

Enhancing Leadership Roles under Effects of Micro and Macro Economic Factors in Vietnam – A Case of Coteccons in Construction Industry

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Abstract

In Vietnam construction industry, Coteccons Group (CTD) established fifteen years ago, got brand name with big projects and became one of leading corporations.

In our study, We will use OLS regression on CTD net profit to draw discussions.

Research results present that CTD Net profit (Y) has negative correlation with lending rate, inflation, VNIndex and exchange rate.

We imply that we need to reduce CPI and exchange rate to be in favor of net profit of CTD.

Next, a policy of reducing lending rate and increasing risk free rate also push CTD net profit. There is management implications from this discussion.

Key-words: Leadership, CTD Net Profit, Risk Free Rate, Better Management.

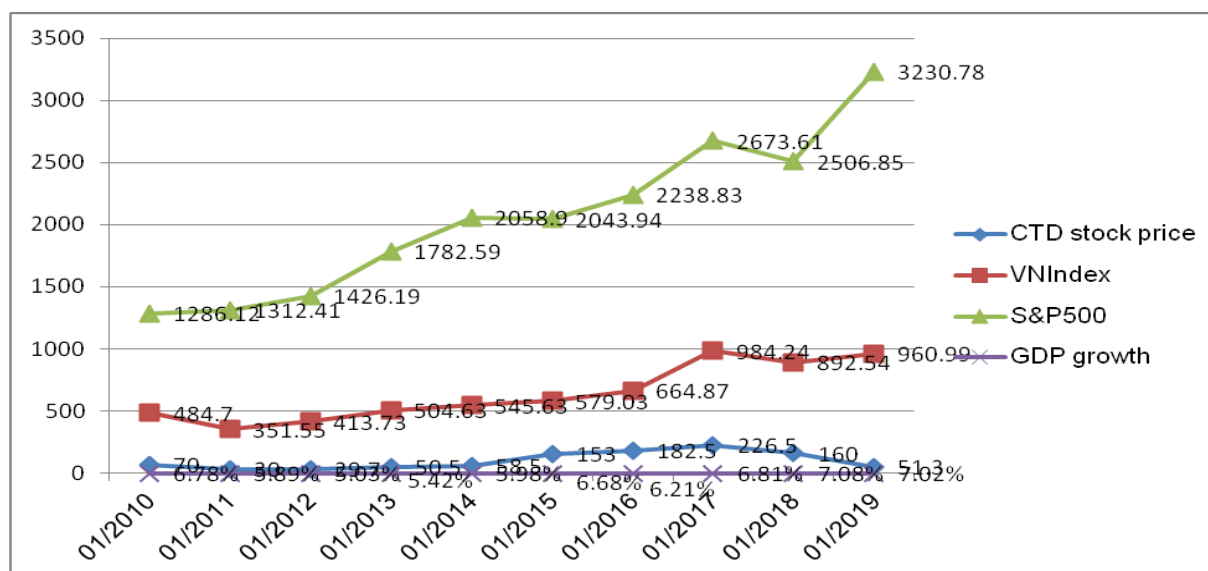
JEL: M21, N1.

1. Introduction

It can be seen that the Coteccons construction Group, stock code: CTD, has formed and developed very strongly in recent years, proving that the projects of this group are deployed from North to South of Vietnam, diverse in big projects and construction projects, from commercial centers, educational establishments, high-end apartments, resorts, condotels... to iconic projects like Landmark 81,... all are CTD very well constructed and completed. The company received lots of merits/awards such as achievements in the work of occupational safety; Certificate 500 largest

enterprises in Vietnam; Gold cup for construction quality in Vietnam; The 50 most effective businesses in Vietnam; The best 30 company annual reports...

Looking at the below chart, we find out that CTD net profit moves in the same trend with VN Index and GDP growth, even S&P500, although it fluctuates in a smaller range.



We organize The paper with introduction, issues, literature review and methodology, main findings, discussion and conclusion.

2. Body of Manuscript

2.1. Research Issues

Authors will address The scope of this study covering:

Evaluate the impacts of above 10 micro and macro economic factors including but not limit to: net sale, cost, interest rate, exchange rate, inflation, VN Index, S&P 500,... on CTD net profit?

In addition, we will test hypothesis that: An increase in inflation can increase pressure in CTD net profit.

2.2. Literature Review

First of all, research shows that between bank return of stock and inflation rate change and supply fo money: there is positive but insignificant relation (Lina, 2012).

