The Impact of Tariff Cuts on the Agriculture Economic Growth in China Based on China's Agricultural CGE Model

Benito G. Reebeg1 ; Huang Delin1* and Y. N. Ahmed2

1The Institute of Agricultural Economic and Development, the Chinese Academy of Agriculture Science, Beijing, China. 2Cairo University, Cairo, Egypt.

ABSTRACT

This paper explores the effects of tariff reduction on macroeconomic and sectoral indicators in China using a computable general equilibrium approach. As of December 2017, the Ministry of Finance of the People’s Republic of China implemented tariff cuts to 187 consumer commodities, among which 29 agricultural or processed agricultural commodities. We then proposed a tariff policy shock, of the 51.362%, to these agricultural and agricultural processing industries using the CACGE model. The simulation results indicate that the tariff reduction will have a positive effect on the Chinese economy, this conclusion was based on the decrease in consumer prices CPI, growth in the gross domestic product GDP, and increases in the real wages and exports. In addition to these macro level indicators, there will also be positive effects for the specific industries mainly the heavy industry and the service industry. But when answering the main question, we find that the proposed policy will have a negative effect on the agricultural sector, with the total output dropping by almost 20%, employment with a loss of 20%, and investment shrinking by 22%. The losses to the sector are largely contributed to the losses in the soybean industry. But the results do imply that the increased agricultural imports and reduced output of the specific commodities will not stifle the growth in the agricultural exports, which will rise by 10% over the period 2018-2030.

Keywords: Chinese Computable General Equilibrium Model; Agriculture; Tariff Reduction; Policy.

INTRODUCTION

As of December 2017, the Ministry of Finance of the People’s Republic of China implemented tariff cuts to 187 consumer commodities. Among which 29 agricultural or processed agricultural commodities, these varied from Frozen Atlantic Salmon and Danube Fish to cooked fruit and homogenized food (Appendix 1. List of AGRI-based tariff cuts). When analyzing the tariff, for these commodities, we see that there was a reduction of approximately 51.362%. To our knowledge, there had not been any research done on the effects these cuts would have on the Chinese economy as a whole, on macro-economic level, nor on the agricultural sector. It is imperative to examine how an economy will react to policy changes, in this case we will evaluate the effect of one these changes, the tariff. The effect that tariffs have are diverse and is made even more apparent by existing literature. Clemens and Williamson show that high tariffs were correlated with fast growth before the Second World War but with slow growth after that period (Clemens & Williamson, 2001). In addition, uneven tariff rates will hampered growth, due to the connectivity of the markets. This is but one example of literature indicating that there is a positive effect of lowering tariff. The progress China has made in lowering its tariff and what the effects were of Chinese tariff drops, one of which tracked the accession of China to the World Trade Organization.

In the more recent research, Li and Xin further build on that point of view and state that when an industry is competitive internationally it is no longer necessary to maintain a higher tariff. This due to the fact the lower tariff rates improve trade and thus have a positive effect on the whole industry. Secondly, although China's industrialization has not yet been completed, the level of industrialization is already at a relatively high level and is a major trading power (Li & Xin, 2017). Where they found that “...that timing is indeed an important determinant of the profile of structural adjustment required in China and the rest of the world.”

We thus proposed to run a policy simulation, using the China Agricultural (CACGE), in which we evaluated the effects of the same average drop, 51.362%, in tariff rate not merely to the consumer-based products but to the subsequent industries they belong to and the agricultural sector as a whole. These being the light industry as well as the agricultural sector as whole. Then analyzing the effects on the macro-economic level, analyzing the Real GDP from expenditure side, employment, consumer price index, real wages, real household consumption, investment on the expenditure, export and import volume index. We also assessed the impact on the light industry, fish production and other foods. In addition to the light industry, we gauged the policy effects on the agricultural sector, where we will focused on the output of the different commodities, the import, and the export. Using Computable General Equilibrium (CGE) models to assess the impact of policy changes, is wide spread and having more effect on policy as this method and the models increase in their accuracy. (Robinson & Devarajan, 2002); (Dwyer, 2015); (Shagdar & Nakajima, 2018)

Methodology and Data base

Theoretical framework and model construction

The model that we used for the simulation was the CACGE (China Agricultural) model from 2002. As such, the
The China Agricultural CGE model is an adjusted CHINAGEM model and is a complex system of equations capturing the behaviors of economic agents and linkages between sectors of the economy and between China and the rest of the world. The core part of CACGE contains widely accepted economic theories such as consumer and producer optimization behavior. A CACGE simulation moves each of the components of the input-output database, thereby taking us to another picture of the economy. Typically, the number of variables is larger than the number of equations in CACGE. “The equation system can be used to solve for changes in endogenous variables — the number of which equals to the number of equations — due to changes in exogenous variables.” (Mai, Dixon, & Rimmer, 2010).

