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Influence of Sale Growth Rate on Return on Sales: The Case of telecommunications technology firms listed on Hanoi Stock Exchange

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Abstract
The study investigates the influence of influence of Sale Growth Rate (SGR) on Return on Sales (ROS) in the telecommunications technology firms listed on Hanoi Stock Exchange. The study employs a set of aggregated data from 14 telecommunications technology firms listed on the Hanoi Stock Exchange (HNX). The research uses both qualitative and quantitative research methods. For the quantitative research method, the supporting tool is Stata13 software. The research results show that, the factor SGR not influence on ROS of telecommunications technology firms listed on the HNX. Based on the findings, some recommendations are given for SGR for improving ROS in the telecommunications technology firms listed on the HNX.

Keywords: Sale Growth Rate (SGR), Return on Sales (ROS), Telecommunications Technology Firms, Financial Ratios, Accounting

JEL Classification codes: M41, F65

1. Introduction
In the period 2020 - 2021, the COVID-19 pandemic maintained its detrimental influence on all business activities of the world in general, and Vietnam in particular. In the context of the severe impact of COVID-19 on the economy, especially during quarter 3 in 2021, many key economic areas had to practice social distancing. However, many telecommunications technology enterprises were fortunate to find their prospects for development in the new contexts.
Most telecommunications technology enterprises consider technology to be their weapons, and place emphasis on identifying and realizing every opportunity, expanding the market, ensuring employees safety and health, and cooperating with sustainable development enterprises and organizations.
Business activities of telecommunications technology enterprises in the market include some fundamental factors: Services provider, customer of the services, price of services on the market, quality of services, etc. Therefore, capital for telecommunications business activities needs to be maintained and developed. However, in the context of an integrating world, the industry is getting more and more competitive. Every industry has its own characteristics and typical capital structures. Each business needs to have the capacity to generate profit to survive in the industry. In addition, as it is an essential industry, and is deeply connected with other industries, it is a challenge for managers to improve the profit and ROS, which is receiving a lot of attention from shareholders. Besides, with the fluctuation of the economy, telecommunications technology enterprises' production and business are affected, sale growth rate and ROS have not yet met the requirements of enterprises and investors. Therefore, it is both theoretically and practically meaningful to analyze and assess the influence of the sale growth rate on ROS.

2. Literature review
Return on sale (ROS)
Return on sale (ROS) tells the relationship between profit after tax and net revenue of an enterprise. ROS can illustrate how much profit the enterprise can make per earnings.

$$\underset{(ROS)}{Return\ on\ sale} = \frac{Profit\ after\ tax}{Net\ revenue}$$ (**Source**: Luu & Vu, 2011) [6]

This ratio can also show the ability to manage and minimize costs of an enterprise. If the enterprise can manage the cost well, the ratio can be improved. Besides, this ratio largely depends on technical and economical features of the industry and enterprises' business strategy.

Sale growth rate

Growth rate is one of the fundamental conditions for an enterprise to achieve its objectives during its lifetime. Growing means that the enterprise is accumulating capital and infrastructure to invest and expand production, which also helps build reputation with customers and investors. In addition, growth helps the enterprise to enhance its competitive edge on the market, allowing the enterprise to survive and develop in the current fiercely competitive environment.

Theoretically speaking, growth can bring significant benefits for enterprises. However, rapid growth is not always an advantage, because it also creates potential risks for the enterprise. If productivity and management capacity cannot satisfy the requirements of a rapid growth, it would be an impediment to the firm's production and business. Therefore, the enterprise needs to maintain a growth rate suitable with the productivity and capacity of management with a detailed business plan in order to improve the business efficiency as well as the enterprise's profitability.

The research by Zeitun & Tian (2007) [10]; Onaolapo & Kajola (2010) [7]; Abbasali & Esfandiar (2012) [1] shows that growth rate positively influences enterprises' profitability. In Vietnam, research by Do Duong Thanh Ngoc (2011) [4] argues that growth rate has no effect on a firm's profitability. Growth rate is represented by sale growth rate. Sale growth rate can be calculated as follows:

$$Sale\ growth\ rate = \frac{Revenue\ of\ year - Revenue\ of\ previous\ year}{Revenue\ of\ previous\ year}$$

3. Research methodology

3.1 Context and sample

Currently in Vietnam, there are 14 telecommunications technology firms listed on the Hanoi Stock Exchange (HNX). Telecommunications technology firms listed on the HNX were listed at different times, have different numbers of outstanding shares, and different current equity.

Sample of research: This study employs a balance sheet whose data is categorized according to objects and time. Secondary data was collected from audited financial statements of 14 operating telecommunications technology firms listed on HNX as of the end of the accounting year 2021 from the website https://finance.vietstock.vn/ [9], which is a prestigious website. The study involved 14 firms over seven years, with a total of 98 observation variables. All 98 observations are included in the analysis through synthesis and data cleaning.

