

DOMESTIC & INTERNATIONAL DEMAND AND QUALITY UPGRADE OF AGRICULTURAL EXPORT

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ABSTRACT

With the growth of income level, improving the quality of agricultural products has become an urgent problem in China's agricultural development. The paper first analyze theoretically the mechanism of domestic and international demand on the quality of exported agricultural products, then based on the trade data of the world's top 50 agricultural products exporting countries (or regions) from 2002 to 2017, test empirically the theoretical hypothesis. The study found that both domestic and international demand can significantly improve the quality of a country's agricultural exports. Compared with international demand, the quality effect of domestic demand is more obvious. Among various products and countries, the quality of consumer-oriented agricultural products and developed countries are more susceptible to domestic and international demand. After substituting indicators for demand variables and quality variables and considering endogenous issues, the above results are still robust.

Keywords: Domestic Demand, International Demand, Quality of Agricultural Exports, Synergistic Effect

1. Introduction

Since joining the World Trade Organization, China's agricultural exports have continued to expand, from US\$18.04 billion in 2002 to US\$79.1 billion in 2019, with an average annual growth rate of 9.08%. However, the export quality has not been continuously improved, and the growth momentum is still in the transition period from "quantity-driven" to "quality-driven"

(Dong & Liu, 2019). In developed markets, China's agricultural exports are frequently detained, rejected and notified on the grounds of substandard quality. The quality problem has become the main reason for the shrinking market of Chinese agricultural products in developed countries. According to the AQSIIQ survey, China's agricultural product exports cause a loss of about 10 billion US dollars each year due to quality problems. Therefore, improving the quality of agricultural products has become a major challenge for the sustainable development of China's agriculture. In 2016, the No. 1 document of the Central Committee proposed the reform of agricultural supply side, taking improving the quality of agricultural products as the main direction. However, the impact of demand factors on the quality of traded products has not been the focus of attention at the policy maker. In the context of economic globalization and the decline of factor flow costs, the role of traditional comparative advantages such as resource endowment in promoting export has been declining, while the incremental benefits brought about by market integration and the expansion of demand have gradually become an important factor in export growth. With the help of domestic and international market demand, manufacturers have improved the quality of traded products while achieving economies of scale (Krugman, 1980; Bojnec&Ferto, 2017).

As more and more consumers begin to pay attention to the ingredients, safety and nutrition of agricultural products, agricultural products are in a transition period from homogeneous products to differentiated products, and differentiated products are the key to achieving local market effects (Yu, 2005; Sexton, 2013). As a developing country with the largest population and the larger economy in the world, China has a huge domestic demand, which provides firms with a driving force for sustainable development, investment and innovation. Based on the development strategy of domestic demand, firms give priority to cultivating local demand through the redistribution of production resources to achieve economies of scale, and integrate advanced production factors at home and abroad to promote the development of the industry (Chen &Chu, 2013). At the same time, the competitiveness of export products will be affected not only by domestic demand, but also interfered by external market (Eaton et al., 2011; Li & Gong, 2019). The vast international market not only strengthens the export demand of products, but also the technical standards and quality control requirements from abroad help agricultural export enterprises to better connect with the more mature and competitive international market. It has promoted the deepening of the division of labor among manufacturers and the development of new products, forcing firms to improve the quality of agricultural products and improve the export competitiveness of products through "learning by doing" (Armenter&Koren, 2015). In 2020, the central government of China proposed for the first time to give full play to the advantages of the country's super-large market and the potential of domestic demand, and to

build a new development pattern with the cycle of domestic market as the main body and dual cycles of the domestic and international market promoting each other. Therefore, it is necessary to analyze the mechanism of domestic and international demand on the quality of exported agricultural products from the demand side.

