Theoretical Study on The Impact of Trade Liberalization to The Economic Performance of Corn In Indonesia

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ABSTRACT: This research purposed to: 1) analyze the full impact of trade liberalization on economic performance of maize in Indonesia. 2) Analyze the impact of external shock for the economic performance of corn in Indonesia on trade liberalization era. This research using secondary data about 1975 – 2014, that gotten from many sources, there are BPS, Kementan, APPI, FAOSTAT, NASS-USDA, ERS-USDA, Unites States of Cencus Beureau, EPI, and Worldfood. Analyze of data using system of simultaneous equations (2SLS). The results of research show that: 1) when the trade liberalization totally implemented, the world corn import had been increased higher than the increment of world corn export, so the world corn price is increase. For Indonesia, if compared with basic condition, although the world corn price increase but the effect of totally implementation trade liberalization (import corn price equal with world corn price ) so Indonesian import corn price is lower than before, then made the decline of Indonesian corn price and the increment of Indonesian corn import. 2) the increment of corn’s demand from main importer countries and the decrease of corn production from main exporter countries on trade liberalization era cause the increment of world corn price. That increase of world corn price causing the increment of Indonesian corn import price then made increase of Indonesian corn price and decrease of Indonesian corn import price. On the other hand, Indonesian corn production is increase.

Keywords: Impact, Trade Liberalization, Performance, Economic, Corn

I. INTRODUCTION
Corn is the second important plant after rice (Deptan, 2005). Corn is use to support the endurance of food and the sufficiency of ensilage. The position of corn in food diversification is decreasing the dependence of rice. Corn is also useful in garment and food industries. The necessary of corn for industry is significantly increase each year (Zubachtirodin, et.al, 2007). Corn is main component (60%) in field rations. The majority of domestic corn necessary is use for fodder or fodder industry (55%), about 30% for food, and its residual use to another industry and seed (Kasryono, et al, 2007).

The condition of corn market in Indonesia shows that demand of corn is higher than can produced. Its make Indonesia still importing corn to met the domestic demand. Corn importing is a dilemma that have to look for its solution, because in one hand import is detrimental to farmers because import price is cheaper than local corn price, on the other hand the necessary of fodder enterpriser can not be met from domestic.

The world trade liberalization effect efford to increase national corn production (if maybe attain corn self-sufficient), have to more pay attention external factor beside of internal factor. External factors like the totally applying of world trade liberalization, demand of world corn, and the supply of world corn that influence the world price. The world corn price is direct impacted to the Indonesian corn import price, then the corn import price influence the quantity of Indonesian corn import.

The totally trade liberalization happened when there is no obstacle on international trade. According to KTT VI WTO in Hongkong December 2005, all form of export subsidy and the rule that concerned with it is deleted on 2013 (Hutabarat, dkk, 2006; Haryadi, 2010). The abolition of export subsidy is expected to increase the competitiveness of Indonesian agricultural product.

This research purposed to: 1) analyze the totally impact of trade liberalization for the economic performance of corn in Indonesia. 2) Analyze the impact of external shock for the economic performance of corn in Indonesia on trade liberalization era.

II. METHOD OF DATA RESEARCH
This research using secondary data about 1975 – 2014, that gotten from many sources, there are Central Bureau Of Statistics (BPS), Agricultural Ministry, Association of Indonesian Manure Produser (APPI), Food Agriculture Organization (FAO), National Agriculture Statistic Service -United States Department of Agriculture (NASS USDA), Economics Research Service-United States Department of Agriculture (ERS USDA), Unites States of Cencus Beureau, Earth Policy Institute (EPI), dan Worldfood.

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Econometric Model

Econometric model of Indonesian corn economic is grouped in two blocks, there are domestic corn market block and world corn market block. This model is has been encountered several respecification then finally the entire variable is arrange each its equality have been met the economic criteria that expected.

