¹Yong Dirgiatmo

Dwi Hascarya KB

Reza Rahardian

Miftachul Maarif

Impact of Social Media Usage on Supplier-Customer Relationship Management: Case on Manufacturing and Service SMEs



Abstract: - Digital products have placed as a competitive advantage for business actors both individuals, companies, and industries recently. Social media such as Facebook, Instagram, YouTube, which are accessible from various communication media such as smartphones, tablets, or laptops have become inseparable media from user's handholds in order to share information, offer products and services, and make friends. In an effort to establish good relationships between companies and suppliers (Supplier Relationship Management/SRM) and between companies and consumers (Customer Relationship Management/CRM), hence optimizing the use of social media for companies becomes very important, no exception for small and medium-sized enterprises (SMEs). This study aims to examine the role of social media to assist SMEs in establishing good relationships with their suppliers and customers. There are around 200-250 manufacturing and service SMEs domiciled in Central Java province were involved. The data collection method was carried out through surveys guided by questionnaires and interviews with SME owners. Quantitative data analysis was conducted using Structural Equation Modelling. It is hoped that the resulting findings will prove the significant role of social media in helping SMEs to establish good relationships with suppliers (SRM) and customers (CRM), and it is believed to be useful both theoretically and practically.

Keywords: Customer Relationship Management, Small Medium Enterprises, Social Media Usage, Supplier Relationship Management.

I. INTRODUCTION

One of the critical success factors for the company is the existence of a well-maintained relationship between the company and its raw material suppliers, product distributors, and customers as the philosophy of Supply Chain Management (SCM). A conducive relationship between the company and suppliers (Supplier Relationship Management/SRM) will have an impact besides increasing company performance, it will also reduce total costs (raw material costs, employee salaries, and overhead costs), inventory levels, and the quality of goods [1]. In addition, it will also speed up the speed of product or service delivery to the final destination because production and delivery schedules can be more easily organized [2], [3]. On the other hand, a closer relationship between the company and the customer (Customer Relationship Management/CRM) will improve the company's total product sales, which will enhance profits, expand the market, and increase the company's reputation [4].

Small and Medium Enterprises (SMEs), the business sector dominating the economy in developing countries, including Indonesia, tend to have no thoughts or strategies yet on how to build better relationships with their suppliers and customers. Several reasons have been found why the majority of SMEs have the potential to experience difficulties in establishing good relations with consumers and suppliers, namely due to inadequate financial management, poor or limited resources, weak or makeshift business planning, and minimal use of technology [5]. The study conducted by [1] also claimed that SMEs in Malaysia and Pakistan were less effective in establishing good relations with related parties due to a lack of genuine business, lack of financial resources, limited training programs and related skills, and lack of women involved in running businesses. Furthermore, [6] revealed that SMEs in Northern Thailand experience problems making friends with their business partners due to a lack of knowledge about financial management and operating costs. Likewise, a study by [7] also proved that

yongdirgiatmo@staff.uns.ac.id, dwi_hastjarjo@staff.uns.ac.id, rezarahardian_fe@staff.uns.ac.id, miftachul.maarif@staff.uns.ac.id
Copyright © JES 2024 on-line: journal.esrgroups.org

¹ Faculty of Economics and Business, Universitas Sebelas Maret Surakarta, Indonesia

limited knowledge about SCM, and lack of interaction with local and international business actors is one of the causes of the inability of SMEs to maintain sustainable good relationships with their business partners.

The rapid development of information technology nowadays provides vast opportunities for all business actors to develop their business. Social media such as Instagram, Facebook, and YouTube have opened the door for all parties, including SMEs, to bring closer interactions and partnerships with suppliers, government, competitors, banks, dealers, retailers, and potential customers to become closer, easier, and wider in reach. A person or group of people has the same opportunity as a company to open a business online. No need to have a physical business (e.g., outlets, shops, stalls), no need for warehouses to store goods, and no need for marketing personnel for promotions. Everything can be done alone with the help of a laptop or mobile phone connected to the internet. The backbone of online business is shipping, the means of transportation to deliver products or services to consumers. Thus, SCM and logistics have become very profitable business fields today [8]. The study conducted by [9] also stated that SCM is a top priority that must be empowered efficiently and systematically by companies to become a competitive advantage in its product market. One of the very effective and efficient media for companies to establish relationships with all of their stakeholders is internet-based social media.

Unfortunately, several previous studies discussing the use of social media by SMEs showed that not all SMEs are ready to accept an internet presence (including social media), and do not optimally understand the benefits of social media to improve their business performance [10], [11]. This phenomenon makes SCM essential and interesting to study in more depth. For this reason, this study aims to explore the impact of using social media in helping to optimize the implementation of SRM and CRM by SMEs in the hope of improving the performance of SMEs. In addition, this study also wants to see how the attitude of owners or managers of manufacturing SMEs and service SMEs in utilizing social media to establish relationships with their suppliers (SRM) and customers (CRM).

II. LITERATURE REVIEW

SCM is defined as the relationship between companies, suppliers, and customers involved in the operation process, from raw material suppliers to end users [12], [13]. The implementation of SCM by companies is a very important activity because it is able to integrate and optimize all activities in the supply chain process [14]. In addition, it can also be one of the competitive advantages among organizations/companies that create maximum overall value for companies by offering better utilization and distribution of resources [15], [16]. A number of previous studies have claimed the positive impact of implementing SCM on company performance, but in the SME realm, this does not seem to provide significant benefits in almost all managerial and logistical aspects [17].