Next, Huy, D.T.N (2015) identified roles of corporate governance standards in corporations that can be applied for most of listed companies in various markets including Vietnam.

Moreover, research on Kosovo banks profitability impacts, (2016) mentioned that Bank loans increase will enlarge profitability of commercial banks in Kosovo.

Beside, in a paper about Macroeconomic factors and micro-level bank risk, Claudia et al (2010) said that As ease of monetary, increase in risk of about a third of US banks.

Then, in a study on Macroeconomic Factors on Banking Index in Pakistan, Saeed và Akhter (2012) stated that In Karachi stock market, Between Banking index and exchange rate: there is effect, significantly.

Last but not least, research also found out profitability of the banking sector will be affected by many variables (Hirindu, Kishanu, 2017).

3. Methodology and Data

First of all, this is equation of CTD net profit:

$$Y \text{ (VNM Net profit)} = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, x_{10}) = ax_1 + bx_2 + cx_3 + dx_4 + ex_5 + fx_6 + gx_7 + hx_8 + ix_9 + jx_{10} + k$$

With: x_1 : GDP growth rate (g), x_2 : inflation, x_3 : VNIndex, x_4 : lending rate, x_5 : risk free rate (Rf), x_6 : USD/VND rate; x_7 : S&P500; x_8 : cost; x_9 : net sale; x_{10} : stock price

We use above equation with OLS regression supported by Eview. All data from reliable sources such as: stock exchange, commercial banks, USA Stock exchange, and Bureau of Statistics.

4. Main Results

4.1. Overall Analysis

First of all, we analyze from the below charts:

- Between Y and cost, VNindex and G: there is positive relation.
- Between Y and CPI, R: there is negative relation.

Chart 1 – CTD Net Profit (Y) vs. Cost (c.o)

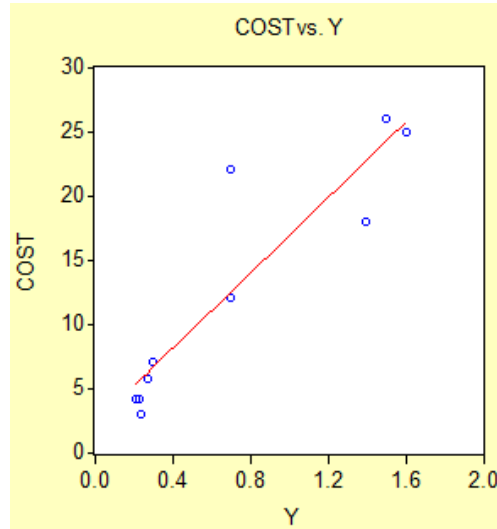


Chart 2 – CTD Net Profit (Y) vs. Inflation (CPI)

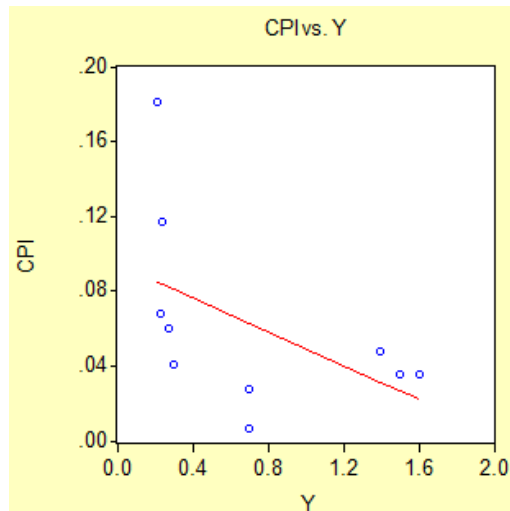


Chart 3 – Y vs. VNINDEX

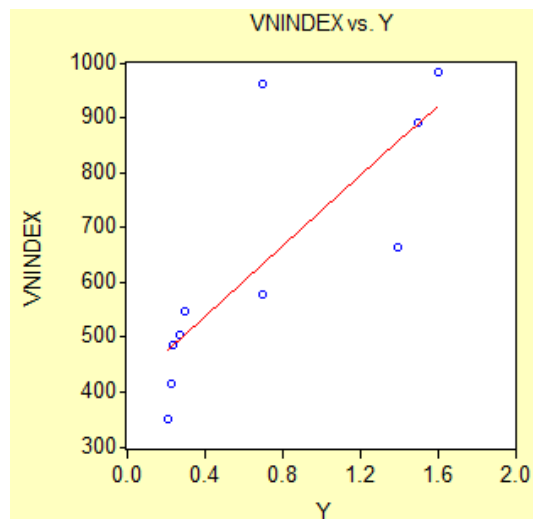


Chart 4 – Y vs. Lending Rate (r)