1. Domestic Corn Market
   Domestic market block include of supply (harvest area, productivity, production, and import), demand, and price of corn.
   (1) Harvested area of Corn: \[ \text{LJIN} = a0 + a1\text{PP} + a2\text{LLJIN} + \mu1 \]
   (2) Price of corn in produsen level: \[ \text{PP} = b0 + b1\text{LJIN} + b2\text{LPP} + \mu2 \]
   (3) The productivity of Corn: \[ \text{YJIN} = c0 + c1\text{PP} + c2\text{LYJIN} + \mu3 \]
   (4) The production of corn: \[ \text{QJIN} = \text{LJIN} \ast \text{YJIN} \]
   (5) The indonesian corn demand:
      \[ \text{DJS} + \text{DJFO} + \text{DJFE} + \text{DJIN} = \mu4 + d2\text{LDJFE} + d1\text{PK} + d0 \]
      \[ \text{PI} = (1 + \text{RESTI})\text{PJW} \]
      \[ \text{PJIN} = \text{i0} + i1\text{DJIN} + i2\text{QJIN} + i3\text{PI} + \mu5 \]
   Where:
   LPIN = Indonesian corn harvested area
   PP = The price of corn in produsen level
   PJIN = Price of corn
   PKIN = The price of indonesian soybean
   POP = The population of indonesia
   GDP = Gross Domestic Product
   PI = The price of indonesian corn import
   PJW = The price of world corn
   YJIN = Indonesian corn productivity
   QJIN = Indonesian corn production
   DJIN = Indonesian corn demand
   DJFE = Demand of corn to fodder
   DJFO = Demand of corn to food
   DJIS = Demand of corn residual of indonesia
   POP = The population of indonesia
   IIIN = Quantity of Indonesian corn Import
   ERI = Exchange rate Indonesia
   RESTI = Trade Restriction of Indonesia
   LLJIN = Lag of Indonesian corn harvested area
   LYJIN = Lag of Indonesian corn productivity
   LPP = Lag of corn price in producer level
   LDJFE = Lag of corn demand for fodder
   LDJFO = Lag of corn demand for food

2. World Market of Corn
   The market consists of the world's corn exports, imports, and world corn prices.
   (9) Price of Corn in World Market: \[ \text{PJW} = j1\text{LJW} + j2\text{EJW} + j3\text{LPJW} + \mu6 \]
   (10) The World Export of Corn:
      \[ \text{EJW} = \text{EJAS} + \text{EJBR} + \text{EJAR} + \text{EJSW} \]
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\[ EJAS = k1PJW + k2QJAS + k3DJAS + k4LEJAS + \mu_{11} \]
\[ EJBR = 10 + 11PJW + 12QJBR + 13DJBR + 14LEJBR + \mu_{12} \]
\[ EJAR = m0 + m1PJW + m2QJAR + m3DJAR + m4LEKAR + \mu_{13} \]

(11) Commodity Export of Corn
\[ IJW = IJJP + IJKO + IJME + IJJN + IJSW \]
\[ IJJP = n0 + n1DJJP + n2NPRJP + \mu_{14} \]
\[ IJKO = o0 + o1DJKO + o2NPRKO + o3LIJKO + \mu_{15} \]
\[ IJME = p0 + p1DJME + p2NPRME + p3LIIJME + \mu_{16} \]

Where:
- \( IJW \) = The World Import of Corn
- \( IJJP \) = Japan Import of Corn
- \( IJKO \) = Korea Import of Corn
- \( IJME \) = Mexico Import of Corn
- \( IJSW \) = The World Import of Residual Corn
- \( EJW \) = The World Export of Corn
- \( EJAS \) = USA Import of Corn
- \( EJBR \) = Brazilia Import of Corn
- \( EJAR \) = Argentina Import of Corn
- \( EJSW \) = The World Export of Residual Corn
- \( QJAS \) = US Corn Production
- \( QJBR \) = Brazilia Corn Production
- \( QJAR \) = Argentina Corn Production
- \( DJAS \) = US Demand of Corn
- \( DJBR \) = Brazilia Demand of Corn
- \( DJAR \) = Argentina Demand of Corn
- \( DJJP \) = Japanese Demand of Corn
- \( DJKO \) = Korean Demand of Corn
- \( DJME \) = Mexico Demand of Corn
- \( NPRJP = Nominal protection rate Jepang \)
- \( NPRKO = Nominal protection rate Korea \)
- \( NPRME = Nominal protection rate Meksiko \)
- \( LPJW = Lag of World Price of Corn \)
- \( LEJAS = Lag of US Export of Corn \)
- \( LEBR = Lag of Brazilia Export of Corn \)
- \( LEJAR = Lag of Argentina Export of Corn \)
- \( LJJKO = Lag of Korea Export of Corn \)
- \( LIJME = Lag of Mexico Export of Corn \)

This model has 21 equations, which include of 5 identity equations and 16 structural equations.