The terminology of SRM and CRM in the context of SCM is a concept that has a strategic and important role for companies, including on the SME scale [18]. According to [19], in SRM, supplier behavior needs to be measured, because suppliers are a fundamental source of value and have the opportunity to increase future revenue streams for the company. SRM performance measures can be in the form of supplier and manufacturer loyalty which includes preferences, attitudes, and responses to one or more product brands over a certain period of time [20]. In addition, it can also be measured from the retention of purchases from suppliers, including the intention to repurchase, talk about brands, and loyalty to certain brands [20].

On the other hand, CRM is a process of obtaining, maintaining, and improving relationships with customers with the aim of creating customer value, so that customers are satisfied and can maximize profits for the company in order to gain a competitive advantage, paying attention to each product quality in order to provide satisfaction for customers [21]. In CRM, there are several performance measurement methods such as Service Profit Chain (SPC), Structured Conduct Outcomes (SCO), and Balanced Scorecard (BSC) which later became the CRM Scorecard. The CRM Scorecard method is capable of diagnosing and assessing a company's CRM practices by measuring aspects of infrastructure, processes, customers, and company performance [22]. Thus, CRM performance measurement is used to provide feedback on changes in the form of new strategic initiatives on CRM.

In its implementation, a number of researchers such as [23] and [24] stated that good management of SRM and CRM (or S-CRM) in industrial-scale companies shows positive and real results. This is evidenced by increased cooperation in business operations, product and service research and development; improve purchasing and quality of raw materials and supporting facilities. Strategically, [25] claimed that S-CRM can be viewed as a routine process and activity of an organization/company to develop and maintain conducive relationships with suppliers and customers. More specifically, [26] also revealed that SRM can help companies remain competitive and be able to increase their profitability. This is in line with [27] research which found that SRM has a significant relationship with operational performance and company productivity. On the other hand, [28] and [29] stated that effective CRM practices can help companies build and maintain long-term customer relationships based on customer satisfaction, and can increase competitive advantage through increased retention and loyalty of the customers.

However, in the realm of SMEs, the study from [2] found that the practice of S-CRM did not have many benefits and even tended to be detrimental. This is because SMEs do not have negotiating power when it comes to conducting business transactions with large-scale companies. In addition, the lack of flexibility in adapting S-CRM practices is also the reason why SMEs do not benefit from partnerships with suppliers and buyers/customers [30]. This is supported by the findings of [31] which revealed that the level of partnership between SMEs is relatively low, making it difficult for them to gain relational benefits from linkages with their supply chain. On the basis of the situation occurring in these SMEs, a more in-depth study to determine the extent to which SMEs have the ability to optimize their relationships with suppliers and customers becomes very urgent and important.

From the perspective of information systems, according to [32], S-CRM can be described as an integrated information system, including people, processes, technology, and all business activities with the aim of improving the relationship between the company and its suppliers as well as its customers. With regard to the use of social media as an information system medium in improving company performance, a number of studies have found that social media can improve company's financial performance [33], employee performance [34], and innovation [35], [36]. Added by [36], social media initiatives can improve operational efficiency and help company innovation. Social media can influence consumer behavior, but can also influence consumer purchasing decisions due to elements of anxiety, sentiment, and discomfort in its use [37].

In the context of social network theory, structural relationships between firms, suppliers, and customers can be described as patterns of relationships between actors (or nodes) that may join with other actors (e.g., individuals, organizations, or communities) to form a network connectivity [38], [39]. By involving social media, the impact will not only be the formation of networks between companies and their suppliers and customers but also the formation of networks between suppliers and customers [40]. In these situations, suppliers and customers can interact, and share information and knowledge via social media platforms, leading to the formation of social networks. By analogy, social networks without social media are "hard" bonds, while social networks with social media are "soft" bonds [41], [42]. In short, social media platforms can extend existing social network relationships in companies and help suppliers and customers form their social networks, which in turn will increase the effectiveness of S-CRM practices. In other words, S-CRM practices that companies carry out effectively through the use of social media will have a positive impact on customer satisfaction, which in turn contributes positively to market performance [41], [42].

III. PROBLEMS

Based on the facts above, the problem in this study can be formulated as follows:

- 1) Do manufacturing and service SMEs in Indonesia have sufficient capacity to establish mutually beneficial relationships (partnerships) with their suppliers (SRM) and customers (CRM)?
- 2) Do manufacturing and service SMEs in Indonesia understand the benefits that can be obtained from using social media as a medium that can help strengthen relationships between companies and their suppliers and customers,

and can improve their business performance?

IV. METHODOLOGY

This study proposes a research framework and a number of hypotheses related to the use of social media to improve S-CRM performance in manufacturing SMEs and service SMEs in Indonesia. The framework in this study is described in Figure 1 as follows:

Fig. 1 Measurement model



Source: Replicated from [42]

From the research framework, five hypotheses are formulated as follows:

H1: The use of social media has a positive and significant effect on Supplier Relationship Management (SRM) in manufacturing and service SMEs in Indonesia.

H2: The use of social media has a positive and significant effect on Customer Relationship Management (CRM) in manufacturing and service SMEs in Indonesia.

H3: Supplier Relationship Management has a positive and significant effect on customer satisfaction.

H4: Customer Relationship Management has a positive and significant effect on customer satisfaction.

H5: Customer satisfaction has a positive and significant effect on market performance.

