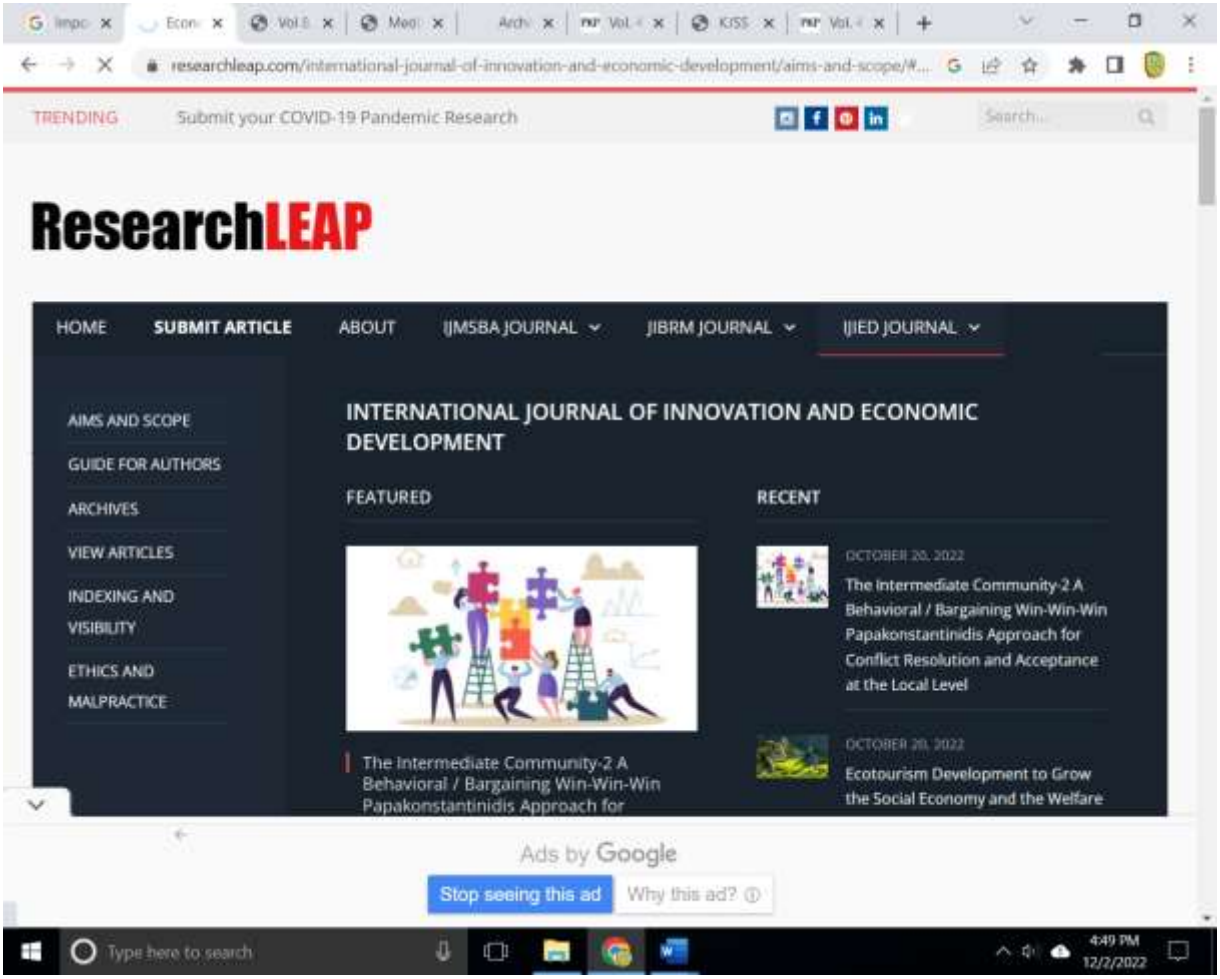
The Impact of External Integration and Internal Integration to Product Innovation and Competitive Advantage on Small and Medium Enterprises (SMEs)



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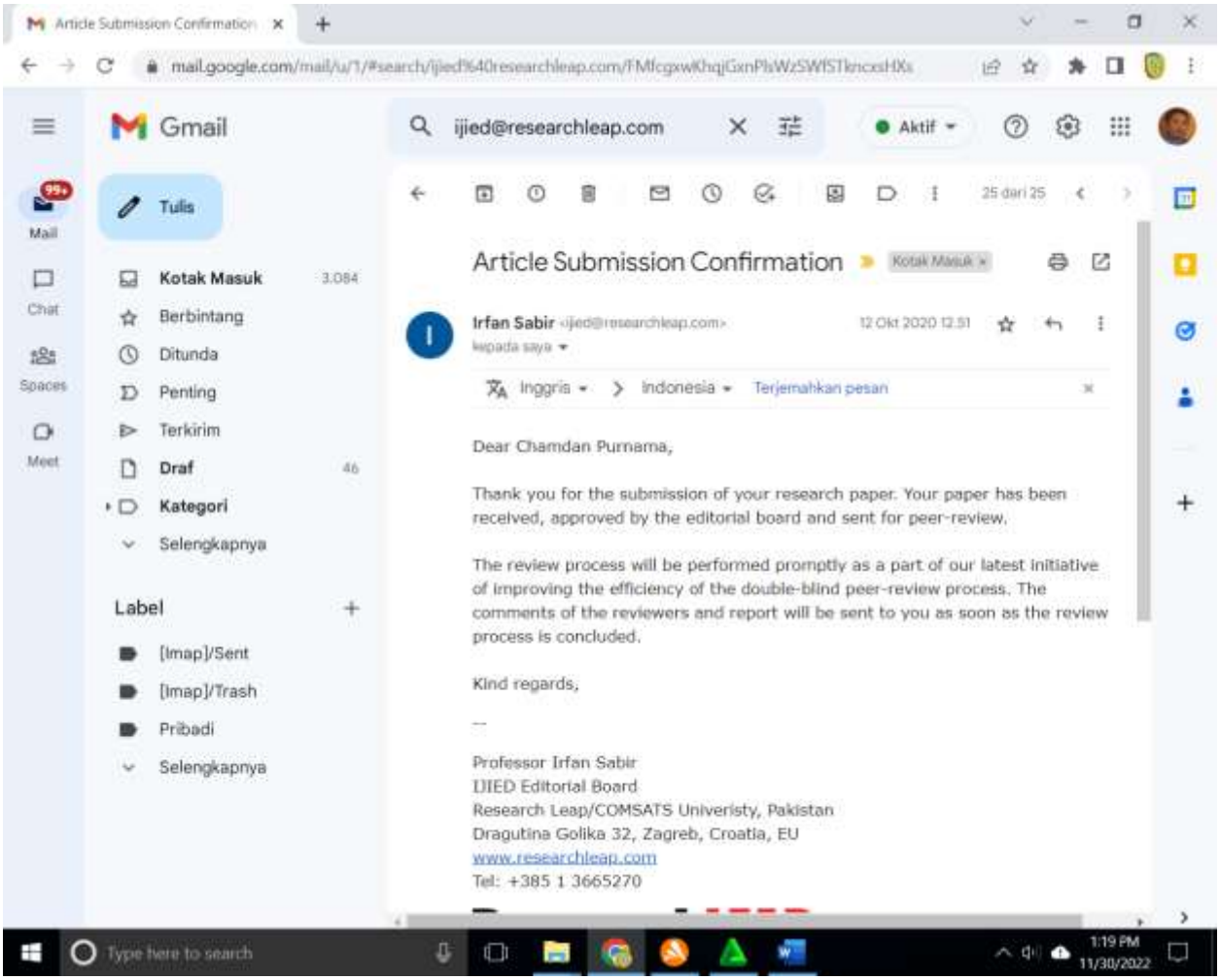
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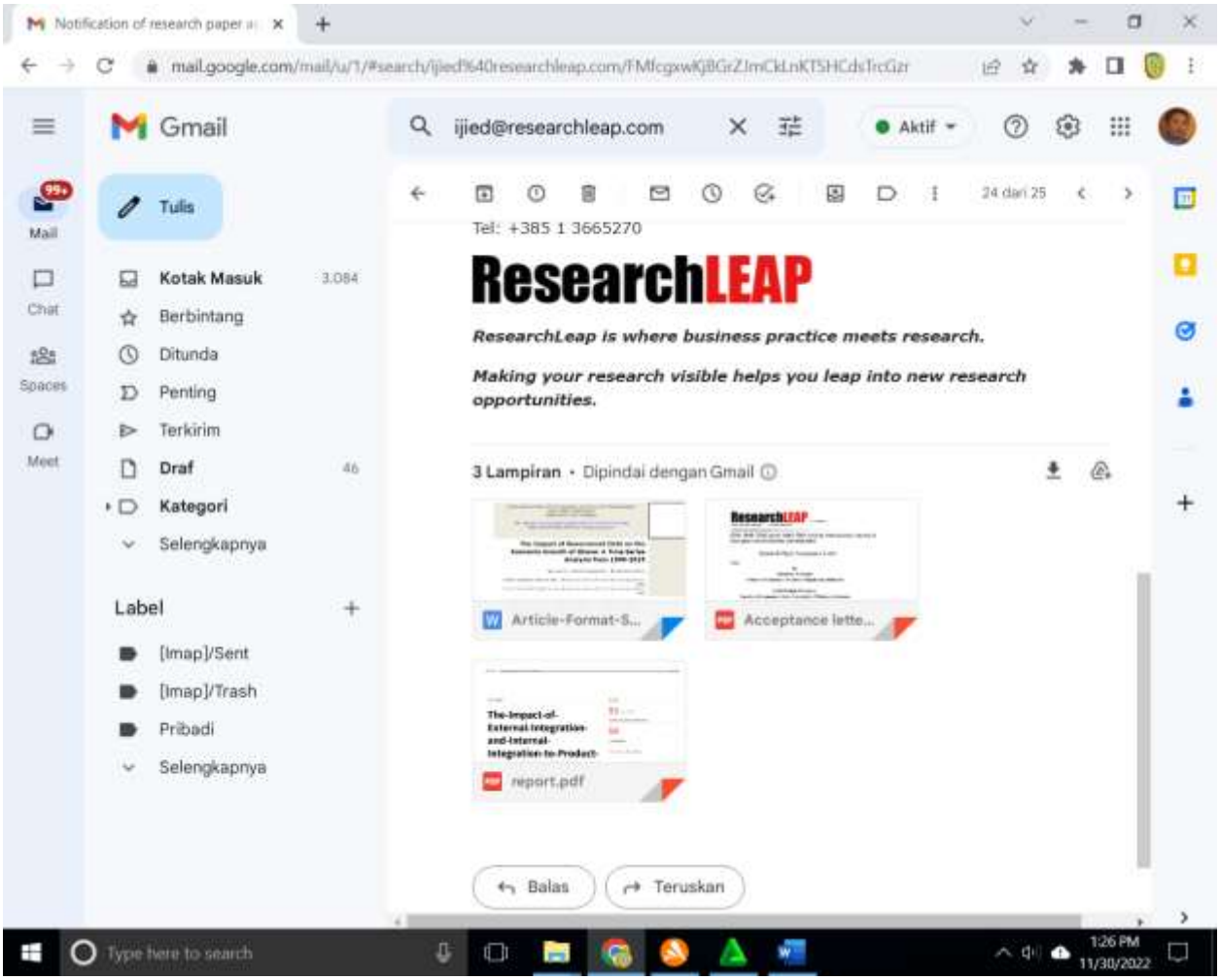

