

Proceedings

The 5th Annual INTERNATIONAL SEMINAR on Transformative Education and Educational Leadership

Theme : Education Innovation in Globalization Practice

22 September 2020
Postgraduate School - Universitas Negeri Medan



Supported by :



Committee

Advisors

Dr. Syamsul Gultom, S.KM.,M.Kes (Rector of Unimed)
Prof. Dr. Bornok Sinaga, M.Pd (Director of Postgraduate Program of Unimed)
Prof. Dr. Sahyar, MS.,MM (Vice Director 1 of Postgraduate School of Unimed)
Dr. Darwin, M.Pd (Vice Director 2 of Postgraduate Program of Unimed)

Conference Chair	:	Dr. Rahmad Husein, M.Ed
Secretary	:	Dr. Juniastel Rajagukguk, M.Si
Trasurer	:	Dedi Agus Syahputra, SE
Secretariat	:	Vivi Emilawati, SE.,M.Si
		1. Erika, S.Pd.,M.Pd
		2. Amir Husin Sitompul, S.Pd.I
		3. Azizi Apri Indaya, S.Pd
		4. Agus Harriyanto
Papers and Proceedings :		1. Dr. R. Mursid, ST.,M.Pd
		2. Dr. Anni Holila Pulungan, M.Pd
		3. Dr. Saronom Silaban, M.Pd
		4. Dr. Tumiur Gultom, M.Si
		5. Mangaratua Simanjorang, M.Pd.,Ph.D
Program/Event	:	1. Dr. E. Elvis Napitupulu, M.Si
		2. Dr. Rachmat Mulyana, M.Si
		3. Dr. Elmanani Simamora, M.Si
Plenary Session	:	1. Prof. Amrin Saragih, M.A.,Ph.D
		2. Prof. Dr. Abinus Silalahi, M.S
		3. Prof. Dr. Abdul Hasan Saragih, M.Pd
Parallel Sessions:		1. Prof. Dr. Edi Syahputra, M.Pd
		2. Prof. Dr. Anita Yus, M.Pd
		3. Prof. Dr. Nasrun,MS
		4. Dr. Edy Surya, M.Si
		5. Dr. Ashar Hasairin, M.Si.
		6. Dr. Rahmatsyah, M.Si
		7. Dr. Arif Rahman, M.Pd
		8. Dr. Ir. Nurfajriani, M.Si
		9. Dr. Hidayat, M.Si
		10. Dr. Fitrawaty, SP.,M.Si
		11. Dr. Albadi Sinulingga, M.Pd
		12. Dr. Wisman Hadi, M.Hum
		13. Dr. Rahma Dewi, M.Pd.
		14. Dr. Arfan Ikhsan, M.Si
		15. Dr. Saidun Hutasuhut, M.Si
		16. Dr. Jubliana Sitompul, M.Hum
Evaluator	:	1. Dr. Anni Holila Pulungan, M.Hum
		2. Dr. Syamsidar Tanjung, M.Pd
		3. Dr. Yuniarto, M.Pd
		4. Dr. Ajat Sudrajat, M.Si
		5. Dr. Ratih Baiduri, M.Si
		6. Dr. Muhammad Fitri Ramadhana, M.Si
		7. Dr. Mulyono, S.Si.,M.Si

8. Dr. Daulat Saragi, M.Hum
 9. Dr. Tumiur Gultom, SP.,MP
 10. Dr. Derlina, M.Si
 11. Dr. Elly Prihasti Wuriyani, M.Pd.
 12. Dr. Nurhayati Simatupang, M.Kes
 13. Dr. Amir Supriadi, M.Pd
 14. Anggriyani, SE., M.Si.
 15. Dr. Thamrin, M.Si
 16. Dr. Junita Friska, S.Pd.,M.Pd
- Public relations : 1. Muhammad Surip, S.Pd.,M.Si
2. Jihan Siska
- Accommodation : 1. Ater Budiman Sinaga, M.Si
2. Hendry Dalimunthe, MA
3. Reza Destya, S.Pd
4. Jasmi Assayuti, SHi
- Equipment : 1. Nur Kholila Harahap, M.Pd
2. Sofianto Gultom
3. Suhana Nasution
4. Farid Ma'ruf Harahap
5. Isachar Adry Utomo
6. Diky Arisandi
7. Herianto Samosir, S.Pd
8. Hizrah Saputra Harahap, S.Pd
9. Muhammad Isnaini, M.Pd
10. Nasiruddin, S.Pd
- IT & ICT : 1. Jerry S. Pauned, S.Si
2. Mulyanto Duha
- Transportation : 1. Hisar P. Sianturi, SH
2. Sari Purnamawati Siregar, M.Hum
3. Yutia Hafwenny, S.KM
- Consumption : 1. Susiani, S.Sos
2. Siti Rohana, M.Pd
3. Yutia Hafweny, S.KM
4. Tiarma Nova, M.Pd.
- Receptions** : 1. Nisa Ansyari Gultom, S.Pd
2. Desi Yulian, S.Pd
3. Siti Rohana, S.Pd.,M.Pd