This research is a quantitative study that takes a sample of manufacturing SMEs and service SMEs. Manufacturing SMEs are SMEs that run their business as goods producers/makers, while service SMEs are SMEs that run their businesses as service providers. Included in the manufacturing SMEs sampled in this study were garment/clothing manufacturers, wood and rattan furniture, bags and shoes, copper carving crafts, and guitar makers. Meanwhile, service SMEs include photocopying, laundry, workshops/vehicle rentals, salons/haircuts, expeditions/ delivery of goods, educational institutions/courses, culinary businesses, fashion/garment, tour & travel, agribusiness, event organizers, and cleaning services. The target sample for each is about 125 SMEs, both manufacturing and services. The research scope is in the area of the former Surakarta Residency, Central Java. The sample selected as the respondent is the owner or manager of SMEs who are trusted to lead and manage the company's resources, especially those who have utilized information technology to support their business. The target sample was selected by purposive sampling by looking at the suitability of the business scale owned, namely small and medium enterprises (SMEs), business location, and type of business. Survey methods and distributing questionnaires guided by surveyors through in-depth interviews were used to collect data from respondents.

The instrument used in this study refers to previous studies but is sufficiently modified to suit the object and research objectives. A 7-point Likert scale was used to measure the variables used, ranging from a score of 1 as "strongly disagree" to a score of 7 as "strongly agree", or with other equivalent criteria. There are five variables involved in this study, namely: Social Media, which is measured using two dimensions, namely Social Media

Function (SMF) and Social Media Usage (SMU), Supplier Relationship Management (SRM), Customer Relationship Management (CRM), Customers Satisfaction (CS) and Market Performance (MF).

V. DATA ANALYSIS

Data analysis was carried out on two types of SMEs involved in this study, namely manufacturing SMEs and service SMEs. The reason underlying the comparison of the two SMEs is that these two types of SMEs have different characteristics, so how their attitudes and behavior are related to the use of social media which can affect SRM and CRM may also be different. By comparing the two using the same methodology and data analysis techniques, it is hoped that findings will be obtained in the form of a "map" of the characteristics of SMEs in responding to the presence of the internet, especially social media, which can support their business performance.

By using SmartPLS 3.2.7 software, diagrams of the relationship between the constructs/variables built into the model in this study were made. After going through several iterations to obtain constructs/variables that are valid, reliable, and meet the requirements for further analysis, it can be explained how the indicators build the construct or variable are formed as follows.

- 1) The indicator forming the SMFU (Social Media Function Usage) variable which combines SMF variables (f1 f6) and SMU variables (u1 u3), in manufacturing SMEs, there are 5 out of 9 question items that must be eliminated because the outer loadings are in below 0.70 (according to the conditions that must be met [43], [44]), namely f1, f2, f3, f4, and f5, leaving 1 SMF variable, namely f6 and 3 SMU variables, namely u1, u2 and u3. Whereas for service SMEs, there are 7 out of 9 question items that must be deleted, namely f1, f2, f3, f4, f5, and f6 (SMF variables) and u1 (SMU variables), leaving only u2 and u3 from the SMU variables.
- 2) There is one indicator forming the SRM (Supplier Relationship Management) variable in manufacturing SMEs that must be eliminated, namely s5, while in service SMEs there is no a single indicator that must be removed.
- 3) None of the indicators forming the CRM (Customer Relationship Management) variable must be eliminated in both manufacturing SMEs and service SMEs.
- 4) There is no indicator forming the CS (Customer Satisfaction) variable in manufacturing SMEs that must be removed, while in service SMEs there is one that must be eliminated, namely t2.
- 5) There is no indicator forming the MF (Market Performance) variable for manufacturing SMEs that should be deleted, while for service SMEs there is one that must be excluded, namely p3.

Furthermore, all indicators that still exist can be said to qualify for further analysis. The following figure of the results of calculations using SmartPLS shows the relationship between constructs/variables and indicators that are valid and reliable at the measurement model assessment stage, both in manufacturing SMEs (Figure 2a) and service SMEs (Figure 2b).

. Fig. 2a. The final measurement model in manufacturing SMEs

Source: Replicated from [42]

0.791 s1
0.931 S2
0.890 S3
0.948 S4
0.873 S5
0.707 0.876 t1
0.936 p1
0.713 p2
0.719 0.919 c2
0.719 0.919 c2
0.719 0.914 c3
0.619 0.712 p1
0.713 p1
0.714 p2
0.715 c1
0.715 c1
0.717 c1
0.718 c1
0.719 c1

Fig. 2b. The final measurement model in service SMEs

Source: Processed Data

From the final measurement model, it is possible to test the validity and reliability of each construct/variable involved in this study, both from the outer-model and the inner-model. The following parts are the explanations.

A. Indicator Reliability/Factor Loading

Testing the measurement model (outer-model) is carried out by looking at a number of parameters. The first is to test the reliability of the composites, the results of which are presented in Table Ia and Table Ib below.