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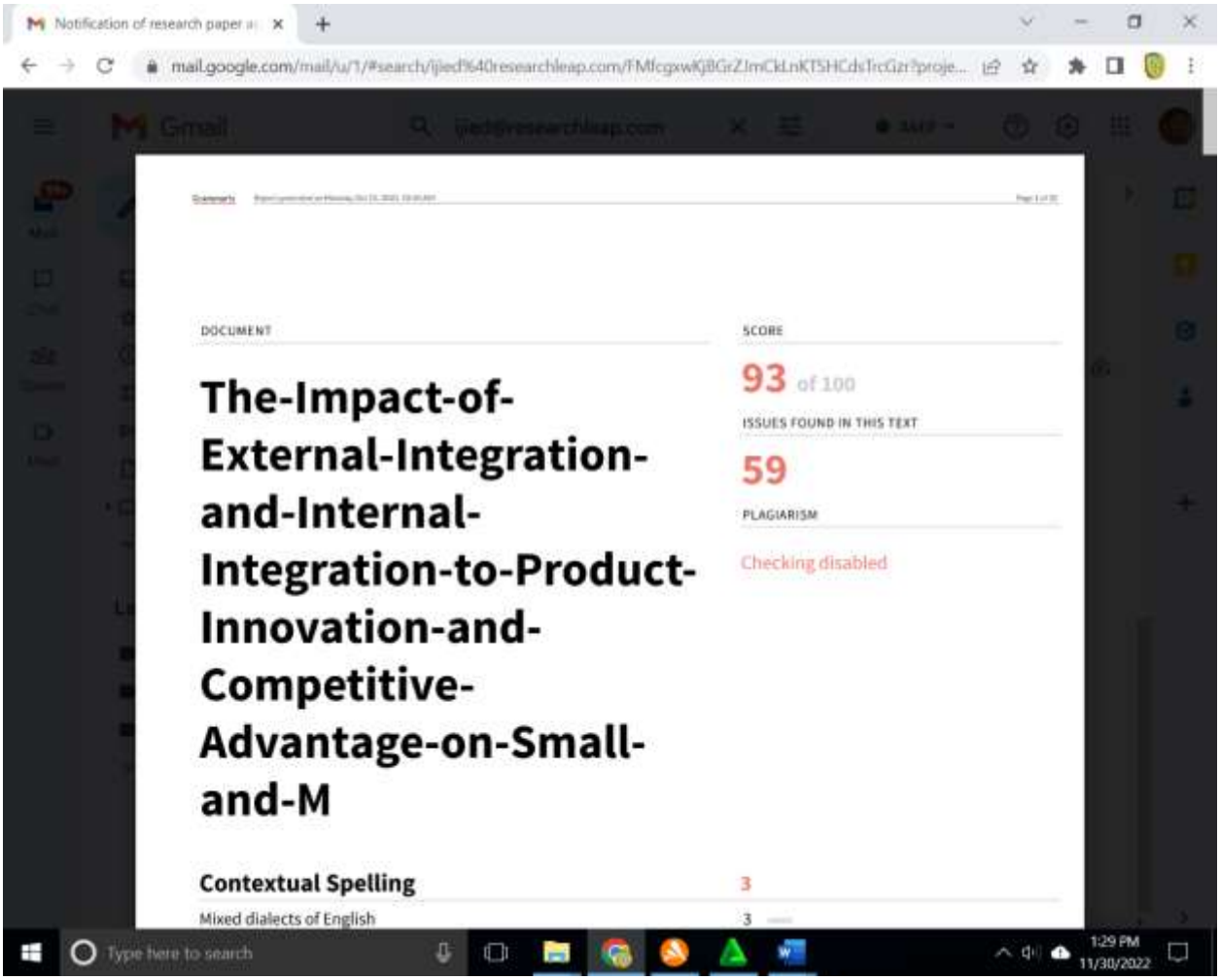
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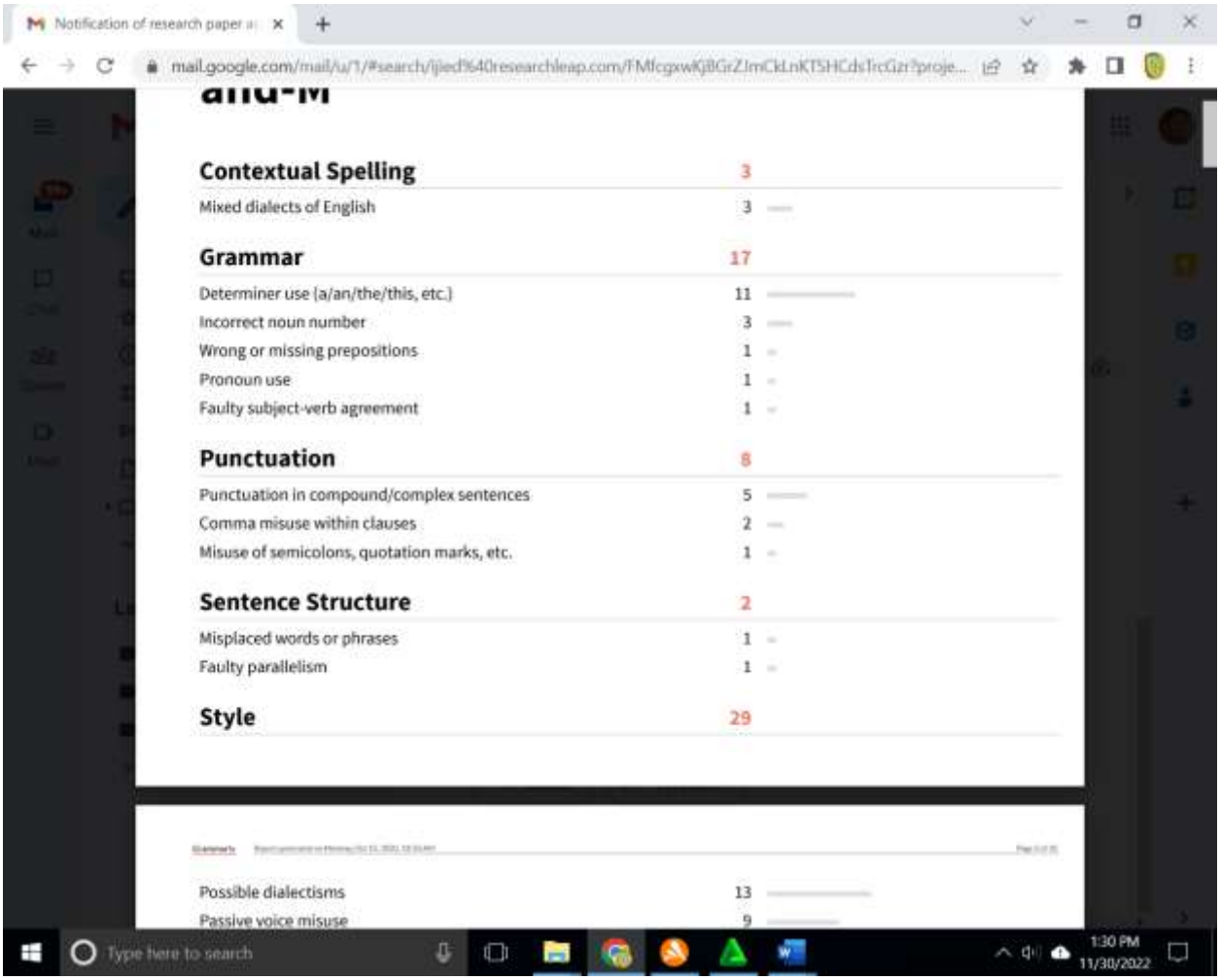
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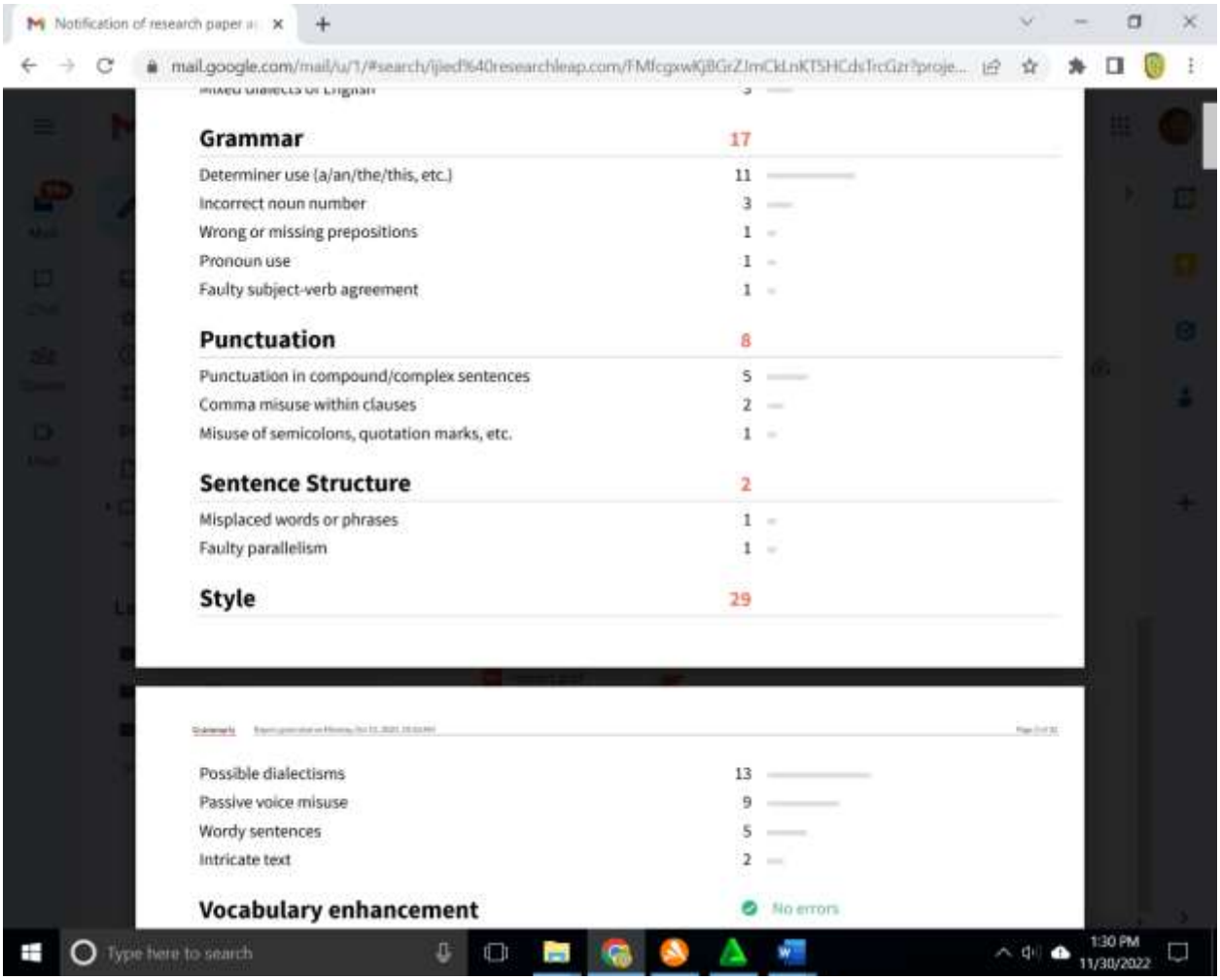

Lampiran revisi 2

The Impact of Government Debt on the Economic Growth of Ghana: A Time Series Analysis from 1990-2015

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Abstract: In this study we investigate the impact of government debt on the economic growth of Ghana adopting the methodology of the simple Ordinary Least Squares with data spanning from 1990 to 2015. Ghana has unfortunately found itself in the tragic situation of high external government debt which has led to high dependency on aid and other loans to support its development. These aids and loans have seen the debt of Ghana rise steadily over the years. As a result of the Heavily-Indebted Poor Countries (HIPC) which was presented by the IMF and World Bank in 1999, Ghana was judged to be a HIPC with unsustainable debt enabling the country to benefit from debt relief. We investigate the impact of government debt (both external and domestic) by testing three related models at the domestic and external levels including the general growth of the Ghanaian economy. In constructing our dataset, we build on the study of many scholars including a substantial amount of new materials from both primary and secondary data sources

being Ministry of Finance (MOF) or Treasury Latest actual data: Government Finance Statistics Manual (GFSM), Ghana and World Bank. The research findings revealed that there is a negative relationship between debt (domestic and external) and growth in the economy of Ghana and recommend among others that government debt borrowing should be discouraged while increasing the revenue base through tax reform programs is encouraged.

Keywords: Domestic debt, External debt, Economic growth

1. INTRODUCTION

Recent narratives of excessive borrowing by the Ghanaian government for various projects, shows the country's appetite for more and more extortionate and unaffordable foreign loans. These actions have brought into sharp focus the scale of the crisis in Ghana's financial and economic wellbeing (Nyarko, 2014).

External debt can be described as the situation where governments face budget deficit due to the high expenditure and fewer revenues. The government of an economy can get revenue by increasing taxes, printing money, domestic or external borrowing and also using the previous budget surplus. When the government decides to borrow instead of introducing additional tax measures, to finance the budget deficit, it creates a liability on itself known as public (Sachs et al., 1985).

Ghana, has unfortunately found itself in the tragic situation of high external government debt which has led to high dependency on aid and other loans to support its development. These aids and loans have seen the debt of Ghana rise steadily over the years. As a result of the Heavily-Indebted Poor Countries (HIPC) initiative introduced by the IMF and World Bank in 1999, Ghana was judged to be a HIPC with unsustainable debt enabling the country to benefit from debt relief. Subsequently, Ghana benefitting from the Multilateral Debt Relief Initiative (MDRI) allowed it to attain total debt relieve from debts owed to monetary agents such as IMF, the International Development Association (IDA) of the World, and the African Development Bank (AfDB). Prior to these reliefs, the Ghanaian economy saw a sharp decline in its debt to a rather sustainable level. This debt relief allowed Ghana to step up its borrowing mostly to finance infrastructure projects which eventually saw the debt level rise again steadily (Barfour Osei 1995).

In the light of the above, this study on Ghana's government debt and its impact on the economic growth which is turning suicidal is an effort in the right direction. Thus the novelty value of this study cannot be overemphasized. The purpose of this study is to discover the impact of Ghana's external and internal government indebtedness for sustained economic growth. The focus of the analyses is on the debt of Ghana from 1990-2015, a period during which Ghana pursued an economic recovery program (ERP), adopted structural adjustment policies, HIPC and heightened increase in borrowings causing twin deficits. The study is intended to address estimation of the impact of the government debt on economic growth.

1.1 Problem Statement

Depending on both external loans and domestic borrowing for its developmental sustenance saw Ghana's debt rise over the years, reaching over 100% of GDP in 2000. The record of some debt relieve aids in terms of loans among others have proven futile in a bid to relieve the economy of its suicidal debt distress.

This continuous rise in the domestic and external debt of Ghana has brought to the fore the need for the government of Ghana to formulate and implement practical debt management strategies to moderate the effects of the debt of the economy. The need to finance rising government expenditure has been identified to be responsible for the rapid increase in the stock of Ghana's domestic and external debt. Prior to the ongoing crisis it is of high essence that something needs to be done and this must be done with all urgency.

1.2 Aim of the study

In relation to this very difficult time of immense financial crisis in which Ghana finds itself, it would be an innovative and significant task to conduct a research work to provide insights and a more reliable guide for monitoring the challenges faced by Ghana as an economy in the realm of its suicidal debt crisis, creating an enabling environment to stimulate and ensure overall growth of the economy. Thus the aim of the study is to examine the inadequate government infrastructure and the ineffective management of domestic and external debt in Ghana. It is also set to analyze the structure and the dynamics of domestic, external and total debt, bringing out emerging vulnerabilities and future threats.

2. LITERATURE REVIEW

In the study of Fuenzalidaet al. (2008), they explored the causes and suddenness of international debt crisis and the existence of an excess supply of credit in the pre-crisis situation are theoretically investigated from a formal game-theoretic point of view. Here it was clearly envisaged over time in many developing countries that international debt crises come on very suddenly. From contrasting an excess supply of credit, a nation can within months or even weeks finds itself caught up in an acute foreign-exchange shortage situation. Emphasis is being made on the fact that International credit is an essential part of a nation's development process. The game theory model was used to give insight into the suddenness of the debt crises of the kind that India faced in 1991. Within the confines of this model, the borrowing countries can raise the interest rate and regain the confidence the lenders but in reality it will take time to regain this confidence.

Carmen et al. (2011) in their study of the debt crisis, from financial Crash to Debt crisis they found out that newly developed time series on public debt, along with data on external debts, allow a deeper analysis of the debt cycles underlying serial debt and banking crisis. They tested three related hypotheses at both world aggregate levels and on an individual country basis. With a data covering 70 countries in Africa, Asia, Europe, Latin America, North America and Oceania and a range of variables encompassing external and domestic debt, trade, Gross National Product (GNP), inflation, exchange rates and commodity prices, their analysis suggest more surprisingly that banking crisis (even those of a purely private origin) increase the likelihood of a sovereign default. They also found a direct effect (perhaps in part due to the recession that typically arises) as well as an indirect effect (perhaps due to the typical post banking crisis explosion in public debt.

Following a variant of Edwards et al. (1999) in their study of financial crisis saw a need to wake up to a new model(s) to be used in explaining the financial crisis of the moment. In their view it is difficult to assume that the generation one, two and three models of financial crisis are in the position to explain the current global financial crisis. The methodology employed in the explanation of the current financial crises is Fuzzy Cognitive Maps with regards to the non-conventional models. Their study resulted that the problem of financial crisis is extremely complex, where an innumerable quantity of financial, economic, social, ethical, technical and human behavior factors interfere and affect in the financial operations. In the case of the conception of a financial crisis, a model of advanced examination using distorted logic, the Fuzzy Cognitive Maps (FCM) is able to allow the addition of qualitative variables in the model, like financial regulation.

In another inspiring study, Trevino (2008) revealed that the economic and financial characteristics of the people, companies and public policies and habits of the US and other countries is not a significance of international crisis. They present some basic facts of the US economy such as saving rates, debt among other factors which help us understand this crisis and to be able to understand the size compared to other crisis in other countries or other crisis before the 1929 crisis. They concluded their findings on the fact that financial crisis is based less on a cause and more on the economic structures of the financial system.

Fuenzalida et al. 2008, in their research findings, explained that to investigate crisis, one can examine the schemes and strategies that may be employed to help manage this type of episodes. Nevertheless, periods of turmoil in developing capital markets could be anticipated through historical technical analysis; their study included the multifractal properties of three Latin American developing markets during the Mexican crisis of 1994: Argentina and two other countries being Brazil and Peru using exploring returns between 1989 and 2000. Employing the crisis-switching indicator with an empirical threshold, the analysis results revealed that unexpected variations in a version of the sequence of Holder advocates was usually followed by raging periods within a period of about sixty days.

Taking into account the well-known 'tequila effect', Cortez et al. 2008, investigated the impact that the unexpected financial crisis of Mexico in 1994 had on Argentina. They took into account the expected financial crisis of the USA and the consequent effect it will have on the Mexican economy. Defining transmission as a major surge in the correlation which can be either negative or positive between the economic and financial variables of two or more countries, induced by an external shock (Edwards and Susmel, 1999). The study employed the Bakeart et al. (2002) with a modified version of Lagunes and Watkins (2008) to justify for the confirmation of transmission and concluded that the inter-relational emphasis on the economy of the United States was embedded in their hypothesis which was affecting Argentina and Mexican countries significantly.

Using the simulation model and merging quantitative and qualitative research methods, Lukasz (2013), examined the significance of employing a cross-European stock markets survey that would ultimately make equity investment less stimulating during the episodes of global financial crises. The study findings remarked that the crisis affecting some equity markets were transmitted to other markets when investors, especially large institutional practitioners began to sell their equities traded in their host markets and other European bourses influencing a decline in the values of portfolios held by other market participants. Finally, the simulation again highlighted the negative influence of the financial crisis on the liquidity in the European stock markets.

With the aim of examining the global financial crisis ElioIannuzzi Massimiliano Berardi, (2010), used the complexity theory and viable system approach to examine the main causes of global financial crisis and perspectives to defining ways in which it can be managed in the future. The study debated the need for a somewhat revised International Financial System having the basic function of coordinating and guiding the different national and international institutions. Analysis of the trends in the debt levels and economic performance of the sub-Saharan countries and assessment of a couple of suggestions for the reduction of the external debt service obligations was investigated by Joshua Greene (1989).

The findings of this study revealed that several initiatives had been established within the past years in a bid to solve the debt crisis dilemma in sub- Saharan Africa. A couple of these initiatives included the Enhanced Structural Adjustment Facility (ESAF), Fund's Structural Adjustment Facility (SAF) and the World Bank's Special intense debt relief strategy to the extremely low-income countries. The study emphasized these proposals to support such countries in meeting their debt service obligations to multilateral organizations, measure for bilateral debt forgiveness and more general debt forgiveness measures aimed at eradicating bilateral and multilateral debt and providing all future assistance in the form of grants.

Running a regression on two panels Omotoye et al. (2006), investigated Africa's debt crisis and uncovered key explanatory variables with their degree of robustness ranging from very strong to moderate and somewhat significant such as terms of trade, inflation, non-petroleum revenue and privatization index. They concluded along with other factors that a history of political instability and the nonexistence of permanency in sound economic policies also ignited the debt crises in the economy of Nigeria.

Michael D. Bordo et al. (2010) also studied the effects of foreign currency debt on currency and debt crisis and its indirect effect on growth (short and long term output effects). Their use of the multivariate growth regressions among other methods in their analysis showed that hard currency debt is only but a partial explanation of the risks of financial crisis. In conclusion, they remarked that although some countries have on the recent started to minimize currency incompatibilities, uneven development, misguided and unregulated credit booms, sudden stops and contagion continue to pose dangers of the financial crisis.