The existing literature studies the impact of demand on international trade, mainly from exporting countries, and the research on domestic demand is mainly carried out from the two dimensions of demand scale and demand structure (Mao & Li, 2015). Due to the proximity of regions, domestic manufacturers are more likely to obtain economies of scale from the huge local demand. While producing according to local demand preferences, firms will also export surplus products abroad (Hummels & Klenow, 2005). The more similar the demand structure between domestic and abroad, the greater the possibility of trade will happen, because they have similar demand preferences (Linder, 1961), And only when the demand scale of both sides of the trade is similar, the demand structure can better exert its own local market effect (Feng, 2013). The export model that deviates from the scale and structure of local demand, after relying on the advantages of factors to create an "export miracle", will suffer from low export quality and deep dependence on product price competition for a long time (Yi et al., 2017).

There are relatively few literatures on the impact of demand from the international demand. The existing literature mainly starts with the uncertainty and scale of international demand (Aghion et al., 2018; Zhong & Yu, 2020). They believe that when export firms are exposed to an environment with more complex demand and greater uncertainty, improving the quality of export products and optimizing product structure are important measures for them to prevent from and resolve external risks (Mayer et al., 2014; He & Chen, 2019). The increase in international demand, on the one hand, reduces firms' marginal cost of production, enables them to use more production resources for innovation investment, optimizes the internal resource allocation, and improves the innovation return of export firms (Zhu & Song, 2019); on the other hand, the expansion of international demand scale will attract more firms to enter, leading to intensified competition among them, which stimulates firms' innovation motivation and technological upgrading behavior, so that firms can maintain or occupy a larger market share (Acemoglu & Linn, 2004; Coelli et al., 2020).

The existing literature provides a good theoretical and empirical basis for the further research. Unfortunately, most of the literatures start from a single perspective of domestic demand or international demand, and the existing literatures mainly concern for manufactured products. In view of this, this paper, combining domestic demand and international demand, focus on the agricultural products, analyze theoretically the impact mechanism of domestic and international

demand on the quality of exported agricultural products, then adopt the data from world's top 50 agricultural exporting countries (or regions) to test the assumption.

2. Theoretical Mechanisms and Research Assumptions

Yu (2005) improved Krugman's model and found that there is a reverse local market effect for homogeneous products, while a positive local market effect exists for differentiated products, so he believes that the existence of local market effects depends on differentiated products. For a long time, the agricultural product market has been traditionally regarded as a perfectly competitive market for the production of homogeneous products. However, as the income level of consumers increases, more and more "middle class" consumers have begun to pay attention to the quality and safety of agricultural products. The quality of agricultural products has become an important factor in the competitiveness of agricultural products (Dong & Qiu, 2014).

Export is a process of gradually cultivating dynamic comparative advantages with the help of domestic demand, and it is the basis for local export firms to move up the value chain. Firstly, the expansion of the domestic market will promote the division of agricultural production, and meet consumers' increasingly differentiated choices while improving yield and production efficiency (Luo, 2017). With the development of technology, the separability of each link of agricultural production is gradually enhanced, and the processes of seedling raising, transplanting and harvesting can all exist as independent intermediate products. Secondly, consumers have diversified demands for agricultural products due to the increase in their income levels, and the classification of agricultural products in the market is becoming more and more specialized and refined. The high-income people have a strong willingness to pay for high-quality products. With the expansion of their scale, it is more profitable for manufacturers to produce high-quality products. Export itself is an extension of domestic production. Therefore, this local market effect promotes the upgrading of the quality of exported agricultural products. Based on the above analysis, the research hypothesis 1 of this paper is formed: The expansion of the domestic demand scale can promote the improvement of the export quality of agricultural products.

International demand mainly affects the quality of export products through three mechanisms: tilt effect, competition effect and innovation effect. The tilt effect means that the expansion of international demand reduces the critical marginal cost of the export market, but it increases the degree of competition in the market. In order to maintain export competitiveness, firms will tilt more resources into core products, optimize the resource allocation, and improve the competitiveness and the added value of products (Mayer et al., 2020). The competition effect

refers to the expansion of international demand, which helps agricultural exporters to connect with the more mature and competitive international market, and provides learning opportunities for local firms. Therefore, firms improve the quality of agricultural products and enhance their export competitiveness through “learning by doing” (Armenter, 2015). The innovation effect refers to the expansion of international demand scale, which increases the return of firms innovation, so that more resources will be used for innovative investment, which improve the export quality of agricultural products, effectively narrowing the technological distance between the export firms and the world's frontiers, and accelerating technological catch-up (Zhu & Song, 2019). Based on the above three conduction paths, the research hypothesis 2 of this paper is formed: The expansion of the international market demand scale can promote the improvement of the export quality of agricultural products.

