

The Relationship between RMB Exchange Rate and Sino - US Trade Surplus

-- Based on the Empirical Study from 2006 to 2015

EVA ZHIRONG FAN

The Chinese University of Hong Kong, P.O. Box 1200, Shatin, New Territories, Hong Kong SAR, China

evangeliner827@gmail.com

Abstract

Globalization accelerated in the 21st century. China's economy and trade are growing. China's biggest commercial partner is the US, and Sino-American commerce is booming. China's trade surplus with the U.S. began in 1993 and increased gradually. The US keeps pressuring China to raise its currency to alleviate Sino-American trade imbalances. RMB exchange rate is causing Sino-American trade tensions. In this study, regression analysis is performed utilizing the Bickerdike-Robinson-Metzler Condition. The RMB's appreciation couldn't narrow the gap between China and the U.S. Export limitations, global industrial restructuring, and other factors contribute to the Sino-American trade gap. The China-US trade deficit is caused by export restrictions, global industrial restructuring, and other causes. This paper recommends policies based on an empirical assessment of China and the US. This essay suggests China speed exchange rate reform and take specific actions in reaction to U.S. manipulation. China should also boost domestic demand. To reduce the trade deficit with China and create a win-win situation, the US must remove limitations on Chinese tech exports.

Keywords

RMB Exchange Rate; Sino - US Trade Surplus; Elasticity Analysis Method; Exchange Rate System.

1. Introduction

1.1. Background and Significance of the Research

Several US academics and politicians say China's currency manipulation has widened the US-China trade gap. The US has pushed China to raise the RMB exchange rate. The trade gap between the U.S. and China is not just attributable to the low RMB exchange rate, but also to export constraints on high-tech U.S. exports to China. Less than a quarter of the US's century trade balance was with China, but in 1997 it was 27%. China's century trade balance has deteriorated since 1997. The US has politicized the trade surplus between the two countries, causing economic conflict in the new millennium. The US manufacturing sector claimed that RMB exchange rate manipulation led to cheaper Chinese exports to the US, dominating the US domestic market and destroying its markets and interests. The low RMB exchange rate has allowed Chinese goods to be dumped in the U.S., displacing American jobs, according to U.S. labor organizations.

A depreciation of the local currency is generally positive for exports, as the lower exchange rate leads to a relative decline in the price of goods supplied to international markets, boosting their competitiveness. The decrease in the home currency makes imported items less competitive,

discouraging imports. As evidenced by the data, however, the RMB has appreciated with the growing U.S.-China trade deficit. The RMB's appreciation doesn't fix the US-China trade deficit. This article examines whether and how RMB fluctuations affect US-China commerce. Other variables than the RMB exchange rate can affect the US-China trade balance. This study presents strategies to reduce exchange rate swings in China's context.

1.2. Research Framework

The first chapter is an introduction. The relationship between exchange rates and a nation's balance of payments is examined through a review of the relevant research. Chapter 2 provides the theoretical foundation. Chapter 3 details the evolution of the RMB exchange rate since the establishment of the PRC. Through reform points, it also presents a qualitative study of the foreign trade environment at the time. Based on monthly economic data from 2006 to 2015, Chapter 4 empirically analyzes the influence of the RMB exchange rate on the trade balance between China and the United States by developing a regression model and evaluating the Bickendyk-Robinson-Metzler condition. Chapter 5 expands on Chapter 4 by discussing additional factors that affect the trade balance between the United States and China, such as the change in industrial structure between the two nations. Based on the conclusions of the empirical investigation, Chapter 6 offers policy recommendations. theoretical underpinnings:

2. Theoretical Premises

2.1. Elasticity Analysis

Alfred Marshall and Abbé Lerner introduced elasticity analysis in the late 1800s. Due to its restricted application, J. Robinson and L. Metzler extended the idea in the first half of the 20th century. J. Robinson and L. Metzler enhanced elasticity analysis' requirements and applicability in the early 1900s. Alfred Marshall devised the doctrine of elasticity, which studied the relationship between currency depreciation and the balance of payments in terms of supply and demand elasticity, and introduced the concept of "elasticity of demand for imports and exports." If a country's currency value declines, it may boost domestic exports while discouraging imports, and vice versa. A change in currency value doesn't necessarily effect the BOP. With World War I and the gradual weakening of the gold standard, the elasticity analysis approach is based on two main directions: first, the elasticity required for a lower exchange rate of the country's currency to reduce the trade balance, and second, the utility of a lower exchange rate price on the country's foreign trade, examining whether and to what extent a change in a country's currency exchange rate is useful. Marshall-Lerner and Bickerdike-Robinson-Metzler are key elasticity conditions. The Robinson-Metzler Condition is underlined.

