorsements from interested social network followers can be a source of revenue for firms (Naylor et al., 2012). However, within this stream of research, many studies focus on a few large

firms or are focused on a single platform (Luo et al., 2013). These studies do not consider the dynamic nature of today's Internet, in which companies manage follower networks on several different websites across the web. Our study fills this gap in knowledge through our examination of a social e-commerce platform, where businesses across a variety of commerce sectors utilize various strategic approaches to both in-platform and social network marketing, across four different social network social networks. Thus, the data analyzed is a more realistic representation of company's strategic actions taken in the ever-present web, as compared to examining any one website in isolation.

With the goal of examining micro-enterprise social network marketing actions and their effectiveness, we reviewed research in two main areas: social-networked e-Commerce and word-of-mouth metrics in such environments. More specifically, we examine research on the concept of social e-commerce and on "social-earned media" - which refers to the visible artifacts left by the actions of users and organizations online.

Social E-Commerce

A basic definition of social commerce involves combining social interaction with elements of commerce (Dennison et al., 2009). Social e-commerce began as a melding of basic Web 2.0 functionality with traditional commerce methods (Curty and Zhang, 2013; Huang and Benyoucef, 2013). The appeal of social e-commerce came from the realization that individuals were no longer beholden to the marketing message of companies and possessed far more bargaining power when consuming and discussing products (Bartikowski and Walsh, 2014; Mudambi and Schuff, 2010). Early social e-commerce topics included the writing of customer reviews (Chevalier and Mayzlin, 2006), the sharing of links to commerce products, and making product recommendations etc. (Mangold and Faulds, 2009).

From this early work grew a set of literature that solidly explains the benefits of social e-commerce to both firms and customers. Studies have shown that social e-commerce is useful for product and service personalization (Adolphs and Winkelmann, 2010; Li and Karahanna, 2012; Li and Unger, 2012; Schubert and Ginsburg, 2000) and improves customer feedback (Curty and Zhang, 2013; Li and Karahanna, 2015). Research has also shown that customers exert significant influence upon one another both in terms of online trust and purchasing decision-making (Kim and Park, 2013; Zhang et al., 2014). While this research lays the groundwork for subsequent social e-commerce research, with the propagation of more advanced Web 2.0 technologies, more specifically the rise of social networks, a new definition for social e-commerce emerged. Recognizing the importance of network economics and the potential of network structures to create deeper and more meaningful customer-to-customer and customer-to-firm interactions, recent researchers have defined social e-commerce as networks consisting of sellers and buyers (Baethge et al., 2016). Our own work fits much more closely into this definition.

Focusing on social commerce as networks of sellers and buyers, a great deal of research looks at issues related to both the user experience and design of such networks. Current studies focus on issues such as adoption and intention-to-use social e-commerce platforms (Baethge et al., 2016), as well as how to design and build features required to take advantage of social commerce networks (Huang and Benyoucef, 2013; Li and Ku, 2018). While this literature has greatly furthered our understanding of networked social commerce as it relates to user behavior, it is somewhat limited in terms of its treatment of firm behavior. For example, a recent meta-analysis shows that most published research considers the user side of social commerce (Baethge et al., 2016). Of the studies that consider the firm context, most focus on website design-science methods. The few studies that do consider the behavior of social commerce firms are limited in scope to only a few firms or focus on one large firm engaging in what is still largely an advertising-based business models (Chen et al., 2017; Luo et al., 2013; Stephen and Toubia, 2010).

The dearth of research focusing on the firm side is problematic for two reasons. First, in social commerce the study of firms has much to contribute to understanding the user side of the network. Many social commerce networks organizations can engage with each other in a manner similar to existing users. As we discussed in the previous section, firms have the same ability to interact and compete for attention ascribed to network users and likely face similar factors when making usage and adoption decisions (Gallaugher and Ransbotham, 2010). For these reasons, it is important to consider both sides of the market, firm-side and user-side, as it can inform and enhance our understanding of each of the respective sides. A holistic view of both sides of the market is especially necessary with regards to issues such as network reputation. Since firms and individual users are subject to similar network

communication actions and restrictions, the attributes that are good for a social e-commerce user are likely beneficial to a firm. Similarly, a user who is interested in increasing their influence might benefit from the practices of companies. Thus, considering these groups as disparate and focusing exclusively on behavioral aspects of users may not show the full picture of the dynamics within the network.