3.2 Research model and research hypothesis

Inheriting the above studies and experts' opinions, we built the research model as shown below (see fig 1):

Fig 1: Research model

Hypothesis H1: Sale Growth Rate (SGR) positive influence on ROS in telecommunications technology firms listed on the Hanoi Stock Exchange

3.3 Analysis approach

To test the research hypotheses, we used Stata software to perform the following analysis: Descriptive statistics; Correlation analysis; Regression.

4. Research results

4.1 Descriptive statistic

Table 1 show that the dependent variable includes 1 observed variables; the independent variable includes 1 observed variables. Each observed variable is described by 98 observations. Basic indicators such as mean, max, min, standard deviation (std), variance, skewness coefficient of variation, sum of variables, range, coefficient of variation (p50), coefficient of variation of each observed variable (cv) has been identified and these basic indices accurately reflect the current state of ROS and the influence of Sale Growth Rate on the ROS of listed telecommunications technology firms.

Table 1: General descriptive statistics and detail descriptive statistics

General descriptive statistics					
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Dependent variable					
ROS	98	-.2647107	2.207708	-19.32131	.4971404
Independent variable					
SGR	98	2.829376	24.83905	-.9904225	245.7647

Detail descriptive statistics		
stats	**EPS**	**RTR**
N	98	98
sum	-25.94165	277.2788
range	19.81845	246.7551
variance	4.873975	616.9784
cv	-8.340078	8.778987
skewness	-7.609972	9.693388
kurtosis	62.12253	95.30304
p50	.0219066	.0520072

4.2 Correlation analysis results

Table 2: Correlation analysis results of independent variable

	ROS	SGR
ROS	1.0000	
SGR	0.0302	1.0000

Table 2 shows the results of correlation analysis, also known as multicollinearity analysis. The results show that the absolute value of each correlation coefficient between 2 variables is less than 0.8; therefore, no multicollinearity occurs (Bryman & Cramer, 2001; Kohler & Kreuter, 2005; Torres-Reyna, 2007; Ditzen, 2018) [2, 5, 8, 3]. The remaining regression model has 1 independent variable with 1 observed variables, 1 dependent variable with 1 observed variables.

4.3 Regression results

Regression results without control variables

Table 3: OLS regression results

OLS regression results for observed variable ROS of the dependent variable (regress ROS SGR)						
Source	SS	df	MS		Number of obs = 98	
					F(1, 96) = 0.09	
Model	.432029065	1	.432029065		Prob > F = 0.7676	
Residual	472.343587	96	4.9202457		R-squared = 0.0009	
Total	472.775616	97	4.87397543		Adj R-squared = -0.0095	
					Root MSE = 2.2182	
ROS	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
SGR	.0026868	.0090672	0.30	0.768	-.0153114	.020685
_cons	-.2723127	.2255321	-1.21	0.230	-.7199904	.175365

With 95% confidence degree, Table 5 shows:
Value of F is equal to 0.09 < 1.96 and value of Prob is larger than value of F (Prob > F) by 0.7676 (> 0.05). Thus, the model is not consistent and statistically significant (Bryman & Cramer, 2001) [2]. Therefore, the research results are not accepted (Bryman & Cramer, 2001; Kohler & Kreuter, 2005; Torres-Reyna, 2007; Ditzen, 2018) [2, 5, 8, 3].

Not define the regression equation of SGR affects on ROS. The observed variable SGR does not influence on ROS. Therefore, hypothesis H1 was not partially accepted.

ROS

ROS is synthesized and analyzed in detail according to Tables 4 and 5 as follows:

Table 4: Average ROS over the years of telecommunications technology firms listed on the HNX

Description	2015	2016	2017	2018	2019	2020	2021	Average 2015-2021
ROS (%)	-67.1	3.3	6.4	4.5	-5.4	-134.9	7.9	-26.5

Sources: Global Data Services Company; https://finance.vietstock.vn/; http://cafef.vn, and authors synthesized [9]

Table 5: Average ROS over the years (2015-2021) of each telecommunications technology firms listed on the HNX

S. No	ROS<0		0<ROS<10%		10%<ROS<15%		ROS>15%	
	Stock code	ROS	Stock code	ROS	Stock code	ROS	Stock code	ROS
1	TTZ	-279,7%	VIE	0,9%			VLA	16,6%
2	SRA	-122,2%	ONE	1,4%				
3	VAT	-11,8%	CKV	1,5%				
4			POT	1,7%				
5			SMT	1,9%				
6			TST	2,3%				
7			ADC	3,1%				
8			VTC	3,5%				
9			KST	3,6%				
10			UNI	6,6%				