Following the variance of previous studies on this subject matter, the current study intends to derive relevant thresholds including new and or (better) models for sustainable eternal debt and finally highlight quantifiable improvements that Ghana can employ to experience better governance infrastructure and effective management of external shocks other than relying on grants and aids amidst borrowing to pay its existing debts. Thus the novelty value of this study cannot be overemphasized.

3. RESEARCH METHODOLOGY

This chapter focuses on the methodology of the study by the formulation of models with particular emphasis on the Ordinary Least Square (OLS) to capture the impact of government debt on economic growth as discussed in earlier chapter.

3.1 Considerations based on industry

The research made an analysis on the economy of Ghana within the period of 1990-2015. The two main primary and secondary sources of information used in this study are the Ministry of Finance or Treasury Latest actual data: Government Finance Statistics Manual (GFSM) and World Bank data. The Domestic government debt, External government debt and Domestic and National savings data were obtained from the Ministry of Finance or Treasury Latest actual data: Government Finance Statistics Manual (GFSM), Ghana while the Private consumption expenditures, Investment expenditures, Inflation, Import, Government consumption expenditures were also obtained from the World Bank. The simple Ordinary Least Square (OLS) method of regression was used while majority of the independent variables were normalized using percentage GDP.

3.2 Model Specification

In line with the theoretical underpinning, the functional form of the models used in this study in relation to public debt and economic growth is specified as follows;

Model 1:

$Y1 = f(\beta_o + \beta_1 Pcon\square + \beta_2 Inv.exp\square + \beta_3 DS\square + \beta_4 Im\square + \varepsilon\square)$.....1

Where;

Pcon = Private Consumption Expenditure
Inv.exp = Investment expenditure
DS = Domestic Savings
Im = Import

Model 2:

$Y2 = f(\beta_o + \beta_1 Gcon\square + \beta_2 Inv.exp\square + \beta_3 NS\square + \beta_4 Inf + \varepsilon\square)$.....2

Where;

Y2 = External Debt
Gcon = Government Consumption expenditures
Inv.exp = Investment expenditure
NS = National Savings
Inf = Inflation

Model 3:

$Gro = f(\beta_o + \beta_1 DD + \beta_2 ED)$.....3

Where;

Gro = Growth
DD = Domestic Debt
ED = External Debt

The choice to normalize the relevant variables in the study by percentage GDP is due to special reasons intended to eliminate some econometric problems such as the multi-collinearity among the variables.

4. DATA ANALYSIS AND INTERPRETATION

As was indicated from the above, the Ordinary Least Squares was adopted for the estimation of models. Ordinary least squares (OLS) method of regression was used to evaluate the slope of the coefficients of the autoregressive model. The use of OLS relies on the stochastic process being stationary. In the case where the stochastic process is not stationary, the use of OLS can result in invalid estimates. These estimates are called 'spurious regression' results thus high adjusted R2 values and high t-ratios yielding results with no economic meaning. Estimation is done by using E-Views (Econometric Views), and results are significant. A total of 26 observations are included from 1990 to 2015 and three models are estimated to capture the impact of government debt on general economic growth of Ghana.

Estimation of Model 1:

The estimation of model one being the Domestic Debt is expressed in the functional form below as;

Model 1:

$Y1 = f(\beta_o + \beta_1 Pcon\square + \beta_2 Inv.exp\square + \beta_3 DS\square + \beta_4 Im\square + \varepsilon\square)$.....1

Table 1: OLS Estimation of domestic debt function from 1990 to 2015

	(Model 1) Y1		
Variable	Coef.	t-stat	Prob
C		4.1895	0.0004
DI	353.844	-5.5113	0.0000
IMP	4	-4.2462	0.0004
SAV	-4.4196	-1.5653	0.1324
DCU	-3.6437	6.9403	0.0000
	-1.4482		
	2.5429		
Adj. R^2	0.70		
F-Stat	15.33		

DW	1.7094

The table one above shows the estimation results for model one (Y1). The analysis result indicates that all the signs of the coefficients are in line with the theoretical underpinning. The t-ratios are more than 2, while all the probabilities are less than 0.05 which tells of the significance of the variables. The adj. R^2 is 70%, showing that the model is good and hence captures the maximum variations of the model.

Estimation of Model 2

The estimation of model two being the External Debt model is expressed in the functional form below as;

Model 2:

$Y2 = f(\beta_o + \beta_1 Gcon\square + \beta_2 Inv.exp\square + \beta_3 NS\square + \beta_4 Inf + \varepsilon\square)$.....2

Adopting E-Views method of estimation, we regress the above model. The result is provided in table 2 below.

Table 2: OLS Estimation of external debt function from 1990 to 2015

	(Model 2) Y2		
Variable	Coef.	t-stat	Prob
C	67.6293	0.4441	0.6638
GC	3.4187	1.1118	0.2808
INV	-2.6908	-1.9129	0.0734
INF	0.3789	0.9129	0.3734
AR(1)	1.1983	5.2744	0.0001
AR (2)	-0.2709	-1.2238	0.2368
Adj. R^2	0.92		
F-Stat. Prob.	0.0000		
DW	1.86		

The table above shows the analysis results of model 2. Here, all the signs of the coefficients are in line with the theoretical underpinning. The variables are significant at5% level except for investment variable (inv). We see also that the t-ratios are significant. The adj. R^2 is 92%, signifying that the model is good and thus captures the maximum variations of the variables. The F Statistic in turn shows a significant result with probability of F Statistic being 0.0000 which is an indication that the overall model is statistically significant.

Estimation of Growth Model

With our third model, we adopt two variables being the domestic and external debts. We normalize them by percentage GPD. This choice of normalizing is to help us avoid some econometric problems such as multicollinearity.

$GRO = f(\beta_o + \beta_1 DD + \beta_2 ED + \varepsilon\square)$.....3

Equation 3 is our Growth model. Estimation results are shown below in table 3 below

Table 3: OLS Estimation of growth function from 1990 to 2015)

	(Model 2) Y2		
Variable	Coef.	t-stat	Prob
C	3.9089	6.5962	0.0000
LNEXD	-0.3391	-37818	0.0010
LNDD	-0.1253	-0.8895	0.3839
Adj. R^2	0.42		
F-Stat. Prob.	0.0007		

DW	1.60

The table above shows the result for the growth model, equation 3. It should be noted that the percentage GDP of domestic debt and external debt have a negative relationship with annual growth. This result further explains that domestic debt has no impact on economic growth. The probability of F-static shows a value of 0.0007 and DW value of 1.60 indicates that the variables are significant and shows that overall model is also significant.

Since both types of debt are inefficiently managed and hence have negative impact on growth of the economy. A more positive result could also be achieved if debt is efficiently managed and used in productive sectors only, and corruption put under control.

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4. CONCLUSION AND RECOMENDATIONS

It is not surprising to see that in order to bridge the fiscal gap of revenue and expenditure, the government of Ghana resorts to excessive borrowings which eventually does more harm than good to the economy. The results presents could be due to a number of limitations. There is a possibility that the measurements of the three dependent variables might be misleading because data based on the external and internal government debt are usually dubious due to corruption. As opined by Armony et al. (2005), quite a number of economists and politicians and or financial experts explain that the financial crisis can be described by macroeconomic opposing factors mainly by the corruption of public officials that has had a detrimental propensity, has designed the wrong policy and institutional malfunction. A lower debt level has the propensity to have a positive effect on growth levels. However the adverse can be accounted for, in the case of high debt level record of above a particular threshold, an additional debt will only result in the birthing of a rather negative impact on economic growth (Pattillo et al. 2002).

As a policy implication, we recommend that government debt borrowing should be discouraged while increasing the revenue base through tax reform programs is encouraged. Again a healthy threshold should be maintained as an alternative to finance its projects. Among these recommendations, suitable economic environment should be provided to private sector investors.
In order to quench the acute curiosity of researchers, another interesting extension of the findings presented in this study would be to delve deeper into finding the specific conditions required to reverse the negative impact of Ghana's public debt and its economic growth.

Ghana requires a policy action that can contribute to rectifying these serious abnormalities in our development and nation building system. Ghana needs new business policies and regulations for development and a revision of our financial sector since the old pattern of just borrowing itself out of poverty and inadequacies no longer fits. These new policies are expected to be dynamic and responsive to the challenges facing Ghana as a developing country in order to get our priorities right.

One research opportunity will be to explore quantitatively the risk estimation of government debt management, the supervision and public information of debt which is usually accompanied by undesirable impact on economic growth.

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The Impact of External Integration and Internal Integration to Product Innovation and Competitive Advantage on Small and Medium Enterprises (SMEs)

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Abstract: This study aims to analyze the influence of external integration and internal integration to product innovation and competitive advantage. The research was conducted on a sample of 180 manager small and medium enterprises (SMEs) in East Java clothing taken with stratified cluster sampling technique. Selection of sample areas based on areas that have the potential development of the industry. Data collection was done by using questionnaire that has been tested for its validity and reliability. Data analysis used Structural Equation Modeling (SEM) analysis with help of AMOS version 21 program. Based on the analysis of SEM, it was found that the first, external integration influence on product innovation SMEs and affect the competitive advantage of SMEs. Second, the internal integration effect on product innovation SMEs and affect the competitive advantage of SMEs. Third, product innovation SMEs effect on the competitive advantage of SMEs. In this respect, the company needs to build a collaboration of external integration and internal integration in order to improve product innovation and competitive advantage of SMEs.

Keywords: External Integration (EI), Internal Integration (II), Product Innovation (PI), Competitive Advantage (CA), Small and Medium Enterprises (SMEs)

1. INTRODUCTION

The business world is currently growing and more and more competitors are unavoidable. The existence of competition makes the company exposed to various opportunities and threats both from within the country and abroad. Because of this intense competition the company must have a CA in order to survive and continue to develop their business. Brun et al., (2008) states that CA is owned by a company can be expected to result in a consumer satisfaction, because the CA it has is a reflection that the products offered meet the needs and desires of consumers, and a positive score in the eyes of consumers. The CA is the heart of marketing performance to the competition (Purnama and Subroto, 2016; Porter, 1996). The setting

is a good strategy the key to success for the company to be in the forefront with anticipation in the market competition (Tarabieh et al., 2015). Innovation can be used as a strategy to achieve competitive advantage.

(Gray et al., 2002) suggests that the innovation capability of a company will guarantee the company's ability to compete. The company's success in maintaining product sales lies in its ability to innovate. Supply chain management (SCM) is the expansion and development of the concept and meaning of logistics management, whose role in regulating the flow of goods between the company and growing concerns to things that are required by the customer (Indrajit and Djokopranoto, 2006). Generally, there are two types of integration, namely the EI and II. EI is the integration of logistics activities which exceed the limits beyond the company. Meanwhile, the II of the cross-functional integration within an enterprise, as reflected by the level of activity of logistics functions, which are interconnected with the scope of other functions (Pituringsih, 2010). II shows the extent how companies can build organisational applied, etiquette and behaviors in synchronous process can be managed to satisfy customer desires (Paulraj et al., 2004).

Integration external and II is widely accepted because of its capability to increase performance, like grade, fee, consignment and smoothness (Wong et al., 2011; Droge et al., 2012; Prajogo and Olinger, 2012). However, results of several studies are still few studies linking of the EI and II towards PI and CA, especially SMEs in East Java.

Consequently this research want to determine so analyses what is the influence II to PI and the effect to CA of SMEs in East Java.

2. LITERATURE REVIEW

External Integration and Internal Integration

According Jebarus (2001) supply chain management (SCM) is a further development of distribution management products to meet consumer demand. By Indrajit and Djokopranoto (2006) SCM is the expansion and development of the concept and meaning of logistics management, whose role in regulating the flow of goods between the company and growing concerns to things that are required by the customer. SCM is an approach used to achieve integration of more efficient organisation of suppliers, manufacturer, distributor, retailer and customer.

From the explanation above researchers can conclude that SCM is a set of approaches to streamline and streamline the integration of suppliers, manufacturing, warehouse and storage, so that the goods are produced and distributed in the right amount, the right location, the right time, to minimize costs, lower volume waste and provide services to the customer's satisfaction. In this study, SCM split into two types of integration, namely the integration of external and II. EI refers to the extent to which a company can partner with other members of the supply chain (customers and suppliers) to develop strategies between organisations, practices, procedures, and behavior in the process of collaboration, synchronization, and can be managed to meet the needs of customers with indicators covering relations suppliers, raw material quality, supply, customer complaint, customer satisfaction, and customer relations. While the II shows the extent to which a company can build internal cooperation as reflected through information sharing of various departments within the company, such as production department, packing, warehousing, distribution, and transportation with indicators which include product development, production planning, quality control, quality production, distribution and quality of information (Paulraj et al., 2004;, Vijayasarathy, 2010; Droge et al., 2012).

While in this study indicators use as a guidance for researcher, using tools developed by (Aloini and Martini, 2013, Wong et al., 2011) for the integration of external variables with indicator (supplier relationships, quality of raw materials, supply risk, customer complaint, customer satisfaction, and customer relationship) and variable II with indicators (product development, production planning, quality control, quality of production, distribution, and quality information)

Product Innovation

Robbins and Coulter (2010) innovation is the process of turning creative ideas into a product or method useful work. PI by Kartikasari (2014: 56) is the result of development of new products by companies or industries, either existing or not. PI may include changes in design, components and product architecture. (Kasali, 2010) describes the innovation is the ability to see things in a new way and sometimes unusual. Anshori (2010) argues that innovation is the summation to the question why and how. Hills (2008: 11) defines innovation as an idea, practice or object that is considered new by an individual or a unit other

users. According Machfoedz (2004: 24) points out that the innovation of products consists of four elements, namely the discovery, development, duplication and synthesis.

From the explanation above the researchers to conclude that PI is a change that is related to increasing or improving existing resources, modify to make something of value creating new things are different, converting a material into a resource and combining each source power into a new configuration that is more productive.

While this research indicator in use is the discovery, development, duplication and synthesis developed by Machfoedz (2004).

Competitive Advantage

CA according to Goyal (2001) is the company's ability to profit in profits that can be achieved by support market in same industry. Firm that have CAs had capability to know the difference and changes structural and knew the effective strategies of marketing. Competitive strategy intended to maintain profitability and lasting position in the face of competition. Developing CA of the value created by the company that is able to customers or buyers. According to Kotler (2005: 68) the CA for the acquisition obtained by giving a greater customer value, through a small fee or by providing more appropriate benefits at a higher price. Measurement of CA in the study of Li et al., (2006) used a dimensional measurement of CA in research among others using delivery dependability, product innovation and time to market. Some of the indicators used to measure CA is the uniqueness of the product, product quality and competitive price (Setiawan et al., 2012: 14).

In this study were measured with a CA in price, product quality, delivery dependability and time to market. These measurements as it has been used in the study (Bashor and Purnama, 2017; Setiawan et al., 2012; Li et al., 2006 and Thatte, 2007).

3. RESEARCH METHODOLOGY

Generally, this study aims to describe and analyze the influence of EI with indicators (supplier relationships, quality of raw materials, supply risk, customer complaint, customer satisfaction, and customer relationship) and II with indicator (product development, production planning, quality control, quality of production, distribution, and quality information) to PI with indicators (invention, development, duplication, and synthesis) and their impact on CA with indicators (price, product quality, delivery dependability, and time to market According to the purpose, this research designed as an explanatory research. The facile results in this study are supposed can provide an explanation on how CA is influenced by some factors, which is product innovation, EI and II.

Total population in the study was the manager of clothing SMEs in the region of East Java province, consisting of 38 local District / City Government. While the sample is a number of 180 managers, according Ferdinand (2014) respondent sample size that fits in the SEM analysis was around 100 -200, further advised the respondent sample size of at least as much as 5 to 10 times of the number of indicators in the latent variable. While the sample of respondents in this study is 20 times the indicator variable 9 totaling 180 respondents. The sample selection is based on local area that potentially industrial development (industrial centers). The Ministry has set a small industrial centers for the entire region, which can be used as a basis for determining the sample area. Prepared in accordance directory, the center of industrial development in the area, business groups Indonesia East Java small industrial clothing consists of five areas, namely Tulungagung district, Bangkalan, Mojokerto, Mojokerto and Sidoarjo. Data is collected using a questionnaire that has collected validity and reliability. Data analysis using SEM analysis with the help of AMOS version 21 program.

4. DATA ANALYSIS AND INTERPRETATION

Results Test Validity

The instrument validity test was given to 180 respondents, and the results were analyzed using correlation product moment person. The results are compared with rtable at a significance level of 5% with n = 180, and known to be rtable = 0.1455. The results of the validity test show the results of calculating all questionnaire items from the variables EI, II, PI and CA having a value greater than rtable = 0.1455. Thus all questionnaire items for variables EI, II, PI and CA are considered valid as a measurement tool and can be used to obtain the data needed in this study.