Table Ia. Construct Reliability and Validity in manufacturing SMEs

Constructs	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
CRM	0.889	0.901	0.918	0.693
CS	0.846	0.848	0.897	0.684
MF	0.856	0.869	0.912	0.776
SMFU	0.711	0.739	0.822	0.540
SRM	0.719	0.735	0.823	0.543

Source: Replicated from [42]

Table Ib. Construct Reliability and Validity in service SMEs

Constructs	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
CRM	0.933	0.954	0.950	0.794
CS	0.868	0.904	0.917	0.786
MF	0.653	0.823	0.841	0.728
SMFU	0.699	0.702	0.869	0.768
SRM	0.719	0.941	0.949	0.789

Source: Processed Data

Tables Ia and Ib indicate that for manufacturing SMEs, Construct Reliability (as measured using the Cronbach Alpha coefficient) scores in the range of 0.711 to 0.889, thus meeting the recommended threshold of 0.70 [43]. Whereas in service SMEs the range is 0.653 to 0.933, so there are 2 Cronbach Alpha values that are below 0.70, namely SMFU and MP (values in bold font). Both can actually be said to be less reliable, but because the distance to the threshold is very small (SMFU = 0.001 and MF = 0.047 towards 0.70), both constructs/variables are maintained. The reason for maintaining these two constructs is because the measurement of Construct Reliability is determined more by the Average Variance Extracted (AVE) coefficient than Cronbach Alpha [43]. The incidental AVE values are 0.728 (MF) and 0.768 (SMFU) which are above the specified threshold of 0.50 [43]. For Composite Reliability, all question items were above 0.70 for both manufacturing SMEs and service SMEs. This shows that the constructs/variables involved in this study can be said to be reliable.

Furthermore, to test Construct/Convergent Validity is done using the AVE parameter, with a range of values between 0.540 to 0.776 in manufacturing SMEs, and between 0.728 to 0.794 in service SMEs. This situation meets the recommended threshold of 0.50. That is, latent variables have the ability to explain more than half of the average indicator variance [43], [44].

B. Discriminant Validity

The next step is to test discriminant validity, and the results are shown in Table IIa and Table IIb below.

ME CMELL

Table IIa. Discriminant Validity in manufacturing SMEs

	CKM	CS	MIL	SMLO	SKW
CRM	0.832				
CS	0.449	0.827			
MF	0.390	0.672	0.881		
SMFU	0.684	0.301	0.250	0.735	
SRM	0.519	0.376	0.371	0.401	0.737

Source: Replicated from [42]

Table IIb. Discriminant Validity in service SMEs

	CRM	CS	MF	SMFU	SRM
CRM	0.891				
CS	0.657	0.887			
MF	0.500	0.845	0.853		
SMFU	0.799	0.768	0.799	0.876	
SRM	0.498	0.703	0.782	0.707	0.888

Source: Processed Data

There are three ways to test Discriminant Validity, namely the Fornell-Larcker criteria, Cross-loadings, and Heterotrait- Monotrait ratio of correlation (HTMT). Table IIa and Table IIb show that the square root of AVE in each construct (diagonal) is greater than the correlation of the off-diagonal construct of all other reflective constructs. This happened to both manufacturing SMEs and service SMEs. This proves that the indicators that build the construct/variable in this study can be said to be discriminantly valid. For example, in the correlation between MF -> MF constructs, the discriminant validity value is 0.853. This value is greater than the MF -> CRM value of 0.500, MF -> CS = 0.845, SMFU -> MF = 0.799, and SRM -> MF = 0.782.

Next, Table IIIa and Table IIIb test for Discriminant Validity with the HTMT ratio of correlation showing the mean of the heterotrait-heteromethod correlations (i.e., the correlations of indicators across constructs that measure different phenomena), relative to the mean of the monotrait-heteromethod correlations (i.e., correlation of indicators within the same construct). This HTMT test threshold should not exceed 0.85 [45], [46].

Table IIIa. HTMT ratio of correlation in manufacturing SMEs

	CRM	CS	MF	SMFU	SRM
CRM					
CS	0.513				
MF	0.443	0.782			
SMFU	0.827	0.386	0.373		
SRM	0.639	0.447	0.436	0.562	

Source: Replicated from [42]

Table IIIb. HTMT ratio of correlation in service SMEs

	CRM	CS	MF	SMFU	SRM
CRM					
CS	0.682				
MF	0.611	1.017			
SMFU	0.962	0.931	1.072		
SRM	0.521	0.736	0.934	0.881	

Source: Processed Data

Table IIIa depicts the HTMT ratio of correlation in manufacturing SMEs where all constructs/variables included in the model have HTMT values lower than 0.85, so the model can be said to have a valid discriminant. On the other hand, Table IIIb shows the HTMT ratio of correlation in service SMEs is somewhat less valid discriminantly because there are several HTMT values that are higher than the requirements of 0.85, namely the correlation between SMFU -> CRM is 0.962, SMFU -> CS = 0.931, SMFU -> MF = 1.072, MF -> CS = 1.017 and SRM-> MF = 0.934 (values in bold font).

C. Path Coefficient

Testing the model structure (inner-model) is carried out after testing the measurement model (outer-model) is considered valid and reliable. The bootstrap procedure is carried out on all items in the construct/variable that have been assessed as valid and reliable at the measurement model assessment stage. The first step is to look at the structure of the model using the path coefficients. The results obtained are shown in Table IVa which represents manufacturing SMEs and Table IVb which represents service SMEs.