3. Model and Data

3.1 Model Settings

In order to verify above assumptions, this paper refers to the method of Han et al. (2020) to establish a cross-country panel data model. The benchmark econometric model is as follows:

$$qua_{ijht} = lndm_{it} + lnfm_{it} + X_{ijt} + \mu_i + \mu_j + \mu_h + \mu_t + \varepsilon_{ijht} \quad (1)$$

Where subscript i 、 j 、 h 、 t represent the exporting country, destination country, product and time respectively; qua_{ijht} is the explained variable, which is used to represent the quality of exported agricultural products; dm_{it} indicates exporting country's domestic demand; fm_{it} indicates exporting country's international demand; X_{ijt} is the control variable, which is used to control other factors that affect the quality of exported agricultural products; μ_i 、 μ_j 、 μ_h 、 μ_t represent the exporting country, the destination country, product and time fixed effects respectively; ε_{ijht} is the random disturbance term.

3.2 Variable Description

This paper refers to Khandelwal (2013), measure the quality of HS4 quantile products exported by the world top 50 exporting countries. The product quality is introduced into the consumer utility function to obtain the demand function of the products exported by the exporting country to the destination country in the year t :

$$q_{ijht} = P_{ijht}^{-\sigma} \lambda_{ijht}^{\sigma-1} E_{jt} P_{jt}^{-1} \quad (2)$$

Where λ_{ijht} and q_{ijht} represent the quality and quantity of export products; σ represent the elasticity of substitution between different products. Take the logarithm of both sides of equation (2) to obtain the regression equation for calculating product-level quality:

$$\ln q_{ijht} = -\sigma \ln P_{ijht} + \ln E_{jt} - \ln P_{jt} + \varepsilon_{ijht} \quad (3)$$

Where $\xi_{jt} = \ln E_{jt} - \ln P_{jt}$ is the destination country-year dummy variable, which is used to control the difference between the countries and time. The product fixed effect ξ_h is added to control the difference between products; $\varepsilon_{ijht} = (\sigma - 1) \ln \lambda_{ijht}$ is the quality of the export product, which cannot be explained by the export price. So the quality expression of the product is:

$\delta_{ijht} = \ln \hat{\lambda}_{ijht} = \frac{\hat{\varepsilon}_{ijht}}{\sigma - 1}$. Because the absolute value of export product quality on different HS4 quantiles is not comparable, so we standardize product quality:

$$qua_{ijht} = \frac{(\delta_{ijht} - \min(\delta_{ht}))}{(\max(\delta_{ht}) - \min(\delta_{ht}))} \quad (4)$$

Where $\max(\delta_{ht})$ and $\min(\delta_{ht})$ represent the highest and lowest quality of export products.

This paper refers to Yu&Wang (2018), and uses the total GDP to represent the domestic demand for agricultural products, and refers to Han& Wang (2017) to estimate the international demand using formula (5):

$$fm_{it} = \sum_j \frac{dm_{jt}}{dist_{ij} \cdot t_{ijht}} \quad (5)$$

Where dm_{jt} represents the domestic demand; $dist_{ij}$ represents the distance between the exporting country and the destination country. t_{ijht} indicates the tariff.

This paper selects the following control variables: $pgdp_{jt}$ is used to control the impact of the income level of the importing country; $open_{it}$ measured by the proportion of the exporting country's import and export value in total GDP; $area_{it}$ is the per capita arable land of the

exporting country; $dist_{ijt}$ is used to control the impact of the transportation cost on the quality of export products. ex_{ijt} is used to control the impact of trade costs and economic instability on the quality of export products.