Results Test Reliability

After the validity test passed by the reliability test to determine the extent to which research instruments are reliable. The criterion is if the alpha correlation results are greater than 0.600 then the instrument can be said to be reliable. Summary of reliability results.

Summary results of reliability tests demonstrate the reliability values of Cronbach's Alpha variables EI, II, PI and CA have a greater value than rtable = 0.600. Thus the whole item questionnaire for variables EI, II, PI and CA is considered to be reliable. Reliability of less than 60 is generally considered poor, their reviews in the range of 0.7 are acceptable, and their reviews of more than 0.8 are good (Penniston et al., 2017).

Loading Factor Confirmatory Testing Results Analysis, Critical Path Ratio and Coefficient
This research uses analysis factor and regression models with SEM. Based on results of the model testing, the confirmation factor and critical ratio are obtained as follows:

External Integration
This uses factor analysis and regression models with SEM. Based on the results of the model testing, the confirmation factor and critical ratio are obtained as follows:

Table 1: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factor External Integration

No	Indicators	SE (Loading Factor) good of fit > 0,4	CR good of fit > 1,96	Probability (P) good of fit < 0,05	Specification
1	Supplier Relationship	0.854	2.114	0.035	good
2	Quality of Raw Materials	1.000		0.000	good
3	Supply Risk	0.283	3.455	0.000	not good
4	Customer Complaint	1.161	2.932	0.026	good
5	Customer Satisfaction	1.209	2.932	0.003	good
6	Customer Relationship	1.563	3.263	0.001	good

Sources: Primary data are processed

The test results presented in table 1, it was found that six indicators can be used as a variable measure in explaining EI (supplier relations, raw material quality, supply risk, customer complaints, customer satisfaction, and customer relations).

Internal Integration
The results and critical confirmation factor loading ratio on job satisfaction are carefully as follows:

Table 2: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factors Internal Integration

No	**Indicators**	**SE (Loading Factor) good of fit > 0,4**	**CR good of fit > 1,96**	**Probability (P) good of fit < 0,05**	**Specification**
1	Product Development	1.000		0.000	good
2	Production Planning	0.406	2.222	0.026	good
3	Quality Control	0.800	4.329	0.000	good
4	Quality of Production	0.914	2.234	0.000	good
5	Distribution	0.908	4.360	0.000	good
6	Quality Information	1.057	4.726	0.000	good

Sources: Primary data are processed
The test results presented in table 2, it was found that the six indicators, all of which can be used as a measure in explaining together variable II, namely: (product development, production planning, quality control, quality of production, distribution, and quality information). From the sixth indicator that is most able to explain variable II is quality information, and product development, followed by quality production, quality control and then further distribution of the latest production planning

Product Innovation
The results of the confirmation factor and the critical success ratio in careful effort are as follows:

Table 3: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factors Product Innovation

No	Indicators	SE (Loading Factor) good of fit > 0,4	CR good of fit > 1,96	Probability (P) good of fit < 0,05	Specification
1	Invention	0.791	3.507	0.000	good
2	Development	0.910	3.705	0.000	good
3	Duplication	0.784	3.571	0.000	good
4	Synthesis	1.000		0.000	good

Sources: Primary data are processed

The test results presented in table 3, it shows that all four indicators can all be used as PI measures in explaining variables, namely: (discovery, development, duplication, and synthesis). The four indicators together can explain the PI variable and from the four indicators that are most able to explain the variables are synthesis, then development is followed and the latest findings are duplicates.

Competitive Advantage
Results containing confirmation factors and critical success ratios in careful effort are as follows:

Table 4: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators Of Factor Competitive Advantage

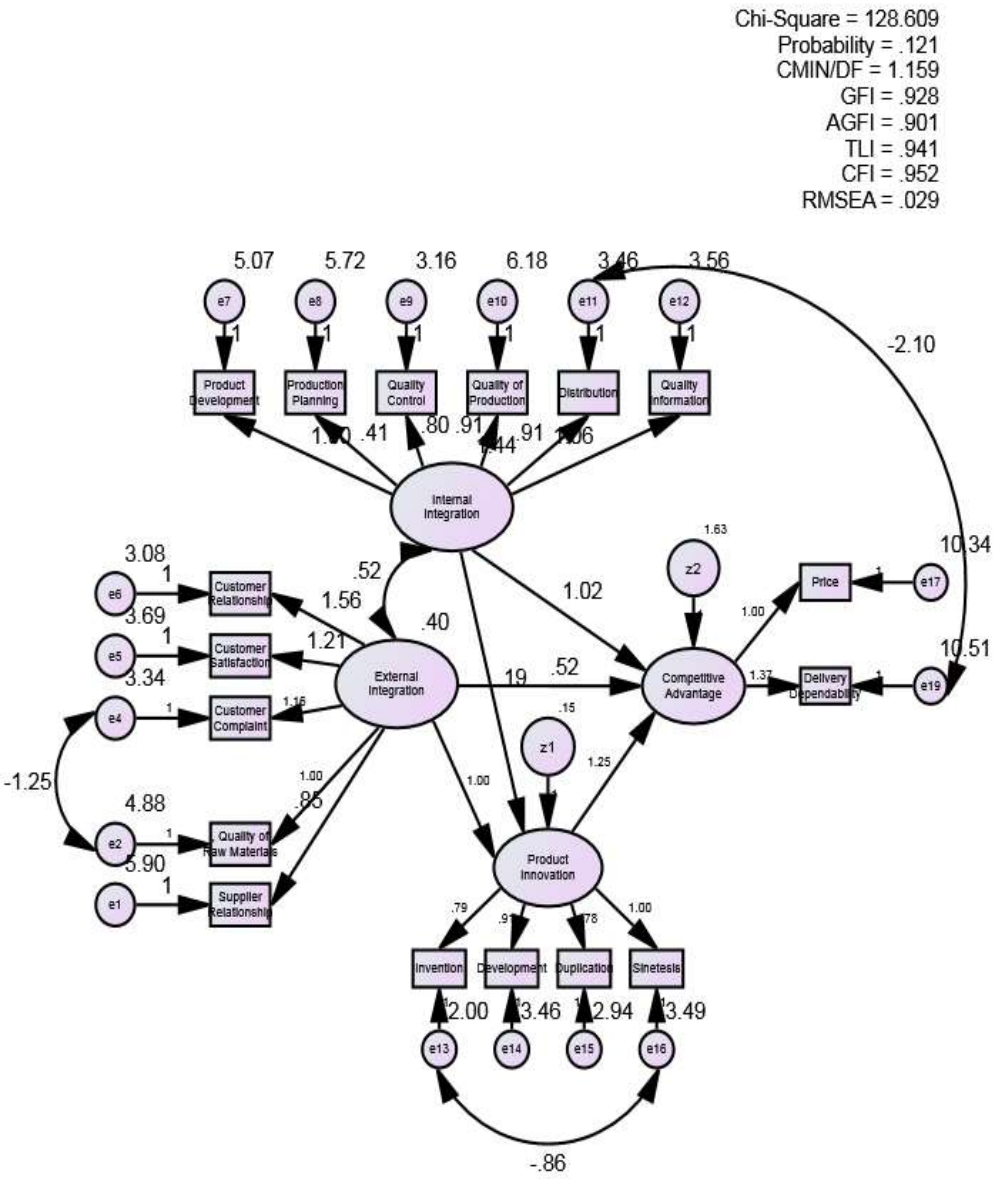
No	Indicators	SE (Loading Factor) Good Of Fit > 0,4	CR Good Of Fit > 1,96	Probability (P) Good Of Fit < 0,05	Specification
1	Price	1.000		0.000	good
2	Product Quality	0.144	2.616	0.009	not good
3	Delivery Dependability	1.368	7.214	0.000	good
4	Time To Market	0.148	2.534	0.011	not good

Sources: Primary data are processed

Test results presented in table 4. The results of the tests above show that of the four indicators, only two that can be used as a measure of CA in explaining variables are: shipping dependence and price. The two indicators are jointly able to explain the variables and CA from the two indicators that are most able to explain the variables are dependence on shipping, and then the price.

Testing Results (Confirmatory factor analysis)
Having to do tests on the foregoing assumptions and found that the model has a good alignment, then analyzed the data to get a clear picture of each variable. The results of the analysis will be undertaken for each variable in the study can be described as follows:
The test results confirmatory factors and influence the path coefficient EI variables with indicators (supplier relationships, quality of raw materials, customer complaint, customer satisfaction, and customer relationship), II with indicators (product development, production planning, quality control, quality of production, distribution, and quality information) to PI with indicators (invention, development, duplication, and synthesis) and their impact on CA with indicators (price and delivery dependability). Broadly speaking, it can be seen in figure 1 below:

Figure 1: Confirmatory Factor and Coefficient Line Effect of Variable External Integration, Internal Integration and Product Innovation Against Competitive Advantage



Sources: Primary data are processed

Hypothetical Testing Results

Results of calculations as presented in table 6

Table 6 : Results of Testing Influence of Variables External Integration, Internal Integration and Product Innovation Against Competitive Advantage

NO	Variabel	Coefficient	SE	CR	P	Specification
1	Product_Innovation ← External_Integration	1.000			0.000	Significant
2	Product_Innovation ← Internal_Integration	0.190	0.653	3.242	0.021	Significant
3	Competitive_Advantage ← External_Integration	0.518	2.690	2.236	0.041	Significant
4	Competitive_Advantage ← Internal_Integration	0.034	1.015	3.983	0.004	Significant
5	Competitive_Advantage ← Product_Innovation	1.245	2.265	2.705	0.048	Significant

Sources: Primary data are processed

Judging from table 6 above, it was found that 1). EI significant effect on PI with coefficient 1,000 lane 2). II significant effect on PI with the coefficient of 0.190 lane 3). EI significant effect on the CA with coefficient

4 0518 lines). II significant effect on the CA with path coefficient value of 0.034 and 5). PI significant effect on the CA with path coefficient value of 1.245.

Effect of External Integration and Internal Integration of the Product Innovation
From table 6, it can be concluded that the test results with SEM analysis performed using AMOS 21 shows that the EI has significant positive effect on PI.

This finding shows that the results are in accordance with what expressed by Wu (2013) found that EI and II affect on innovation products. Wong et al., (2013), which states that the EI has a positive influence on PI. Furthermore, Wong et al., (2013) Stated that EI has the ability to acquire information, knowledge sharing, coordination efficiently, and facilitate new PI with collaboration between external parties and EI helps improve the capabilities and resources normally owned by other parties, such as suppliers and customers (Aloini and Martini, 2013), where staff of purchasing and manufacturing departments need to work with suppliers to ensure suppliers understand the design and manufacturing process of new products according to needs.

Song et al., (2017) states the importance of EI, integration moderates the relationship between customers and business performance, the relationship between supplier integration and operational performance, and the relationship between time to market and business performance. In addition, customer and supplier integration fully improves operational and business performance by reducing time to market, while increasing customer integration with full operational performance by shortening time to market. Gatz EI allows companies to gain knowledge about the needs of consumers (Ragatz et al., 1997). Through the integration of the value chain upstream (Ettlie and Reza, 1992). In addition EI support supplier involvement in new product development process (Ragatz et al., 1997; Koufteros et al., 2005), which allows the company to focus on digging new products and technological knowledge of the supplier (Petersen et al., 2005) that complements internal capabilities (Ragatz et al., 1997).

Better regarding the influence of II to PI. According Dangelico et al., (2017) the EI of resources, integration of internal resources, and the development of resources and reconfiguration) affecting changes / updates to the ability regular-oriented sustainability (ability of innovation and design capabilities). The results of the study support research Yee & Ooi (2008) and share information among supply chain partners, and establish supply chain collaboration (Schmelzle and Tate, 2017; Cilibertietal, 2016).
This study is in line with the theory of ambidexterity, that the EI and II complement each other to facilitate business processes. As it is known, that the EI known to be more effective in influencing the time-based performance and flexibility as well as building cooperation with suppliers and customers (Ettlie and Reza, 1992). While the II is superior in terms of quality, costs, as well as communication, collaboration and sharing of information between departments within the company (2010, Wong et al., 2009). The decision of new product development in the company relies on information obtained from suppliers and customers, known as the EI, and the information will be converted into a reference or insight that is very useful when going on PI internally when supported by effective interaction between the EI and II. When EI and II interact, knowledge or assets owned by the supplier and the customer will be incorporated into the PI efforts. Therefore, to ensure the development of effective innovation, companies are advised to increase its internal capacity to absorb knowledge and external information (Tracey, 2004). The results of this study have important implications for research and also practices in the field of supply chain integration and PI.

Effect of External Integration and Internal Integration to Competitive Advantage
From table 6, it can be concluded that the test results with the analysis sem who performed using the amos 21 shows that the EI and II significant positive effect on the CA.

These findings indicate that the results were in line with what is Liu et al., (2017) based on the analysis of the relationship between integration between departments and service innovation has a significant positive correlation level. Integrating resources, internal and external competency, adopted a "direct innovation" and the flow of knowledge within the organisation, complementary competencies and fast and seamless communication with customers to enable organisations to obtain external knowledge and to improve innovative development to maintain a competitive advantage. In the era of economic globalisation with the knowledge and network economy, growth companies are facing new challenges. In such a situation, enterprises should emphasise the integration of internal network resources and reduce business risk by developing external network relationships to improve performance. Forms of II that can provide the sustainable and synergistic effect of warding off competition for now. Gunaratne & Hoover (2001) states have competitive products and services, also supply chain right to the customer is not enough in today's

market environment, the supply chain should be on the right customers. Relational customers, combined with the operations of the company and the customer's operations will create a supply chain demand. Business success SMEs sustainable depends on many other factors, such as the ability of the supplier and customer integration (Tehseen and Ramayah, 2015).

This research support study (Rahmah, M., & Fatmah, D., 2018; Li et al., 2006) found that the integrity of the implementation of external and internal integrity can lead to improvement of excellence compete and improve organisational performance. To build CA depends not only on internal factors but also influenced by external factors (Restrepoet al., 2016). The survival and growth of SMEs can be difficult in today's competitive business environment and global markets. That is a challenge to deliver the right products, services promptly and with the lowest possible cost to right customers. These challenges emphasise the importance of managing cross-border relationships between business partners. To gain a competitive advantage, an effective tool for SMEs is SCM (Thooet al., 2017). The results of the Sales et al., (2016) Studies show there are many factors that drive the development of Product Innovations, both internally and externally to the company. In internal factors, the most important is the prospect of competitive advantage, reduction in costs, market benefits, increased reputation as well as innovation opportunities. In external factors, the most important are regulations in the environment - currently or anticipated - and demand on the market. In the results, this study provides evidence that the most relevant things are cost savings, achievement in competitive advantage, increasing share in the market, increasing sales, increasing turnover, higher profits, better reputation, increased exports and higher productivity. According to Quang et al., (2016) from the perspective of supply chain management, the specific critical dimensions : procurement, internal logistics and distribution. Therefore, there is a need to change the thinking of today's organisations that focused on the enterprise, and develop it into an inter-organisational behaviour involving customers, suppliers and other stakeholders.

Today, the knowledge economy more focused on developing integrated systems that been recognised as one of the most effective integration systems. In turn, the process, which is based on interdependence and cooperation from economic entities, enables stable economic relations, synergistic effects and CA growth (Pustynnikova & Uskova, 2017).

Findings Sales et al., (2016) building collaborative networks and to improve the flow of knowledge, both inside and outside the company, cross-functional integration and the development of resources and the ability to influence the success of the development of PI. The development of PI. which in turn will increase the CA (Garengo & Panizzolo, 2013). According to (Carraresi et al., 2016) results show that marketing, networking, and innovation capabilities directly and positively affect performance. SMEs benefit from selling their products on the national market. Network capability plays a dual role: It has a direct positive influence on performance and also an indirect effect on the ability to obtain information about markets and supply chain agents. The market and consumer information obtained is very valuable in improving marketing capabilities and improving performance

Effect of Product Innovation to Competitive Advantage
From Table 6, it concluded that the results of testing with SEM analysis carried out using AMOS 21 showed that PI had a significant positive effect on CA.