Table IVa. Path coefficient in manufacturing SMEs

Constructs Correlatio ns	Origin al Sample (O)	Sampl e Mean (M)	Standard Deviatio n (STDE V)	T Statistic s (O/STD EV)	P Values
CRM ->	0.347	0.364	0.138	2.511	0.012*
CS -> MF SMFU ->	0.672 0.684	0.663 0.700	0.080 0.067	8.357 10.205	0.000* 0.000*

CRM					
SMFU ->	0.401	0.420	0.000	4.436	0.000*
SRM	0.401	0.428	0.090	4.430	
SRM ->	0.106	0.102	0.114	1 717	0.087*
CS	0.196	0.193	0.114	1.717	*

^{*} sig. level 0.05

Source: Replicated from [42]

Table IVb. Path coefficient in service SMEs

Constructs Correlatio ns	Origin al Sample (O)	Sampl e Mean (M)	Standard Deviatio n (STDE V)	T Statistic s (O/STD EV)	P Values
CRM -> CS	0.409	0.406	0.072	5.676	0.000*
CS -> MF	0.845	0.843	0.017	48.723	0.000*
SMFU -> CRM	0.799	0.794	0.038	20.888	0.000*
SMFU -> SRM	0.707	0.698	0.052	13.512	0.000*
SRM -> CS	0.499	0.499	0.056	8.981	0.000*

^{*} sig. level 0.05

Source: Processed Data

The path coefficient aims to test the significance and relevance of the structural model relationship. The path coefficient threshold following the t-test must not be less than the critical value of 0.01 ($\alpha = 1\%$), which is 2.58, or 0.05 ($\alpha = 5\%$), which is 1.96. Table IVa and Table IVb illustrate the relationship between the constructs/variables involved in this research model which have a positive and significant value in both manufacturing SMEs and service SMEs. All interactions except SRM -> CS (values in bold font) have a T-statistic value that is greater than the required threshold, namely 1.96 or 2.58 (it can be also seen on the P value that is smaller than 0.05). In the correlation between SRM -> CS (manufacturing SMEs), the value of the T-statistic = 1.717 which is smaller than 1.96 ($\alpha = 5\%$), but still greater than 1.65 ($\alpha = 10\%$), so it can still be said to be significant even at $\alpha = 10\%$ [43].

D. Coefficient of Determination (R^2 adjusted)

The coefficient of determination (R^2 adjusted) is a coefficient that can explain how much influence the independent construct/variable has on the dependent construct/variable in the structural model. Table Va (representing manufacturing SMEs) shows the relationship and magnitude of influence between SMFU and CRM = 0.462, SMFU and SRM = 0.152, (CRM + SRM) and CS = 0.213, and CS and MF = 0.446. While Table Vb (representing service SMEs) indicates the relationship and the magnitude of influence between SMFU and CRM = 0.635, SMFU and SRM = 0.495, (CRM + SRM) and CS = 0.611, and CS and MF = 0.710. Comparatively, the independent construct/variable has a greater influence on the dependent construct/variable in service SMEs than in manufacturing SMEs.

^{**} sig. level 0.10

Table Va. The coefficient of determination (R²) in manufacturing SMEs

	R Square	R Square
	K Square	Adjusted
CRM	0.467	0.462
CS	0.230	0.213
MF	0.451	0.446
SRM	0.161	0.152

Source: Replicated from [42]

Table Vb. The coefficient of determination (R²) in service SMEs

	D Canara	R Square
	R Square	Adjusted
CRM	0.639	0.635
CS	0.619	0.611
MF	0.713	0.710
SRM	0.501	0.495

Source: Processed Data

VI. DISCUSSION

Based on Tables IVa and IVb and Tables Va and Vb, the results of the analysis are verified with the proposed hypothesis and are explained as follows:

1) The relationship between Social Media Function and Usage (SMFU) and Supplier Relationship Management (SRM) in manufacturing SMEs has a regression coefficient of 0.401. This means that an increase in the use of social media by manufacturing SMEs (by 1 unit) will increase relations with their suppliers by 0.401 units (at a significance level of 1%), while for service SMEs it is 0.707. These results support hypothesis 1 (H1) that the use of social media has a positive and significant effect on the relationship between manufacturing SMEs (and service SMEs) and their suppliers. On the other hand, the coefficient of determination (R² adjusted) is very small (0.152), meaning that SMFU in manufacturing SMEs only contribute 15% to SRM. Whereas in service SMEs the contribution is greater, that is 0.495 or almost 50%. This finding is in line with the research of [41] which states that social media has a positive and significant influence on SRM practices.

The difference in the contribution of the use of social media in influencing company and supplier relations (SRM) is more marked by the difference in fulfilling the needs of manufacturing SMEs and service SMEs towards their suppliers. For service SMEs, suppliers will have more interest in the company to help fulfill the products, services, or facilities needed by the company to serve its consumers/customers. Meanwhile, for manufacturing SMEs, it is the company that has an interest in suppliers so that their raw material and supporting material needs can be met by their suppliers. For example, in the laundry business (service SME), the supplies needed by the company are detergents, deodorizers, irons, electricity supplies, fuel supplies for transportation (goods delivery services), and telephone credit for communication, which are relatively easy to obtain and fulfill. Meanwhile, for furniture SME, wood materials are determined by wood suppliers whose availability can be very limited or not always easy to get.

2) The relationship between Social Media Function and Usage (SMFU) and Customer Relationship Management (CRM) in manufacturing SMEs produces a regression coefficient of 0.684. That is, if there is an increase (by 1 unit) in the use of social media by manufacturing SMEs in supporting their business, it will increase the relationship with customers/consumers by 0.684 units (significant at the 1% significance level), while for service SMEs it is 0.799. These results also support hypothesis 2 (H2) that the use of social media has a positive and significant effect on the relationship between manufacturing SMEs (and service SMEs) and their customers/consumers (CRM). The value

of the regression coefficient in manufacturing and service SMEs is quite large. This is supported by the relatively moderate adjusted R² of 0.462 for manufacturing SMEs and 0.635 for service SMEs, which means that the contribution of the use of social media in influencing good relations between manufacturing SMEs and their customers (CRM) is 46.2%, while service SMEs is 63.5%. This finding also supports a study conducted by [41] which states that social media has a positive and significant influence on CRM practices.