3.3 Data Sources

This paper selects the trade data of the world's top 50 agricultural exporting countries (or regions) from 2002 to 2017. The export value of agricultural products in these countries (or regions) exceeds 90% of the world total export value of agricultural products, and there are 167 export destination countries, covering most of the countries in the world.

The HS4 quantile import and export agricultural trade data involved in this article are from the CEPII-BACI global trade database (HS92 version, 2002-2017). The agricultural output value and distance between countries in the world are from the CEPII database. Per capita GDP, per capita arable land and exchange rate are from the WDI database. The world oil price data is from the US Energy Information Administration. The tariff data is from the WITS database. The descriptive statistics of each variable are shown in Table 1:

Table 1: Variable Descriptive Statistical Analysis

Variable	Mean	Median	Standard Deviation	Min	Max	Sample Size
qua_{ijht}	0.507	0.503	0.221	0	1	1655504
$lndm_{it}$	27.58	27.53	1.39	23.24	30.60	1655504
$lnfm_{it}$	30.49	29.85	2.82	23.11	41.56	1655504
$lnpgdp_{jt}$	9.59	10.09	1.32	4.72	11.54	1655504
$lnarea_{it}$	1.49	1.16	1.19	1	11.39	1655504
$open_{it}$	0.61	0.45	0.48	0.07	5.06	1655504
$lndist_{it}$	12.16	12.30	1.19	7.31	14.61	1655504
$lnex_{ijt}$	-0.533	-0.164	3.340	-10.70	11.35	1655504

Data source: Stata15

4. Empirical Analysis

4.1 Benchmark Regression Analysis

Table 2 reports the OLS regression results using multiple fixed effects, in which column (1) only considers the core explanatory variables, and columns (2) and (3) are the regression results after adding country-level and cost-level control variables.

The results show that the regression coefficients of domestic and international demand are both positive and significant at the 1% statistical level, indicating that both domestic and abroad demand can significantly promote the quality upgrading of exported agricultural products, which verifies the hypotheses 1 and hypotheses 2 of this paper. Comparing the regression coefficients of domestic and abroad demand, it is found that domestic demand has a stronger role in promoting the quality of exported agricultural products. Firstly, with the increase of domestic income, consumers will prefer to consume high-quality, high-nutrition, safer and more environmentally friendly agricultural products, while manufacturers can accurately receive signals due to the proximity of the domestic market. In response to demand signals, the quality of agricultural products will be improved in a targeted manner. While for external demand, due to the lag and deviation of information transmission, enterprises are full of hesitation in production and miss the opportunity to meet the needs of the international market. Secondly, the external demand-driven growth model will rely on factors advantages create scale expansion, but it is easy to separate the matching relationship between domestic demand and supply structure, making exports fall into the dilemma of low-level structure and extensive growth (Yi et al., 2017). The export model rooted in domestic demand is the source of power to maintain economic growth.

The coefficient of $\ln pgdp_{it}$ is significantly positive, indicating that if the income level of the exporting country improved, and the demand for high-quality products would expanded, which in turn has promoted the upgrading of export quality. The coefficient of $\ln pgdp_{jt}$ is significantly positive, indicating that the increase in the income level of the destination country will make the exporting firms to improve the quality of agricultural products. The coefficient of $\ln area_{it}$ is significantly positive, indicating that the country with more per capita arable land has more factors endowment. When others keep constant, the country with the comparative advantage of resource endowment will export higher quality of the agricultural products (Liu & Zhao Bao, 2019). The coefficient of $open_{it}$ is significantly positive, indicating that the exporting country's openness has a positive impact on the quality upgrade of exported agricultural products because firms benefit from the technological spillover of multinational companies (Chen & Xu, 2016). In addition, the coefficient of $\ln dist_{it}$ and $\ln ex_{ijt}$ are significantly positive as expected.