III. RESULT AND DISCUSSION

Econometric model is built representative enough to describe the impact of trade liberalization to the Indonesia economic performance of corn. This is look from the evaluation economic criteria and statistic indicator values that already got, there is coefficient determination \( R^2 \), F test \( F_{calculated} \)and real degree (\( \alpha \)) and Durbin Watson Test (DW). The result of statistic indicator values is completely shown in table 1 below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Endogenous Variable</th>
<th>( R^2 )</th>
<th>( F_{calculated} )</th>
<th>( \alpha )</th>
<th>DW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Harvested Corn of Indonesia (LIJN)</td>
<td>0.57681</td>
<td>24.53</td>
<td>&lt;0.0001</td>
<td>2.133202</td>
</tr>
<tr>
<td>2.</td>
<td>Price of Corn in Producer Level (PP)</td>
<td>0.98586</td>
<td>1254.89</td>
<td>&lt;.0001</td>
<td>1.695970</td>
</tr>
<tr>
<td>3.</td>
<td>Indonesia Productivity of Corn (YIJIN)</td>
<td>0.99418</td>
<td>3074.13</td>
<td>&lt;.0001</td>
<td>2.004238</td>
</tr>
<tr>
<td>4.</td>
<td>Demand of Corn for Fodder(DJFE)</td>
<td>0.97051</td>
<td>592.45</td>
<td>&lt;.0001</td>
<td>1.718123</td>
</tr>
<tr>
<td>5.</td>
<td>Price of Soybean (PK)</td>
<td>0.98566</td>
<td>1236.89</td>
<td>&lt;.0001</td>
<td>1.797267</td>
</tr>
</tbody>
</table>
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6. **Corn Demand for Food (DJFO)**
   - Coefficient: 0.66838
   - t-statistic: 36.28
   - Prob.: <.0001
   - R²: 2.143777

7. **Gross Domestic Product (GDP)**
   - Coefficient: 0.67346
   - t-statistic: 76.31
   - Prob.: <.0001
   - R²: 0.104804

8. **Indonesia Corn Import (IJIN)**
   - Coefficient: 0.99777
   - t-statistic: 5230.24
   - Prob.: <.0001
   - R²: 2.054065

9. **Indonesia Price of Corn (PJIN)**
   - Coefficient: 0.91524
   - t-statistic: 125.97
   - Prob.: <.0001
   - R²: 1.806903

10. **World Price of Corn (PJW)**
    - Coefficient: 0.94975
    - t-statistic: 226.83
    - Prob.: <.0001
    - R²: 1.571683

11. **US Corn Export (EJAS)**
    - Coefficient: 0.97069
    - t-statistic: 289.73
    - Prob.: <.0001
    - R²: 2.111830

12. **Brazilia Corn Export (EJBR)**
    - Coefficient: 0.92670
    - t-statistic: 107.47
    - Prob.: <.0001
    - R²: 2.566751

13. **Argentina Corn Export (EJAR)**
    - Coefficient: 0.80432
    - t-statistic: 34.94
    - Prob.: <.0001
    - R²: 1.998061

14. **Japan Corn Import (IJJP)**
    - Coefficient: 0.97508
    - t-statistic: 704.26
    - Prob.: <.0001
    - R²: 2.169830

15. **Korea Corn Import (IJKO)**
    - Coefficient: 0.91824
    - t-statistic: 131.02
    - Prob.: <.0001
    - R²: 2.312162

16. **Mexico Corn Import (IJME)**
    - Coefficient: 0.78937
    - t-statistic: 43.72
    - Prob.: <.0001
    - R²: 2.398561

Keterangan: α = real degree (level of significance)