Schedule of The 5th Annual Internatioanal Seminar on Transformative Education and Educational Leadership (AISTEEL) 2020
Postgraduate School, Universitas Negeri Medan

22 September 2020

(Indonesian time)	Activities	PIC/Moderator
07.00 – 08.30 (am)	Preliminaries	committee
08.30 - 08.45 (am)	Opening Ceremony 1. MC Speech 2. Indonesian National Anthem 3. Pray 4. Chairperson Report 5. Welcoming speech of Director of Postgraduate School 6. Welcoming speech and official opening of Rector of Universitas Negeri Medan 7. Photo session	MC (Dr. Anni Holila Pulungan, M.Hum & Sofianto Gultom, S.Pd)
08.45 – 09.25 (am)	Keynote Speech 1: Prof. Dr. Syawal Gultom, M.Pd (Universitas Negeri Medan– Indonesia)	Dr. Rahmad Husein, M.Ed
09.25 – 10.05 (am)	Keynote Speech 2 Prof. Emmanuel Manalo (Graduate School of Education, Kyoto University, Japan)	Prof. Amrin Saragih, PhD
10.05 – 10.45 (am)	Keynote Speech 3 Dr. Susan Ledger (Head of Education, Murdoch University - Australia)	
10.45 – 11.25 (am)	Keynote Speech 4 Prof. Dr. Ekkarin Sungtong (Dean of Faculty of Education Prince of Songkla University - Thailand)	Mangara Simanjorang, PhD
11.25 – 12.05 (am)	Keynote Speech 5 Assoc. Prof. Yuri Uesaka (The University of Tokyo - Japan)	
12.05 – 13.30	Break	
13.30 – 15.30 (pm)	Parallel Session 1 (divided to 19 parallel rooms)	Moderator/Operator
15.30 – 15.35 (pm)	Break	
15.35 – 17.00 (pm)	Parallel Session 2 (divide to 19 parallel rooms)	Moderator/Operator
17.00 – 17.10 (pm)	Cloosing	committee

**Proceedings of the 5th Annual International Seminar on Transformative Education
and Educational Leadership (AISTEEL 2020)**

Preface

The fifth Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2020) was held by virtual seminar on 22 September 2020. This seminar is organized by Postgraduate School, Universitas Negeri Medan and become a routine agenda at Postgraduate program of Unimed now.

The AISTEEL is realized this year with various presenters, lecturers, researchers and students from universities both in and out of Indonesia participating in, the seminar with theme “Educational Innovation in Globalization Practice”.

The fifth AISTEEL presents 4 distinguished keynote speakers from Universitas Negeri Medan - Indonesia, Kyoto University - Japan, Murdoch University – Australia, Prince of Songkla University – Thailand and from The University of Tokyo - Japan. In addition, presenters of parallel sessions come from various Government and Private Universities, Institutions, Academy, and Schools. Some of them are those who have sat and will sit in the oral defence examination. The plenary speakers have been present topics covering multi disciplines. They have contributed many inspiring inputs on current trending educational research topics all over the world. The expectation is that all potential lecturers and students have shared their research findings for improving their teaching process and quality, and leadership.

There are 180 articles submitted to committee, some of which are presented orally in parallel sessions, and others are presented through posters. The articles have been reviewed by double blind reviewer and 104 of them were accepted for published by Atlantis Press indexed by International Indexation, while 54 papers are published by digital library indexed by google scholar..

The Committees of AISTEEL invest great efforts in reviewing the papers submitted to the conference and organizing the sessions to enable the participants to gain maximum benefit.

