

SOCIAL MEDIA & INTERNET: A STUDY IN START UP COMPANIES

Eliot Simangunsong

Prasetiya Mulya University

R. A. Kartini (TB Simatupang) Road, Jakarta 12430, Indonesia

Email: elliott@pmb.ac.id

Abstract

This study is intended to further investigate this issue and gain a better understanding of how the Internet, especially social media, can really affect ecosystems and operations of start-up companies. A quantitative research using surveys has been applied and questionnaire data were collected from 104 start-up companies. The result of analysis shows that start-up companies have started using the Internet and social media as an integral part of their business ecosystem to increase sales where Fashion and Food & Beverage (F&B) are the types of businesses that gain most benefits.

Keywords: Internet, social media, start-up company, business ecosystem, operations.

Introduction

In just a short period of time, social networking sites have become very popular among people who use technology. Facebook, for example, has reached over 1.59 billion active members (Statista, 2016). Table 1 shows the top ten social networking sites ranked by number of active users (in millions). Social networking sites have pages dedicated to certain brands. Enthusiasts can share their dedication and enthusiasm for the brand in the fan page and unite with other fans who share similar interests about the brand (de Vries, Gensler, & Leeftang, 2012).

Social media marketing has become one of the most important markets for goods and services transactions in this current era. Customer spending online in the United States exceeded \$ 100 billion in 2007, and the growth rate of demand online for information goods, such as books, magazines, and software, is between 25% and 50% (Albuquerque, Pavlidis, Chatow, Chen, & Jamal, 2012). Social Media revolution is not only seen in the business environment, but it is also seen in the organizations worldwide because of its incredible speed entering all the fields of social and economical life (Georgescu & Popescu, 2015). From that phenomenon, we can see that the rapid growth of today's technology brings a different perspective in the way companies choose their business strategies.

Due to the statistics above, the presence of social media and the Internet have made it easier to reach the revenue target, particularly in terms of sales volume, as the capability of the platform enables businesses to capture their target customers who are mostly online. Thus, it is necessary to know how the social media and the Internet can really affect the company's sales.

Table 1

Global Social Networks Ranked by Number of Users 2016

Social Media	Number of users (in millions)
Facebook	1590
Whatsapp	1000
Facebook Messenger	900
QQ	853
WeChat	697
QZone	640
Tumblr	555
Instagram	400
Twitter	320
Baidu Tieba	300

Source: Adapted from Statista, 2016

There are several reasons why we chose business start-ups as the unit of analysis in this research. First, they have limited capital in terms of money available. Secondly, they need to grow as fast as possible from entering the targeted market. The social media can be a source of information about a certain business for the consumers. They might offer essential data about a business without the need to pay expensive publicity (Georgescu & Popescu, 2015). Therefore, we will conduct a study, which aims to provide insight into how powerful social media is in helping start-up businesses increase their sales.

Due to start-up businesses trying to maximize their sales to grow, we hypothesize that they will tend to choose social media as their tool over others to increase sales of their products. This research is a quantitative study in which the researcher conducted a survey of the respondents, who are start-up business owners, aiming to find out their awareness of the effectiveness of social media and the Internet on the ecosystem and operations of their start-up company.

The flow of this paper consists of what is meant by social media and the Internet. The literature review will then be presented which will identify gaps and solve questions. Next the research conducted will be identified and analyzed, followed by the conclusion.

Nowadays, almost everyone who is familiar with the internet can easily choose any online media they want, such as news website, blogs, or social media to produce and publish any content they want without the needs of high practical skill sets (Budd, 2012). Social media is one of popular mediums for cyberspace information. Social media is a “user-generated communication” that represents a common source of information (Mangold & Faulds, 2009). Social Media is also an internet based application that allows the creation and facilitation of interactions, and sharing of user-generated content (Kim & Ko, 2012; Laroche, Habibi, & Richard, 2013). There are many types of social media, e.g., weblogs, social blogs, micro blogging, wikis, podcasts, pictures, video, rating and social bookmarking (Kim & Ko, 2012). Not only for personal use, the number of businesses and governmental organizations that use social media to reach their customers is increasing. Social networking sites facilitate companies to enhance relationship and interact with customers (de Vries *et al.*, 2012).

The number of companies that has social media presence is increasing. These social media have been used as tools to promote and support the creation of brand communities (Kaplan & Haenlein, 2010). Social media has changed how companies apply tools and strategies to communicate with their customer. A study by Phillips, McFadden, and Sullins (2010) and Kahar, Yamimi, Bunari, and Habil (2012) found that social media had been used effectively for marketing plan innovation, a new mode of promotion, opportunity to grow market segments, increase customer loyalty, and multi modal marketing strategy for SMEs. Mangold and Faulds (2009) added that social media is a source of important information used by companies to develop tools and strategies to communicate with the customer. Online shopping also initiates higher engagement through many kinds of promotions such as recommendations by friends or family, reviews and ratings by other customers, and how-to guides via social media (Amblee & Bui, 2011).

