

# The Effectiveness of using Online Application in Improving Micro, Small and Medium Enterprises (MSMEs) Performance

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**Abstract.** This study aims to see the effect of the effectiveness of the use of online applications (go-food) on the performance of Small & Medium Enterprises (SMEs) in the city of Medan. The use of online applications is measured through (1) online communication channels; (2) online promotion channels (3) online supplier distribution channels; (4) online sales channels (5) online transaction channels. Meanwhile, SMEs performance is measured through (1) customer satisfaction; (2) sales growth; (3) employee growth; (4) market share.

**Keywords:** Effectiveness · Online application · Performance

## 1 Introduction

Online-based technology is increasingly in demand. Data e-Marketer (2018) states that internet service users in Indonesia continue to grow. According to these data there has been an increase in internet users since 2013. The data recorded showed that as many as 72.8 million internet service users, where the number continues to increase in 2016 to 102.8, and 112.6 million in 2017. Data released by Bank of Indonesia estimates that 24.7 million people from internet users do online shopping transactions. The value of the transaction is estimated in 2018 to reach 144 trillion.

The rapid development of online business by offering various facilities, time efficiency, energy efficiency and cost efficiency is certainly a good opportunity for the development of Micro, Small and Medium Enterprises (MSMEs). Referring to the data of MSMEs in Indonesia, as many as 8.7 million MSMEs are potential for the economic sector. Small and medium Enterprises (SMEs) have become a vital economic sector in competitive economic development, even in Indonesia the source of community economic livelihood depends on this sector. SMEs in Indonesia are concentrated in the trade sector, such as "food, processed food, textiles and garments, wood and wood products, as well as mineral and metal and culinary production".

A research that has been conducted by Utomo [1] found that business utilization using online technology can improve business performance. Utilization of online technology will ultimately open up opportunities and conveniences for SMEs in improving business performance. Research conducted by Misnawati & Yusriadi (2018) explains that the opportunities for sophisticated digital technology will have an impact on the

ease of managing a business in order to increase sales profits [2]. The findings of research conducted by Zulfikar & Supriyoso (2019) found the results that online sales were effectively carried out well [3]. Utilization of online business sales even increased sales by 80% compared to manual business sales which only amounted to 20%. Although there is a significant increase there are obstacles in utilizing online sales, one of which is the initial sale there is consumer distrust in the products offered online. Lack of references to products that cause consumers to distrust vendors who sell online. Arisandi's research (2018) found that the use of e-commerce can increase business productivity and endurance of the flip business and increase sales [4]. Based on this background, this study will explore the effectiveness of using online applications at MSMEs in the city of Medan.

## 2 Theoretical Review

### 2.1 Effectiveness of using Online Applications

The most technological invention of transformation today is the internet (The-Economist, 1999). The internet is believed to be the basis for potentially changing business paradigms that have an impact on every corporate value chain link [5]. The facilities provided by the internet to support business activities such as the availability of websites, blogs, social media. Where the devices provided are global and real time as well as practical in supporting business activities such as promotional activities that are more leverage and broad reach. Utilization of online applications will accelerate the dissemination and exchange of information up to date.

Online applications will have an impact on business operations and marketing activities for customers through three marketing channels namely, "communication channels, whose main function is to inform buyers and prospective buyers about the availability of products / services and seller attributes that enable buyers and prospective buyers to communicate with sellers, the transaction channel, whose main function is to facilitate economic exchange between buyers and sellers, the distribution channel, whose main function is to facilitate physical exchange[6]. By using an online application, the company will immediately be accessed by potential customers who use the application. All information provided by the company will be accessible to potential customers in realtime. Thus the use of online applications will streamline activities that are the company's goals.

Understanding the effectiveness cannot be separated from how successful the target has been achieved. Effectiveness can be related to achievement in terms of quantity, quality or related to time. Measuring effectiveness can be interpreted by comparison between targets and achievements, where the better the achievement of the targets, the higher the effectiveness [7].

Effectiveness is the ability to achieve targets that have been set [8]. Sales effectiveness is the ability to sell every unit of goods produced and resell items purchased in order to achieve the objectives set [8]. Thus it can be said that sales effectiveness is a comparison between sales targets and the realization obtained (Akmal, 2006: 37).

The effectiveness of using online applications can be interpreted as how effective the process of online applications to increase sales. The use of online applications (e-

marketing) is an act of using the web in marketing products and services to customers[9]. Through the use of web media marketing activities in the form of transactions, payments, advertisements and promotions can be done, obtained by users by accessing information anywhere via internet-connected devices. Indicators used regarding online applications consist of, (1) online communication channels, (2) online promotional channels (3) online supplier distribution channels, (4) sales channels online (5) online transaction channels[6].