Grateful thanks to all of members of The 5th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2020) for their outstanding contributions. Thanks also given to Atlantis Press for producing this volume.

The Editors

**Bornok Sinaga
Rahmad Husein
Juniastel Rajagukguk**

Table of Content

Title And Authors	Page
The Effect of Learning Models and Motion Ability on Learning Outcomes of Volleyball Passing Skills for Class VIII Students of Junior High School 6, Academic Year 2019-2020 <i>Ihsan Azhari Hasugian; Julaga Situmorang; Abdul Hasan Saragih</i>	1-5
The Effect of Everyone is a Teacher Here Learning Model and Learning Style on The Economic Learning Outcomes <i>Swara Kasih Kartini Putri; Saidun Hutasuhut; M. Nasir</i>	6-10
The Effect of Learning and Creativity Models on the Economic Learning Outcomes of Grade XI Berastagi High School Students <i>Wisnu Saputra Sembiring</i>	11-16
The Effect of Learning Methods and Courage Towards The Outcomes of Learning Physical Education Students Class V Public Elementary School in Sub-District Tanah Jawa <i>Dewi Hamda M. Sirait; Albadi Sinulingga; Agung Sunarno</i>	17-22
Development of Exercise Variations Race After Lay Up Basketball <i>M.Anas Surimeirian; Tarsyad Nugraha; Rahma Dewi</i>	23-25
Development of Dribble Training Variations in The Basketball Extracurricular Club in State High Schools of Medan City 2020 <i>Riski Iman Siregar; Ardi Nusri; Agung Sunarno</i>	26-29
Development of Interactive Learning Media Basketball Games in Subjects Physical and Sports Health Education <i>Andes Martua Harahap; Imran Akhmad; Hariadi</i>	30-37
Speech Function in The News Broadcast of the Radio Kardopa Medan <i>Syukur Selamat Gulo; Amrin Saragih ; Sumarsih</i>	38-44
External and Internal Conjunctions in the News Story Text of the Jakarta Post <i>Novita Sari; Amrin Saragih; Anni Holila Pulungan</i>	45-49
Analysis of Chemical Practicum Guides for Learning Evaluation Based on the National Education Standards <i>Arfiena Fitria Berutu; Iis Siti Jahro; Marham Sitorus</i>	50-53
An Analysis of Students' Scientific Attitude on the Topic of Bryophytes in State High Schools of the Langkat Regency <i>Muhammad Syukri; Ashar Hasairin; Fauziyah Harahap</i>	54-57
Karonese Language Shift of Young Generation <i>Tita Nirmaliya Ginting ;Siti Aisyah Ginting; Anni Holila Pulungan</i>	58-62
Interruption in the Conversation on Corbuzier Youtube	63-66

<i>Devi Rahmawyta Sitompul; Sri Minda Murni; Anni Holila Pulungan</i>	
Analysis of the Determinan of North Sumatra Cofffe Exports to the United States Error Correctional Model Approach <i>Rimelda Rona Sar; M. Nasir; Muhammad Fitri</i>	67-70
The Implementation of Deception Strategy Used by Fahri Hamzah as an Indonesian People’s Representative Council in the Political Debate <i>Astari Rara Sandy; Sumarsih; Meisuri</i>	71-73
The Flouting Maxim in Social Interaction Expressed by The Characters in Zakeut Edition of Eumpang Breuh Movie <i>Asmaul Husna; Sumarsih; I Wayan Dirgeyasa</i>	74-77
How Children Acquire Lexical Acquisition <i>Dwi Astarini</i>	78-81
Translation Method in Web-Toon: True Beauty as Digital Comic by Yaongyi <i>Fitri Anisah Sitorus; Rahmad Husein; Sri Minda Murni</i>	82-86
Naturalization in Translation of English Accounting Terms into Indonesian <i>Anita Basrah; Anni Holila Pulungan; Rahmad Husein</i>	87-90
Types of Rudeness in the Classroom Context <i>Siti Sahuri; Sri Minda Murni; Rahmad Husein</i>	91-95
The Influence of Agriculture and Industry Sectorson GRPDin Serdang Bedagai Regency <i>Zuhari; M. Fitri Rahmadana; Arwansyah</i>	96-100
Analysis of Input Production of Rice <i>Hazlansyah Ramelan; Arwansyah; Rachmat Mulyana</i>	101-104
The Effect of Functional Training and Balanced Nutrition on Increasing Vo2max and Reduction of Percent Body Fat in Women Members of New Life Gym <i>Fery Juanda; Hariadi; Ardi Nusri</i>	105-107
The Translation of Cultural Words in Novel the Associate <i>Farah Frayenisari Sutara; Anni Holila Pulungan; Syahron Lubis</i>	108-112
Analysis of the Effect of Macroeconomic Variables to Joint Stock Price Index with Monetary Policy as Moderating Variables in Indonesia <i>A. Mahendra; Dede Ruslan; Sirojuzilam; Irsad</i>	113-118
Students’ Multilanguages Acquisition <i>Wikiaprian Pinim; Rahmad Husein; Siti Aisyah Ginting</i>	119-126
Pastap Game Development for Learning Badminton of the Mild Mental Retardation <i>Mulia Romadi Harahap; Sanusi Hasibuan; Isa Hidayati; Hariadi; Friska Indria Nora Harahap</i>	127-130