The key equations of the model that we focused on were:

\[(\text{All}_c, \text{COM}) \ V0CIF(c) = V0IMP(c) - V0TAR(c), \quad 1\]

This equation is the total ex-duty imports of good c (V0CIF(c)), which is the sum of the total basic-value imports of good c (V0IMP(c)) and tariff revenue of good c (V0TAR(c)). The relevance of this equation is rooted in the fact that it makes it possible to calculate the tariff on every commodity denoted as COM.

\[\text{Equation } E, \text{delV0TAR} \# \text{ Tariff revenues } \# \]

\[(\text{All}_c, \text{COM}) \ \text{delV0TAR}(c) = 0.01*\text{V0TAR}(c)*x0imp(c) \]

- \[\phi\] + 0.01*V0IMP(c)*t0imp(c); \quad 2

Which calculates the ordinary change in tariff revenue for every good c delV0TAR(c). This equation three endogenous variables, V0IMP(c), x0imp(c) and V0TAR(c). Where x0imp(c) represents the total supply of imported goods.

This equation also has three exogenous variables that can change the endogenous variable (delV0TAR(c)). The three exogenous variables are:

- \[\text{pf0cif(c)}\]: the Cost, Insurance, Freight (C.I.F) foreign currency import price,
- \[\phi\]: the exchange rate (foreign/local), and
- \[t0imp(c)\]: the power of tariff, which is the tariff rate on each good c plus one 1.

These equations made it possible for us to calculate the tariff for the different commodities and thereafter to change the tariff by adjusting the exogenous variable \(t0imp(c)\) (the power of tariff).

**Data Base**

The purpose of this paragraph is to give insight and into the database and on which part the model we focused and which macroeconomic indicators and sectors we analyzed to assess the effects of the policy shock. The structure of the CACGE input-output database in three parts: an absorption matrix; a joint-production matrix; and a vector of import duties. The first row in the absorption matrix, V1BAS… V6BAS shows flows in year t of commodities to producers, investors, households, exports, public consumption and inventory accumulation. Each of these matrices has CxS rows, one for each of C commodities from S sources. C is the number of commodities in the model and S is two (domestic and imported). The part that we focused on was the vector of import duties, with the data items relating to V0TAR. This is a C × 1 vector showing tariff revenue by imported commodity, which we used to calculate the tariff.

**Figure 1. The CACGE Input-Output Database (ORONI-G Flows Database)**

The macroeconomic indicators and sectors we analyzed are displayed in Table 1. Commodities list and Table 2. The indicators. We differentiated between the agricultural sector and the agriculture based processing and manufacturing sector.