## 2.2 The Performance

Performance is interpreted as a level to meet expectations associated with its function[10]. This expectation relates to its function in the organization. Managerial performance is "one of the factors that can increase organizational effectiveness. The performance of managers in carrying out tasks and actions are grouped according to section functions" [11]. The functions and divisions are divided into several centers of responsibility consisting of investment responsibility centers, profit centers, cost centers and revenue centers Mahoney et al (1963) in Soleman (2012)[10]. Manager performance is "the ability of managers to carry out their responsibilities on product quality, product quantity, product timeliness, new product development, personnel development, budget achievement, cost reduction (increase in income), and public affairs "[12].

The purpose of organizational effectiveness shows how important business performance is. Furthermore, the company's performance according to (Soininen, Martikainen, Puumalainen, & Kyläheiko, 2012)[13] is "an indicator of high profitability and market share growth where the growth of the two measurement indicators is an essential part of the company's performance and is used to evaluate the competitiveness of the company". In general there are two indicators that are able to describe business performance as part of (a) financial performance (such as, sales increase performance, ability to get profits, etc.); (b) operational performance (market share growth, new products, product quality, marketing effectiveness and value added)[14]. Business performance indicators consist of "(1) sales growth; (2) customer growth; (3) profit growth; (4) growth of working capital " [15]. Financial performance is the extent of financial efficiency and profit size. While non-financial performance is operational performance that includes "(1) customer satisfaction; (2) sales growth; (3) employee growth; (4) market share [16].

## 2.3 Effect of Effective Use of Online Applications on Business Performance

The approach taken through online applications brings several advantages for MSMEs, especially in increasing sales, increasing customer interest and attention, increasing references in innovation [17]. The use of online applications helps small entrepreneurs to improve the way they communicate and interact with customers, increase sales of products and services through effective marketing, and build better relationships between suppliers and customers [17].

The results showed that there was a positive influence on the application of online applications to the business value of Wade, Johnston, & McClean [18], while Utomo

[17] found that the use of business using online technology could improve business performance. Research conducted by Misnawati & Yusriadi [2] explains that the opportunities for sophisticated digital technology will have an impact on the ease of managing a business to increase sales profits, while Zulfikar and Supriyoso [3] find the results that online sales are effectively implemented well. Arisandi Research [4] found that the use of e-commerce can increase business productivity and endurance of the flip business and increase sales. Then Doherty, Ramsey, Harrigan, & Ibbotson [19] found that "MSMEs that adopt and use broadband internet technology encourage efficiency and strategic development on a daily basis.

Referring to the explanation above, the research hypothesis is:

H1: The effectiveness of using online applications has a positive and significant effect on performance.

### **3 Methods**

#### **3.1 Measurement and Observation Parameters**

Variables observed / measured.

##### **3.1.1 Effectiveness of using Online Applications (X1)**

The effectiveness of the use of online applications is how effective the process of online applications is to increase sales and the convenience provided by the internet to support business activities such as the availability of websites, blogs, social media. This variable is measured by indicators adopted by Peterson et al [6] consisting of "(1) online communication channels, (2) online promotion channels (3) online supplier distribution channels, (4) online sales channels (5) transaction channels online Variables will be measured using a Likert scale with a score from 1 to 5.

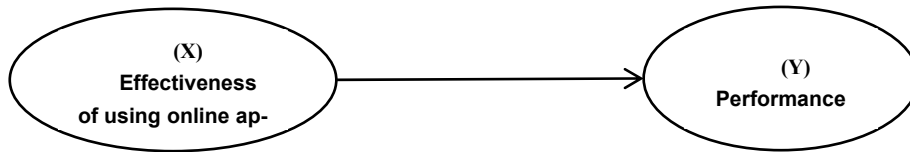
##### **3.1.2 Performance (Y)**

Financial performance is the extent of financial efficiency and profit size. Business performance indicators consist of "(1) sales growth; (2) customer growth; (3) profit growth; (4) working capital growth " [15], while operational (non-business) performance consists of" (1) efficiency; (2) customer satisfaction. Variables will be measured using a Likert scale with a score from 1 to 5.

#### **3.2 Research Models**

The model used,

The model used in this study can be described as follows:



Picture 1.

The statistical formula used:  $Y = a + X + e$

Information :

Y = Performance

X = Effectiveness of using online applications

### 3.3 Research Design

Research design,

1. Determine the population and sampel

The population is all MSMEs using Go-Food applications in Medan City. The population is 500 (five hundred) MSMEs. The sample is determined using the Slovin method with total 222 samples.