These findings show that the results are in line with what was expressed by Kennedy et al., (2017) PI has a significant and positive impact on CA. Carraresi et al., (2016) the results of his research shows that the ability to innovate is directly and positively affect performance. Bermúdez et al., (2017) the concept of open innovation chain. This concept will be an alternative for the growth of small and medium-sized companies, ranging from the integration of their actors to solve the real needs of the market. Khan et al., (2017) Innovation is important for SMEs to survive in market and maintain a competitive advantage. Ability to obtain information about markets and supply chain agents. The market and consumer information obtained is very valuable in improving marketing capabilities and improving performance. On the other hand company that have more capacity to innovate will be able to develop a CA in order to achieve the performance (Daneels, 2002). These advantages can not be separated from the development of product innovations produced, so it will have the advantage in the market which in turn will win the competition. Innovation gives companies the possibility to create and use their capabilities to support business and long-term performance (Teece, 2007). Innovation when it success can make it harder for companies to replicate the external environment and allow them to maintain excellence (García-Morales et al., 2006). Therefore, innovation will affect the company's CA and performance. Under conditions of a rapidly changing environment, saying that the CA is determined by the creativity and innovation that can satisfy the desires

of customers better than the competition. Gray et al., (2002) says the innovation capability of a company will ensure the company's ability to compete. (O'Regan and Ghobadian, 2005), see the innovation is a new idea that can create added value for the company.

Through innovation, the company hopes to create a product that is completely new, or other previously or create a product which is an improvement of the product which have been there before. In consuming a product, consumers are not only limited to see the value or function of a product that is needed, but consumers also pay attention to whether the selected products add value or advantages compared with other similar products. Desire is what should be understood by the manufacturer as the foundation for the innovation process. Innovating, companies will be successfully responding to their environment and develop skills where this can have an impact on the overall marketing performance. Utaminingsih (2016) states that innovation has a positive and significant effect on marketing performance. Usvita (2015) states that CA has a significant positive effect on marketing performance. Research (Titahena et al., 2012) found empirical evidence which states that there is a significant positive relationship and supports the relationship between CA for marketing performance. Research (Titahena et al., 2012) found empirical evidence that states that there is a significant positive relationship and support of the existence of a relationship between a CA to marketing performance. It means that if CA marketing performance will increase and vice versa. Innovation is one of the key aspects of company performance, if the competitive environment is getting tougher. Another opinion is from (Gray et al., 2002) suggests that the innovation capability of a company will guarantee the company's ability to compete. O'Regan and Ghobadian (2005) to see the innovation is a new idea that can create added value for the company. Robbins and Coulter (2010) innovation is the process of changing ideas - creative ideas into a product or method useful work. Kasali (2010) describes the innovation is the ability to see things in a new way and sometimes unusual.

According Hubeis (2005: 69) explains that PI is a change that is related to increasing or improving existing resources, modify to make something of value creating new things are different, converting a material into a resource and combining each source power into a new configuration that is more productive, either directly or indirectly in an effort to gain a competitive advantage. Innovation can also be created as the company saw a lot of competitors are emerging that the company is able combine competitors excellence into a new advantage for the company. CA has been achieved by the company should be maintained due to their advantages more and more competitors who pay attention to the point unguarded firms, therefore the company should continue to be consistent in maintaining its superiority (Russell & Millar, 2014). CA can also be seen through customer evaluations that can be created by firms through service facilities that can accommodate all sorts of complaints or suggestions aimed at consumers to the company for the sake of improvement toward a higher quality. The setting is a good strategy the key to success for the company to be in the forefront with anticipation in the market competition (Tarabieh et al., 2015). At present innovation has become an important factor for entrepreneurs and companies in ensuring sustainability and even the survival of companies in global business (Costa & Ramos, 2015).

4. CONCLUSION AND RECOMENDATIONS

Based on the results of the research and discussion above, it can be concluded that EI represented by (customer relationship, and customer satisfaction, followed by customer complaint, then the quality of raw materials and most recently supplier relationship) influence on PI represented by (synthesis, then development, followed by his most recent invention and are duplications) and of the EI effect on the CA represented by (delivery dependability, and then price). EI (integration of customers and suppliers) increase operational performance and business completely by reducing time to market, while the integration of customers improve fully operational performance by shortening time to market.

II represented by (quality information, and product development, followed by quality of production, then quality control further distribution of the most recent and production planning) effect on PI represented by (synthesis, then development, followed by his most recent invention and are duplications). And II affect the CA represented by (delivery dependability, and then price). EI and II is widely accepted because of its ability to improve operational performance, such as quality, cost, delivery, and flexibility. So as to enhance the innovation capability and its ability to compete.

PI represented by (synthesis, then development, followed by his most recent invention and are duplications) affect the CA represented by (delivery dependability, and then price). The innovation capability of a company will guarantee the company's competitive ability and success of the company in order to maintain sales of its products lies in its ability to innovate.

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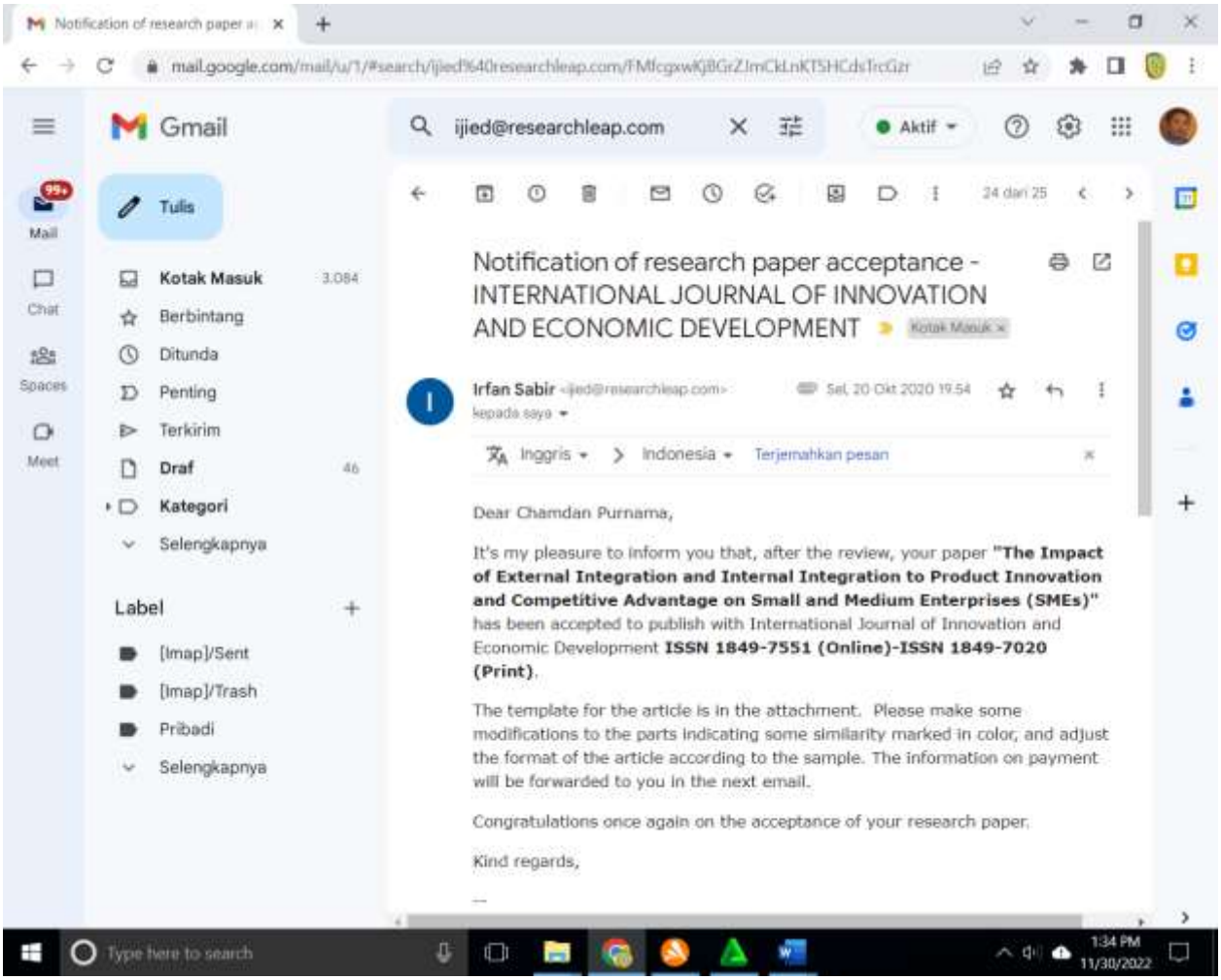

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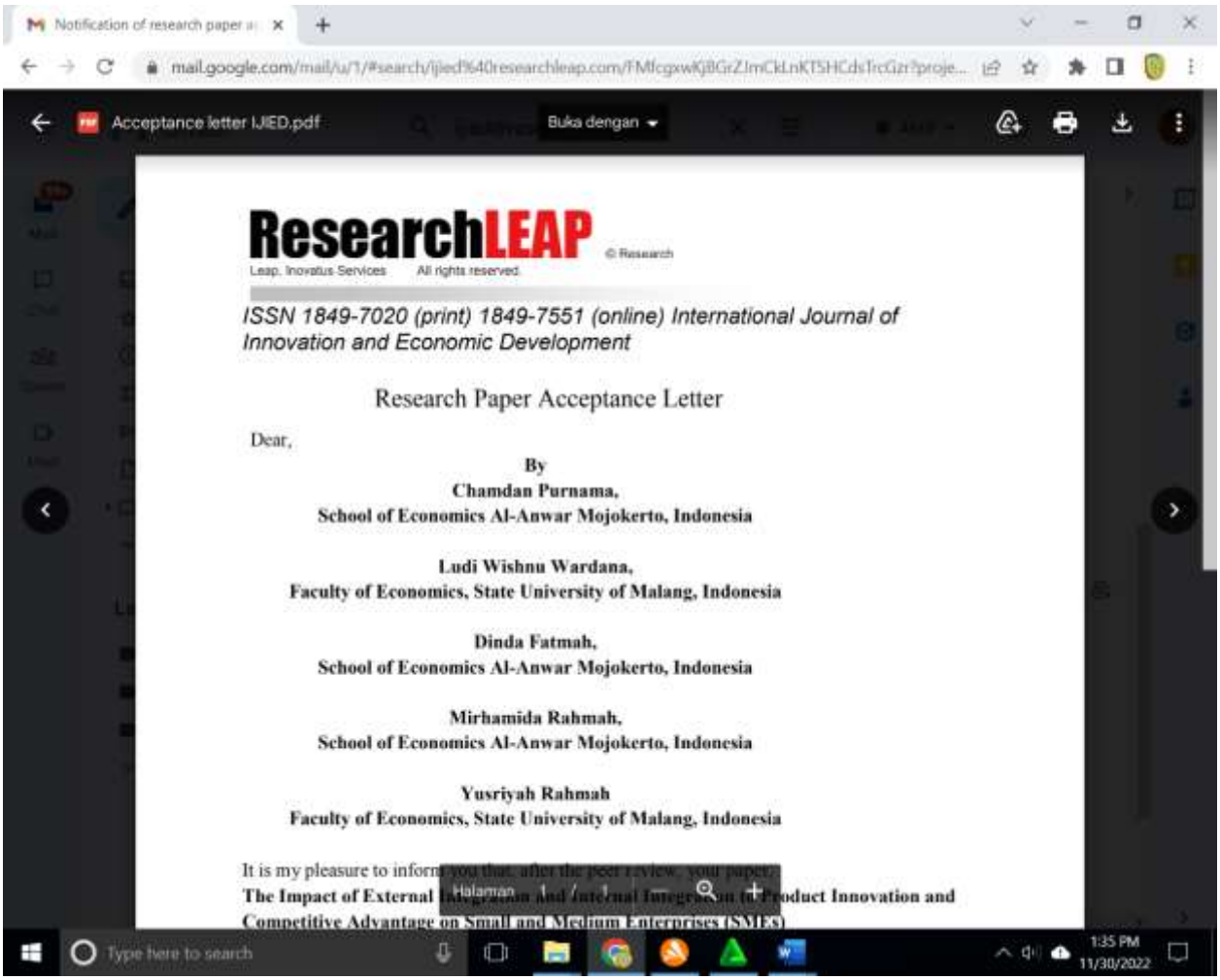

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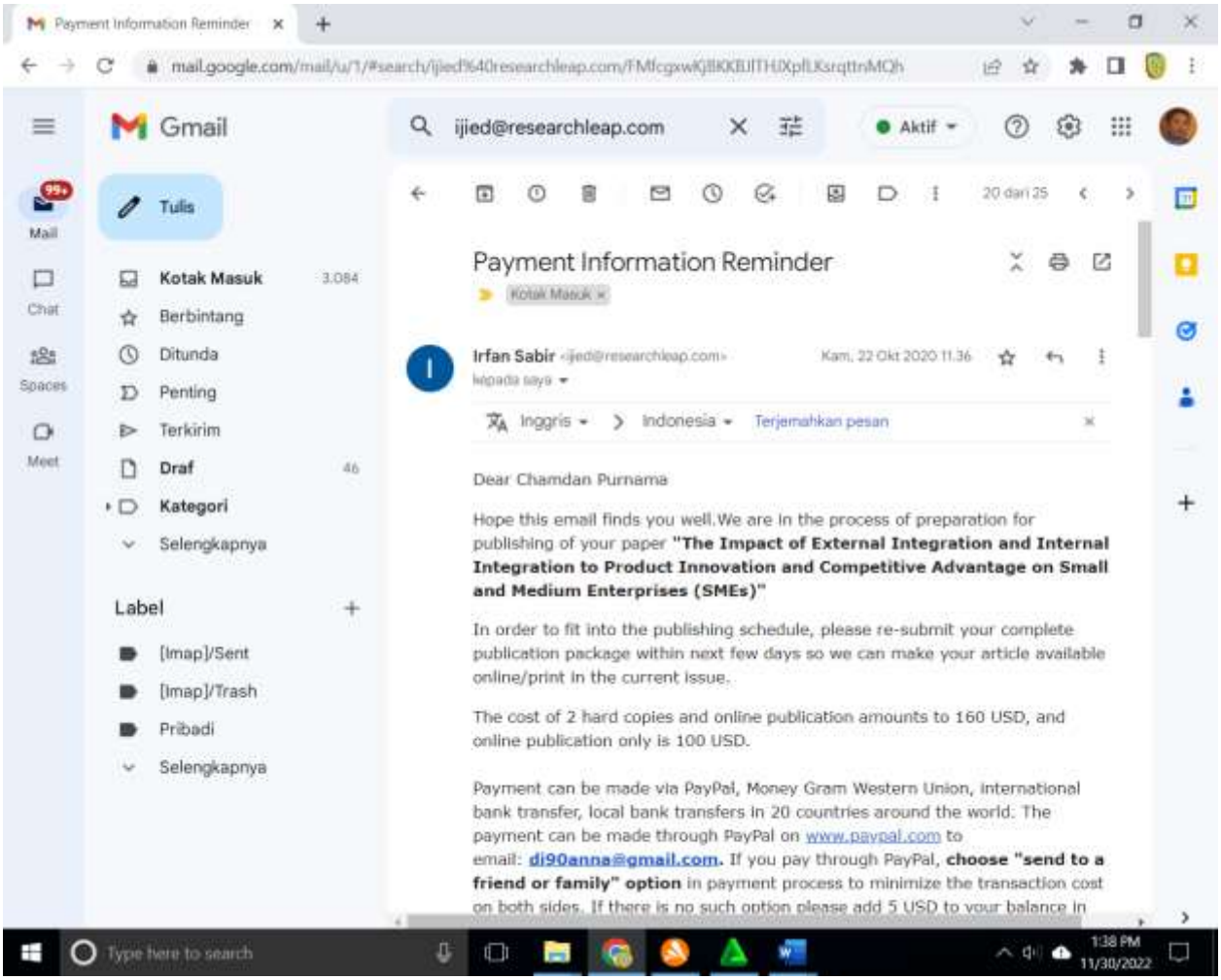