According to Baethge et al. (2016), the second main area of social commerce research concerns the design and building of social commerce networks and artifacts. While this research does focus more on issues related to the firm and firm performance, it also has some limitations in areas to which our study can make a significant contribution. Extant research has articulated the design features that social commerce networks should have. However, these studies focus solely on building the "ideal" social commerce platform (Curty and Zhang, 2013; Huang and Benyoucef, 2013). The studies fail to examine the ingenuity of many companies already participating in social e-commerce every day. Faced with the limitations of current systems, these companies engage in endeavors designed to cobble together networks with their desired functionality from existing product offerings.

As an example of how users and companies may use different sites to accomplish different objectives, consider the variety available in terms of content representation and expression across different social commerce platforms. Sites like X (formerly known as Twitter[1]) still focus primarily on short bursts of textual communication to as the primary form of expression (Duh et al., 2012; Smith et al., 2012). Sites like Pinterest depend more on the use of images (Mull and Lee, 2014). Other sites emphasize streaming video presentation features like those available through Facebook Live. While the research has focused on developing a platform that encompasses all these features and more, firms are currently using social networks and accumulating or compiling a multi-network system to have the functionality that they need today. Thus, our examination of this phenomenon is an important contribution to this study.

Social Earned Media

To better understand the impact of social e-commerce, we need to examine the artifacts left by company actions online. As companies and users participate in social e-commerce activities, they often leave a trail of observable artifacts and actions behind them. The exact nature of these artifacts differs based on the website, but may include things like "likes", "tweets", "re-pins", star-ratings, and reviews etc.

Past research looks at these "social earned media" artifacts as observable derivatives of electronic word-of-mouth communication (Stephen and Galak, 2012; Susarla et al., 2012), which is itself a phenomenon that has been studied since the early days of Web 2.0 (Chevalier and Mayzlin, 2006; Mudambi and Schuff, 2010). Specifically, social earned media focuses on different traces left by user actions within social platforms. For example, a user may like a tweet made by a company's X.com account. The "like" is an example of social earned media, in the sense that the company's actions directly led to the accruing of this metric of online popularity. Unlike paid media or advertisements, social earned media is only available as a direct result of social media users' responses to a company's action (Stephen and Toubia, 2010; Trusov et al., 2009).

Early efforts on social earned media focused on the nature of discourse within social network sites. For example, if an organization takes some action, and that action is covered by blogs and members of online social network sites like Facebook, that is social earned media (Stephen and Galak, 2012). These and subsequent studies identified several positive economic benefits for organizations. Many of these benefits stem from the compounding, or "viral" effect arising from the accrual of social metrics. For example, social earned media can lead to more followers and social network spaces (Barnes, 2014), which can in turn lead to its own benefits such as increased firm equity value (Luo et al., 2013), improved demand for products (Gong et al., 2015), and increased sales (Schultz, 2016).

One limitation of much of the social earned media literature deals with the fact that studying multiple firms is very challenging from the data collection standpoint. For this reason, most studies offer an in-depth view of just a few firms. This creates some issues on generalizability of the findings in this research. Our study helps to alleviate this

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[1] Twitter was rebranded to X on July 23, 2023. Data for this study was collected prior to the rebrand when Twitter was a top 5 social network site (Smith and Anderson, 2018).

problem by focusing on the social earned media of many social e-commerce firms across a number of different products and categories.

A second challenge with extant research on social earned media on the way in which social earned media is operationalized. As time has passed, and social network sites have proliferated, there has been a rise in the number of online artifacts that fit under an umbrella term of social earned media. Blog posts, tweets, Facebook posts, followers, Pinterest pens, etc. have some role to play in the cumulative social earned media attributable to a particular organization. There are several interesting forms of media that exist across a number of platforms, yet most studies tend to focus on one type of media within one platform. To address this issue, our study presents a holistic view of all the media attributable to an organization across a multitude of platforms in which they have social networks. Our assessment of a company's social media network allows us to examine its impact on the company's social metrics of success. Our study proposes that social network success funnels users from social networks back to a main commerce platform. The next section details this theorizing around social networks and follower growth.