**Table 1. Commodities list**

<table>
<thead>
<tr>
<th>(Sub)Sectors</th>
<th>code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>SOYBEANS</td>
</tr>
<tr>
<td>Corn</td>
<td>CORN</td>
</tr>
<tr>
<td>Wheat</td>
<td>WHEAT</td>
</tr>
<tr>
<td>Rice</td>
<td>RICE</td>
</tr>
<tr>
<td>Millet</td>
<td>Millet</td>
</tr>
<tr>
<td>Vegetables</td>
<td>VEGETABLES</td>
</tr>
<tr>
<td>Apples</td>
<td>APPLES</td>
</tr>
<tr>
<td>Citrus</td>
<td>Citrus</td>
</tr>
<tr>
<td>Grapes</td>
<td>Grapes</td>
</tr>
<tr>
<td>Other Crops</td>
<td>OtherCrops</td>
</tr>
<tr>
<td>Pigs</td>
<td>Pigs</td>
</tr>
<tr>
<td>Sheep &amp; Goats</td>
<td>SheepGoats</td>
</tr>
<tr>
<td>Other Livestock</td>
<td>OthLivestock</td>
</tr>
<tr>
<td>Cotton</td>
<td>Cotton</td>
</tr>
<tr>
<td>Fishing</td>
<td>Fishing</td>
</tr>
<tr>
<td>Other Ag. Products</td>
<td>OtherAg</td>
</tr>
<tr>
<td>Agri. based Processing &amp; Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Pork Industry</td>
<td>Pork</td>
</tr>
<tr>
<td>Other Meat Industry</td>
<td>OthMeat</td>
</tr>
<tr>
<td>Eggs Industry</td>
<td>Eggs</td>
</tr>
<tr>
<td>Dairy Industry</td>
<td>Milk</td>
</tr>
<tr>
<td>Grain Milling Industry</td>
<td>GrainMillOil</td>
</tr>
<tr>
<td>Feed Industry</td>
<td>AnimalFood</td>
</tr>
<tr>
<td>Vegetable Oil processing</td>
<td>VegetableOils</td>
</tr>
<tr>
<td>Sugar Industry</td>
<td>SugarRef</td>
</tr>
<tr>
<td>Aquatic products</td>
<td>FishProc</td>
</tr>
<tr>
<td>Other Food manufacturing</td>
<td>OtherFood</td>
</tr>
<tr>
<td>Alcohol and Wine Industry</td>
<td>Wines</td>
</tr>
<tr>
<td>Other Beverages</td>
<td>OtherBev</td>
</tr>
<tr>
<td>Tobacco Industry</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Cotton Textile Industry</td>
<td>CottonTextil</td>
</tr>
<tr>
<td>Wool Textile Industry</td>
<td>WoolTextiles</td>
</tr>
<tr>
<td>Silk Textile Industry</td>
<td>SilkTextiles</td>
</tr>
<tr>
<td>Other Textile Processing</td>
<td>TextProc</td>
</tr>
<tr>
<td>Leather Industry</td>
<td>Leather</td>
</tr>
</tbody>
</table>
Table 2. The indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Description</th>
<th>code</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>Real GDP from expenditure side</td>
<td>x0gdpexp</td>
</tr>
<tr>
<td>EMPLOYMENT</td>
<td>Aggregate employment in persons</td>
<td>emp_person</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer price index</td>
<td>p3tot</td>
</tr>
<tr>
<td>REAL WAGE</td>
<td>Average real wage</td>
<td>realwage</td>
</tr>
<tr>
<td>CONSUMPTION</td>
<td>Real household consumption</td>
<td>x3tot</td>
</tr>
<tr>
<td>INVESTMENT</td>
<td>Aggregate real investment expenditure</td>
<td>x2tot_i</td>
</tr>
<tr>
<td>EXPORT</td>
<td>Export volume index</td>
<td>x4tot</td>
</tr>
<tr>
<td>IMPORT</td>
<td>Import volume index, duty-paid weights</td>
<td>x0imp_c</td>
</tr>
<tr>
<td>OUTPUT</td>
<td>per industry</td>
<td>x1tot</td>
</tr>
<tr>
<td>EXPORT</td>
<td>per industry</td>
<td>x4</td>
</tr>
<tr>
<td>IMPORT</td>
<td>per industry</td>
<td>x0imp</td>
</tr>
<tr>
<td>INVESTMENT</td>
<td>per industry</td>
<td>x2tot</td>
</tr>
<tr>
<td>EMPLOYMENT</td>
<td>per industry</td>
<td>employ</td>
</tr>
<tr>
<td>Dom. Price</td>
<td>Basic price of domestic goods per industry</td>
<td>p0dom</td>
</tr>
</tbody>
</table>

Baseline Scenario Simulation

The purpose of this chapter is to give insight into the macro-economic and the agricultural indicators prior to the proposed policy simulation. The base data was built on the historical economic data from China, starting in 2002 until 2017 and the data for the years thereafter, 2018 until 2030, was forecasted under the conditions of the model (Excluding policy shocks). The data shown is for the 20 agricultural sectors and the two sectors of the agricultural manufacturing sector.

Baseline simulation of macroeconomics variables

In this paragraph, we give an overview of the trends for the indicators and the commodities. This is done by adding the growth of every year until 2030; furthermore, we also differentiate between 2002 until 2017 and 2018 until 2030. Thus giving more perspective.

The first graph shows the development of these indicators. We see that the GDP would increase with approximately 250%, CPI with more than 78%, and the Export exceeds a growth of 372%.

Baseline simulation of Agriculture sector

The following two graphs show how the commodities have developed over the same period.