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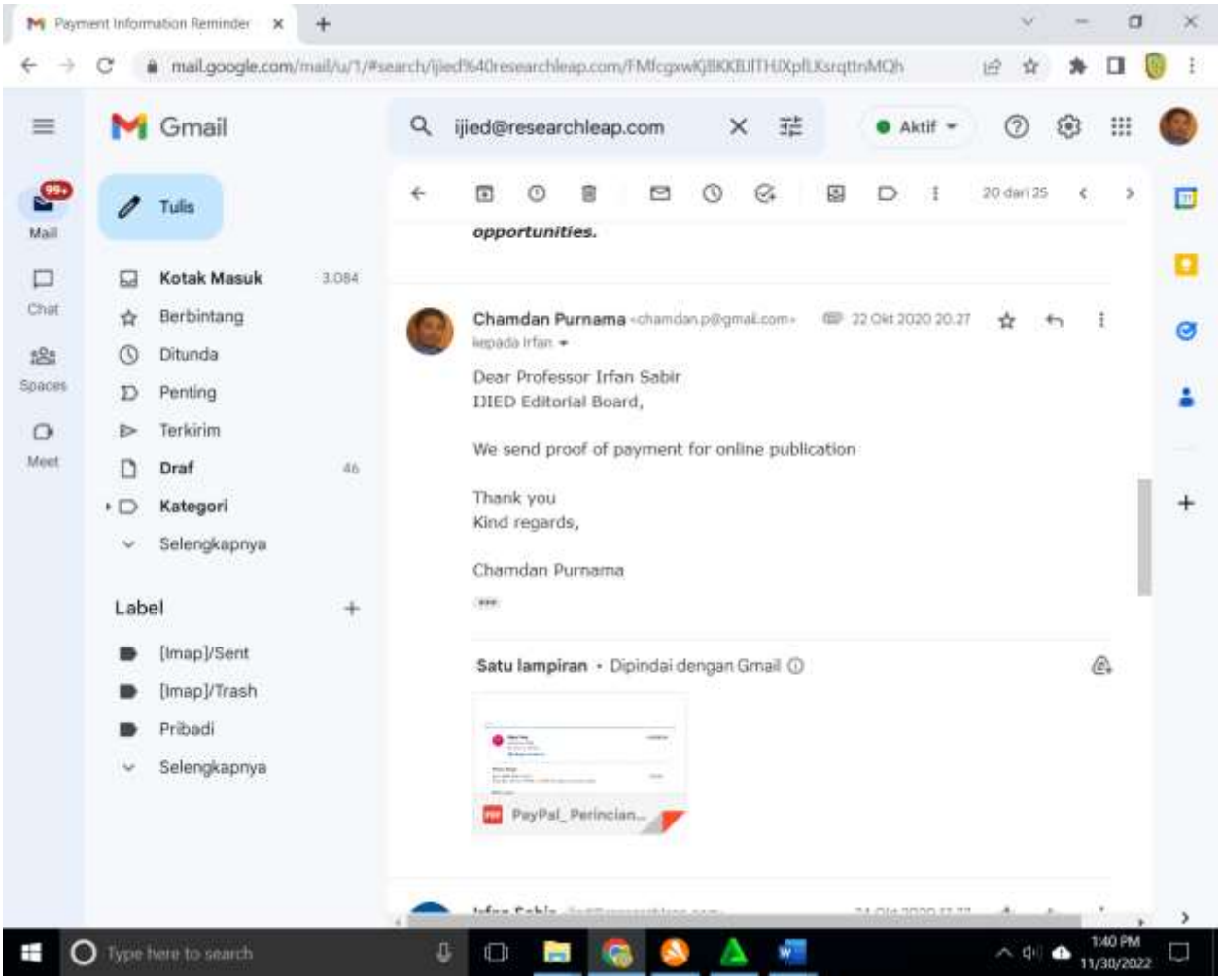

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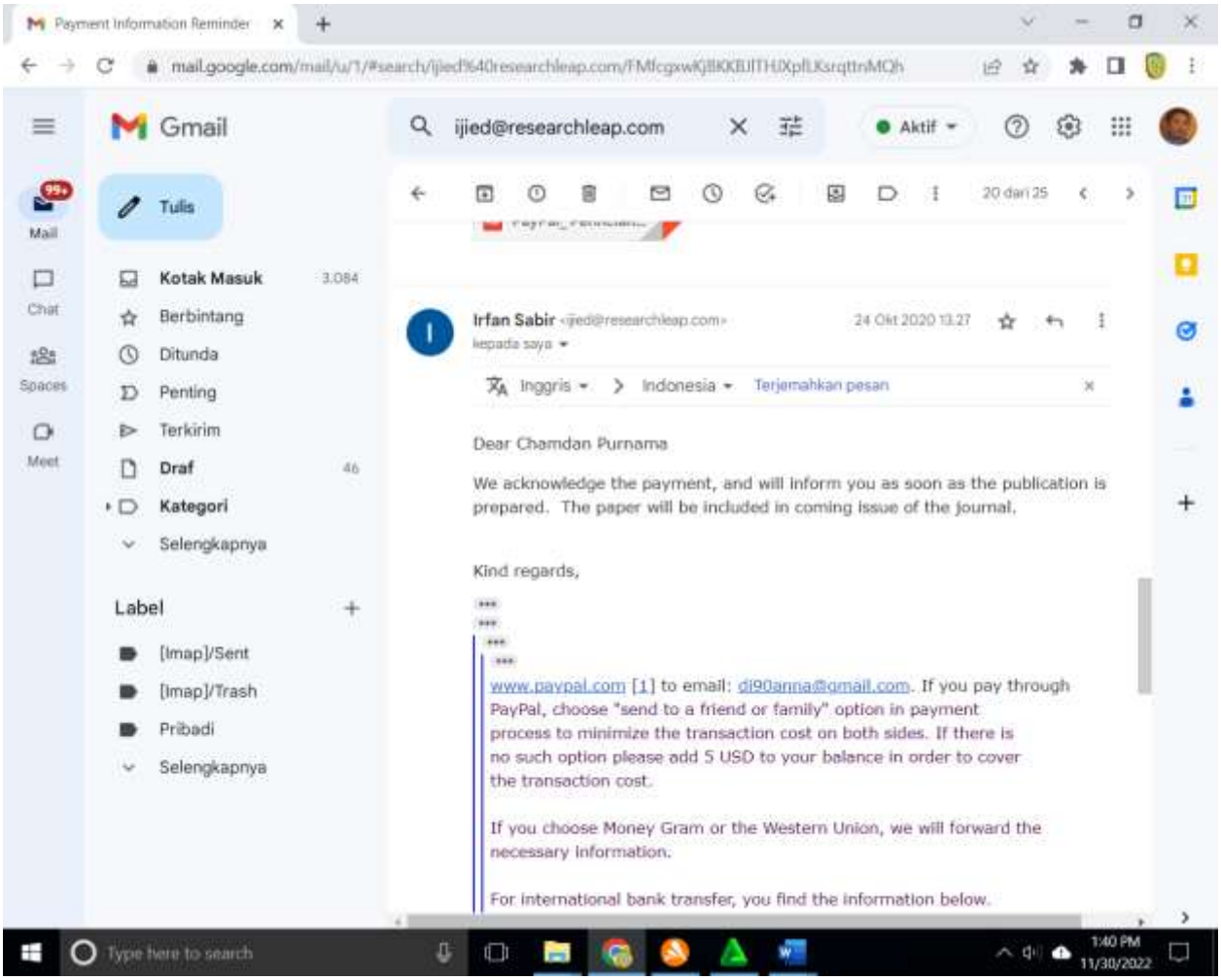

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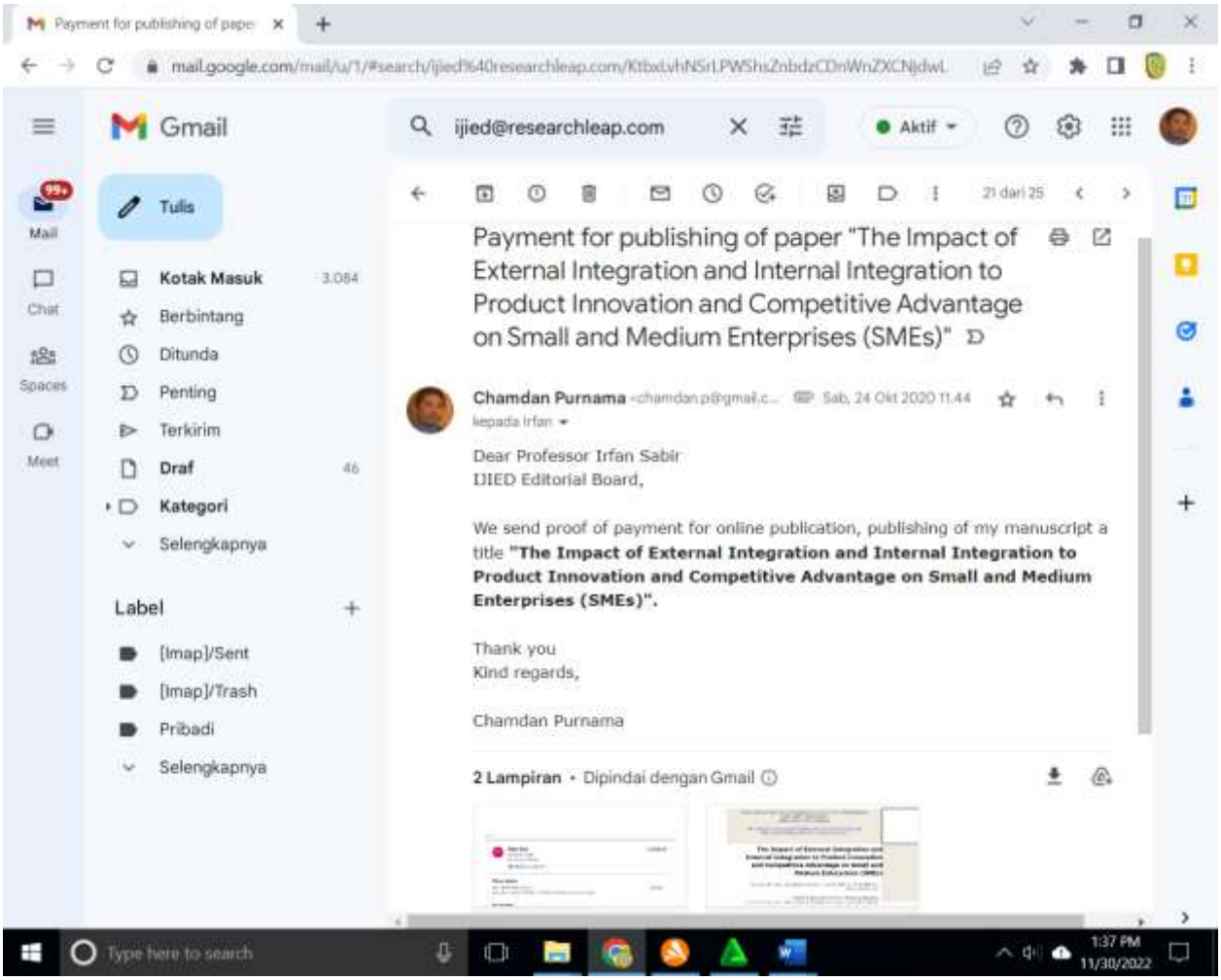

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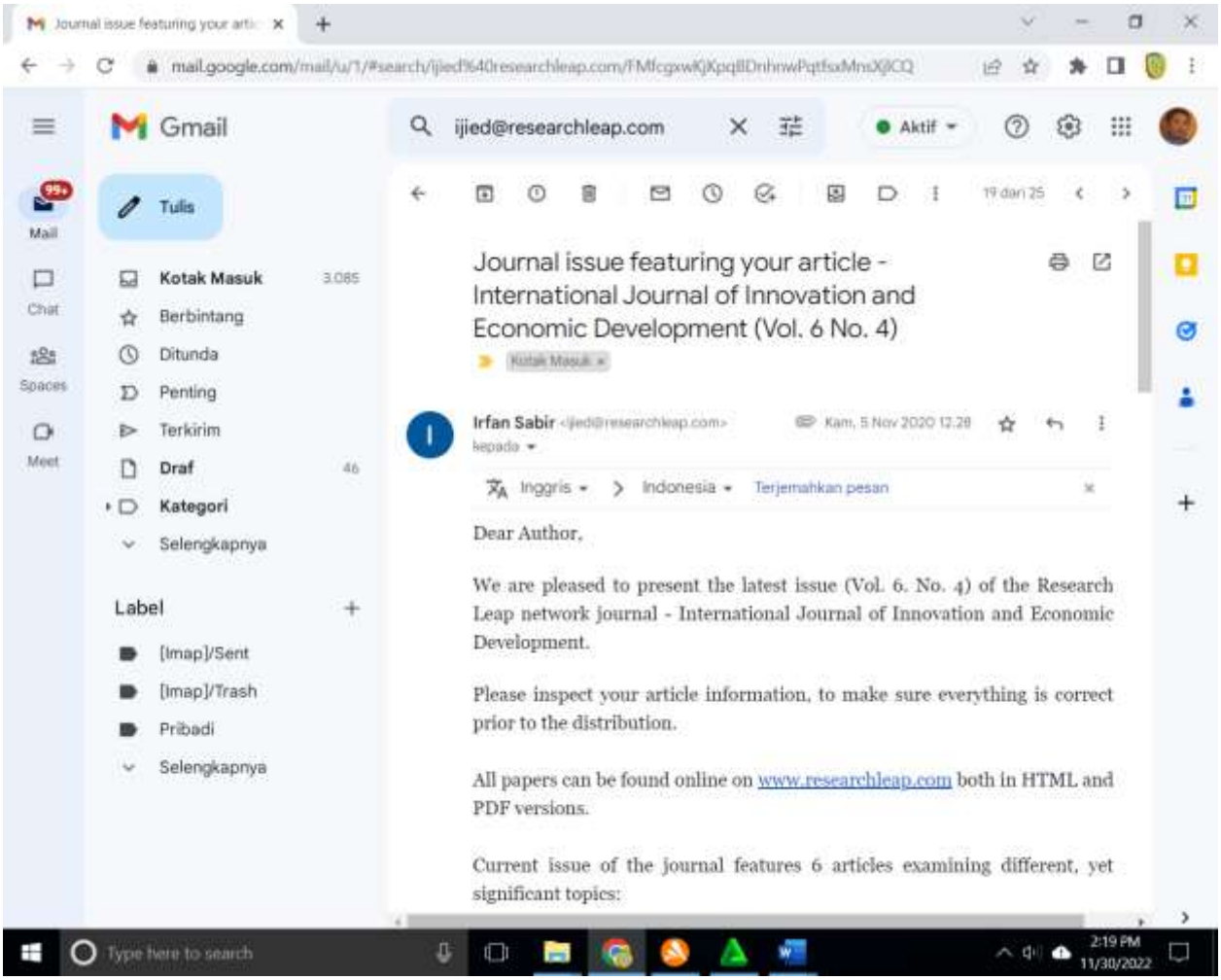
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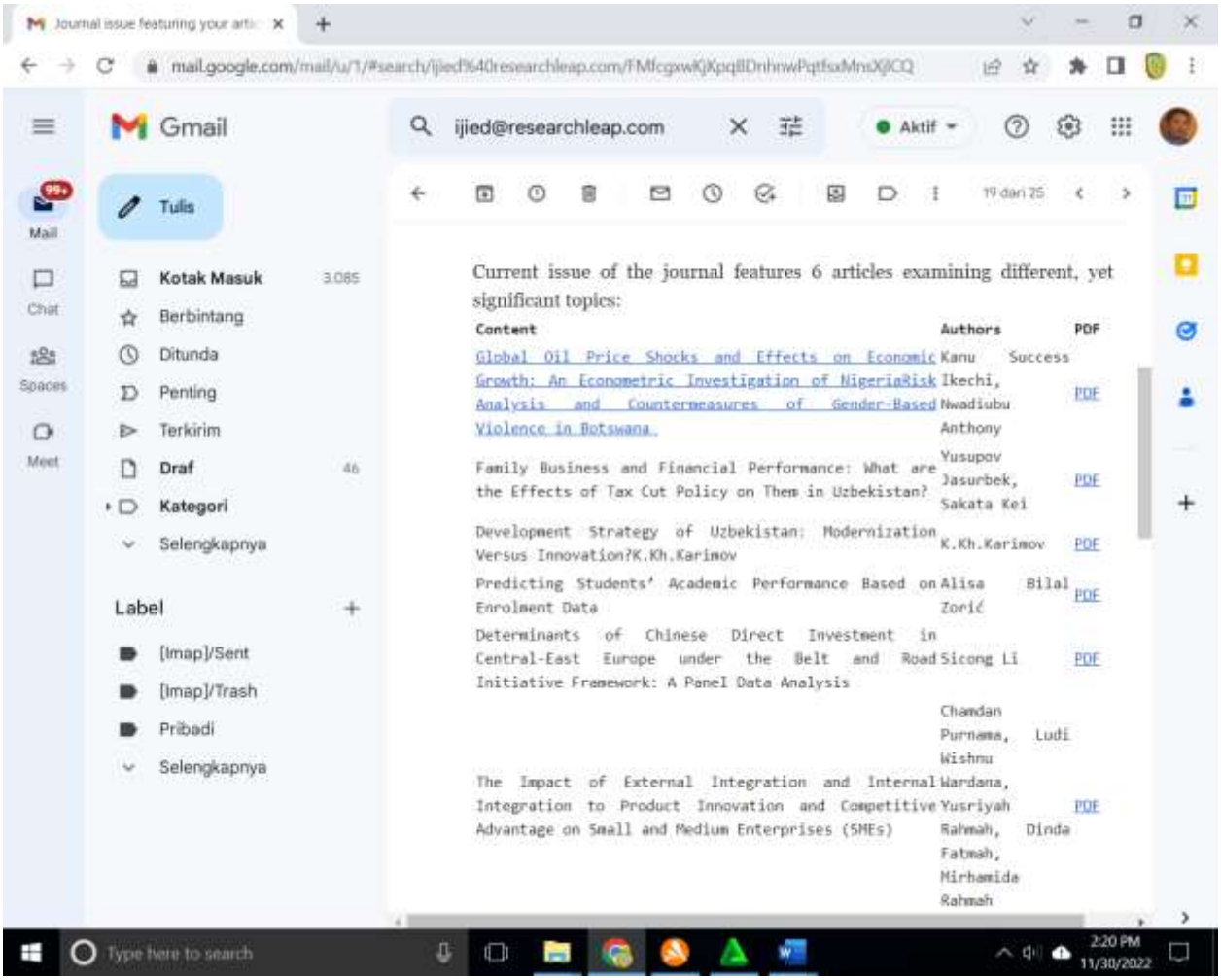
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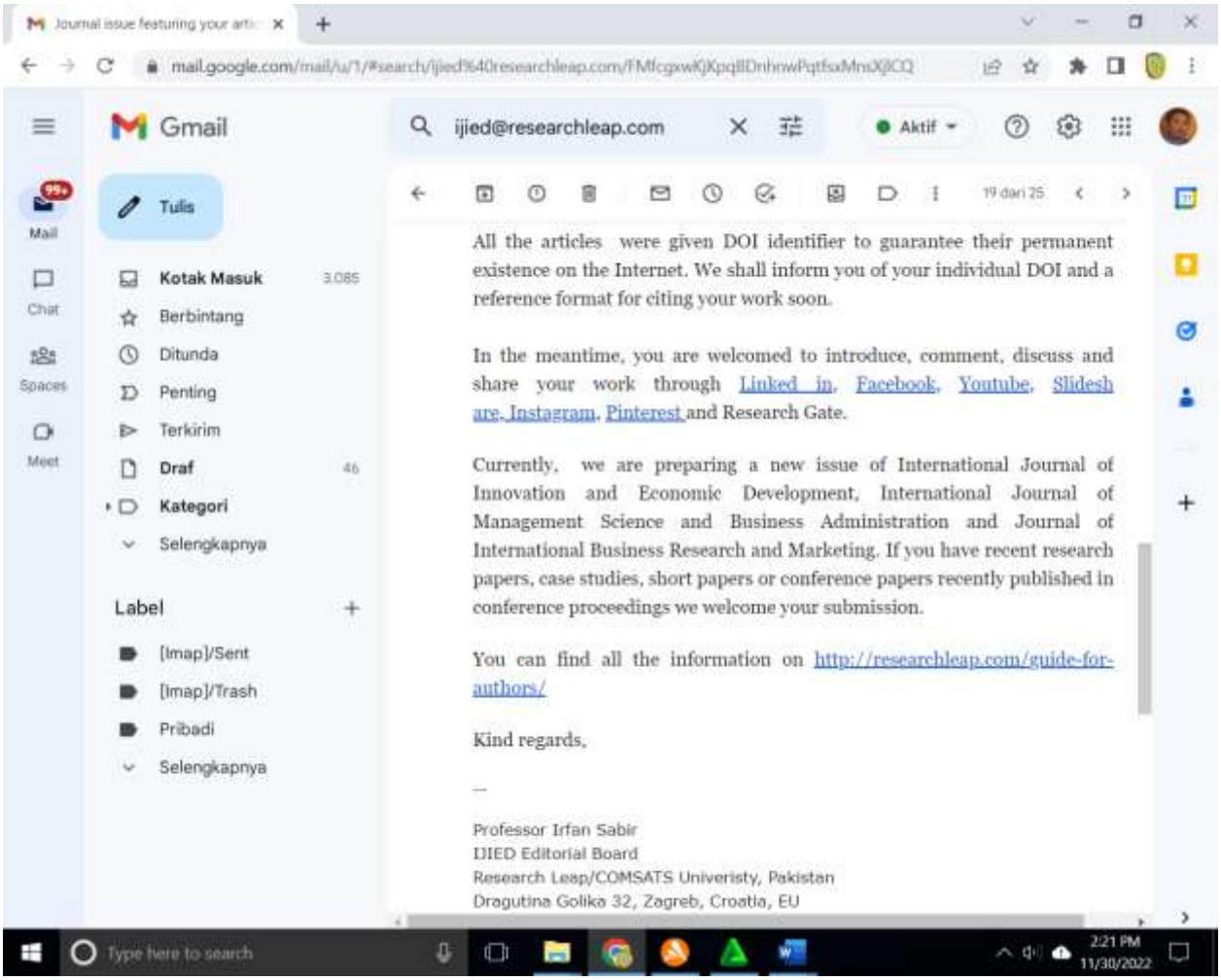