Types of Elicitation on Students' Engagement in Learning English <i>Wilda Novri Anisah; Rahmad Husein; Masitowarni Siregar</i>	131-133
Flouting Maxim of Humor in Digidoy Comic Strips <i>Yanti Hidayani Hasibuan; T. Silvana Sinar; Rahmad Husein</i>	134-136
Improvement of Mathematical Communication Skills and Student Learning Motivation Through Realistic Mathematics Education Approaches <i>Sari Arta Simanjuntak, Waminton Rajagukguk, Yulita Molliq Rangkuti</i>	137-140
Taboo Words in Rap Song Lyrics <i>Nurul Khoiriyah Hasibuan; Amrin Saragih; Rahmad Husein</i>	141-143
The Technique of Montessori Method to Investigate Reading Achievement at Preschool <i>Sofiah Rahmah Nst; Rahmad Husein; Masitowarni Siregar</i>	144-146
Analysis of Academic Supervision of Principal to Improve Teachers' Basic Teaching Skills at SMK Swasta Harapan Mekar 2 Medan <i>Fahmi, Prof. Dr. Zainuddin, M.Pd, Dr. Irwandy, M.Pd</i>	147-150
Ritual Ngumbah Keris in Javanese Society (Study on the Javanese community in the Kuala Silo Bestari sub-district, North Tanjungbalai district, Tanjungbalai City) <i>Syuhady Witana; Ichwan Azhari; Pujiati Chalid</i>	151-153
The Effect of Literature Circle and Students' Interest on Students' Reading Comprehension Achievement <i>Siti Soleha; Rahmad Husein; Zainuddin</i>	154-158
The Development of Game Based on Basic Motion Learning Model in SD Brigjend Katamso Medan <i>Iswanta Ginting, Haradi, Sanusi Hasibuan</i>	159-162
Types of Intertextuality in Opposite Editorials Related to the Vice Presidential Candidates Debate Topics 2019 <i>Elsi Revita Hasibuan; Anni Holila Pulungan; Sri Minda Murni</i>	163-168
Lexical Metaphor Used in Awaken the Giant Within for Transforming Lives of Students <i>Henri Dunant Biha; Rahmad Husein; Anni Hollila Pulungan</i>	169-171
Analysis of Factors Affecting Rice Imports in North Sumatera <i>Adiguna Dwirusandi; Dr. Arwansyah, M.Si.; Dr. Fitrawaty, M.Si.</i>	172-175
Types and Functions of Fillers Used by Indonesian Celebrities in Seleb English Youtube Videos <i>Ella Marissa Pardede; Amrin Saragih; Anni Holila Pulungan</i>	176-180
Analysis of Labor Demand and Supply in North Sumatra <i>Muhammad Alhasymi Matondang; Dede Ruslan; Indra Maipita</i>	181-185