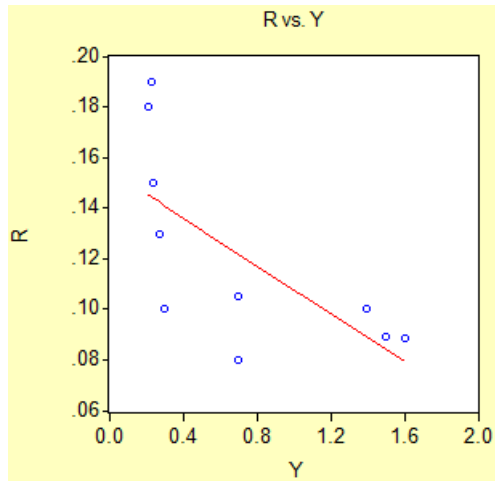


Chart 5 – Y vs. Risk Free Rate (Rf)

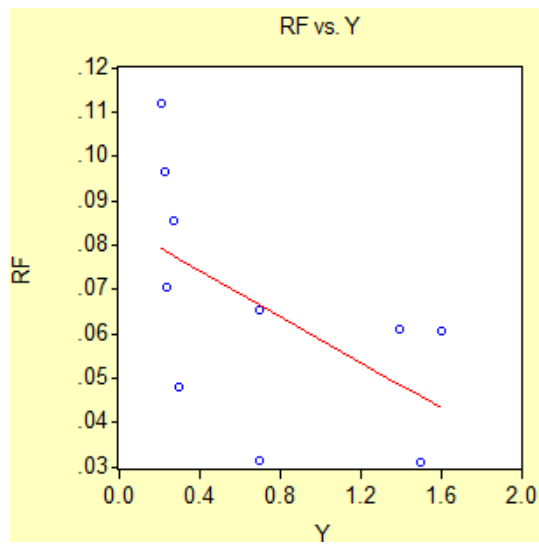


Chart 6 – Y vs. GDP Growth (g)

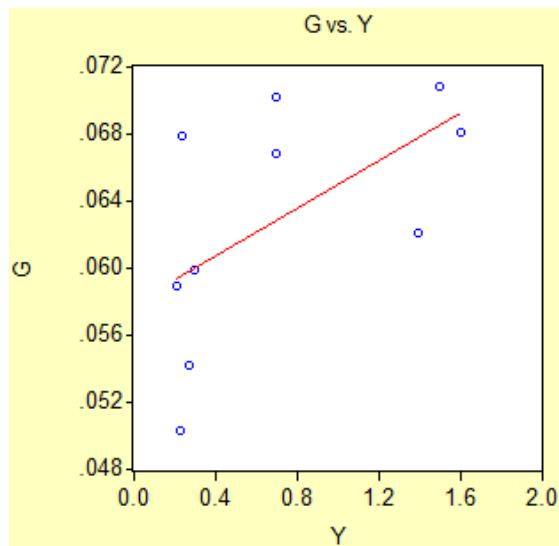


Chart 7 – Y vs. Exchange Rate (Ex_rate)