Jurnal Terbit

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Abstract: This study aims to analyze the influence of external integration and internal integration to product innovation and competitive advantage. The research was conducted on a sample of 180 manager small and medium enterprises (SMEs) in East Java clothing taken with stratified cluster sampling technique. Selection of sample areas based on areas that have the potential development of the industry. Data collection was done by using questionnaire that has been tested for its validity and reliability. Data analysis used Structural Equation Modeling (SEM) analysis with help of AMOS version 21 program. Based on the analysis of SEM, it was found that the first, external integration influence on product innovation SMEs and affect the competitive advantage of SMEs. Second, the internal integration effect on product innovation SMEs and affect the competitive advantage of SMEs. Third, product innovation SMEs effect on the competitive advantage of SMEs. In this respect, the company

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The Impact of External Integration and Internal Integration to Product Innovation and Competitive Advantage on Small and Medium Enterprises (SMEs)

[1]Chamdan Purnama, [2]Ludi Wishnu Wardana, [3]Yusriyah Rahmah, [4]Dinda Fatmah, [5]Mirhamida Rahmah

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needs to build a collaboration of external integration and internal integration in order to improve product innovation and competitive advantage of SMEs.

Keywords: External integration (EI), Internal integration (II), Product innovation (PI), Competitive advantage (CA), Small and medium enterprises (SMEs)

2. Introduction

The business world is currently growing and more and more competitors are unavoidable. The existence of competition makes the company exposed to various opportunities and threats both from within the country and abroad. Because of this intense competition the company must have a CA in order to survive and continue to develop their business. Brun et al., (2008) states that CA is owned by a company can be expected to result in a consumer satisfaction, because the CA it has is a reflection that the products offered meet the needs and desires of consumers, and a positive score in the eyes of consumers. The CA is the heart of marketing performance to the competition (Purnama and Subroto, 2016; Porter, 1996). The setting is a good strategy the key to success for the company to be in the forefront with anticipation in the market competition (Tarabieh et al., 2015). Innovation can be used as a strategy to achieve competitive advantage.

(Gray et al., 2002) suggests that the innovation capability of a company will guarantee the company's ability to compete. The company's success in maintaining product sales lies in its ability to innovate. Supply chain management (SCM) is the expansion and development of the concept and meaning of logistics management, whose role in regulating the flow of goods between the company and growing concerns to things that are required by the customer (Indrajit and Djokopranoto, 2006). Generally, there are two types of integration, namely the EI and II. EI is the integration of logistics activities

which exceed the limits beyond the company. Meanwhile, the II of the cross-functional integration within an enterprise, as reflected by the level of activity of logistics functions, which are interconnected with the scope of other functions (Pituringsih, 2010). II shows the extent how companies can build

organisational applied, etiquette and behaviors in synchronous process can be managed to satisfy customer desires (Paulraj et al., 2004).

Integration external and II is widely accepted because of its capability to increase performance, like grade, fee, consignment and smoothness (Wong et al., 2011; Droge et al., 2012; Prajogo and Olinger, 2012). However, results of several studies are still few studies linking of the EI and II towards PI and CA, especially SMEs in East Java.

Consequently this research want to determine so analyses what is the influence II to PI and the effect to CA of SMEs in East Java.

3. Literature Review

3.1 External Integration and Internal Integration

According Jebarus (2001) supply chain management (SCM) is a further development of distribution management products to meet consumer demand. By Indrajit and Djokopranoto (2006) SCM is the expansion and development of the concept and meaning of logistics management, whose role in regulating the flow of goods between the company and growing concerns to things that are required by the customer. SCM is an approach used to achieve integration of more efficient organisation of suppliers, manufacturer, distributor, retailer and customer.

From the explanation above researchers can conclude that SCM is a set of approaches to streamline and streamline the integration of suppliers, manufacturing, warehouse and storage, so that the goods are produced and distributed in the right amount, the right location, the right time, to minimize costs, lower volume waste and provide services to the customer's satisfaction. In this study, SCM split into two types of integration, namely the integration of external and II. EI refers to the extent to which a company can partner with other members of the supply chain (customers and suppliers) to develop strategies between organisations, practices, procedures, and behavior in the process of collaboration, synchronization, and can be managed to meet the needs of customers with indicators covering relations suppliers, raw material quality, supply, customer complaint, customer satisfaction, and customer relations. While the II shows the extent to which a company can build internal cooperation as reflected through information sharing of various departments within the company, such as production department, packing, warehousing, distribution, and transportation with indicators which include product development, production planning, quality control, quality production, distribution and quality of information (Paulraj et al., 2004;, Vijayasarathy, 2010; Droge et al., 2012).

While in this study indicators use as a guidance for researcher, using tools developed by (Aloini and Martini, 2013, Wong et al., 2011) for the integration of external variables with indicator (supplier relationships, quality of raw materials, supply risk, customer complaint, customer satisfaction, and customer relationship) and variable II with indicators (product development, production planning, quality control, quality of production, distribution, and quality information)

3.2 Product Innovation

Robbins and Coulter (2010) innovation is the process of turning creative ideas into a product or method useful work. PI by Kartikasari (2014: 56) is the result of development of new products by companies or industries, either existing or not. PI may include changes in design, components and product

architecture. (Kasali, 2010) describes the innovation is the ability to see things in a new way and sometimes unusual. Anshori (2010) argues that innovation is the summation to the question why and how. Hills (2008: 11) defines innovation as an idea, practice or object that is considered new by an individual or a unit other users. According Machfoedz (2004: 24) points out that the innovation of products consists of four elements, namely the discovery, development, duplication and synthesis.

From the explanation above the researchers to conclude that PI is a change that is related to increasing or improving existing resources, modify to make something of value creating new things are different, converting a material into a resource and combining each source power into a new configuration that is more productive.

While this research indicator in use is the discovery, development, duplication and synthesis developed by Machfoedz (2004).

3.3 Competitive Advantage

CA according to Goyal (2001) is the company's ability to profit in profits that can be achieved by support market in same industry. Firm that have CAs had capability to know the difference and changes structural and knew the effective strategies of marketing. Competitive strategy intended to maintain profitability and lasting position in the face of competition. Developing CA of the value created by the company that is able to customers or buyers. According to Kotler (2005: 68) the CA for the acquisition obtained by giving a greater customer value, through a small fee or by providing more appropriate benefits at a higher price. Measurement of CA in the study of Li et al., (2006) used a dimensional measurement of CA in research among others using delivery dependability, product innovation and time to market. Some of the indicators used to measure CA is the uniqueness of the product, product quality and competitive price (Setiawan et al., 2012: 14).

In this study were measured with a CA in price, product quality, delivery dependability and time to market. These measurements as it has been used in the study (Bashor and Purnama, 2017; Setiawan et al., 2012; Li et al., 2006 and Thatte, 2007).

4. Research Methodology

Generally, this study aims to describe and analyze the influence of EI with indicators (supplier relationships, quality of raw materials, supply risk, customer complaint, customer satisfaction, and customer relationship) and II with indicator (product development, production planning, quality control, quality of production, distribution, and quality information) to PI with indicators (invention, development, duplication, and synthesis) and their impact on CA with indicators (price, product quality, delivery dependability, and time to market According to the purpose, this research designed as an explanatory research. The facile results in this study are supposed can provide an explanation on how CA is influenced by some factors, which is product innovation, EI and II.

Total population in the study was the manager of clothing SMEs in the region of East Java province, consisting of 38 local District / City Government. While the sample is a number of 180 managers, according Ferdinand (2014) respondent sample size that fits in the SEM analysis was around 100 200, further advised the respondent sample size of at least as much as 5 to 10 times of the number of indicators in the latent variable. While the sample of respondents in this study is 20 times the indicator

variable 9 totaling 180 respondents. The sample selection is based on local area that potentially industrial development (industrial centers). The Ministry has set a small industrial centers for the entire region, which can be used as a basis for determining the sample area. Prepared in accordance directory, the center of industrial development in the area, business groups Indonesia East Java small industrial clothing consists of five areas, namely Tulungagung district, Bangkalan, Mojokerto, Mojokerto and Sidoarjo. Data is collected using a questionnaire that has collected validity and reliability. Data analysis using SEM analysis with the help of AMOS version 21 program.

5. Data Analysis and Interpretation

5.1 Results Test Validity

The instrument validity test was given to 180 respondents, and the results were analyzed using correlation product moment person. The results are compared with rtable at a significance level of 5% with n = 180, and known to be rtable = 0.1455. The results of the validity test show the results of calculating all questionnaire items from the variables EI, II, PI and CA having a value greater than rtable = 0.1455. Thus all questionnaire items for variables EI, II, PI and CA are considered valid as a measurement tool and can be used to obtain the data needed in this study.

5.2 Results Test Reliability

After the validity test passed by the reliability test to determine the extent to which research instruments are reliable. The criterion is if the alpha correlation results are greater than 0.600 then the instrument can be said to be reliable. Summary of reliability results.

Summary results of reliability tests demonstrate the reliability values of Cronbach's Alpha variables EI, II, PI and CA have a greater value than rtable = 0.600. Thus the whole item questionnaire for variables EI, II, PI and CA is considered to be reliable. Reliability of less than 60 is generally considered poor, their reviews in the range of 0.7 are acceptable, and their reviews of more than 0.8 are good (Penniston et al., 2017).

5.3 Loading Factor Confirmatory Testing Results Analysis, Critical Path Ratio and Coefficient

This research uses analysis factor and regression models with SEM. Based on results of the model testing, the confirmation factor and critical ratio are obtained as follows:

5.4 External Integration

This uses factor analysis and regression models with SEM. Based on the results of the model testing, the confirmation factor and critical ratio are obtained as follows:

Table 1: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factor External Integration

No	Indicators	SE (Loading Factor) good of fit > 0,4	CR good of fit > 1,96	Probability (P) good of fit < 0,05	Specification

1	Supplier Relationship	0.854	2.114	0.035	good
2	Quality of Raw Materials	1.000		0.000	good
3	Supply Risk	0.283	3.455	0.000	not good
4	Customer Complaint	1.161	2.932	0.026	good
5	Customer Satisfaction	1.209	2.932	0.003	good
6	Customer Relationship	1.563	3.263	0.001	good

Sources: Primary data are processed

The test results presented in table 1, it was found that six indicators can be used as a variable measure in explaining EI (supplier relations, raw material quality, supply risk, customer complaints, customer satisfaction, and customer relations).

5.5 Internal Integration

The results and critical confirmation factor loading ratio on job satisfaction are carefully as follows:

Table 2: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factors Internal Integration

No	**Indicators**	**SE (Loading Factor) good of fit > 0,4**	**CR good of fit > 1,96**	**Probability (P) good of fit < 0,05**	**Specification**
1	Product Development	1.000		0.000	good
2	Production Planning	0.406	2.222	0.026	good
3	Quality Control	0.800	4.329	0.000	good
4	Quality of Production	0.914	2.234	0.000	good
5	Distribution	0.908	4.360	0.000	good
6	Quality Information	1.057	4.726	0.000	good

Sources: Primary data are processed

The test results presented in table 2, it was found that the six indicators, all of which can be used as a measure in explaining together variable II, namely: (product development, production planning, quality control, quality of production, distribution, and quality information). From the sixth indicator that is most able to explain variable II is quality information, and product development, followed by quality production, quality control and then further distribution of the latest production planning

5.6 Product Innovation

The results of the confirmation factor and the critical success ratio in careful effort are as follows:

Table 3: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators of Factors Product Innovation

No	Indicators	SE (Loading Factor) good of fit > 0,4	CR good of fit > 1,96	Probability (P) good of fit < 0,05	Specification
1	Invention	0.791	3.507	0.000	good
2	Development	0.910	3.705	0.000	good
3	Duplication	0.784	3.571	0.000	good
4	Synthesis	1.000		0.000	good

Sources: Primary data are processed

The test results presented in table 3, it shows that all four indicators can all be used as PI measures in explaining variables, namely: (discovery, development, duplication, and synthesis). The four indicators together can explain the PI variable and from the four indicators that are most able to explain the variables are synthesis, then development is followed and the latest findings are duplicates.