It stands to reason that both manufacturing SMEs and service SMEs will prioritize meeting consumer/customer needs more than their suppliers. Therefore, it is natural for companies to be closer to their customers than their suppliers. It can be said, the company will be more willing to lose its suppliers than its customers and it is easier to find other suppliers than to lose customers.

3) The relationship between Supplier Relationship Management (SRM) and Customer Satisfaction (CS) in manufacturing SMEs obtained a regression coefficient of 0.196. This means that an increase in the relationship between manufacturing SMEs and suppliers (by 1 unit) will only increase supplier satisfaction by 0.196 units (significant at the 10% significance level), while for service SMEs it is 0.499. These results support hypothesis 3 (H3) that the relationship between manufacturing SMEs (and service SMEs) and their suppliers has a positive and significant effect on customer satisfaction (CS). This is also in line with R² in manufacturing SMEs which is only 0.213, that is, 21% changes in SRM will affect CS, while R² in service SMEs is 0.611, which means that the high and low CS is contributed by the ups and downs of SRM by 61%, while the rest is contributed by other variables.

This finding implies that in manufacturing SMEs the relationship between the company and the supplier is too small to make customers satisfied. On the other hand, service SMEs have quite large impact on the relationship between the company and the supplier in influencing consumer satisfaction. Operationally, for manufacturing SMEs, suppliers are third parties needed by the company, especially in fulfilling the needs of raw materials and auxiliary materials for the company's products, so that the continuity of the company's business depends on/is determined by suppliers, not customers. In contrast, for service SMEs, customer satisfaction is not only determined by the company but also by the availability of supplies and facilities provided by suppliers and companies to prospective buyers/customers. Both in manufacturing SMEs and service SMEs, this finding contradicts research conducted by [41] who claim that there is no significant relationship between SRM practices and customer satisfaction.

4) The relationship between Customer Relationship Management (CRM) and Customer Satisfaction (CS) in manufacturing SMEs produce a regression coefficient of 0.347. That is, an increase in the relationship between manufacturing SMEs and customers/consumers (by 1 unit) will only increase customer satisfaction by 0.347 units (significant at the 5% significance level), while for service SMEs is 0.409. These results support hypothesis 4 (H4) that the relationship between manufacturing SMEs (and service SMEs) and their customers has a positive and significant effect on customer satisfaction (CS). This is also similar to the R² obtained, which is only 0.213, that is, only 21% of the ups and downs of CRM will affect the ups and downs of CS. Whereas R² in service SMEs is 0.611, which means that the rise and fall of CRM will affect the level of CS by 61%. Both in manufacturing SMEs and service SMEs, this finding is in line with the study of [41] which states that there is a significant relationship between CRM practices and customer satisfaction.

The small value of the regression coefficient and R² in manufacturing SMEs and also the moderate value of the regression coefficient and R² in service SMEs is another proof that although there is more closeness between the company and its customers compared to its suppliers, limited human resources, minimum financial resources and technology, and the still weak business management owned by companies (both manufacturing SMEs and service SMEs) has resulted in dissatisfied customers in establishing business relationships with companies.

5) The relationship between Customer Satisfaction (CS) and Market Performance (MF) in manufacturing SMEs gives a regression coefficient of 0.672. This means that if there is an increase in customer (and possibly supplier) satisfaction from manufacturing SMEs when running a business (by 1 unit), it will increase the product market

performance of manufacturing SMEs by 0.672 units (significant at the 1% significance level), while service SMEs are 0.845. These results support hypothesis 5 (H5) that customer satisfaction (CS) has a positive and significant effect on market performance (MF). On the other hand, the coefficient of determination (R² adjusted) which is 0.446 proves that the company's customer satisfaction is able to have a positive and significant influence on the market performance of the company's products. There are about 45% of market performance (MF) will be affected by changes in CS. Whereas in service SMEs the contribution is 0.71% or 71% CS has an impact on market performance. This finding is in line with the research of [41] which states that there is a significant relationship between customer satisfaction and market performance.

Based on the value of the regression coefficient and R² adjusted, the impact of CS on service SMEs actually contributes more to market performance than manufacturing SMEs (45% versus 71%). This is a logical consequence that satisfied customers will have a positive impact on company performance. In addition to getting an increase in reputation, customer retention, and an increasingly recognized (viral) product brand, in turn, sales volume, market share, and of course the company's profits will also increase. Nevertheless, there are differences in orientation in providing customer satisfaction between manufacturing SMEs and service SMEs.

Manufacturing SMEs that produce goods, their performance is largely determined by the price and quality of the products purchased by consumers. If the price and product quality can be accepted by consumers, then consumers will be satisfied. Whereas service SMEs whose products are in the form of services to consumers, if the company's services can be received or reach the hands of consumers at unchanged price and quality levels, then consumers will also feel satisfied. So, with a difference of 45 (manufacturing SMEs) compared to 71 (service SMEs), it shows that the price and quality of products produced by manufacturing SMEs still do not make their consumers/customers satisfied yet.

CONCLUSION

Based on the findings obtained referring to the proposed hypothesis, there are several things that can be concluded, namely:

- (1) From the many indicators in the SMFU construct/variable that must be eliminated, both in manufacturing SMEs and service SMEs, it indicates that the SMEs involved in this study did not yet understand the functions and benefits of social media to support their business.
- (2) For both manufacturing SMEs and service SMEs, the use of social media does not guarantee that it can improve good and mutually beneficial relationships between companies and their customers and suppliers.
- (3) In manufacturing SMEs there is a situation where companies have a closer relationship with their customers than their suppliers. Conversely, in service SMEs, companies tend to be closer to their customers than their suppliers.
- (4) In manufacturing SMEs there is no or only little influence/relationship between the company and its suppliers on customer satisfaction.
- (5) Limited resources owned by SMEs in terms of human, finance, management, and technology are still classic problems faced by SMEs, both in manufacturing and services.