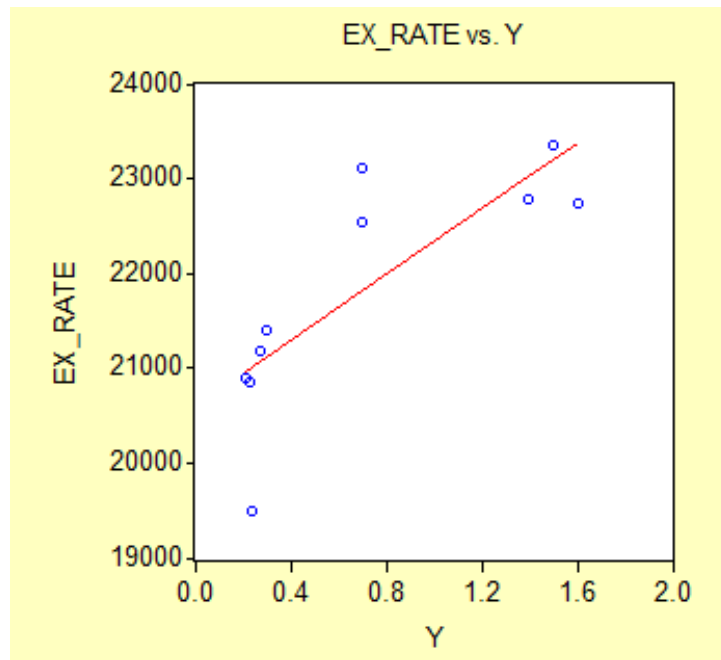
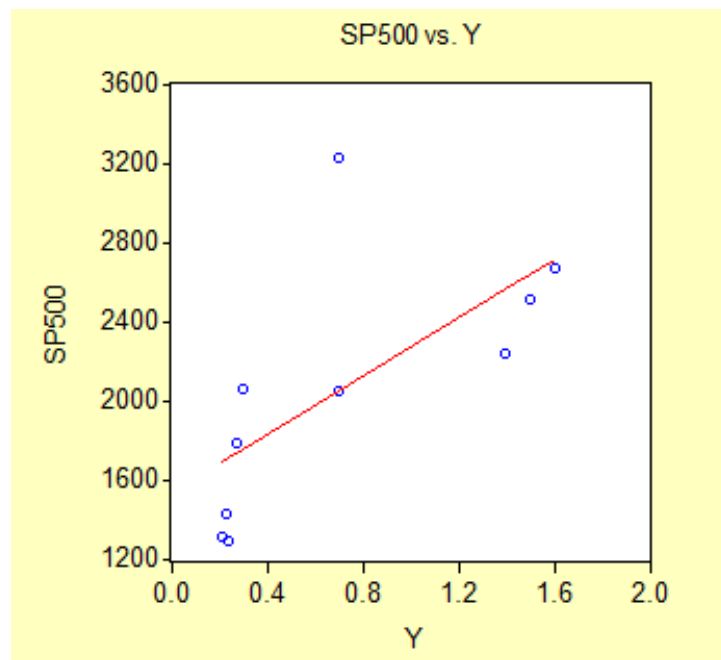


Chart 8 – Y vs. S & P500



Next we see:

- Highest values of standard dev: exchange rate and SP500 - see table 1.
- Correlation between Y and net sale higher than that between Y and R - see table 2.

Table 1 – Statistics for Macro Economic Factors

Unit: %

	Net sales	Cost	Net profit	CTD stock price	GDP growth	Inflation (CPI)	VN Index	Lending rate	Risk free rate	USD/VND rate	S&P 500
Mean	13.63	12.69	0.715	101.2	0.06416	0.02588	758.875	0.09856	0.050485	22611.7	2056.022
Median	10	9.5	0.5	64.25	0.0648	0.0264	720.67	0.1	0.05435	22757.5	2051.42
Maximum	28	26	1.6	226.5	0.0708	0.0474	984.24	0.1115	0.06535	23350	3230.78
Minimum	3.3	3	0.21	29.7	0.0552	0.0063	545.63	0.0886	0.0297	21405	1286.12
Standard dev.	9.944	9.230	0.573	71.871	0.005549	0.013884	176.4835	0.007636	0.014066	610.2313	633.811

Table 2 – Correlation matrix - macro-economic variables

Correlation Matrix											
	Y	SP500	VNINDEX	STOCKPRICE	RF	R	NETSALE	G	EX RATE	CPI	COST
Y	1.000000	0.665528	0.796970	0.913094	-0.562990	-0.685186	0.925083	0.581968	0.797952	-0.503583	0.912349
SP500	0.665528	1.000000	0.932232	0.476242	-0.816875	-0.880212	0.872843	0.616498	0.869277	-0.701892	0.886443
VNINDEX	0.796970	0.932232	1.000000	0.627498	-0.800688	-0.835661	0.943561	0.729679	0.800218	-0.622082	0.951781
STOCKPRICE	0.913094	0.476242	0.627498	1.000000	-0.426849	-0.627091	0.751701	0.550010	0.637094	-0.510984	0.733944
RF	-0.562990	-0.816875	-0.800688	-0.426849	1.000000	0.888975	-0.722911	-0.731404	-0.660120	0.710100	-0.737206
R	-0.685186	-0.880212	-0.835661	-0.627091	0.888975	1.000000	-0.792955	-0.698635	-0.785406	0.756683	-0.801391
NETSALE	0.925083	0.872843	0.943561	0.751701	-0.722911	-0.792955	1.000000	0.688539	0.902629	-0.584364	0.999348
G	0.581968	0.616498	0.729679	0.550010	-0.731404	-0.698635	0.688539	1.000000	0.502911	-0.310687	0.693028
EX RATE	0.797952	0.869277	0.800218	0.637094	-0.660120	-0.785406	0.902629	0.502911	1.000000	-0.691415	0.904223
CPI	-0.503583	-0.701892	-0.622082	-0.510984	0.710100	0.756683	-0.584364	-0.310687	-0.691415	1.000000	-0.591905
COST	0.912349	0.886443	0.951781	0.733944	-0.737206	-0.801391	0.999348	0.693028	0.904223	-0.591905	1.000000