HYPOTHESIS DEVELOPMENT

Social networks have become diverse in theme and format, causing many e-commerce platforms to no longer focus their marketing efforts on any one platform. An up-and-coming social e-commerce platform may offer several conveniences in terms of facilitating e-commerce, but Facebook and Instagram still maintain a significantly large base of active monthly users – 2.9 billion and 2.0 billion respectively (Wong, 2023). Access to these social network users offers the potential for soliciting new customers. To have the best of both worlds, a business would be wise to use other social network platforms, such as Facebook, Pinterest, Instagram, and X to engage in strategic marketing (Church and Oakley, 2017). The goal of this strategic approach is to attract customers on the larger social network platforms and drive them back to the company's main website, thus growing the company's user base, or followers. Effectively, businesses create a presence that extends beyond their main website and provides marketing opportunities in any number of social network sites. Therefore, businesses potentially benefit from both the e-commerce functionality of the social e-commerce platform and the larger user bases offered by other social network sites.

Pinterest, Ravelry, Groupon, and dozens of other sites face the challenge of how best to siphon attention from larger networks into their marketplaces. Social network activities are costly in both the time required for their upkeep as well as the monetary investment required for the creation of interesting content. Many of these businesses are sole proprietors or micro-enterprise businesses with only a few employees. They largely do not have dedicated social media marketing teams or vast financial resources. While it might be affordable for a large organization like Nike or Starbucks to maintain a presence across four or five social networks, micro-organizations need to optimize their social networks to maximize sales and follower growth.

For companies with financial means, brand social network customer acquisition can certainly come through advertising, but these companies pay hefty monthly fees to do so. Micro-enterprises simply do not have the resources to compete in this way. However, one of the most powerful economic aspects of the Internet is its ability to allow even small companies to reach large customer segments in innovative and interesting ways. We seek to better understand this process by examining the methods employed by micro-enterprises that are most useful for generating business in an interconnected web presence environment.

Social Network Broadcasting and Follower Growth

Social network marketing has its roots in very traditional forms of advertising through channels such as television, radio, and print. Within literature in these areas, the downstream effect of prominently displayed media is well understood (Corcoran, 2009). Social networks provide firms with the ability to broadcast media to a wide number of users across different customer segments, and broadcasted media has for decades been linked to increased sales (Assmus et al., 1984), customer engagement and satisfaction (Anderson and Sullivan, 1993), and customer acquisition and retention (Fornell and Wernerfelt, 1987).

However, it would be insufficient to imply that social network marketing is perfectly synonymous with broadcast media. First, unlike a company website, organizations do not have the final say in determining information distribution within social networks. These rules are decided by the social network owner, and companies within the network are largely reliant on the same information channels open to personal social network users. This means getting their message across through widely visible posts and pages (Hogan, 2010).

Social network broadcasting therefore represents an attempt at creating universally desirable presentations to inform and educate current and potential customers (Bernstein et al., 2013). There is a known effect on customers' familiarity with brands and organizations stemming from exposure to such media presentations, and this effect is understood to increase with the number of broadcast media exposures (Bucklin and Sengupta, 1993). It is reasonable to assume that 1) more social networks provide more opportunities for exposure from broadcasting, and 2) more broadcast actions, for example posts, tweets, pins etc. within social networks provide greater exposure opportunities. We thus propose the following two hypotheses:

H1: The number of social networks is positively associated with in-platform follower acquisition.

H2a: Broadcast activities are positively associated with increased social network follower acquisition.

Social Earned Media and Follower Growth

Social networks operate on a "call and response" model of marketing. Most forms of broadcasting are designed to elicit a response on the part of the customer. While this study is mostly concerned with a response on the social e-Commerce platform, we also consider the role of this response in the form of in-platform social earned media. Reposts on X, re-pins on Pinterest, likes on Facebook etc. all fall under the umbrella of social earned media. Taken together, these forms of media create a digital footprint often spanning multiple social networks that provide channels through which individuals can follow content from a social network site back to the organization's main commerce platform (Kunst & Vatrapu, 2018).

Companies, particularly small businesses, rely heavily on the native information distribution mechanisms of each individual social network. For example, when a company posts on X, their primary means of evaluating customer response depends on the number of users that retweet or like a particular tweet (Zhang, Jansen, & Chowdhury, 2011). Thus, there are several reasons that social earned media in social networks would translate back to e-Commerce platform followers. First, the acquiring of positive social earned media represents a visible component of firm reputation (Luo et al., 2013). Users that acquire likes, re-pins, or retweets often subsequently obtain more visibility in the network, and this visibility increases their marketing footprint.