Culturally Loaded Words and Phrases in Nevermoor Translated into Bahasa Indonesia <i>Noni Indani</i>	186-189
The Effect of Word Wall Strategy and Students' Interest on English Vocabulary Mastery <i>Siti Fadhilah Siregar; Anni Holila Pulungan; Sri Minda Murni</i>	190-195
Analysis of Regional Financial Independence, Economic Growth Rate of Human Development Index in 34 Provinces in Indonesia <i>Tiur Roida Simbolon; Fitriawaty; Indra Maipita</i>	196-201
Development of Thematic Learning Media For Comics for Beautiful Themes of Diversity My Country to Improve Results Student Learning in Fourth Grade of Public Elementary School 028071 Binjai City <i>Indra Maulana Harahap; Hidayat; Ratih Baiduri</i>	202-213
Expressive Speech Acts in Up in the Air Movie <i>Gusti Rahayu Manik</i>	214-217
Development of Android-Based Learning Media Subject for Class X Drug Matters in 1st Besitang State Senior High School <i>Andi Akbar Suparto; Tarsyad Nugraha; Sanusi Hasibuan</i>	218-220
The Influence of Teaching Style and Student Perception on the Outcomes of Passing Learning in The Volley Ball Game in SMP Negeri 4 Laguboti <i>Martin Edward Manik; Rahma Dewi; Budi Valianto</i>	221-223
The Effect of Teaching Approaches and Linguistic Intelligence on the Students Achievement in Reading Comprehension <i>Muhammad Ilham Adha; Berlin Sibarani; Didik Santoso</i>	224-228
Development of Interactive Learning Media in Character Formation Kindergarten <i>Natalia Noveri Tarigan; Hamonangan Tambunan; Samsidar Tanjung</i>	229-234
Analysis of the Ability of Metacognition of Students of SMAK Country Samosir in Solving Problems Apply Learning Guided Discovery <i>Siita Tamba, Bornok Sinaga, Syafari</i>	235-240
The Influence of PAIKEM Strategy on Reading Interests of VII Grade of SMP Negeri 2 Siberut Selatan <i>Eirene Siagian; Abdurahman Adisahputera; Wisman Hadi</i>	241-246
Development of Local Characteristics Learning Text Learning Media in Indonesian Language Learning in Kartika I-2 SMA Private Vocational School <i>Herza Alwanny; M. Oky Fardian Gafari; Abdurrahman Adisahputera</i>	247-256

Analysis of the Determinan of North Sumatra Coffe Exports to the United States Error Correctional Model Approach

Rimelda Rona Sar
Department of Economics
Universitas Negeri Medan
Medan, Indonesia
rimeldaronasari@gmail.com

M. Nasir
Department of Economics
Universitas Negeri Medan
Medan, Indonesia

Muhammad Fitri
Department of Economics
Universitas Negeri Medan
Medan, Indonesia

Abstract— United States as one of the worlds largest coffee importer and the coffee consuming country in the worlds second largest potential market for North Sumatra province. This research aims to determine the most influential factors on the volume of export coffee North Sumatra province to the United States period 1997-2017 in the short term and longterm. The data used is secondary data obtained from the Central Statistic Agency, Trading Economics and the International Coffee Organization. The method of analysis using the Error Correction Model. the results showed United States GDP in the short-term, United States GDP in the long-term and in world coffee price in the long-term a significant influence on the volume of coffee exports Indonesia. the rupiah exchange rate against the dollar America in the short- term, the rupiah exchange rate against the dollar America in thelong-term and in world coffee price in the short-term does not have a significant effect.

Keywords—GDP;world Cofffee Prices; Exchange Rate; Exports; Error Correction Model

I. INTRODUCTION

Plantation is one of the agricultural subsectors which has a significant influence on the economic development of North Sumatra province. The plantation sector plays a strategic role in the development of the national economy and is a mainstay sector and engine of economic growth

Coffee is one of the prima donna of Indonesian agricultural commodities that have the potential to be developed. Evidently, in 2011 Indonesia became the fourth largest country that exported coffee, after Brazil, Vietnam and

Colombia (AEKI, 2012). The main export destination country for coffee from North Sumatra is the United States, which has been known as the export destination country for traditional coffee. The United States as the world's largest coffee consuming country is a potential market for North Sumatra. However, recently, the demand for United States coffee imports from Indonesia has encountered problems due to the enactment of the Bio-Terrorism Law which requires exporters to register and report any delayed goods shipments. The fact shows that a number of trading partner countries are not ready with this provision.

The United States imports all types of coffee, ranging from Arabica to Robusta. Of course, Indonesia has to compete with coffee producing countries that import their coffee into the United States, including Brazil as the Arabica coffee producing country. So far, the world's coffee supply depends on the largest producing countries, which ultimately affects the ups and downs of international coffee prices. The quota system imposed by the International Coffee Organization (ICO) is also heavily influenced by world coffee supply.