The evaluation of economic criteria to the all of guesser parameter that find on each equation that used to build econometric model of Indonesian corn economic have mark and quantity that compatible with economic criteria that expected (table 2 column 2). Then, coefficient determination value of equation has high value. From table 1 column 2 shows that from 16 structural equations R² value (equation 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21), that has R² value >60% is 15 equation and that has R² value<60% is 1 equation. It means explanatory variables that entered to the equation are able to describe behavior of its endogen variables.
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\[ EJW_t = -2.22E-07 -0.72 0.4781 \]
\[ LPJW_t = 0.543584 4.06 0.0003 \]

14. EJW

\[ EJW = EJAS+EJBR+EJAR+EJSW \]

15. EJAS

\[ PKW_t = 28927.98 0.78 0.4414 \]
\[ QIAS_t = 0.054062 0.82 0.4192 \]
\[ DJIAS_t = -0.04165 -0.52 0.6051 \]
\[ LEJAS_t = 0.814667 7.06 <.0001 \]

**Table 2: Continue**

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. EJBR</td>
<td>Intersep</td>
<td>-3426518</td>
<td>-2.77</td>
<td>0.0090</td>
</tr>
<tr>
<td></td>
<td>PJW_t</td>
<td>21864.10</td>
<td>3.07</td>
<td>0.0041</td>
</tr>
<tr>
<td></td>
<td>QJBR_t</td>
<td>0.339739</td>
<td>4.89</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>DJBR_t</td>
<td>-0.26827</td>
<td>-3.22</td>
<td>0.0028</td>
</tr>
<tr>
<td></td>
<td>LEJBR_t</td>
<td>0.391784</td>
<td>3.60</td>
<td>0.0010</td>
</tr>
<tr>
<td>17. EJAR</td>
<td>Intersep</td>
<td>-556206</td>
<td>-0.42</td>
<td>0.6741</td>
</tr>
<tr>
<td></td>
<td>PJW_t</td>
<td>14044.77</td>
<td>1.59</td>
<td>0.1217</td>
</tr>
<tr>
<td></td>
<td>QJAR_t</td>
<td>0.589188</td>
<td>4.60</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>DJAR_t</td>
<td>-0.51538</td>
<td>-1.17</td>
<td>0.2518</td>
</tr>
<tr>
<td></td>
<td>LEJAR_t</td>
<td>0.234825</td>
<td>1.97</td>
<td>0.0570</td>
</tr>
<tr>
<td>18. IJW</td>
<td>IJW = IJJP+IJKO+IJME+IJIN+IJSW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. IJJP</td>
<td>Intersep</td>
<td>-919511</td>
<td>-2.13</td>
<td>0.0403</td>
</tr>
<tr>
<td></td>
<td>DJJP_t</td>
<td>1.063011</td>
<td>37.2</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>NPRJP_t</td>
<td>-267133</td>
<td>-1.59</td>
<td>0.1209</td>
</tr>
<tr>
<td>20. IJKO</td>
<td>Intersep</td>
<td>-10019.4</td>
<td>-0.03</td>
<td>0.979</td>
</tr>
<tr>
<td></td>
<td>DJKO_t</td>
<td>0.937592</td>
<td>10.6</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>NPRKO_t</td>
<td>-1978536</td>
<td>-9.39</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>LIJKO_t</td>
<td>0.160957</td>
<td>2.18</td>
<td>0.036</td>
</tr>
<tr>
<td>21. IJME</td>
<td>Intersep</td>
<td>-1209001</td>
<td>-1.66</td>
<td>0.1057</td>
</tr>
<tr>
<td></td>
<td>QJME_t</td>
<td>0.20733</td>
<td>3.88</td>
<td>0.0004</td>
</tr>
<tr>
<td></td>
<td>NPRME_t</td>
<td>-1037039</td>
<td>-1.8</td>
<td>0.0798</td>
</tr>
<tr>
<td></td>
<td>LIJME_t</td>
<td>0.430008</td>
<td>3.07</td>
<td>0.0042</td>
</tr>
</tbody>
</table>

The result of F test (Look at table 1 column 4) to the entire equation that used to build econometric model of Indonesian corn economic show that all of the explanatory variables that arrange the equation simultaneous is really influenced to its endogenous variables on the real degree at 1%. This is show if we did t test (partial test) to each equation, therefore any one or more explanatory variable is real influenced to its endogenous variable (Look at table 2 column 5).