Figure 2. Baseline Macro Econ

Figure 3. Agricultural sector base data

Policy scenario and Simulation

Policy simulations principles

As previously mentioned (The chapter 2 Methodology and Data base ), we will focus on the vectors relating to the import duties. Hence, in analyzing the Main Tablo file, we shocked the exogenous variable t0imp. The following equations and explanation will give a better understanding how the t0imp changes some key equations in the system:

1. \( V0CIF(c) = V0IMP(c) \cdot V0TAR(c) \)
   - This made is possible to calculate the tariff for good c by doing the division of \( V0TAR(c) \cdot V0CIF(c) \).
   - The exogenous variable that will affect the tariff is t0imp, representing the power of tariff, thus we have to add 1 to the tariff value;

2. After adjusting the power of tariff to the level we wanted, it would then have an effect on the following equation
   - \( delV0TAR(c) = 0.01 \cdot V0TAR(c) \cdot [x0imp(c)+p0cif(c)\cdot phi] + 0.01 \cdot V0IMP(c)\cdot p0imp(c) \);

   Thereafter, the change in value of the tariff revenues of good c (delV0TAR(c)), tracked further to ultimately, change de nominal GDP from the income side (V0GDPINC). The following equations in the model prove the before mentioned:

3. \( V0TAR_C = sum(c,COM, V0TAR(c)) \);
   - the summation of tariff revenue of good c (V0TAR(c));

4. \( V0TAR_C = V0TAX_C + V1OCT_I + V1PTX_I \);

5. \( V0TAX_CSI = V0TAX_C + V2TAX_CSI + V3TAX_CS + V4TAX_C + V5TAX_C + V6TAX_I + V8TAX_C + V1OCT_I + V1PTX_I \);

6. \( V0GDPINC = V1PRIM_I + V0TAX_CSI \);

7. \( V0GDPINC = V1PRIM_I + V0TAX_CSI \);

Policy simulation scenario

The previously mentioned policy adjustments, to bring the import tariff on the consumer-based products and agricultural commodities down by 51.362%, shall be explained in the chapter and in which way this was transferred to a shock in the model.

To be able to do these shocks the current tariff had to be found. This calculation was done by opening the TABLO file and analyzing which variable could be used. These were respectively "V0CIF(c) # Total ex-duty imports of good c #" and "V0TAR(c) # Tariff revenue #". To calculate the tariff the following equation was used in AnalyseGE "(All,COM) V0TAR(c)\cdot V0CIF(c)" which displays the tariff for all of the commodities, which was approximately 4.6%. When reducing the tariff by 51.362%, the new tariff rate became approximately 2.2373%. The next step was finding an exogenous variable which could drop the tariff to the wanted rate. Therefore, we chose the exogenous variable that could be used to do the proposed policy shock, t0imp. This variable is not simply the tariff percentage but the power of tariff meaning...
that if the base tariff equaled 0.046 (4.6%) then the power of

tariff \( (t_{imp}) \) would be 1.046.

To achieve the first shock in 2018 we used the following equation:

\[
\frac{(\text{propose power tariff by the beginning of 2018})}{\text{power of tariff at the end of 2017}} - 1 = \left( \frac{1.0223}{1.046} \right) - 1 = 0.0228753
\]

This value was then multiplied by 100 where after it

was substituted in the shock formula, for each commodity ea. for

Soybean: “\( \text{ashock } t_{imp}("SOYBEANS")=-2.2587525488892" \).”

1. Policy simulation Results

In this chapter we will discuss the results obtained from our policy simulation. To shows the growth the industries, for

the years starting from 2018 until 2030, we have aggregated the data. This gives a clear overview of the changes.

The Impact on macroeconomic variables

The impact of the policy is made apparent by comparing the accumulated growth starting from 2018, the first year of the proposed policy change, until 2030 with the baseline scenario. In doing so, we have found the following results as shown in Figure 5. Change in Macro indicators and

Error! Reference source not found.. When analyzing Figure 6, we find that the indicators that will increase are GDP with 0.11%, Consumption by 0.15%, real wages by 0.48%, consumption by 0.15%, investment with 0.17%, and furthermore exports and imports with respectively 0.27% and 0.67%. The decreases were limited to the CPI and Employment with respectively 0.43% and 0.11%.

The Impact on agricultural processing and manufacturing sector.