The trend of international coffee prices in 1997-2017 had a positive impact on coffee exports in North Sumatra. The decline in the export price of coffee in 2000 by -55,245 was also accompanied by a decrease in exports of -16,547. The same thing also happened in 2003, when the price decline of -5,036 was accompanied by a decrease in exports of -22,816. Likewise in 2010, 2013, 2016 and 2017, the decline in coffee prices was always accompanied by a decrease in coffee exports. This shows that the overall export price of coffee has

a positive and significant impact on North Sumatra coffee exports in the international market.

According to Mankiw (2003), theoretically, the factors that influence a country's exports, imports and net exports are consumer taste for domestic and foreign goods, prices for domestic and foreign goods, exchange rates, domestic and foreign consumer income, costs [4]. transportation of goods between countries and government policies on international trade. The exchange rate relationship with exports can be explained by the concept of supply theory, the supply here is the export of a country that conducts foreign trade. While the price in question is the exchange rate. In the theory of supply, if the price rises, the supply of commodities will increase, but on the other hand, if the price of foreign exchange is low, the goods offered will also decrease Sukirno (2004)[8]. The decline in the USD exchange rate against the rupiah or the weakening of the USD currency occurred in 2000 where the exchange rate decreased by -2.56 accompanied by a decline in exports of -16,547. The same thing also happened in a year where the exchange rate decreased by -14,789, where the export also experienced a decrease, namely by -22.81. And so on for the following years, where the weakening of the exchange rate was always accompanied by a decline in exports.

II. LIERATURE REVIEW

Exports are international trade activities that provide a stimulus to grow domestic demand which causes the growth of large industries, together with a stable political structure and flexible social institutions. Todaro (2004) explained that a country will increase in wealth if it is in line with the increased skills and efficiency of the involvement of workers and residents in that country in the production process[9]. A country is said to have an absolute advantage when that country specializes in producing commodities with other countries

Table1. Number of Work Days Needed To Produce

Countries	Grape (1 Botol)	Cloth (1 Yard)
Amerika	3 Days	4 Days
Indonesia	6 Days	3 Days

Based on comparative costs, America for wine $\frac{3}{6} < \frac{4}{3}$ or $\frac{3}{4} < \frac{6}{3}$, America for clothes $\frac{3}{4} < \frac{6}{3}$ or $\frac{3}{6} < \frac{4}{3}$. In this case America will specialize in wine production, while Indonesia will produce clothing. At the exchange rate of 1 bottle of wine = 1 yard of clothing, America would sacrifice 3 working days for 1 yard of clothing which, if produced itself, would take 4 working days. Every country will benefit from international trade (gain from trade) because it specializes in production and exports goods if the country has an absolute advantage, and imports if the country has absolute disadvantage. Gain from trade can be divided into two, namely the profit from imports, this occurs if the import price is smaller than the domestic

price for the same goods and the profit from exports, this occurs when the price of domestically made goods in the export market is higher than the price in the domestic market. Of course, the export price must be lower than the price of the same goods on world markets or in importing countries. Shah and Abidin (2013) that the main determinants are the economy, the stage of economic openness, inflation and exchange [7]

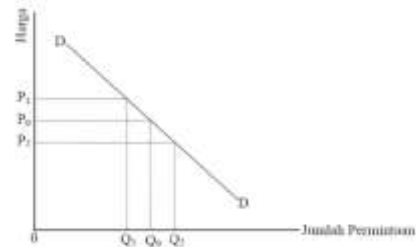


Fig. 1. Demand Curve

If the price of an item is at P_0 , the quantity demanded is Q_0 . The price change of P_0P_1 results in a change in demand for Q_0Q_1 . On the contrary, a change in price of P_0P_2 results in a change in demand for Q_0Q_2 . The property of this demand curve is that it has a negative slope. This means that as the price of goods increases, the quantity of goods demanded will decrease. In contrast to demand, from the supply side, the sellers have the opposite attitude from the buyers. They tend to offer more goods when the price is high and reduce the amount offered when the price is lower. By assuming that everything else is fixed (*ceteris paribus*), the quantity of goods offered is positively related to the price of the goods