The result of Autocorrelation test to the entire equation that used to build econometric model of corn economic using Dubin Watson test (DW test) show that from 16 structural equations that used to build model, only 1 equation that has autocorrelation indication, so guessers of coefficient regression that gotten still unbius, but the variances of disturbance variable less efficient if compared with not any autocorrelation indication. Therefore, the result of prediction model in this research is good enough to describe corn economic phenomenon in Indonesia.

**The result of Model Validation**

The result of analyzis economic model of Indonesia corn with using indicators Root Mean Square Error (RMSE) and Root Means Square Percent Error (RMSPE) that showed by deviation value on table 3.

<table>
<thead>
<tr>
<th>(1)</th>
<th>Variable</th>
<th>Deviation (%)</th>
<th>U-Theil</th>
<th>U^M</th>
<th>U^S</th>
<th>U^C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Harvested Corn of Indonesia (LJIN)</td>
<td>-0.05</td>
<td>0.05</td>
<td>0.00</td>
<td>0.15</td>
<td>0.85</td>
</tr>
<tr>
<td>2.</td>
<td>Price of Corn in Producer Level (PP)</td>
<td>-0.63</td>
<td>0.04</td>
<td>0.00</td>
<td>0.04</td>
<td>0.96</td>
</tr>
<tr>
<td>3.</td>
<td>Indonesia Productivity of Corn (YJIN)</td>
<td>-0.01</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>4.</td>
<td>Indonesia Production of Corn (QJIN)</td>
<td>0.43</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>5.</td>
<td>Indonesia Demand of Corn (DJIN)</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.02</td>
<td>0.98</td>
</tr>
<tr>
<td>6.</td>
<td>Demand of Corn for Fodder(DJFE)</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
<td>0.01</td>
<td>0.99</td>
</tr>
</tbody>
</table>
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6. Demand of Corn for Fodder (DJFE) 0.00 0.00 0.00 0.00
7. Price of Soybean (PK) 0.00 0.00 0.00 0.00
8. Corn Demand for Food (DJFO) 0.00 0.00 0.00 0.00
9. Gross Domestic Product (GDP) 0.00 0.00 0.00 0.00
10. Indonesia Corn Import (IJNI) 51.56 -1.13 -0.52 -1.66
11. Import Price (PI) -130.15 2.77 1.29 3.98
12. Indonesia Price of Corn (PIIN) -33.07 0.72 0.33 1.05
13. World Price of Corn (PJW) 0.10 2.77 1.29 3.98
14. World Export of Corn (EJW) 0.01 0.23 -8.80 -8.53
15. US Corn Export (EJAS) 0.01 0.31 -3.96 -3.62
16. Brazilia Corn Export (EJBR) 0.02 0.45 -30.42 -29.65
17. Argentina Corn Export (EJAR) 0.02 0.41 -23.44 -22.81
18. World Corn Import (WJ) 0.21 4.64 0.00 4.64
19. Japan Corn Import (IJJP) 0.00 15.14 0.00 15.14
20. Korea Corn Import (IJKO) 0.00 20.77 0.00 20.77
21. Mexico Corn Import (IJME) 0.00 15.68 0.00 15.68

Explanation:
Sim = simulation
Sim 1 = Totally Implementation of Trade Liberalization
Sim 2 = Increased Corn Demand from Major Importer Countries by 25%
Sim 3 = Decreased Corn Demand from Major Exporter Countries by 20%
Sim 4 = Increased Corn Demand From Major Importer Countries by 25% and Decreased Corn Demand From Major Exporter Countries by 20%