Table 2: Benchmark regression

	(1)	(2)	(3)
$lndm_{it}$	0.1702*** (0.0088)	0.1086*** (0.0088)	0.1087*** (0.0088)
$lnfm_{it}$	0.0123*** (0.0010)	0.0071*** (0.0010)	0.0072*** (0.0011)
$lnpgdp_{jt}$		0.5543*** (0.0092)	0.5544*** (0.0092)
$lnarea_{it}$		0.1026*** (0.0063)	0.1023*** (0.0063)
$open_{it}$		0.1310*** (0.0126)	0.1314*** (0.0126)
$lnex_{ijt}$			0.0106*** (0.0033)
$lndist_{it}$			0.0010** (0.0005)
$cons$	-4.2269*** (0.2360)	-7.8857*** (0.2427)	-7.9141*** (0.2432)
Country Fixed Effects	Controlled	Controlled	Controlled
Product Fixed Effects	Controlled	Controlled	Controlled
TimeFixed Effects	Controlled	Controlled	Controlled
R^2	0.1229	0.1351	0.1351
N	1655504	1655504	1655504

Note: Robust standard deviations are in brackets; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

4.2 Robustness Check

In order to prove the reliability of the benchmark regression, this paper will mainly consider the robustness of the model from the perspective of index transformation and endogeneity. At the level of index transformation, the local market is measured by the country's total agricultural output value plus agricultural import value minus export value of agricultural product or per capita GDP, and the above formula is used to calculate the abroad demand. At the same time, the unstandardized export quality is used for robustness testing.

Since the quality change of export products will affect the domestic income structure, and then affect the domestic demand (Verhoogen, 2008). At the same time, considering that external demand may be affected by non-observed factors, resulting in endogenous problems. Therefore, the paper refers to Liu et al. (2019) to control the possible endogeneity problems. The paper replaces both domestic demand and external demand with the observed values of the lag period for regression. As an instrumental variable, the core explanatory variables are estimated by two-

stage least squares (2SLS). Due to the stickiness and continuity of consumption habits and production habits, the quality of agricultural products in the current year is likely to be affected by previous years. Therefore, the quality of agricultural products in the lag period is introduced into the model as an explanatory variable, and the dynamic panel generalized moment estimation (GMM) is used.

Table 3: Robust regression for substitution variables

	(1) Demand Replacement	(2) Demand Replacement	(3) QualityReplacement	(4) Explanatory variables one period behind	(5) instrumental variable	(6) Explained variable one period behind
<i>L.qua_{ijht}</i>						0.0043* (0.0022)
<i>lndm_{it}</i>	0.0907*** (0.0069)	0.1260*** (0.0093)	0.0149*** (0.0010)	0.0065*** (0.0010)	0.1086*** (0.0015)	0.0372*** (0.0015)
<i>lnfm_{it}</i>	0.0770*** (0.0069)	0.0075*** (0.0011)	0.0015*** (0.0001)	0.0008*** (0.0001)	0.0090*** (0.0012)	0.0187*** (0.0008)
<i>lnpgdp_{jt}</i>	0.5547*** (0.0092)	0.5531*** (0.0092)	0.0549*** (0.0010)	0.0549*** (0.0011)	0.2505*** (0.0016)	0.0799*** (0.0014)
<i>lnarea_{it}</i>	0.0975*** (0.0063)	0.1007*** (0.0063)	0.0112*** (0.0007)	0.0099*** (0.0008)	0.0611*** (0.0018)	0.0043*** (0.0010)
<i>open_{it}</i>	0.1085*** (0.0128)	0.1282*** (0.0126)	0.0187*** (0.0015)	0.0220*** (0.0016)	0.1791*** (0.0045)	0.0150*** (0.0021)
<i>lnex_{ijt}</i>	0.0102*** (0.0033)	0.0108*** (0.0033)	0.0016*** (0.0004)	0.0016*** (0.0004)	0.0312*** (0.0009)	0.0015*** (0.0004)
<i>lndist_{it}</i>	0.0010** (0.0005)	0.0013* (0.0007)	0.0002*** (0.0001)	0.0000 (0.0001)	0.0776*** (0.0017)	0.0002*** (0.0001)
<i>cons</i>	-7.5558*** (0.2044)	-6.2697*** (0.1144)	-0.4494*** (0.0277)	-0.2294*** (0.0277)	-4.3437*** (0.0510)	-0.7928*** (0.0427)
<i>LMStatistics</i>					3.0e+05***	
<i>FStatistics</i>					1.7e+06	
fixed effects	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
<i>R²</i>	0.1352	0.1352	0.1173	0.0943	0.0321	
<i>N</i>	1655504	1655504	1655504	1552035	1552035	1552035