Additionally, because social earned media are often designed for easy distribution, they move from user-to-user and distribute information with alacrity, in a way that often circumvents any attempts at publication guidelines or restrictions. Whereas a broadcasted post may go out to a pre-defined number of social network users, once that post is retweeted it has the potential to go viral, reaching many users quickly and efficiently (Colicev, Malshe, Pauwels, & O'Connor, 2018). This makes social earned media well-suited to respond to changing market situations and user characteristics. They spread through naturally influential channels (Stephen and Galak, 2012), often bypassing more traditional sources such as a major news outlet or high-exposure website. As a result, the message carried by social earned media may be highly trusted and therefore influential (Chu and Kim, 2015). It may also reach more selective pockets of interested users than typically observed with other media types (Church and Oakley, 2018). This makes them especially suited to reach individuals heavily engaged with a product or brand (Godey et al., 2016), exactly the kind of individuals willing to enter into long-lasting and substantial follower relationships.

Each instance of social earned media generated in a social network provides an opportunity to push a user to the social e-Commerce platform. Well-crafted social earned media will often contain hyperlinks or other marketing materials designed to make this transition as easy as possible. Thus, with each retweet, re-pin, or like, the brand receives another marker serving as an electronic road sign and directing customers to their digital door. We thus propose the following hypothesis.

H2b: Increased social earned media is positively associated with social network follower growth.

RESEARCH METHODOLOGY

Our analysis used a unique panel data set collected from a company's main e-Commerce site and its respective four different social network sites. Primary data on our microenterprises comes from Etsy.com, a social e-commerce platform focused on the sale of handmade and customized goods. Founded in 2005, Etsy serves as a e-commerce platform for millions of small businesses providing products and services to its more than 26 million users. Etsy also provides social network functionality allowing shop owners to manage their digital storefronts, browse and comment on the content of other sellers, make friends and connections, and manage their network reputation (Church and Oakley, 2018; Pace et al., 2013). The business model of Etsy is highly successful, as evidenced with reporting 2022 year-end general merchandise sales of $13.3 billion (Etsy, n.d.).

To gather information on the social networks attributable to our microenterprises, or Etsy shops, we relied on information provided by Etsy itself. Specifically, Etsy allows shops to broadcast their larger social media presence as a part of the "Around the Web" page for each individual shop. This section provides links to the social networks that the shop designer has provided. Using these links, we collected data from four social network sites - Instagram, Pinterest, Facebook, and X. While these four social networks may not represent the entirety of brand social network activities for all companies in our sample, a presence on these four sites is common among the significant number of our companies. Moreover, these sites represent the only websites that were linked from Etsy itself.

To create our panel data set, data was collected on each Etsy shop and its social network activities every two weeks for a period of four months from November 2017 to February 2018. For the data to best represent the Etsy community, we sought to obtain an approximately random sample of Etsy shops representing a wide variety of industries and specialties. The procedure worked as follows. A web crawling application traversed the Etsy network and collected a list of observable shops. This resulted in a list of over 1 million active Etsy shops. A random sample of shops was then taken from the list to provide a sample of manageable size for further data collection. This resulted in the eventual selection of 1,458 users (n = 1,458).

Variables

In-Platform Follower Growth

Etsy is a social e-Commerce platform that allows customers to "follow" their favorite Etsy shops, whilst providing a public count of these followers. Our dependent variable is the change in followers attributable to an Etsy shop over our observation period. We refer to these followers as in-platform because they are engaging in a follower relationship with each Etsy shop in our sample on the main e-Commerce platform (Etsy). As stated above, followers are suitable as a dependent variable because of the potential benefits stemming from follower acquisition identified in extant research (Luo et al., 2013; Stephen and Galak, 2012; Susarla et al., 2012).

Social Networks

Etsy represents the primary social e-Commerce platform for all of our microenterprises. Each Etsy shop also maintains one, many, or no other social media social networks. Each social network consists of a social media presence in one of four other social networks that we considered (Facebook, Pinterest, Instagram, and X). The choice of other networks to consider came from Etsy's own "Around the Web" section displayed on the "About Us" section on the page of each shop. These "Follow Us" sections contained links to social networks attributable to each shop.