A study by Cone Communications (2008) shows that 93% of social media users think that companies should have a social media presence, and 85% of the users believe that companies should interact with customers through social media. Another study by Williamson (2009) showed that advertising spending on social media such as Facebook and

MySpace, was about \$605M and \$435M, respectively, in year 2010. The significant portion of this spending was spent on social media network presence. Even though social media is magnifying the impact consumer-to-consumer conversations have in the marketplace, methods for shaping those conversations have not yet been articulated (Mangold & Faulds, 2009).

For start-up and SMEs (small medium enterprises), a study by Michaelidou, Siamagka, and Christodoulides (2011) showed that only 27% of the respondents surveyed used social media. Facebook was the favorite platform. Most of the SMEs were either not investing any financial resources from their marketing budgets or only using 1% of their budgets for this purpose. Georgescu and Popescu (2015) identified that start-up and SMEs usually have limited capital in terms of money available. Social media offers information and data about business without the need to pay expensive publicity. For entrepreneurs, social media was popularly used to create networking, build relationship with friends, and strengthen networking (Kahar *et al.*, 2012). Social media was also used to attract new customers, cultivate relationships, and increase awareness (Michaelidou *et al.*, 2011).

Research Method

This study uses a quantitative method with survey as the research instrument. Research by survey requires a standard format, for example, a questionnaire, which is used to define or describe variables, and to analyze the relationship between variables (Malhotra & Grover, 1998). The unit of analysis is start-up companies owned by recent graduates of a degree program in entrepreneurship. This is an undergraduate program in entrepreneurship of a University in South Tangerang. A survey questionnaire was developed as a research instrument and then completed by the founder of the start-up companies.

Quantitative methods like surveys and questionnaires can be applied to a wide range of topics (Jean Lee, 1992). This research method is selected because of various reasons. Firstly, most previous studies used quantitative methods. Secondly, this study aimed to explain the cause and effect relationship between variables. Saunders, Lewis, and Thornhill (2000) explains that positivist paradigm such as quantitative research can be applied to investigate relationships-causalities between constructs of a model. Surveys enable researchers to collect data which is relevant and correlated with the purpose of this study. To analyze the data, interpreta-

tive techniques have been applied to enable researchers to describe, decode, and come to terms with the meaning of the phenomena studied. Additional quantitative instruments, such as non-parametric tests and regression analysis were also applied to examine possible correlations among variables.

The survey questionnaire has been posted on social media and instant messaging platform. Population data is start-up businesses that have been operating under five years. We use non-probability sampling technique, which means there is no equal opportunity for all members of the population to be sampled. The reason behind this is that we simply chose the founders of start-up companies who are active users of social media.

Result and Discussion

The survey questionnaire was completed by 108 respondents. We eliminated data from four companies because the start-up companies were not using social media, hence it is not relevant to this study. All respondents have a business start-up aged less than five years. There were three respondents (2.88%) who are in the beauty business, 10 respondents (9.62%) in the creative business, 31 respondents (29.81%) in the fashion business, 41 respondents (39.42%) in the food and beverage business, and 19 respondents (18.27%) have business in other industries such as auto detailing, florist, medical, services, stationery, and travel. Fashion and Food & Beverage represent 69% of the respondents. Start-up business profiles are presented in Table 2.

Table 2
Type of Start-up Business

Type of Business	N
Beauty	3
Creative	10
Fashion	31
Food and Beverage	41
Others	18
Total	104

Table 4
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Increase awareness	0.216	104	0.000	0.838	104	0.000
Sell product	0.164	104	0.000	0.924	104	0.000
Latest information	0.231	104	0.000	0.846	104	0.000
Feedback	0.158	104	0.000	0.924	104	0.000
Know customer	0.164	104	0.000	0.937	104	0.000
Exist in social world	0.170	104	0.000	0.887	104	0.000
Facilitate place	0.127	104	0.000	0.957	104	0.000
Word of mouth	0.179	104	0.000	0.886	104	0.000

a. Lilliefors Significance Correction

All respondents said that they use social media such as Facebook, Twitter, Snapchat, Path, Instagram, Tumblr, Blogs, etc. into their business activities. When they were asked about how much they agree about the reasons why social media is included into their business activities, there were three reasons that scored above 5 (see Table 3), namely:

- increasing awareness of brands (score = 5.6)
- give the latest information of product or service (score = 5.5), and
- tool of word-of-mouth (score = 5.3)

Providing a place for customer to talk with each other got the lowest score (3.7), and there are also other reasons such as easy access of the social media, cost-efficient promotion, and to get invitation from a bazaar easily.