Table 3 – Covariance-macro economic variables

Covariance Matrix											
	Y	SP500	VNINDEX	STOCKPRICE	RF	R	NETSALE	G	EX RATE	CPI	COST
Y	0.295525	217.5428	94.46109	33.84460	-0.007645	-0.013965	4.744150	0.002105	514.4120	-0.013326	4.342950
SP500	217.5428	361545.2	122213.5	19524.77	-12.26913	-19.84271	4951.061	2.466311	619836.3	-20.54446	4667.222
VNINDEX	94.46109	122213.5	47536.57	9328.307	-4.360682	-6.830873	1940.728	1.058476	206899.6	-6.602438	1817.095
STOCKPRICE	33.84460	19524.77	9328.307	4648.938	-0.726989	-1.603022	483.5070	0.249507	51513.11	-1.696006	438.1940
RF	-0.007645	-12.26913	-4.360682	-0.726989	0.000624	0.000833	-0.170350	-0.000122	-19.55408	0.000863	-0.161247
R	-0.013965	-19.84271	-6.830873	-1.603022	0.000833	0.001406	-0.280454	-0.000174	-34.91917	0.001381	-0.263089
NETSALE	4.744150	4951.061	1940.728	483.5070	-0.170350	-0.280454	88.99410	0.043216	10097.81	-0.268354	82.55130
G	0.002105	2.466311	1.058476	0.249507	-0.000122	-0.000174	0.043216	4.43E-05	3.967930	-0.000101	0.040375
EX RATE	514.4120	619836.3	206899.6	51513.11	-19.55408	-34.91917	10097.81	3.967930	1406290.	-39.91345	9389.432
CPI	-0.013326	-20.54446	-6.602438	-1.696006	0.000863	0.001381	-0.268354	-0.000101	-39.91345	0.002370	-0.252303
COST	4.342950	4667.222	1817.095	438.1940	-0.161247	-0.263089	82.55130	0.040375	9389.432	-0.252303	76.67490

4.2. Regression Model and Main Findings

We see:

- Between Y and cost: positive correlation - see figure 1.
- Between CTD Net profit (Y) and Cost (c.o) and with inflation (CPI) and lending rate ®: positive correlation.
- See Figure 3.

4.2.1. Case 1: Regression Model with Single Variable

Run OLS give us:

Figure 1

Dependent Variable: Y
 Method: Least Squares
 Date: 02/25/20 Time: 20:31
 Sample: 1 10
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COST	0.056641	0.008986	6.302961	0.0002
C	-0.003775	0.138552	-0.027249	0.9789
R-squared	0.832381	Mean dependent var		0.715000
Adjusted R-squared	0.811429	S.D. dependent var		0.573028
S.E. of regression	0.248836	Akaike info criterion		0.232813
Sum squared resid	0.495356	Schwarz criterion		0.293330
Log likelihood	0.835936	F-statistic		39.72732
Durbin-Watson stat	1.107711	Prob(F-statistic)		0.000232

Hence, $Y = 0.05 * COST - 0.003, R^2 = 0.83, SER = 0.24$

4.2.2. Case 2 - Regression Model with 2 VARIABLES

Run OLS give us:

Figure 2

Dependent Variable: Y
 Method: Least Squares
 Date: 02/25/20 Time: 20:31
 Sample: 1 10
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COST	0.058702	0.011846	4.955371	0.0016
CPI	0.626419	2.130899	0.293969	0.7773
C	-0.068802	0.265710	-0.258937	0.8031
R-squared	0.834425	Mean dependent var		0.715000
Adjusted R-squared	0.787118	S.D. dependent var		0.573028
S.E. of regression	0.264390	Akaike info criterion		0.420543
Sum squared resid	0.489315	Schwarz criterion		0.511319
Log likelihood	0.897285	F-statistic		17.63848
Durbin-Watson stat	1.084737	Prob(F-statistic)		0.001847