Broadcast Activities

We operationalized broadcast activities by looking at the actions taken by each Etsy shop within a social network. Since Etsy shops vary in the number of social networks they maintain, it is possible for an Etsy shop to have many broadcast activities, or absolutely none. Broadcast activities represent the sum of any posts to Facebook and Instagram pages, pinning of content in Pinterest, and Posts sent out by the shop within X.

Social Earned Media

We operationalized social earned media as the digital traces of customer interaction generated when users interact with or show interest in the content posted by each Etsy shop within the social network. The exact nature of social

earned media differs based on the social network. For example, as shops post content to their Pinterest pinboards, the Pinterest community responds by copying the content and distributing it through the network, creating what is known in Pinterest as a "re-pin". A similar process exists in X results and those are called "reposts." Facebook and Instagram users "like" content. All of these things help to expand the digital presence of the Etsy shop within the social network, and we refer to them all collectively here as social earned media.

Control Variables

We also include some control variables in our analysis. We control for shop size using both the change in item listings and change in weekly sales count. We expect larger shops to generate a greater number of in-platform followers. This also allows us to control for relative popularity of a shop at the start of our data collection. We also control for shop reputation, measurable as the mean of all 5-star evaluations submitted by Etsy customers for a particular shop. This is done to account for past literature that has examined the effect of digital reputation on follower growth (Chevalier and Mayzlin, 2006; Mudambi and Schuff, 2010).

Table I presents the descriptive statistics for variables used in the study. Since we are interested in growth in these variables, the statistics are related to the mean of the change in the variable across time periods. For example, the mean of 1.74 for In-platform Followers shows that, on average, users accumulated 1.74 new followers on the Etsy platform per observation period. The only variable for which this is not the case is shop reputation. Since shop reputation did not change significantly across our observation period, we use the static reputation value at the start of the data collection.

Variable of Interest	Mean	Std. Dev	Min	Max	N
In-Platform Follower Growth (Dependent variable)	1.74	1.47	0	7.47	1,458
Social networks	1.09	1.25	0	4	1,458
Within Social Network Variables					
Broadcast Activities	0.62	1.52	0	10.41	1,458
Social-earned Media	0.74	1.83	0	12.11	1,458
Control Variables					
Item Listings	0.49	1.01	0	6.34	1,458
Sales Count	7.82	3.1	0	12.82	1,458
Shop Reputation	4.87	0.22	0	5	1,458
Note: Values represent average change in variables across all weeks of observation with the exception of shop reputation, which remained static through all time periods.					

Table 1. Descriptive Statistics

Model Specification

Model

Our analysis looks at two types of social network activities and their relationship on follower growth. Our dependent variable is the growth in Etsy followers. The model includes the control variables and variables pertaining to broadcast activities and social earned media and the interaction between these variables.

$$Y_{ij} = \beta_0 + \beta_1 Broad_{ij} + \beta_2 Social_{ij} + \beta_4 BroadSocial_{ij} + \delta_j + \tau + \epsilon_{ij} \qquad (1)$$

Where Y_{ij} again represents the change in natural log of followers attributable to shop j as the period changes from $i - 1$ to i. $Broad_{ij}$ in this model refers to the change in broadcasting activities attributable to shop j as the observation period moves from $i - 1$ to i. $Social_{ij}$ refer to social earned media change, again as the period changes from $i - 1$ to i. We also include an interaction term, $BroadSocial_{ij}$ which represents the multiplicative effects of broadcast and social earned media. δ_j is once again a set of dummy variables corresponding to user fixed effects,

ϵ_{ij} is the standard error and τ represents a set of dummy variables for time. Table 2 presents the results of the analysis.

The results show main effect support for the role of broadcast and social earned media in predicting Etsy shop Follower growth. The coefficients can be interpreted as percentages since the independent and dependent variables were entered in the model as log transformations. For each percentage change in broadcast activity undertaken, expected followers increased by 4%. Social earned media yielded even higher effects, with a 7% growth in followers for each percent change social earned media instances.

There was also an observed positive effect in the interaction between broadcast activities and social earned media. This relationship led to an observed 2% positive increase in followers. We interpret these results in the following section.

	Regression Model
Variable	
Follower Growth (Dependent variable)	
Within Social Network Variables	
Broadcast Activities	0.04 (0.009)**
Social earned media	0.07 (0.008)**
Broadcast*Social	0.02 (0.007)**
Control Variables	
Item Listings	0.22 (0.002)**
Sales Count	0.02 (0.007)**
Shop Reputation	0.07 (0.065)
R^2	0.34
Note: Standard Errors in Parentheses; $p^* < 0.05$; $p^{**} < 0.01$.	