Totally implementation of trade liberalization
Totally implementation of trade liberalization without trade restriction impacted to the world corn import and world corn export. The world corn import increase about 0.21%, whereas the import corn of Japan, Korea, and Mexico is constant, so predicted that increase is from another countries’s import excepted of three countries above. The world corn export increase about 0.01% where USA corn export increase about 0.1%. Brasil and Argentina increase about 0.02%. The increment of world corn import higher than the increment of world corn export cause the world corn price increase about 0.10% (table 5 column 3).
For Indonesia, although the world corn price increase from US $ 207 to be US $ 207,2 (0.10%) but the impact of liberalization (the world corn price equal with the world corn import) so the first Indonesian import corn price that was US $ 476.90 decrease to US $ 207.2. The cheaper corn price of import impacted on the increment quantity of Indonesian corn import about 51.56%. Although from the percentage show high increment, but in fact only 277.164 ton, which was from 260.393 ton to 537.557. If compared with the total production of corn that produced, so that Indonesian import is too small.
The decrease of that corn price is also impacted to the decrease of corn price in Indonesia about 33.07%. The decrease of Indonesian corn price impacted to the decrease of corn price in produksen level (farmers) about 3.20%. This condition impact to decreasing of farming corn competitiveness, so Indonesian corn harvested area decrease about 0.89% and productivity decrease about 0.19%. Decrease of harvested area and productivity impact to decrease of Indonesian corn production about 1.08%. In other hand, in demand side, the decrease of Indonesian corn price there is no impact to the increment of Indonesian corn demand, good both of food and fodder.
This clearly show that totally implementation of trade liberalization without trade restriction impacted to decreasing domestic price of corn and increasing import of corn. Those results appropriate with the result of research that doing by Erwidodo and Hadi (1999), Triana (2009) and Ferrianta (2012). But the result of this research doesn’t same with the research’s result by Imron (2007) he declare that trade liberalization causing production and income of domestic corn is increase extremely because of the high increment of domestic corn price.
External Shocks: The demand Increment of corn from Major Importer Country and The decrement of Corn Production from Major Exporter Country

The demand increment of corn from Major Importer Country and the decrement of corn production from Major Exporter Country that happened simultaneous have same impact with the demand increment of corn from Major Importer Country or the decrement of corn production from Major Exporter Country, that world price of corn is increase. But because of happened simultaneous, so the rate of change more big than before. From table 5 column 6 can be known that the demand increment from Major Importer Country and The production decrement of Corn from Major Exporter Country causing The world import of Corn increase about 4,64%. Whereas in export side, The world export of corn decrease 8,53%. Any increment of world corn import in one hand, and decrement of world corn export in another hand causing the world price of corn increase 3,98%.

For Indonesia, the increment of world price about 3,98% on trade liberalization era impacting the increment of import corn price on same rate (3,98%), Indonesian price of corn increment is 1,05%, and price of corn in produsen’s level increase 0,1%. That increment causing Indonesian corn import is decrease about 1,66%. Whereas the increment of Indonesian corn price cause the corn farming competitiveness increase though small. Harvested area of corns increase is 0,03% and corn productivity is 0,01%. Finally, the production of corn increase 0,03%. Meanwhile, Indonesian demand of corn is relatively constant.

IV. CONCLUSION AND SUGGESTION

Conclusion
1. When the trade of liberalization totally implemented, the world import of corn through increment higher than increment of world corn export, therefore the world price of corn is increase. For Indonesia, if compared with basic condition, although the world price of corn increase but cause of totally implementation of trade liberalization so Indonesia price of corn still cheaper than before, therefore the decrement of Indonesian corn price and the increment of Indonesian corn import are happened.

2. The demand increment of corn from Major Importer Country and the production decrement of corn from Major Exporter Country causing the increment of world corn price. For Indonesia, the increment of world corn price on trade liberalization era causing the increment of Indonesian corn import price so the decrement of Indonesian corn price and the increment of Indonesian corn import are happened. In other hand, Indonesia production of corn is increase.

Suggestion
1. The world price of corn tended to increase showing its unavailability in market. So the government of Indonesia, by Agriculture Ministry, must more seriously increase the production by the optimise productivity and extensification area.

2. Efforts to coaching and mentoring the corn farmers must be intensified to enable them to carry out their farming efficiency and increase their corn farming productivity.

3. In order to extensification of corn farming can effectively did, so must doing together with all of stake holders, it was Ministry of Agriculture, the National Land Agency, and the Ministry of State-Owned Enterprises, especially farmers.

4. In trade liberalization era, Indonesia needs comprehensive policy to support corn chain management cohesiveness. Then, production increment effort by policy of increasing productivity and expansion, must pay attention for correlation with others subsystem, such as post harvest, management, transportation, and saving. Bulog also must involve in price stabilization and supports production.

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