The effects of our policy shock on agricultural processing and manufacturing sector is displayed in Figure 7. The Impact on agricultural processing and manufacturing sector. When we analyzed the data, we found that the output will drop with almost 13%, averaging about 0.72%. The biggest losers were the Aquatic products, Other Meat, Dairy, and Other Food manufacturing industries with respectively 4.5%, 2.5%, 5.7%, and 1.4%. This was as expected mainly because our policy shock included these industries, but the Pork and Egg industry did not take such a hit to their output, the Egg industry even showed growth in output. The import of the agricultural processing and manufacturing sector has noticeably gone up totaling almost 225%, with the shocked industries, as per our simulation, accounting for almost hundred percent. This is the same for all the other indicators. The rest of the industries within this sector have only small changes (Appendix 3. Aggregated shock data (Processed & Manufactured). We did find that the feed industry, with a drop of 2.62%, has seen a bigger drop in domestic prices than the average 0.71%. This is also seen for the investment and the employment within the feed industry. Which is also evident for the leather industry.

The Impact on the Industries.

In this paragraph we further elaborate on the effect of our policy on the Chinese economy and give an overview of the impact on the heavy and service industry Figure 8. The Impact on all the Industries and Figure 9. The Impact on all the Industries (excl. Imports).

The Impact on agricultural sector.

The changes in the performance of the commodities, in comparison with the baseline, show that the agricultural output will drop with a totaling almost 20% with an average of 1.23% (Figure 6. The Impact on agriculture sector.) Soybean output, with a decrease of more than 11%, accounts for the biggest share of the losses and as a result trickles further into the bigger drop in employment and investments with a share of more than 55%. The exports had a small increase for all the sectors, 7.6% in total. But the imports on the other hand, saw substantial increases averaging around the 42% per industry. In analyzing the domestic prices we have saw a small decrease for every industry, averaging 0.2%. We do have to put the emphasis on the fact that soybean does show the biggest drop with more than three times the average (Appendix 2: List of AGRI-based tariff cuts). In addition, we found that the employment and investment will also drop with 21% and 22%.
Regarding the imports the heavy industry will gave a growth of approximately 5%, but the service sector will shrink with 1.65%. Apart from the import both sectors will experience positive effects from the policy shock especially the output will increase by respectively 7.7% and 5.2% for the heavy and service industry and the exports with more than 15%. Domestic prices for the heavy industry is very small at 0.61% but that of the service industry is approximately 2.6%. Finally, we have seen that the investments reaches almost 13% for the heavy industry and 8.8% for the service industry (Appendix 4. Aggregated shock data (All)).

**Summary and suggestion**

The purpose of this paper was to analyze the effect of a 51.362% tariff reduction, to the consumer-based products and the subsequent industries they belong to and the agricultural sector as a whole using the CAGGE CGE model (2002 Input-Output table). This was based on the Ministry of Finance of the People’s Republic of China implemented tariff cuts to 187 consumer commodities on the as of December 2017. In analyzing the results we have concluded that the proposed policy adjustments will have a negative effect on the agricultural sector, with the total output dropping by almost 20%, employment with a loss of 20%, and investment shrinking by 22%. The losses to the sector are largely contributed to the losses in the soybean industry. But the results do imply that the increased agricultural imports and reduced output of the specific commodities will not stifle the growth in the agricultural exports, which will rise by 10% over the period 2018-2030.

On the Chinese economy as a whole the proposed tariff reduction will have a positive effect, this conclusion is based on the decrease of 0.49% in CPI, growth in GDP of 0.11%, real wages of 0.49%, a total rise in Exports of 0.27%, and of 0.67% in Imports. In addition, we have assessed that the effects on the heavy and service industry will be positive because of increases in investments, output, exports, employment and even a reduction in prices. Having seen the results we would like to emphasis the need for further research regarding the effects of the reductions in the agricultural output, increased agricultural imports, and eventual loss of income for the agricultural sector.