Table 2. Regression Results

DISCUSSION

The results of our study highlight the intertwining nature of how marketing activities and the word-of-mouth response create a strong positive feedback loop for social e-commerce users. These activities help businesses secure followers, grow their business, gain longevity, and increase sales. Moreover, their impacts are not separate and distinct. Rather, in addition to their individual effects, the study also observed a positive interaction effect between broadcasting activities and social earned media. This positive and significant interaction result shows that in addition to growing followers individually, the interplay between broadcasting activities and social earned media also imparts a positive multiplicative effect to further increase follower gains.

This study offers an examination of the role of social network marketing on the sales success of businesses operating in social e-Commerce platforms. While past work has looked at the effects of marketing activities in social media, this study offers a unique contribution by considering holistically the way in which a company's marketing actions, conducted across a variety of different social media platforms, help create an increased social presence within the "home" social e-Commerce platform. In addition to examining the company's own actions, the study makes a further contribution by showing how the marketing activities of companies interact with and are aided by the word-of-mouth response of these activities on social network platforms. Taken as a whole, the study is the first to consider the entire cycle of marketing activities, customer response to those same activities, and subsequent customer conversion for many companies operating within an e-commerce platform.

In terms of specific results from the study, econometric analysis of data for a large number of Etsy shops showed first that sellers on social e-Commerce platforms directly benefit from their own marketing activities on social network platforms. Our conceptualization of the role of social networks and their relative distance from the point of final commerce represents a significant contribution. Past studies have shown the role of marketing activities in-platform. These efforts have significantly improved our understanding of the way in which metrics such as likes,

thumbs up, or YouTube subscribers may help the success of a particular channel or user operating within that same platform. However, as social networks have fragmented into increasingly specialized niche markets, companies and users find themselves engaging with a number of platforms designed for specific purposes. Very little work has examined the way in which marketing activities can help to push an interested customer back to a commerce enabled platform that operates outside of the social network in which marketing activities take place and generate metrics such as likes, thumbs ups or subscribers. Showing the impact of these social network marketing activities on acquisition of these metrics represents a significant contribution of this study.

Secondly, in addition to examining the effect of a company's own marketing activities and social networks, the study also investigates the subsequent response to these activities in the form of user word-of-mouth. We show that while word-of-mouth response can be manifested in a variety of formats depending on the social network, regardless of the characteristics of the engagement, whether it be a Facebook like, a Pinterest re-pin etc., all of these metrics cumulatively help to push users back from the social network to the e-commerce enabled platform where they can be converted to paying customers.

As mentioned above, the idea of word-of-mouth response to a user's actions has been shown to create a positive effect within a particular platform. This effect is typically consistent across most forms of social media. In other words, having people re-pin your content on Pinterest or like your content on Facebook is very likely to result in a user becoming more popular within that platform. However, just as is the case with marketing activities, it is frequently becoming necessary for companies to find ways to translate their word-of-mouth success on one platform into another area. We show that regardless of the type of social media response, accruing more social media across varied social networks provides a strategic benefit to companies operating within e Commerce platforms.

Implications for Research and Practice

Our findings offer several interesting implications for theory and practice. In terms of theoretical contributions, the research contributes to and expands our understanding around the way in which popularity is cultivated online. Significant progress has been made in recent years to examine the ways in which attention is cultivated within a particular social media platform. This has been a major area of electronic commerce research over the last 10 years, and the collective work has increased our understanding of how people accrue Instagram followers, YouTube subscribers etc. However, most of this work considers how actions within a platform translate to popularity and attention within that platform. As a result, much of this research has limited generalizability to situations in which a particular user maintains a digital presence that crosses platforms. Such a gap in research is understandable given that social media usage over the last two decades has largely been dominated by a few enormous platforms. In recent years, there has been significant fragmentation of both usage and interest in social media platforms, giving rise to platforms that vary significantly in both specialization and functionality. The pace with which this fragmentation has occurred has resulted in a significant dearth of research that examines the way in which attention can be cultivated across platforms. Our study fills this gap in research as it examines the marketing actions of a business' multi-platform strategic presence and how those actions result in success from a social perspective.