Note: Robust standard deviations are in brackets; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

After the index transformation (columns 1-3 in Table 3) and considering endogeneity (columns 4-6 in Table 3), both domestic and foreign demand can significantly promote the upgrading of the quality of exported agricultural products. Compared with external demand, the incentive effect of domestic demand on export quality is stronger. And the LM and F statistic reject the null hypothesis that the instrumental variables are unidentifiable and weakly identifiable,

indicating that there is a strong correlation between the instrumental variables and the potential endogenous variables. The regression results in column (6) of Table 3 show that the quality of products consumed in the previous period has a positive effect on the quality of the current period.

4.3 Heterogeneity Analysis

According to USDA’s classification of agricultural products, this paper divides agricultural products into bulk agricultural products, intermediate agricultural products, consumer-oriented agricultural products and other related agricultural products. There are differences in response to changes in market demand and product transformation. Therefore, this paper further conducts product and country-level heterogeneity tests on the full sample industry.

Table 4: Heterogeneity analysis by product and country

	(1) bulk agricultural products	(2) Intermediate agricultural products	(3) consumer orientation	(4) other agricultural products	(5) developed countries	(6) developing country
<i>lndm_{it}</i>	0.0514*** (0.0157)	0.0226*** (0.0020)	0.0873*** (0.0107)	0.0602** (0.0295)	0.2110*** (0.0171)	0.1530*** (0.0182)
<i>lnfm_{it}</i>	0.0057*** (0.0019)	0.0060*** (0.0023)	0.0095*** (0.0013)	0.0092*** (0.0033)	0.0104*** (0.0021)	0.0052*** (0.0015)
<i>lnpgdp_{jt}</i>	0.4373*** (0.0397)	0.3073*** (0.0199)	0.6447*** (0.0113)	0.6582*** (0.0315)	0.5511*** (0.0164)	0.5917*** (0.0111)
<i>lnarea_{it}</i>	0.0892*** (0.0251)	0.1022*** (0.0136)	0.1075*** (0.0077)	0.0742*** (0.0236)	1.0678*** (0.0758)	0.0680*** (0.0066)
<i>open_{it}</i>	0.1591*** (0.0566)	0.0601** (0.0280)	0.1285*** (0.0154)	0.2225*** (0.0395)	0.1414*** (0.0186)	0.1422*** (0.0163)
<i>lnex_{ijt}</i>	-0.0151 (0.0129)	0.0209*** (0.0080)	0.0080** (0.0039)	0.0308*** (0.0110)	0.0063 (0.0039)	0.0177*** (0.0059)
<i>lndist_{it}</i>	-0.0026 (0.0035)	0.0028* (0.0016)	0.0007 (0.0009)	0.0021 (0.0024)	0.0032* (0.0017)	0.0005 (0.0008)
<i>cons</i>	-4.6678*** (0.9842)	-8.8732*** (0.5605)	-8.2024*** (0.2923)	-7.8018*** (0.8146)	-8.6216*** (0.4590)	-1.0273** (0.4996)
Fixed Effects	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
<i>R</i> ²	0.0539	0.0904	0.1748	0.1345	0.1189	0.1619
<i>N</i>	115632	386688	1000992	152192	1131412	524092

Note: Robust standard deviations are in brackets; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

It can be seen from the columns (1)-(4) of Table 4 that both domestic and abroad demand can significantly promote the export quality of various agricultural products. Compared with bulk,

intermediate and other agricultural products, consumer-oriented agricultural products have the closest relationship with consumers' needs; firms can intuitively feel the changes in buyers' needs through changes in their sales volume, and consumers' demands for agricultural products are transmitted to the obstacles on the production side are smaller, so firms will optimize the allocation of production factors to meet market demand. Therefore, the quality of consumer-oriented agricultural products is more affected by domestic and foreign demand.