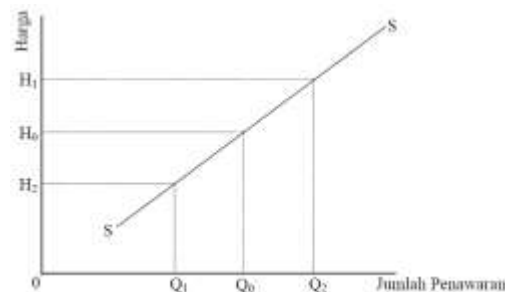


Figure 2. Curve of Supply of a Goods or Commodity

III. RESEARCH METHOD

This research was conducted to measure the variables that affect North Sumatra coffee exports. Economic variables to be studied are Economic Growth, Coffee Production, International Coffee Prices and Exchange Rates (Kurs) from 1997 to 2017. Data collection was carried out using documentation techniques, namely the researcher collected secondary data obtained from the Central Statistics Agency.

(BPS) North Sumatra Province, Bank Indonesia (BI) and Indonesian Plantation Statistics. The data collection method used in this research is literature study, which is an effort to obtain data by studying and analyzing literature books and processed data. the model used in the research below:

$$EKS = f(PDRB, P, HI, KURS)$$

$$EKS_t = \alpha_0 + \alpha_1 PDRB + \alpha_2 P + \alpha_3 HI + \alpha_4 KURS + \epsilon_i \dots \dots$$

EKS	= Export
PDRB	= Economic Growth
P	= Production
HI	= International Price
KURS	= Exchange Rate
α_0	= Constant
$\alpha_1 : \alpha_2 : \alpha_3 : \alpha_4$	= Regression Coefficient
ϵ_i	= Disturbance Variable

IV. RESULTS AND DISCUSSION

The results of the F test simultaneously show that the probability value of the F test is 0.000, greater than 0.05, so it can be concluded that the 4 independent variables X1 (economic growth), X2 (coffee production), X3 (international coffee prices) and X4 (exchange rate) has a significant effect on the dependent variable Y (coffee exports).

The results of the t test partially show that each of the independent variables X1, X2, X3 and X4 shows different probability values, the probability value X1 = 0.6213 (> 0.05), X2 = 0.0208 (<0.05), X3 = 0.0465 (<0.05)) and X4 = 0.0270 (<0.05), so it can be concluded that of the 4 independent variables, there are 3 that have a significant effect, namely X2 (coffee production), X3 (international coffee prices) and X4 (exchange rates), while the X1 variable (growth economy) has no significant effect on the dependent variable Y (coffee exports).

The autocorrelation test results show that the probability value of obs-square = 0.0285, greater than 0.01, it can be concluded that the research data does not contain autocorrelation symptoms.

The results of the heteroscedasticity test that the probability value of obs-square = 0.3544, is greater than 0.01, it can be concluded that the research data does not contain heteroscedasticity symptoms

The results of the normality test show that the probability value = 0.712594, greater than 0.05, so it can be concluded that the data is normally distributed

The results of the stationarity test show that the probability value of all independent and dependent variables is greater than 0.05, namely Y = 0.1615, X1 = 0.1122, X2 = 0.4224, X3

= 0.3066 and X4 = 0.0783 so it can be concluded that the research data is not stationary at the level so that the ECM analysis can be continued.

The results of the cointegration check show that the probability value = 0.000, because it is smaller than 0.05. This means that the data Y, X1, X2, X3, and X4 are co-integrated so that the test can be continued to estimate the long-term and short-term equations.

The results of the cointegration relation test in t that the probability value of F (simultaneous) is 0.000, this means that simultaneously, the 4 independent variables have a significant effect on the dependent variable (exports). While the probability value t (partial), only three independent variables that have a probability value smaller than 0.05, namely X2 (production), X3 (price) and X4 (exchange rate). This means that each of the 3 independent variables has a partially significant effect on the dependent variable (exports), while the X1 variable (economic growth) has a probability value greater than 0.05, so it can be concluded that the variable X1 (economic growth) is not has a significant effect on the dependent variable (exports).