The context considered in this study, Etsy, offers a very useful context in which to examine the cultivation of cross-platform popularity. Etsy is fundamentally designed as a commerce enabling platform. while Etsy does offer some functionality seen in other social networks. It is now, and likely always will be, fundamentally centered around enabling financial transactions and commerce. As a result, Etsy shop owners need the ability to go elsewhere for their primary social media marketing activities, and it is this need that forms the primary theoretical motivation for this study.

It is important to note though, that the findings in this study generalized to a large number of cross-platform social media contexts. Moreover, the number of these contexts is expanding rapidly. One notable example of such an extension concerns the interplay that currently exists between the online live-streaming website Twitch and the more traditional streaming platform YouTube. These two platforms show the differentiation of social media spaces both in terms of context and functionality. For example, whereas in the past a content creator might make content "on" YouTube and "for" YouTube, today that same creator might instead utilize live-streaming technology as a primary source of content creation, an area in which YouTube lags significantly behind Twitch. Yet while Twitch

has a lead in terms of technology, its revenue potential may still pale in comparison to the much larger YouTube. In such a situation, live streamers need the ability to create their content on their main platform yet monetize and distribute that same content across different platforms.

In addition to examining issues related to multi-platform influence, the study also makes unique theoretical contributions to existing knowledge on electronic word-of-mouth. While past research has considered the role of marketing activities and their role in electronic word-of-mouth generation, much less work has considered the way in word-of-mouth on one platform can transfer into word-of-mouth success on another platform. Thus, the scope of our contribution stems from the differentiation we employ between word-of-mouth response within an social network, and subsequent response on the social-commerce platform. Through our examination of this distinction, the study expands and updates much of the word-of-mouth research that exists for the currently differentiated social media environment. As a result, the study offers guidance for researchers interested in studying in-platform and out-of-platform social media generation and the way in which social networks interact with and support home platforms.

One area of the economy that should benefit practically from the word-of-mouth findings in this study comprises the ever-growing number of entrepreneurial photographers, content designers and graphic artists that create and promote their own work through social media. Owing to the ease of transmission of such content, effective distribution is often not dependent upon one individual's broadcasting ability, but rather it relies on the cumulative content diffusion ability of the network.

Unfortunately, as content diffuses through the network, its ownership very often becomes uncoupled from the content creator. This results in decreased revenue for the creators themselves. To combat this, graphic designers, photographers, and artists often rely on platforms that offer more direct forms of compensation. In recent years, an important avenue of this type of revenue generation has become subscription-based crowdfunding platforms, with notable examples being Patreon and OnlyFans. These websites offer direct compensation opportunities for content creators and in a practical sense they are similar to e-commerce purchases from the Etsy shops considered in this study. As a result, the findings gleaned from this study should benefit these areas of the economy as well.

Limitations and Opportunities for Future Research

As with all research, there are a few limitations. First, while we considered activities across a number of different platforms, all social network activities are treated as equal in our analysis. In other words, we did not distinguish between a Facebook post and an Instagram post. This was done to preserve the underlying argument of the study, namely that we are interested in considering the general role that social network activities play. A thorough delineation of social network activities based on where it originates from is outside the scope of this work. However, we are encouraged by the prospect of a future research study that would look at the role of different types of social network activities in determining the success of social network marketing. For example, it would be very interesting to see how an Instagram post, given their reliance on rich media and photographs, differs from the more textual nature of posts or reposts on X. There is a robust area of research that exists on media richness that could guide such a study (Ottoni et al., 2014).

CONCLUSION

More and more, we see that popularity online is associated with economic success, and that the popularity of personalities and brands online often translates into significant revenues (Godey et al., 2016; Krüger et al., 2012). Moreover, the past two years have seen an increase in the ability of small organizations to become trendsetters online, often exhibiting great agility in adapting to fads and fashions faster than their larger corporate counterpoints.

Key findings from the study show that social network marketing is both a complex and multifaceted activity. Our study will make significant contributions in the areas of word-of-mouth and social media marketing literature. Specifically, our analysis provides a unique comparison and contrast of various social network marketing methods to determine the most profitable strategies available. Researchers should benefit from the increased understanding of the complex phenomenon of attention seeking online, while both individual companies and platform developers will benefit from the practical results offered by the study. This study's findings are generalizable generalizability

that is not limited to Etsy. Rather, the paper contributes to work in any realm where social metrics are blended with commerce functionality.

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