**REFERENCES**


**APPENDIX**

| No. | EX | Tax Code | Product description | MFN tax rate for 2017 (%) | New tax rate December 1 (%) | Change (%)
|-----|----|----------|---------------------|--------------------------|-----------------------------|-----------|
| 1   |    | 3031300  | Frozen Atlantic salmon and Danube fish | 10 | 5 | -50%
| 2   | Ex | 3035900  | Frozen capelin, except edible chopped meat | 10 | 5 | -50%
| 3   |    | 3061490  | Other frozen crab | 10 | 5 | -50%
| 4   |    | 3061612  | Frozen northern long-range shrimp | 5 | 2 | -60%
| 5   |    | 3061719  | Frozen other shrimp | 5 | 2 | -60%
| 6   |    | 3063199  | Fresh and cold other eay shrimps and other lobsters | 15 | 5 | -67%
| 7   |    | 3063399  | Other live cold crabs | 14 | 7 | -50%
| 8   |    | 3078190  | Live, fresh or cold other abalone | 14 | 7 | -50%
| 9   |    | 4062000  | Various grated or powdered cheeses | 12 | 8 | -33%
| 10  |    | 4063000  | Processed cheese (except for grated or powdered) | 12 | 8 | -33%
| 11  |    | 4064000  | Blue cheese and other creamy cheeses produced by Penicillium articulatum | 15 | 8 | -47%
| 12  |    | 4069900  | Other cheese | 12 | 8 | -33%
| 13  |    | 8011100  | Dried coconut | 12 | 7 | -42%
| 14  |    | 8012100  | Fresh or dried unhulled Brazil fruit | 10 | 7 | -30%
| 15  |    | 8012200  | Fresh or dried shelled Brazilian fruit | 10 | 7 | -30%
| 16  |    | 8013100  | Fresh or dried unshelled cashew nuts | 20 | 7 | -65%
| 17  |    | 8013200  | Fresh or dried shelled cashew nuts | 10 | 7 | -30%
| 18  |    | 8026190  | Unhulled Non-specialized Macadamia Nuts (Hawaiian Nuts) | 24 | 12 | -50%
| 19  |    | 8026200  | Shelled Macadamia Nuts (Hawaiian Fruit) | 24 | 12 | -50%
| 20  | Ex | 8029000  | Pecan | 24 | 7 | -71%
| 21  |    | 8044000  | Fresh or dried avocado | 25 | 7 | -72%
| 22  | Ex | 8134000  | Dried cranberries | 25 | 15 | -40%
| 23  |    | 16010010 | Animal meat, chops and blood sausages made of natural sausage | 15 | 8 | -47%
| 24  |    | 16010020 | Animal meat, chops, and other sausage sausages made of blood | 15 | 8 | -47%
| 25  |    | 19011090 | Other retail packaged foods for infants and young children | 15 | 2 | -87%
| 26  |    | 19021900 | Other unfilled or uncooked raw pasta | 15 | 8 | -47%
| 27  |    | 20071000 | Cooked fruit homogenized food | 30 | 15 | -50%
| 28  |    | 21069050 | Seal oil capsules | 20 | 10 | -50%
| 29  | Ex | 21069090 | Milk protein partially hydrolyzed formula, and deep protein hydrolyzed formula, amino acid formula, lactose-free formula special infant milk powder | 20 | 0 | -100%

average -51.362%

1 Indicates that the goods subject to the provisional tax rate shall be within the scope of the tax number, subject to the specific product description.
تأثير تخفيف التعريفات الجمركية على النمو الاقتصادي الزراعي في الصين

1. تأثير تخفيف التعريفات الجمركية على النمو الاقتصادي الزراعي في الصين

2. قسم الاقتصاد الزراعي، كلية الزراعة، جامعة القاهرة، مصر.

نتعلمن هذه الجملة أثير تخفيف التعريفات الجمركية على الاقتصاد الكلي. وبناءً على نتائج الدراسة، في منتصف عام 2017، فتحت وزارة الزراعة في مصر نشاطاً جديداً لتحسين البيئة الزراعية.

وتعد زيادة الناتج المحلي الإجمالي أحد الأسباب الرئيسية لنمو الاقتصاد الزراعي في الصين. حيث تشير نتائج الدراسة إلى أن تخفيف التعريفات الجمركية سيكون له تأثير إيجابي على النمو الاقتصادي.

وتبناء هذه الجملة على نتائج الدراسة التي كشفت أن تعريفات الجمرك على السلع الزراعية تؤثر بشكل سلبي على الناتج المحلي الإجمالي. في السياق الذي يتناوله الدراسة، فإن تخفيف التعريفات الجمركية سيكون له تأثير إيجابي على الاقتصاد الزراعي في الصين.

Joinbelief الإحصائي للتعليم العالي، جامعة القاهرة، 2019.


2. لحاسب جان مارس، بحث في مجال الاقتصاد الزراعي، جامعة القاهرة، 2019.

3. Appendices 2، 3: Aggregated shock data (Processed & Manufactured).