From the columns (5)-(6) of Table 4, it can be seen that production enterprises in developed countries are better at utilizing external market signals than developing countries. Due to the improvement of market data in developed countries, manufacturers can often accurately predict changes in demand, and rely on their developed agricultural mechanization to manufacture products that meet market demand and achieve supply and demand matching; while developing countries often suffer from outdated agricultural technology and facing the dilemma of dislocation of supply and demand due to crude market data.

5. Conclusion

Currently, China is at a critical stage of transformation and upgrading of its economic structure and high-quality development. How to transform the dividend of domestic demand and the competition of external market into the competitive advantage of agricultural export has become a hot issue concerned by the government and academia. This paper analyzes the impact of domestic and abroad demand on the quality of exported agricultural products. The results show that the demand scale for high-quality agricultural products in a country's domestic market will positively promote the upgrading of the quality of exported agricultural products, and foreign demand also stimulate the quality upgrading of agricultural products.

According to the conclusion, it's necessary to promote the reform of the income distribution system to reduce the income gap. Moreover, in the post-epidemic era, even though the rising noise of "de-globalization" in the world economy, China should unswervingly deepen reform and opening up, actively participate in international economic cooperation, and strengthen the role of the external market in leading to the quality of agricultural products.

References

[1] Dong Yinguo, Liu Xuemei. SPS measures, product diversification and agricultural product quality upgrade: [1] Dong Yinguo, Liu Xuemei. SPS measures, product diversification and agricultural product quality upgrade: Based on the theory of multi-product export enterprises [J]. World Economic Research, 2019(12): 62-76+132.

- [2] Krugman P. Scale Economies, Product Differentiation, and the Pattern of Trade[J]. *American Economic Review*, 1980, 70(5):950-959.
- [3] Bojnec S, Ferto I. Quality Upgrades of EU Agri-Food Exports[J]. *Journal of Agricultural Economics*, 2017, 68(1): 269-279.
- [4] Yu Zhihao. Trade, market size, and industrial structure: revisiting the home-market effect[J]. *Canadian Journal of Economics*, 2005,(1):255-272.
- [5] Sexton R. Market Power, Misconceptions and Modern Agricultural Markets *American Journal of Agricultural Markets*[J]. *American Journal of Agricultural Economics*, 2013,95(2):209-219.
- [6] Chen Qifei, Chu Mingqin. Expanding Domestic Demand, Rising Wages and Exports: Panel Data from 228 Chinese Cities [J]. *Economic Theory and Economic Management*, 2013(11): 18-29.
- [7] Eaton B, Kortum S, Kramarz F. An Anatomy of International Trade: Evidence from French Firms[J]. *Econometrica*, 2011, 79(5):1453-1498.
- [8] Li Jieyu, Gong Jiamei. Uncertainty of external demand, export network and export behavior of enterprises [J]. *International Economic and Trade Exploration*, 2019, 35(11): 4-18.
- [9] Armenter R, Koren M. Economies of Scale and the Size of Exporters[J]. *Journal of the European Economic Association*, 2015(3): 482-511.
- [10] Mao Yanhua, Li Jingzi. Research on the local market effect of China's service industry exports [J]. *Economic Research*, 2015, 50(08): 98-113.
- [11] Hummels D, Klenow P J. The Variety and Quality of a Nation's Exports[J]. *The American Economic Review*, 2005, 95(3): 704-723.
- [12] Linder S B. An Essay on Trade and Transformation[J]. *Journal of Political Economy*, 1961(1):171-172.
- [13] Feng Di. Research on local market effect based on non-similar preference [D]. Hunan University, 2013.
- [14] Yi Xianzhong, Bao Qun, Gao Lingyun, Zhang Yabin. Structural divergence between export and domestic demand: causes and effects [J]. *Economic Research*, 2017, 52(07): 79-93.