Table 3
The Reasons Why Include Social Media in Business Activities

The reasons why you include social media in your business activities	Average	Standard Deviation
Increase awareness of brands	5.60	1.40
Sell products or services	4.70	1.73
Give the latest information of product or service	5.53	1.48
Facilitate feedbacks from customers or prospects	4.76	1.73
Get to know customers deeper	4.50	1.70
Exist in social world like other brands use social media	4.92	1.86
Provide a place for customer to talk with each other	3.74	1.72
Tool of word-of-mouth	5.32	1.50

Tests of Normality using Kolmogorov-Smirnov and Shapiro-Wilk yielded result in Table 4. The table presents test statistic value, degrees of freedom and the significance value (*p-value*). For all variables, *p-value* is very small. It means the test is highly significant and indicates that all variables are not normally distributed.

Because the data consists of rank measurement and is not normally distributed, non-parametric tests will be applied to analyze the data further. Friedman's ANOVA is used to test the difference of multiple conditions, i.e., the reasons why including social media in business, using same participants (*k*' dependent samples). Another test using Kendall's W is also applied to look at the extent respondents agree about the variable. The result of analysis is presented in Table 5.

Table 5
Tests of Difference among Variables

Friedman's ANOVA Test		Kendall's W Test	
<i>N</i>	104	<i>N</i>	104
Chi-Square	201.613	Kendall's W	0.277
df	7	df	7
Asymp. Sig.	0.000	Asymp. Sig.	0.000

The Friedman's ANOVA test above show $F_{7,104}=201.63$ and small *p-value*. This means a significant result and the eight reasons of using social media in business activities have different rank of importance for respondents. Kendall's W test also show significant result, which confirms that respondents do not agree the assumption that the eight reasons have similar importance.

Further analysis of the reasons to use social media by looking at specific business are presented in Table 6. Previously we found there are three main reasons why a start-up business uses social media. However, further analysis per type of business in Table 5 shows only two reasons, i.e., increase awareness and latest information that provides a consistent score for all type of business.

From 104 respondents, 30 respondents (28.85%) estimate that they can reach less than 250 people using their social media, 34 respondents (32.69%) can reach 250–500 people, seven respondents (6.73%)

can reach 500–750 people, seven respondents (6.73%) can reach 750–1000 people, 1 respondent (0.96%) can reach 1000–1250 people, and 25 other respondents (24.04%) estimate that they can reach more than 1500 people using the power of social media. None of the respondent choose the 1250–1500 range.

Table 7
Estimation Percentage of People Reached using Social Media

Number of people reached	Respondent	Percentage
Less than 250 people	30	28.85%
250-500 people	34	32.69%
500-750 people	7	6.73%
750-1000 people	7	6.73%
1000-1250 people	1	0.96%
More than 1500 people	25	24.04%
Total	104	100.00%

Table 7 above shows interesting results. About 29% of respondents said the use of social media does not give a great effect, just reach a very small number of users (under 250 people). This proportion becomes greater, about 61%, if we count the user reached below 500. It is reasonable to assume that more than half of respondents believe social media activities conducted on their business do not reach large user. Using Chi-Square Test (see Table 8), we conduct statistical test to compare people reached using social media between less and over 500 people. The result shows *Chi-Square value*=5.538 and *p-value* 0.019. Small *p-value* means significant result or confirmation that the use of social media only reaches small amounts of people.

Further investigation to this finding shows that Beauty is the least effective user of social media and fashion is the most effective type of business using social media. However, on total average, using social media is least powerful at least a half 18% compared to 35.6% (see Table 8).

Table 6
Rank of Interest in Social Media by Type of Business

	Beauty	Creative	Fashion	Food and Beverage	Others	Average Rank	Standard Deviation
Increase awareness	1.5	2.0	1.5	1.0	1.0	1.40	0.42
Latest information	1.5	1.0	1.5	2.0	2.0	1.60	0.42
Word-of-mouth	3.5	5.0	3.0	3.0	3.0	3.50	0.87
Facilitate feedbacks	5.5	3.0	7.0	5.0	4.0	4.90	1.52
Sell products/services	3.5	4.0	8.0	6.0	6.0	5.50	1.80
Exist in social media	5.5	8.0	5.0	4.0	7.0	5.90	1.60
Facilitate customer interaction	8.0	3.4	3.8	8.0	8.0	6.25	2.40
To know customers deeper	7.0	7.0	6.0	7.0	5.0	6.40	0.89

Table 8
Chi-Square Test of People Reached using Social Media

	Observed <i>N</i>	Expected <i>N</i>	Residual	Test Statistics	Value
Less than 500 people	64	52.0	12.0	Chi-Square	5.538
More than 500 people	40	52.0	-12.0	df	1
Total	104			Asymp. Sig.	0.019

These findings enable proposed argument that not all businesses have effectively use social media. Further investigation showed that the beauty is the most ineffective business in reaching social media users. Fashion and Food & Beverage is the most effective type of business using social media (see Table 9). It is to be noted, however, that the effective use of social media is still averagely half lower (18%) compared with that said it was ineffective (35.6%).