By looking at and understanding the pattern of relationships between companies and suppliers (SRM) and between companies and customers (CRM) carried out by manufacturing SMEs and service SMEs, it becomes clear that there are still many obstacles faced by SMEs, especially the limited resources they have and the understanding of functions and benefits of using social media to support their business. Therefore, empowering human resources, providing managerial and technological aspects, as well as enhancing appropriate and adequate skills (i.e., hard

skills and soft skills) is very important in order to improve how to negotiate with suppliers and communicate with customers, both verbally (mouth-to-mouth) or by using social media.

This research was conducted in a limited scope, which was only carried out on manufacturing SMEs and service SMEs in the former Surakarta residency area which consisted of one city and six regencies. Future research can explore similar cases in trading, plantation, or micro-scale SMEs which have their own uniqueness and problems. Likewise, the scope of the survey area can be expanded and the sample size enlarged, a different analysis model approach, or longitudinal data used to obtain a comprehensive map of how SMEs with various types of businesses use social media as a medium to establish better and profitable relationships with suppliers (SRM) and customers (CRM).

REFERENCES

- [1] Khan, S. A., Liang, Y., & Shahzad, S. (2015). The effect of buyer-supplier partnership and information integration on supply chain performance: an experience from Chinese manufacturing industry, *International Journal of Supply Chain Management*, 4(2), 20–34.
- [2] Matsoso, M. L., & Benedict, O. H. (2014). The customer-supplier relationships in supply chain management: a small manufacturing enterprise (SME) perspective. *Journal of Economics*, 5(2), 177–184.
- [3] Paik, S. K. (2011). Supply management in small and medium enterprises: role of firm size. *Supply Chain Forum an International Journal*, 12(3), 10-21.
- [4] Lang A., Pravicini D., & Revaz E. (2001). Reputation in a Request for Proposals Electronic Platform. *Working Paper*, University of Lausanne Business School.
- [5] Kannan, G. (2016). 11 reasons why SMEs fail. Retrieved from Leader Economics: https://leaderonomics.com/ business/why-smes-fail
- [6] Pongwiritthon & Awirothananon (2015). Competitive advantages of small and medium enterprises in northern Thailand. *Journal of US-China Public Administration*, 12(1), 42–50.
- [7] Chin, T. A., Hamid, A. B. A., Rasli, A., & Baharun, R. (2012). Adoption of supply chain management in SMEs. *Procedia Social and Behavioral Sciences*, 65, 614–619.
- [8] Gunasekaran, A., Lai, K., & Edwincheng, T. (2008). Responsive supply chain: A competitive strategy in a networked economy. *Omega*, vol. 36, no. 4, pp. 549–564.
- [9] Jajja, M. S. S., Kannan, V. R., Brah, S. A. & Hassan, S. Z. (2017). Linkages between firm innovation strategy, suppliers, product innovation, and business performance. *International Journal of Operation Production Management*, vol. 37, no. 8, pp. 1054–1075.
- [10] Dirgiatmo, Y., Abdullah, Z., & Mohd. Ali, R. H. R. (2019). The role of entrepreneurial orientation in intervening the relationship between social media usage and performance enhancement of exporter SMEs in Indonesia. *International Journal of Trade and Global Markets*, vol. 12, No. 2, pp. 97-129.
- [11] Hassan, S., Nadzim, S. Z. A., & Shiratuddin, N. (2015). Strategic Use of Social Media for Small Business Based on the AIDA Model. *Procedia Social and Behavioral Sciences* 172: 262-269.
- [12] Jamal, N. M., & Tayles, M. (2014) The Direct Effect of Supply Chain Management Practices for Management Accounting and Supply Chain Performance. *World Journal of Management*. 5:2, 50-55.
- [13] Masdek, N. M., & Othman, M. F. (2014). Supply chain management practices as a source of competitive advantage for food processing SMEs in peninsular Malaysia. *Economic and Technology Management Review*, 19-28.
- [14] Khalid, N. (2009). Adopting total supply chain management towards enhancing Malaysia's competitive edge as a trading nation. *Maritime Institute of Malaysia*, (November), 1–40.
- [15] Chopra, S., Meindl, P., & Kalra, D. V. (2016). Supply Chain Management: Strategy, Planning and Operation, sixth edition, Pearson India Education Services Pvt, Ltd.