- [15] Aghion P, Bergeaud A, Lequien M. The Impact of Exports on Innovation: Theory and Evidence[R]. NBER Working Paper, 2018.
- [16] Zhong Tenglong, Yu Miaojie. External Demand, Competitive Strategy and Export Behavior of Multi-Product Enterprises [J]. *China Industrial Economy*, 2020(10): 119-137.
- [17] Mayer T, Melitz M J, Ottaviano G I P. Market Size, Competition, and the Product Mix of Exporters[J]. *American Economic Review*, 2014, 104(2):495:536.
- [18] He Canfei, Chen Tao. External demand shock, related diversification and export resilience [J]. *China Industrial Economy*, 2019(07): 61-80.
- [19] Zhu Xiaoming, Song Huasheng. Destination country demand, enterprise innovation capability and export quality [J]. *World Economic Research*, 2019(07):13-28+134
- [20] Acemoglu D, Linn J. Market size in innovation: theory and evidence from the pharmaceutical industry[J]. *The Quarterly Journal of Economics*, 2004,119(3):1049-1090.
- [21] Coelli F, Moxnes A, Ulltveitmo K H. Better, faster, stronger: Global innovation and trade liberalization[J]. *The Review of Economics and Statistics*, 2020, 102(2) :1-42.
- [22] Dong Yinguo, QiuHeye. Analysis of China's Pork Competitiveness Based on Traceability, Transparency and Guarantee System [J]. *Agricultural Economic Issues*, 2014, 35(02): 17-25
- [23] Luo Biliang. On the scale of service management—from vertical division of labor to horizontal division of labor and contiguous specialization [J]. *China Rural Economy*, 2017(11): 2-16.
- [24] Mayer T, Melitz M J, Ottaviano G I P. Product mix and firm productivity responses to trade competition[J]. *The Review of Economics and Statistics*, 2020, 102(3):1-59.
- [25] Han Feng, Zhuang Zongwu, Li Dan. Has the advantage of the large domestic market promoted the rise in the value of China's manufacturing exports? [J]. *Finance and Economics Research*, 2020, 46(10): 4-18.
- [26] Khandelwal A, Schott P K, Wei S J. Trade Liberalization and Embedded Institutional Reform: Evidence from Chinese Exporters [J]. *American Economic Review*, 2013, 103(6):2169-2195.

- [27] Yu Meici, Wang Zengxu. Research on the Local Market Effect of China's Agricultural Products Exports—Also on the Demand-Oriented Agricultural Supply-Side Reform [J]. *Journal of Huazhong Agricultural University (Social Science Edition)*, 2018(03):18-26 +153.
- [28] Han Feng, Wang Yejiang. Market Potential, Government Intervention and Population Urbanization [J]. *China Population Science*, 2017(01):59-70+127.
- [29] Li Zhi. Research on the Coordination Mechanism of Internal and External Demand for China's Economic Development—Measurement Benchmarks and Coordinated Policies [J]. *Price Theory and Practice*, 2014(12):15-19.
- [30] Liu Yan, Zhao Banghong. The influence of the export quality of agricultural products on the upgrading of the agricultural industry [J]. *Agricultural Technology and Economics*, 2019(08): 115-132.
- [31] Chen Fenglong, Xu Kangning. The quality ladder of China's export products and its influencing factors [J]. *International Trade Issues*, 2016(10):15-25.
- [32] Verhoogen E A. Trade, Quality Upgrading, and Wage Inequality in the Mexican Manufacturing Sector. *The Quarterly Journal of Economics*, 2008, 123(2):489–530.
- [33] Liu Yue, Chen Yakun, Li Bing. The Influence of Income Inequality on Consumption Upgrade: A Cross-Country Analysis Based on Luxury Consumption [J]. *Economic Science*, 2019(06): 30-42.