### 3.4 Data Collection and Analysis Techniques

All statement instruments will be measured using a Likert scale. Likert scale is a measurement scale used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena [20]. Measurement of variable indicators in this study, answers to positive and negative questions are made in five assessment weights, namely:

- a. Strongly disagree weighting 1
- b. Disagree weight 2
- c. Neutral weights 3
- d. Agree weights 4
- e. Strongly agree weight 5

The selection of the right measuring instrument will determine the validity or validity of a research result. Mistakes in choosing a measuring instrument will cause the results obtained will not describe the real situation. Sekaran [21] states that to overcome this, two types of testing are needed, namely the test of validity and the test of reliability used to test the sincerity of the respondents' answers. Data processing devices in the equation model in this study use PLS.

## 4 Results and Discussion

### 4.1 Descriptive Data

Based on the Table 1, it can be seen that the majority of respondents are male. The education level of most respondents is high school. The length of effort that has been undertaken by the majority of respondents is 5-10 years. The average sales per month of the majority of respondents is 2 to 5 million per month. While there are still 77% of respondents who do not have a TIN. And the majority of respondents have used Go-Food for >1 year.

Table 1. Descriptive Data.

No	Description		Frequency	Percentage
1	Gender	Male	161	64%
		Female	60	36%
2	Degree of Education	High School	173	69%
		Diploma	62	25%
		Graduate	15	6%
		PostGraduate	1	0%
3	Business time span	<5 year	76	30%
		5-10 year	168	67%
		>10 year	7	3%
4	Monthly Sales	< 1million	1	0%
		1 – million	63	25%
		2 – 5 million	138	55%
		5 – 10 million	44	18%
		> 10 million	5	2%
5	Have Tax Registration Number (NPWP)	Yes	58	23%
		No	193	77%
6	Time length of using go-food services	< 1 Year	52	21%
		> 1 Year	99	40%

### 4.2 Data Analysis

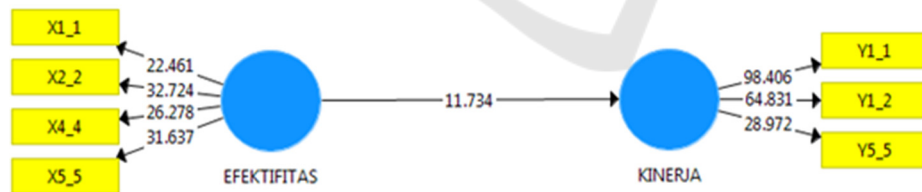


Fig. 1. Path Analysis.

From the picture above it can be seen that the indicators that make up the effectiveness variable are:

1. The go-food application helps in selling the respondent's products
2. The go-food application helps in introducing respondent products
3. The go-food application helps in increasing respondents' product sales
4. The go-food application helps to find out the total product sales of the respondents

However, go-food application does not help in the process of purchasing respondents' raw materials. So that the 3rd indicator that is helping in purchasing raw materials must be eliminated, because it is proven to not form the effectiveness variable.

Meanwhile, the indicators that make up the performance variable are:

1. Increased profits (profits)
2. Increased sales
3. Increased customers

And, indicators of capital increase and expenditure reduction do not have enough load- ing factors to form performance variables so they must be removed from the model.

**Table 2.** Data Analysis.

	<b>Adjusted R square</b>	<b>P-value</b>	<b>T-statistics</b>
<b>Effectiveness -Performance</b>	0.366	0.000	11.734

Based on the above table, it can be seen that the amount of adjusted R-square between the effectiveness of using online applications with performance is 36.66%. This means that every time there is an increase in effectiveness by 1 (one) standard deviation, the performance will increase by 36.66%.

The table above also shows that the effectiveness of using on-line (go-food) appli- cations can improve the performance of MSMEs in Medan. The effectiveness of using an online application is measured through:

1. The go-food application helps in selling the respondent's products
2. The go-food application helps in introducing respondent products
3. The go-food application helps in increasing respondents' product sales
4. The go-food application helps to find out the total product sales of the respondents

Meanwhile, MSME performance is measured through:

1. Increased profits (profits)
2. Increased sales
3. Increased customers

## 5 Conclusions

Based on research gaps, literary studies, data processing and analysis, it can be con- cluded that the use of online applications (go-food) in small and medium businesses in the culinary field has an effect on improving the performance of MSMEs in Medan.