Therefore, $Y = 0.05 * COST + 0.6 * CPI - 0.06, R^2 = 0.83, SER = 0.2$

4.2.3. Case 3 - Regression Model with 3 Variables

Run OLS give us:

Figure 3

Dependent Variable: Y
 Method: Least Squares
 Date: 02/25/20 Time: 20:32
 Sample: 1 10
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COST	0.063032	0.017052	3.696538	0.0101
CPI	0.004439	2.806193	0.001582	0.9988
R	1.858235	4.909808	0.378474	0.7181
C	-0.310478	0.698711	-0.444358	0.6724
R-squared	0.838286	Mean dependent var		0.715000
Adjusted R-squared	0.757429	S.D. dependent var		0.573028
S.E. of regression	0.282225	Akaike info criterion		0.596950
Sum squared resid	0.477906	Schwarz criterion		0.717984
Log likelihood	1.015251	F-statistic		10.36751
Durbin-Watson stat	1.044689	Prob(F-statistic)		0.008671

Hence, $Y = 0.06 * COST + 0.004 * CPI + 1.8 * R - 0.31$, $R^2 = 0.83$, $SER = 0.28$

4.2.4. Scenario 4 - Regression Model with 5 -8 Macro Variables

	Co efficient			
	5 variables	7 variables	8 variables	8 variables
Cost	0.08	-0.6	-0.1	0.1
CPI	-1.4	-0.2	2.2	-3.1
Lending rate	-3.09	-2.3	1.5	-5.7
Risk free rate	10	-0.7	-6.9	7.3
VNIndex				-0.003
GDP growth		-10	-20.9	
Stock price			0.0004	0.0004
Exchange rate	-0.0001	-0.0001	-1.67E	
Net sale		0.6	0.2	0.04

4.2.5. Scenario 5 - Regression Model with 8 Macro Variables: Adding S & P500

Running Eviews gives us results:

Dependent Variable: Y
 Method: Least Squares
 Date: 02/25/20 Time: 20:35
 Sample: 1 10
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COST	0.625950	0.200648	3.119639	0.1975
CPI	-6.773940	1.129601	-5.996756	0.1052
R	-9.137558	1.474401	-6.197469	0.1018
EX_RATE	-0.001151	0.000201	-5.731061	0.1100
RF	15.52001	2.800396	5.542077	0.1136
NETSALE	-0.260424	0.144081	-1.807489	0.3217
VNINDEX	-0.009302	0.001696	-5.485465	0.1148
SP500	0.000845	0.000240	3.521856	0.1761
C	26.15423	4.408563	5.932598	0.1063

R-squared	0.999477	Mean dependent var	0.715000
Adjusted R-squared	0.995290	S.D. dependent var	0.573028
S.E. of regression	0.039326	Akaike info criterion	-4.136454
Sum squared resid	0.001547	Schwarz criterion	-3.864128
Log likelihood	29.68227	F-statistic	238.7375
Durbin-Watson stat	2.228199	Prob(F-statistic)	0.050015

$$Y = 0.6 * \text{COST} - 6.7 * \text{CPI} - 9.1 * \text{R} - 0.001 * \text{EX_RATE} - 0.009 * \text{VNINDEX} + 15.5 * \text{Rf} - 0.26 * \text{NETSALE} + 0.0008 * \text{SP500} + 26,$$

$$R^2 = 0.99, \text{SER} = 0.03$$

5. Discussion and Further Researches

We recognize that, from above regression:

- CTD Net profit (Y) has negative correlation with lending rate, inflation, VNIndex and exchange rate
- Between Y and with cost, SP500, Rf and net sales: there is positive correlation.

6. Conclusion and Policy Suggestion

Firm Management implied: CTD management need to have better sale and cost management plans (used as effective mechanisms to stimulate profit)

Because CTD Net profit (Y) has negative correlation with lending rate, inflation, VNIndex and exchange rate, we imply that macro policies with reducing exchange rate will push net profit.

Huy, D.T.N et al (2020) also mentioned important roles of commercial banks going parallel with corporations to achieve better business management strategies.

Limitation

We need to propose more management strategies.

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Exhibit

Exhibit 1 – Inflation, CPI over Past 10 Years (2007-2017) in Vietnam