Table 9
Effectiveness of Reaching People across Business

	Reach less than 250 people	Reach more than 1500 people
Beauty	66.7%	0%
Creative	30.0%	20%
Fashion	25.8%	32%
Food and Beverage	29.3%	24%
Others	26.3%	16%
Average	35.6%	18%

After posting a content in their social media, respondent has notice a sales increase on their products or services. As we can see from the Table 10, using Pareto analysis criteria, about 80% respondents or 84 start-up companies reported sales increase up to 20% on their product or services after posting a sales content on their social media. From this result, only 4.81% or five respondents notice a less than 5% sales increase. Fashion and Food & Beverage business shows average distribution of sales increase up to more than 30%.

Table 10
Sales Volume Increase after using Social Media

Sales volume increase after using social media	Type of Business							
	Beauty	Creative	Fashion	Food and Beverage	Others	Total	%	% Cum
Less than 5%	0	0	1	2	2	5	5%	5%
5%-10%	1	3	6	12	4	26	25%	30%
10%-15%	1	2	9	10	6	28	27%	57%
15%-20%	1	3	9	9	2	24	23%	80%
20%-25%	0	1	1	2	3	7	7%	87%
25-30%	0	0	2	0	0	2	2%	88%
More than 30%	0	1	3	6	2	12	12%	100%
Total	3	10	31	41	19	104		

When we combine effectiveness of reaching people and sales volume increase, we find that effectiveness in reaching more people using social media contributes to higher sales volume. For example, about 20% respondents that reached over 1500 people gained over 30% sales increase compared to only 6.7% respondents that reached less than 250 people gained over 30% sales increase.

Further analysis using regression has been applied to test relationship between sales increase as dependent variable and the number of people reached using social media as independent variable. Table 11 presents global test value ($F_{test}=15.195$) and small *p-value*. This means significant result and independent variable can be used to predict dependent variable. Applying t_{test} also present small *p-value* for independent variable and a positive beta value or slope. This confirms the regression model that the number of people reached is positively related to sales increase.

It is reasonable to conclude that from 104 respondents, most of them consider the use of social media play important role in their business to obtain an increase in sales for products or services. This finding confirms trend predicted by Georgescu and Popescul (2015) in which organizational models tend to include social media applications. Most of them believe that they can reach 250–500 people for each published social media content and this people is useful as a target market. They also see that social media has important role to increase brand awareness among their target market.

Conclusion and Implication

This study aims to answer questions about the influence of social media and the Internet in the business ecosystem and operations of start-up companies. The analysis showed that the business start-ups, responded to this study, have been using the Internet and social media such as Facebook, Twitter, Snap-

Table 11
Regression Analysis Result

ANOVA ^b					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.025	1	36.025	15.195	0.000 ^a
Residual	241.822	102	2.371		
Total	277.846	103			

a. Predictors: (Constant), People reach

b. Dependent Variable: Sales increase

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.655	0.272		9.747	0.000
People reach	0.304	0.078	0.360	3.898	0.000

a. Dependent Variable: Sales increase

chat, Path, Instagram, Tumblr, RSS, etc. and the main reason for using social media is to enhance brand awareness and provide the latest information of products or services to their customers.

The effectiveness of social media to reach people shows variation across the business. Effective use of social media is found on Fashion and Food & Beverage business while the use of social media is not effective in the Beauty business. The ability to reach more people through social media is also contributed to the increase in sales volume. It should be noted, however, that the proportion who consider the use of social media is effective to reach people is half than those who consider the use of social media is not effective. About 61% of respondents said the use of social media does not give a great effect, reaching only a small number of users (under 500 people). It is to be noted, however, regression analysis shows that the number of people reached is positively related to sales increase. Therefore, effective use of social media to reach people may contribute to sales increase.

The results of this study brings managerial implications, especially for the business ecosystem and operations of start-up businesses. First, social media has potential to put into operations of a start-up business to increase brand awareness and sales. Second, not all types of businesses have equal potential advantages in using social media to increase sales. Founders or management teams of business start-ups need to identify the suitability of their business and the results of this study to optimize the benefits of using social media in their business. Social media can help to increase sales of a start-up company but it depends on the right business strategy.

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