- [16] Sukati, I. A., Hamid, A. B., Baharun, R., Tat, H. H., & Said, F. (2011). A study of supply chain management practices: An empirical investigation on consumer goods industry in Malaysia. *International Journal of Business and Social Science*, 2(17), 166-176.
- [17] Rezaei, J., Ortt, R., & Trott, P. (2015). How SMEs can benefit from supply chain partnerships. *International Journal of Production Research*, 53(5), 1527–1543.
- [18] Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2002). The Theoretical Underpinnings of Customer Asset Management: A Framework and Propositions for Future Research. Erasmus Research Institute in Management, *Working Paper* No. ERS-2002-80-MKT, Erasmus University, Rotterdam.
- [19] Wang, Y., Lo, H. P., Chi, R., & Yang, Y. (2004) An integrated framework for customer value and customer-relationship management performance: a customer-based perspective from China. *Managing Service Quality*, Volume 14, Number 2/3, pp. 169-182.
- [20] Chang, T. M., Liao, L. L., & Hsiao, W. F. (2005). An empirical study on the e-CRM performance influence model for service sectors in Taiwan. *IEEE International Conference on e-Technology, e-Commerce and e-Service*, pp. 240-245.
- [21] Kim, J., Suh, E., & Hwang, H., 2003. A Model For Evaluating The Effectiveness of CRM Using The Balanced Scorecard. *Journal of Interactive Marketing*, 17(2), 5–19.
- [22] Kim, S. W. (2007). Organizational Structures and the Performance Supply Chain Management. *International Journal Production Economics*, Vol. 106, pp. 323-345.
- [23] Harland, C. M. (1996). Supply chain management: relationships, chains and networks. *British Journal of Management*, 7, 63-80.
- [24] Tanskanen, K. (2015). Who wins in a complex buyer-supplier relationship? a social exchange theory based dyadic study. *International Journal of Operations & Production Management*, 35(4), 577-603.
- [25] Forkmann, S., Henneberg, S. C., Naudé, P., & Mitrega, M. (2016). Supplier relationship management capability: A qualification and extension. *International Marketing Management*, vol. 57, pp. 185–200.
- [26] Kabachia, S., & Kihara, D. A. (2019). Effect of supplier relationship management on organizational performance: A case study of Kenya Airways Limited. *International Journal of Supply Chain Logistics*, vol. 3, no. 3, p. 34-47.
- [27] Kiarie, J. W. (2017). The Influence of supplier relationship management practices on operational performance of large manufacturing organizations in Kenya. *Ph.D. Dissertation*, School Management Commerce, Strathmore Univ., Nairobi, Kenya.
- [28] Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research*, vol. 41, no. 3, pp. 293–305.
- [29] Bhat, S. A., & Darzi, M. A. (2016). Customer relationship management. *International Journal of Bank Marketing*, vol. 34, no. 3, pp. 388–410.
- [30] Quayle, M. (2003). A study of supply chain management practice in UK industrial SMEs. *Supply Chain Management*, 8(1), 79-86.
- [31] Pakir M., Omar, S. S., & Chin W. L. (2015). Trustworthiness in buyer-supplier relation on supply chain collaboration among SMEs. In *Proceeding of 2nd International Symposium on Technology Management and Emerging Technologies*, ISTMET 2015, 454–458.
- [32] Chen I. J., & Popovich, K. (2003). Understanding customer relationship management (CRM). *Business Process Management Journal*, vol. 9, no. 5, pp. 672–688.
- [33] Ainin, S., Parveen, F., Moghavvemi, S., Jaafar, N., I., & Shuib, N.L.M. (2015). Factors influencing the use of social media by SMEs and its performance outcomes. *International Management Data System*, vol. 115, no. 3, pp. 570–588.
- [34] Cetinkaya, A. S., & Rashid, M. (2018). The effect of social media on employees' job performance: The mediating role of organizational structure. *Journal of Organizational Psychology*, vol. 18, no. 4, pp. 1–21.
- [35] Dodokh, A., & Al-Maaitah, M. A. (2019). Impact of social media usage on organizational performance in the Jordanian dead sea cosmetic sector. *European Journal of Business Management*, vol. 11, no. 2, pp. 75–91.

- [36] Lam, H., K., S., Yeung, A. C. L., & Cheng, T. C. E. (2016). The impact of firms' social media initiatives on operational efficiency and innovativeness. *Journal of Operation Management*, vols. 47–48, no. 1, pp. 28–43.
- [37] Monteiro, T. A., Giuliani, A. C., Pizzinatto, N. K., & Larios-Gomez, E. (2019). Managing the digital consumer: Insights from Brazil and Spain. *Journal of Manufacturing Technology Management*, vol. 30, no. 8, pp. 1196–1215.
- [38] Kim, Y., Chen, Y.-S., & Linderman, K. (2015). Supply network disruption and resilience: A network structural perspective. *Journal of Operation Management*, vols. 33–34, no. 1, pp. 43–59.
- [39] De Nooy, W., Mrvar, A., & Batagelj, V. (2005). *Exploratory Social Network Analysis with Pajek*. Cambridge, U.K.: Cambridge Univ. Press.
- [40] Borgatti, S. P., & Li, X. (2009). On social network analysis in A supply chain context. *Journal of Supply Chain Management*, vol. 45, no. 2, pp. 5–22.
- [41] Cho, Y. S., Hong, P. C. & Lau, A. K. W. (2020). The Impact of Social Media Technologies on Supplier and Customer Relationship Management: An Empirical Analysis in the U.S. *IEEE Access*, volume 8, 220878-220888.
- [42] Dirgiatmo, Y., Hascarya, D., Rahardian, R., & Maarif, M. (2022). The Use of Information Technology in Social Media with Structural Equation Modeling Method: A Study of Impact on Supplier-Customer Relationship Management (S-CRM). *Proceedings paper* on the 1st International Conference on Smart Technology, Applied Informatics, and Engineering (APICS), IEEE, Xplore. pp. 42-47.
- [43] Hair, J. F., Hult, G. T. M., Ringle, C. M. & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). 2nd Edition, Sage Publications Inc., Thousand Oaks, CA.
- [44] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-based Structural Equation Modeling. *Journal of the Academy of Marketing Science*.
- [45] Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3), 309–319.
- [46] Kline, R. B. (2011). Principles and Practice of Structural Equation Modelling. Guilford Press, New York.