Development policies undertaken by a country for its coffee commodity will have an impact on increasing the country's export volume, and in turn, will have an impact on the coffee export volume of its competing countries. Thus, increasing coffee exports to Indonesia's competitors, such as Brazil, Colombia and Vietnam, will be able to reduce Indonesian coffee exports. The factors that influence the export of Indonesian coffee where the results of the study show that those that affect the export of Indonesian coffee are non-economic factors, namely most of them are from the production aspect, both domestic production and world production in addition to the US Dollar exchange rate factor. Meanwhile, other factors, such as the level of coffee imports and the level of coffee consumption, except for per capita coffee consumption, have no significant effect on Indonesia's coffee exports. In international trade, especially in export activities, one of the factors that can affect the level of export value of coffee is the price. International economic growth did not have a significant effect on Indonesia's coffee exports Mutohharoh (2018) [5]

Prices prevailing in the international market have an influence in measuring the purchasing power of the world's population in consuming coffee. The rupiah exchange rate (exchange rate) greatly influences export activities, export transactions result in money entering Indonesia in foreign currencies. One of the factors that causes fluctuation in total export value is fluctuation in exchange rate. Rahmawati (2012) individual vanilla production variables in Indonesia have a significant effect on the export volume of vanilla in Indonesia [6]. Wide exchange rate fluctuations lead to depreciation or exchange rate appreciation. In the event of exchange rate appreciation in a country, then an increase in the relative price of exports and the declining relative prices of

imports so that the goods - the country exported goods tend to be competitive in the international market and can decrease the value of exports to foreign countries. The depreciation of the exchange rate causes the relative price of exports to decrease while the relative price of imports increases but the export goods become uncompetitive in the international market and increase the value of exports.

V. CONCLUSIONS AND SUGGESTION

A. Conclusion

1. The results of the stationarity analysis show that there is no research data that is stationary at the level. This is indicated by the probability value of all independent and dependent variables is greater than 0.05, namely $Y = 0.1615$, $X1 = 0.1122$, $X2 = 0.4224$, $X3 = 0.3066$ and $X4 = 0.0783$ so that it can be concluded that the research data is not stationary so that ECM analysis can be continued.
2. The results of the cointegration analysis show that the research data (Y, X1, X2, X3 and X4) are co-integrated. This is indicated by the probability value of the 5 variables is less than 0.05.
3. The estimation results of the long-term equation (cointegration relation) show that the probability value of F (simultaneous) is 0.000, this means that simultaneously, the 4 independent variables have a significant effect on the dependent variable (exports). While the probability value of t (partial), only 3 independent variables have a small probability value of 0.05, namely the variables X2 (production), X3 (price) and X4 (exchange rate).
4. The estimation results of the short-term equation show that there are no independent variables that have a significant effect on the dependent variable (coffee exports).
5. The results of the ECM analysis show that the data of this study only apply to long-term estimates.

B. Suggestion

1. It is recommended that the North Sumatra Agriculture Office pay more attention to aspects that affect coffee exports so that coffee exports can be further increased
2. Further researchers are advised to conduct similar research by adding other variables so that the results of the research are obtained which are used as a reference for comparison to previous research.

REFERENCES

- [1] Assauri, A. 2008. *Pengertian dan Pengawasan Proses Produksi*. PT. Rineka Cipta. Jakarta.
- [2] Gujarati, D. 2004. *Basic Econometric*. Fourth Edition. New York McGrawHill.
- [3] Kannan. 2013. The Determinant of Production and Ekspor of Natural Rubber in India. *Journal of Economics and Finance (IOSR - JEF)*. ISSN1(5).
- [4] Mankiw, & Greogory N. 2003. *Teori Makroekonomi*. Edisi Kelima, Erlangga. Jakarta
- [5] Muttoharoh. 2018. Daya saing dan Faktor-faktor Yang Mempengaruhi Ekspor Kopi Indonesia di Pasar Internasional. *Jurnal Perspektif Ekonomi dan Pembangunan*
- [6] Rahmawati. 2012. Analisis Faktor – Faktor Yang Mempengaruhi Volume Ekspor Panili di Indonesia. *Jurnal Agrista* ISSN 2302-1713. Fakultas Pertanian. Universitas Sebelah Maret.
- [7] Shah, I., & Abidin Z. 2013. The Determinants of Export Between Malaysia and the OIC Member Countries : A Gravity Model Approach. *Elsevier Journal*. 5(2).
- [8] Sukirno & Sadono, 2004. *Makroekonomi Teori Pengantar Edisi 3*. PT. Raja Grafindo Persada. Jakarta
- [9] Todaro, & Michael .P, &, Stephen, C. 2004. *Pembangunan Ekonomi di Dunia Ketiga Edisi Kedelapan*. Penerbit Erlangga. Jakarta