## References

1. M. N. Utomo, "Kajian strategi pengembangan usaha mikro kecil dan menengah (umkm) di kota tarakan."
2. Misnawati and Yusriadi, "Efektifitas Pengelolaan Kewirausahaan Berbasis Kognitif Personal Melalui Penggunaan Infrastruktur Digital (Media Sosial)," *Jurnam Mitra Manaj. (JMM Online)*, vol. 2, no. 3, pp. 138–145, 2018.

3. F. Zulfikar and P. Supriyoso, "Efektifitas Penjualan Online Melalui Media Sosail Pada Perusahaan CV Billionaire Sinergi Korpora (Billionaire Store)," in Festival Riset Ilmiah Manajemen Akuntansi, 2019, pp. 909–913.
4. Y. T. Arisandi, "Efektivitas Penerapan E-Commerce Dalam Perkembangan Usaha Kecil Menengah di Sentra Industri Sandal Dan Sepatu Wedor Kabupaten Sidoarjo . (Unpublished)," 2018.
5. J. Papows, "Enterprise.com: Reading, MA: Perseus Books," 1998.
6. R. A. S. Peterson, Balasubramanian, and B. J. Bronnenberg, "Exploring the Implications of the Internet for Consumer Marketing," *J. Acad. Mark. Sci.*, vol. Vol. 25, no. No. 4, p. hlm: 329-346, 1997.
7. Hidayat, *Teori Efektifitas Dalam Kinerja Karyawan*. Yogyakarta: Gajah Mada University Press, 1986.
8. A. Dearden and Bedford, *Management control system*, 6th ed. Richard D.Irwin,Inc, 1992.
9. F. C. Ling and L. Ting, "Assessment of Internet Marketing and Competitive Strategies for Leisure Farming Industry in Taiwan. J," *ournal Am. Acad. Business*. ISSN 15401200, vol. Volume 8, no. Issue 2, pp. 296–300, 2006.
10. R. Soleman, "Pengaruh Penganggaran Partisipatif terhadap Kinerja Manajerial Dengan Budaya Organisasi Dana Gaya Kepemimpinan Sebagai Variabel Moderating," *J. Siasat Bisnis*, vol. 16, no. 1, pp. 87–105, 2012.
11. A. and Govindarajan, *Management Control Systm*, New York: Mc. Graw Hill. Jakarta: Terjemahan Penerbit: Salemba Empat, 2005.
12. R. Supriyono, "Pengaruh Komitmen Organisasi dan Keinginan Sosial Terhadap Hubungan Antara Partisipasi Penganggaran Dan Kinerja Manajer," in *Simposium Nasional Akun-tansi VII.*, 2004.
13. J. Soinininen, M. Martikainen, Puumalainen, and K. Kyläheiko, "Entrepreneurial orientation: Growth and profitability of Finnish small- and medium-sized enterprises," *Int. J. Prod. Econ.*, vol. Vol. 140, no. No.,1, pp. 614-621., 2012.
14. N. Venkatraman and V. Ramanujam, "Measurement of Business Performance in Strategy Research: A Comparison of Approaches," *Acad. Manag. Rev.*, vol. 11, no. 4, pp. 801-814., 1986.
15. Meutiaa and T. Ismail, "The Development of Entrepreneurial Social Competence And Business Network to Improve Competitive Advantage And Business Performance of Small Medium Sized Enterprises: A Case Study of Batik Industry In Indonesia," in *Procedia - Social and Behavioral Sciences*, Vol. 65, No., hlm: 46 - 51, 2012.
16. G. Sidik, "Conceptual framework of factors affecting SME development: mediating factors on the relationship of entrepreneur traits and SME performance," in *Procedia Economics and Finance*, Vol. 4, No., hlm: 373 - 383, 2012.
17. M. N. Utomo, "Efektivitas Bisnis Berbasis Teknologi Internet dalam Membangun Kinerja Kewirausahaan," *BISMA (Bisnis dan Manajemen)*, vol. 11, no. 2, pp. 156–172, 2019.
18. M. Wade, D. Johnston, and R. McClean, "Exploring the net impact of internet business solution adoption on SME performance," *Int. J. Electron. Bus.*, vol. 2, no. 4, pp. 336–350, 2004.
19. E. Doherty, E. Ramsey, P. Harrigan, and P. Ibbotson, "Impact of Broadband Internet Technologies on Business Performance of Irish SMEs," *Strateg. Chang.*, vol. 25, no. 1, pp. 693–716, 2016.
20. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Penerbit Alfabeta., 2016.
21. U. Sekaran, *Metodologi penelitian untuk Bisnis*. Jakarta: Salemba Empat, 2011.