Sources: Global Data Services Company; https://finance.vietstock.vn/; http://cafef.vn, and authors synthesized [9]

Table 4 shows that the average ROS of the telecommunications technology industry over the years has also had significant fluctuations. Specifically: In 2015, ROS reached -67.1%; in 2016, ROS increased slightly to 3.3% and continued to increase in 2017 with 6.4%, decreased to 4.5% in 2018 and sharply decreased in 2019 with -5.4%;
In the period 2015-2021, the average of telecommunications technology enterprises listed on the Hanoi Stock Exchange have ROS of -26.5%. It shows that, 100 dong of net revenue did not create but also made a loss of 26.5 dong in profit after tax. Thus, if considering the scope of all telecommunications technology enterprises listed on the Hanoi Stock Exchange, the ROS will reach 3.3% in the years 2016-2018 and 2021; and in three years, 2015, 2019, 2020, negative ROS.
Table 4, Table 5 and financial experts said that enterprises with ROS > 10% continuously for a period of 3-5 years are strong and have positive business results (SRA, VLA).

Sale Growth Rate (SGR)

Table 6: Average SGR over the years of telecommunications technology firms listed on the HNX

Description	2015	2016	2017	2018	2019	2020	2021	Average 2015-2021
SGR (%)	54.4	1,777.4	16.8	88.3	-10.1	-6.8	60.5	282.9

Sources: Global Data Services Company; https://finance.vietstock.vn/; http://cafef.vn, and authors synthesized [9]

Table 7: Average SGR over the years (2015-2021) of each telecommunications technology firms listed on the HNX

S. No	SGR <0		0%< SGR <20%		20%< SGR <35%		SGR >35%	
	Stock code	SGR	Stock code	SGR	Stock code	SGR	Stock code	SGR
1	UNI	-15,4%	KST	10,1%	POT	22,2%	TTZ	195,2%
2	VAT	-12,2%	ADC	11,1%	VTC	23,3%	SRA	3641,7%
3			VIE	11,9%				
4			TST	12,9%				
5			ONE	14,3%				
6			CKV	14,7%				
7			SMT	15,7%				
8			VLA	15,7%				

Sources: Global Data Services Company; https://finance.vietstock.vn/; http://cafef.vn, and authors synthesized [9]

Tables 6 and 7 show that the revenue growth rate of telecommunications technology firms listed on the Hanoi Stock Exchange fluctuated strongly. Many firms have reduced growth. The growth process of telecommunications technology enterprises listed on the Hanoi Stock Exchange in the period 2015-2021 still reveals many limitations, which are: unstable growth rate, scattered investment, many Enterprises with business efficiency are decreasing day by day.

During the period 2015-2021; there are 2 enterprises with negative revenue growth rate (UNI, VAT); two enterprises with the highest revenue growth rate (TTZ, SRA).

5. Discussion and implications

In the current competitive environment, every enterprise needs to ensure its business to be growing in order to gain a considerable position in the market. Growth is one of the fundamental conditions for an enterprise to achieve its objectives during its lifetime. Growing means that the enterprise is accumulating capital and infrastructure to invest and expand production and business, which also helps build reputation with customers, providers and investors. Therefore, growth induces the opportunities to develop, expand business and improve profit. Growth rate of an enterprise can be represented by revenue growth rate or assets growth rate when compared to the previous year.

These results have not shown the influence of revenue growth rate to enterprises' ROS. However, Abbasali & Esfandiar (2012) [1] research outcome and theory show that high growth rates positively affect profitability. The more enterprises focus on investing and expanding their business, the more productive and developed they are.

Telecommunication enterprises listed on Hanoi Stock Exchange places emphasis on good revenue growth management:

In order to improve ROS, in the future, telecommunication enterprises listed on Hanoi Stock Exchange needs to improve its management of revenue growth rate in order to sustainably develop and create favorable environment for the development of telecommunication enterprises by:

Actively explore and invest in advanced technology projects: The current demand for digital transformation and application of advanced technology in production and business in Vietnam is considerable and there are many potential advantages. Therefore, it is necessary to select good projects on technology and telecommunication for investment.

It is also necessary to invest resources to establish informative means to investigate customers' needs and collect customers' responses. To increase ROS, it is essential that enterprises benefit their customers with the values that they expect. Thus, by investing in resources to investigate customers' needs and responses, which could help locate strengths and weaknesses to execute necessary measures to adjust and improve weaknesses, enterprises can elevate their reputation as well as attract customers' loyalty.

This research has presented the effect of sale growth rate to the ROS of telecommunication enterprises listed on Hanoi Stock Exchange. There is no evidence for the effect of sale growth rate on ROS.

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