5.7 Competitive Advantage

Results containing confirmation factors and critical success ratios in careful effort are as follows:

Table 4: Regression Weight (Loading Factor Confirmatory) Standardized Estimate (SE) and Critical Ratio (CR) Indicators Of Factor Competitive Advantage

No	Indicators	SE (Loading Factor) Good Of Fit > 0,4	CR Good Of Fit > 1,96	Probability (P) Good Of Fit < 0,05	Specification
1	Price	1.000		0.000	good
2	Product Quality	0.144	2.616	0.009	not good
3	Delivery Dependability	1.368	7.214	0.000	good
4	Time To Market	0.148	2.534	0.011	not good

Sources: Primary data are processed

Test results presented in table 4. The results of the tests above show that of the four indicators, only two that can be used as a measure of CA in explaining variables are: shipping dependence and price. The two indicators are jointly able to explain the variables and CA from the two indicators that are most able to explain the variables are dependence on shipping, and then the price.

5.8 Testing Results (Confirmatory Factor Analysis)

Having to do tests on the foregoing assumptions and found that the model has a good alignment, then analyzed the data to get a clear picture of each variable. The results of the analysis will be undertaken for each variable in the study can be described as follows:

The test results confirmatory factors and influence the path coefficient EI variables with indicators (supplier relationships, quality of raw materials, customer complaint, customer satisfaction, and customer relationship), II with indicators (product development, production planning, quality control, quality of production, distribution, and quality information) to PI with indicators (invention, development, duplication, and synthesis) and their impact on CA with indicators (price and delivery dependability). Broadly speaking, it can be seen in figure 1 below:

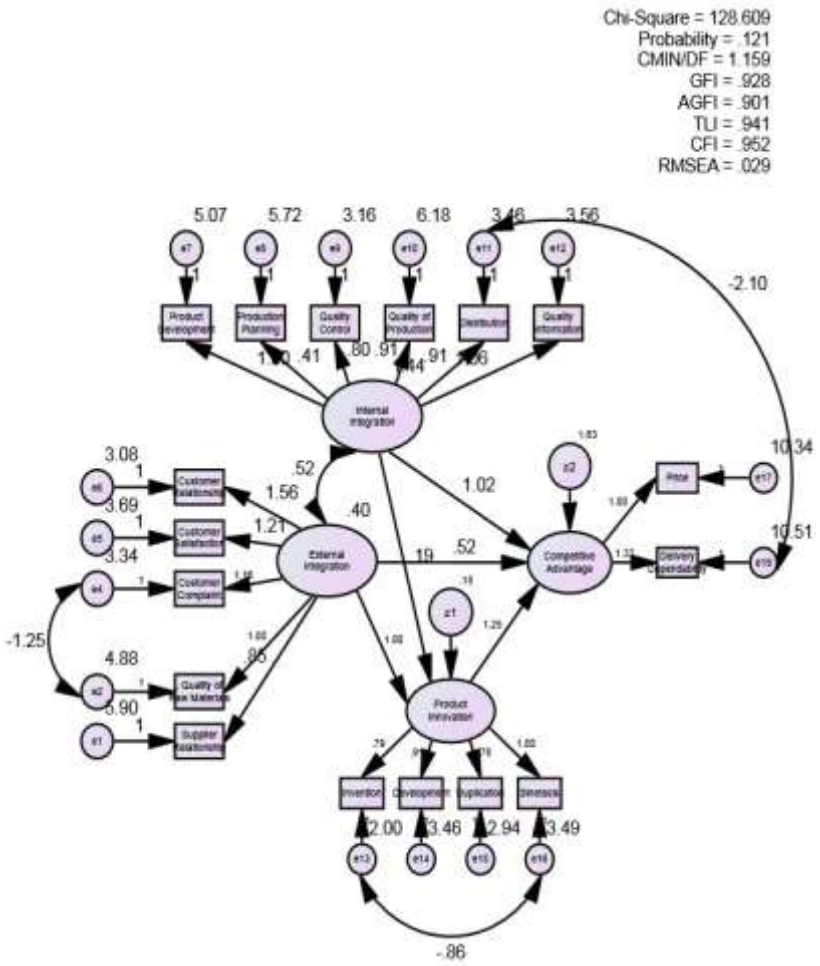

Figure 1: Confirmatory Factor and Coefficient Line Effect of Variable External Integration, Internal Integration and Product Innovation Against Competitive Advantage

Sources: Primary data are processed

5.9 Hypothetical Testing Results

Results of calculations as presented in table 6

Table 6 : Results of Testing Influence of Variables External Integration, Internal Integration and Product Innovation Against Competitive Advantage

NO	Variabel	Coefficient	SE	CR	P	Specification
1	Product_Innovation ← External_Integration	1.000			0.000	Significant
2	Product_Innovation ← Internal_Integration	0.190	0.653	3.242	0.021	Significant
3	Competitive_Advantage ← External_Integration	0.518	2.690	2.236	0.041	Significant
4	Competitive_Advantage ← Internal_Integration	0.034	1.015	3.983	0.004	Significant
5	Competitive_Advantage ← Product_Innovation	1.245	2.265	2.705	0.048	Significant

Sources: Primary data are processed

Judging from table 6 above, it was found that 1). EI significant effect on PI with coefficient 1,000 lane 2). II significant effect on PI with the coefficient of 0.190 lane 3). EI significant effect on the CA with coefficient 4 0518 lines). II significant effect on the CA with path coefficient value of 0.034 and 5). PI significant effect on the CA with path coefficient value of 1.245.

4.9.1 Effect of External Integration and Internal Integration of the Product Innovation From table 6, it can be concluded that the test results with SEM analysis performed using AMOS 21 shows that the EI has significant positive effect on PI.

This finding shows that the results are in accordance with what expressed by Wu (2013) found that EI and II affect on innovation products. Wong et al., (2013), which states that the EI has a positive influence on PI. Furthermore, Wong et al., (2013) Stated that EI has the ability to acquire information, knowledge sharing, coordination efficiently, and facilitate new PI with collaboration between external parties and EI helps improve the capabilities and resources normally owned by other parties, such as suppliers and customers (Aloini and Martini, 2013), where staff of purchasing and manufacturing departments need to work with suppliers to ensure suppliers understand the design and manufacturing process of new products according to needs.

Song et al., (2017) states the importance of EI, integration moderates the relationship between customers and business performance, the relationship between supplier integration and operational performance, and the relationship between time to market and business performance. In addition, customer and supplier integration fully improves operational and business performance by reducing time to market, while increasing customer integration with full operational performance by shortening time to market. Gatz EI allows companies to gain knowledge about the needs of consumers (Ragatz et al., 1997). Through the integration of the value chain upstream (Ettlie and Reza, 1992). In addition EI support supplier involvement in new product development process (Ragatz et al., 1997; Koufteros et al., 2005), which allows the company to focus on digging new products and technological knowledge of the supplier (Petersen et al., 2005) that complements internal capabilities (Ragatz et al., 1997).

Better regarding the influence of II to PI. According Dangelico et al., (2017) the EI of resources, integration of internal resources, and the development of resources and reconfiguration) affecting changes / updates to the ability regular-oriented sustainability (ability of innovation and design capabilities). The results of the study support research Yee & Ooi (2008) and share information among supply chain partners, and establish supply chain collaboration (Schmelzle and Tate, 2017; Cilibertietal, 2016).

This study is in line with the theory of ambidexterity, that the EI and II complement each other to facilitate business processes. As it is known, that the EI known to be more effective in influencing the time-based performance and flexibility as well as building cooperation with suppliers and customers (Ettlie and Reza, 1992). While the II is superior in terms of quality, costs, as well as communication, collaboration and sharing of information between departments within the company (2010, Wong et al., 2009). The decision of new product development in the company relies on information obtained from suppliers and customers, known as the EI, and the information will be converted into a reference or insight that is very useful when going on PI internally when supported by effective interaction between the EI and II. When EI and II interact, knowledge or assets owned by the supplier and the customer will be incorporated into the PI efforts. Therefore, to ensure the development of effective innovation, companies are advised to increase its internal capacity to absorb knowledge and external information (Tracey, 2004). The results of this study have important implications for research and also practices in the field of supply chain integration and PI.

4.9.2 Effect of External Integration and Internal Integration to Competitive Advantage From table 6, it can be concluded that the test results with the analysis sem who performed using the amos 21 shows that the EI and II significant positive effect on the CA.

These findings indicate that the results were in line with what is Liu et al., (2017) based on the analysis of the relationship between integration between departments and service innovation has a significant positive correlation level. Integrating resources, internal and external competency, adopted a "direct innovation" and the flow of knowledge within the organisation, complementary competencies and fast and seamless communication with customers to enable organisations to obtain external knowledge and to improve innovative development to maintain a competitive advantage. In the era of economic globalisation with the knowledge and network economy, growth companies are facing new challenges. In such a situation, enterprises should emphasise the integration of internal network resources and reduce business risk by developing external network relationships to improve performance. Forms of II that can provide the sustainable and synergistic effect of warding off competition for now. Gunaratne & Hoover (2001) states have competitive products and services, also supply chain right to the customer is not enough in today's market environment, the supply chain should be on the right customers. Relational customers, combined with the operations of the company and the customer's operations will create a supply chain demand. Business success SMEs sustainable depends on many other factors, such as the ability of the supplier and customer integration (Tehseen and Ramayah, 2015).

This research support study (Rahmah, M., & Fatmah, D., 2018; Li et al., 2006) found that the integrity of the implementation of external and internal integrity can lead to improvement of excellence compete and improve organisational performance. To build CA depends not only on internal factors but also influenced by external factors (Restrepoet al., 2016). The survival and growth of SMEs can be difficult in today's competitive business environment and global markets. That is a challenge to deliver

the right products, services promptly and with the lowest possible cost to right customers. These challenges emphasise the importance of managing cross-border relationships between business partners. To gain a competitive advantage, an effective tool for SMEs is SCM (Thooet al., 2017). The results of the Sales et al., (2016) Studies show there are many factors that drive the development of Product Innovations, both internally and externally to the company. In internal factors, the most important is the prospect of competitive advantage, reduction in costs, market benefits, increased reputation as well as innovation opportunities. In external factors, the most important are regulations in the environment - currently or anticipated - and demand on the market. In the results, this study provides evidence that the most relevant things are cost savings, achievement in competitive advantage, increasing share in the market, increasing sales, increasing turnover, higher profits, better reputation, increased exports and higher productivity. According to Quang et al., (2016) from the perspective of supply chain management, the specific critical dimensions : procurement, internal logistics and distribution. Therefore, there is a need to change the thinking of today's organisations that focused on the enterprise, and develop it into an interorganisational behaviour involving customers, suppliers and other stakeholders.

Today, the knowledge economy more focused on developing integrated systems that been recognised as one of the most effective integration systems. In turn, the process, which is based on interdependence and cooperation from economic entities, enables stable economic relations, synergistic effects and CA growth (Pustynnikova & Uskova, 2017).

Findings Sales et al., (2016) building collaborative networks and to improve the flow of knowledge, both inside and outside the company, cross-functional integration and the development of resources and the ability to influence the success of the development of PI. The development of PI. which in turn will increase the CA (Garengo & Panizzolo, 2013). According to (Carraresi et al., 2016) results show that marketing, networking, and innovation capabilities directly and positively affect performance. SMEs benefit from selling their products on the national market. Network capability plays a dual role: It has a direct positive influence on performance and also an indirect effect on the ability to obtain information about markets and supply chain agents. The market and consumer information obtained is very valuable in improving marketing capabilities and improving performance

5.9.3 Effect of Product Innovation to Competitive Advantage

From Table 6, it concluded that the results of testing with SEM analysis carried out using AMOS 21 showed that PI had a significant positive effect on CA.

These findings show that the results are in line with what was expressed by Kennedy et al., (2017) PI has a significant and positive impact on CA. Carraresi et al., (2016) the results of his research shows that the ability to innovate is directly and positively affect performance. Bermúdez et al., (2017) the concept of open innovation chain. This concept will be an alternative for the growth of small and medium-sized companies, ranging from the integration of their actors to solve the real needs of the market. Khan et al., (2017) Innovation is important for SMEs to survive in market and maintain a competitive advantage. Ability to obtain information about markets and supply chain agents. The market and consumer information obtained is very valuable in improving marketing capabilities and improving performance. On the other hand company that have more capacity to innovate will be able to develop a CA in order to achieve the performance (Daneels, 2002). These advantages can not be separated from the development of product innovations produced, so it will have the advantage in the market which in turn will win the competition. Innovation gives companies the possibility to create and

use their capabilities to support business and long-term performance (Teece, 2007). Innovation when it success can make it harder for companies to replicate the external environment and allow them to maintain excellence (García-Morales et al., 2006). Therefore, innovation will affect the company's CA and performance. Under conditions of a rapidly changing environment, saying that the CA is determined by the creativity and innovation that can satisfy the desires of customers better than the competition. Gray et al., (2002) says the innovation capability of a company will ensure the company's ability to compete. (O'Regan and Ghobadian, 2005), see the innovation is a new idea that can create added value for the company.

Through innovation, the company hopes to create a product that is completely new, or other previously or create a product which is an improvement of the product which have been there before. In consuming a product, consumers are not only limited to see the value or function of a product that is needed, but consumers also pay attention to whether the selected products add value or advantages compared with other similar products. Desire is what should be understood by the manufacturer as the foundation for the innovation process. Innovating, companies will be successfully responding to their environment and develop skills where this can have an impact on the overall marketing performance. Utaminingsih (2016) states that innovation has a positive and significant effect on marketing performance. Usvita (2015) states that CA has a significant positive effect on marketing performance. Research (Titahena et al., 2012) found empirical evidence which states that there is a significant positive relationship and supports the relationship between CA for marketing performance. Research (Titahena et al., 2012) found empirical evidence that states that there is a significant positive relationship and support of the existence of a relationship between a CA to marketing performance. It means that if CA marketing performance will increase and vice versa. Innovation is one of the key aspects of company performance, if the competitive environment is getting tougher. Another opinion is from (Gray et al., 2002) suggests that the innovation capability of a company will guarantee the company's ability to compete. O'Regan and Ghobadian (2005) to see the innovation is a new idea that can create added value for the company. Robbins and Coulter (2010) innovation is the process of changing ideas - creative ideas into a product or method useful work. Kasali (2010) describes the innovation is the ability to see things in a new way and sometimes unusual.

According Hubeis (2005: 69) explains that PI is a change that is related to increasing or improving existing resources, modify to make something of value creating new things are different, converting a material into a resource and combining each source power into a new configuration that is more productive, either directly or indirectly in an effort to gain a competitive advantage. Innovation can also be created as the company saw a lot of competitors are emerging that the company is able combine competitors excellence into a new advantage for the company. CA has been achieved by the company should be maintained due to their advantages more and more competitors who pay attention to the point unguarded firms, therefore the company should continue to be consistent in maintaining its superiority (Russell & Millar, 2014). CA can also be seen through customer evaluations that can be created by firms through service facilities that can accommodate all sorts of complaints or suggestions aimed at consumers to the company for the sake of improvement toward a higher quality. The setting is a good strategy the key to success for the company to be in the forefront with anticipation in the market competition (Tarabieh et al., 2015). At present innovation has become an important factor for entrepreneurs and companies in ensuring sustainability and even the survival of companies in global business (Costa & Ramos, 2015).

6. Conclusion and Recommendations

Based on the results of the research and discussion above, it can be concluded that EI represented by (customer relationship, and customer satisfaction, followed by customer complaint, then the quality of raw materials and most recently supplier relationship) influence on PI represented by (synthesis, then development, followed by his most recent invention and are duplications) and of the EI effect on the CA represented by (delivery dependability, and then price). EI (integration of customers and suppliers) increase operational performance and business completely by reducing time to market, while the integration of customers improve fully operational performance by shortening time to market.

II represented by (quality information, and product development, followed by quality of production, then quality control further distribution of the most recent and production planning) effect on PI represented by (synthesis, then development, followed by his most recent invention and are duplications). And II affect the CA represented by (delivery dependability, and then price). EI and II is widely accepted because of its ability to improve operational performance, such as quality, cost, delivery, and flexibility. So as to enhance the innovation capability and its ability to compete.

PI represented by (synthesis, then development, followed by his most recent invention and are duplications) affect the CA represented by (delivery dependability, and then price). The innovation capability of a company will guarantee the company's competitive ability and success of the company in order to maintain sales of its products lies in its ability to innovate.

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