2.2. Meaning and Application of the Marshall-Lerner Condition

If the Metzler condition is the apex of the elasticity analysis pyramid, then the Marshall-Lerner condition (henceforth referred to as the Lerner condition) must be its foundation. If the absolute value of the sum of the elasticities of demand for a country's externally traded goods is greater than one, the country's foreign trade balance can be improved if the currency exchange rate is lowered, assuming that the supply of the country's externally traded goods reacts and is sensitive to price fluctuations, i.e. if the elasticities tend to be infinite. If the exchange rate is decreased, the country's external trade balance will be much improved. The following formula expresses this:

$$C_x + C_m > 1$$

(C_x, C_m) represents the price sensitivity of export demand and import demand in the event of a currency devaluation. If this condition is met, the devaluation of a country's currency will have a substantial effect on its external balance, and the two sensitivity measures can be described

independently in terms of demand elasticity. Greater is the nation's international trade surplus the further the sum of the two values is from 1. In other words, if the country's imports and exports are sufficiently sensitive to the real exchange rate, i.e. demand elasticity, a decrease in the national currency's exchange rate can successfully improve the country's balance of payments. If the Lerner condition is to be implemented, the price of the nation's international trade must be more sensitive, all else being equal. Consequently, the Lerner criterion's relevance to international trade studies is highly constrained.

2.3. Meaning and Application of the Bickendyk-Robinson-Metzler Condition

In the 1930s, economists Robinson and Metzler waived the requirement that the elasticity of supply of a country's exports and imports for external transactions be infinite and instead established the premise that the price of exports was roughly equivalent to the price of imports before the price of money was lowered.

$$\frac{\eta_x \eta_m (e_x + e_m + 1) + e_x e_m (\eta_x + \eta_m - 1)}{(e_x + \eta_x)(e_m + \eta_m)} > 0$$

η_x and e_x denote the price elasticity of demand for exports and the price elasticity of supply for exports, respectively, and η_m and e_m denote the price elasticity of demand for imports and the price elasticity of supply for imports, respectively, for a country with a depreciating currency. The above inequalities are an important part of the elasticity analysis: the Bickendyk-Robinson-Metzler condition.

The Lerner condition and the Metzler condition each have their own characteristics, the former being a special case of the latter where e_x and e_m tend to infinity. Therefore, it can be inferred that the Metzler condition is more widely used in practice than the Lerner condition.

2.4. Key Theories Following the Collapse of the Bretton Woods System

During the Bretton Woods era, researchers studied the relationship between exchange rates, trade flows, and the trade balance. Not until the Bretton Woods system was replaced by the Jamaican system, when exchange rates changed but international trade goods and import prices stayed stable, did research focus on exchange rate transmission effects. Exchange rate transmission study focuses on why exchange rates don't transmit their effects well and experimentally examining the extent and level of transmission. The exchange rate is converted into refined price level indicators. Broad price level indicators with exchange rate transmission impacts aren't included. In actuality, the traditional PPP theory is often inaccurate, the exchange rate swings owing to market segmentation and other external factors, and the exchange rate can only provide a partial exchange rate transmission impact, which is not fully transmitted to price level indicators. If the exchange rate transmission effect is fully exploited, the price elasticity relative to currency value changes is 1; if it isn't, it's between 0 and 1.

2.5. Literature Review

Miles (1979) utilizes a simplified model and an econometric analysis of currency exchange rates and international trade data to show that currency devaluation does not enhance a country's trade balance. Obstfeld and Rogoff (1996) show that exchange rate transmission effects are sufficient when prices are fixed in the producer's currency by analyzing US-Japan trade data. Betts and Devereux (2001) examine how the price of one country's currency expressed in other countries' currencies fluctuates with the macroeconomy in the case of incomplete exchange rate transmission effects and deviations from the law of one price. Unlike Obstfeld and Rogoff's study, in which the pricing model is constructed as "market-dependent pricing," price viscosity is a significant component in inefficient exchange rate transmission. Meade says a country's current account differential can determine its exchange rate if it has a well-developed economy,

financial system, market system, and flexible exchange rate mechanism (1998). Meade contends that currency movements have a J-curve influence on a nation's balance of payments. Paul Krugman (1990) collected data on US import and export transactions and the exchange rate of the US dollar relative to the euro and the Japanese yen at corresponding points in time to investigate the relationship between US foreign exports and imports, especially to the Chinese economy. He demonstrated that there is a correlation between the real exchange rate of the US dollar and US foreign trade, and that the US exchange rate is coin-operated. Choudhry and Graham (1970) analyzed North American and Japanese bilateral trade data for the 30 years before 2008 to evaluate real exchange rates and the link between nominal exchange rates and real trade. An econometric analysis found that real and nominal exchange rates negatively affected exports. Li Yining (1998) collected data on China's exchange rate and foreign exports and imports in the 1970s and 1980s and calculated that the sum of China's domestic market demand elasticity and other countries' market demand elasticity was 0.6506, which was less than 1 and did not satisfy the Lerner condition. This shows that a rise in our currency's value won't always reduce our trade imbalance.

2.6. Historical Review of China's Exchange Rate System Reform

The Renminbi was born in December 1948, and the exchange rate was declared in Tianjin in January 1949. On 8 July 1950, China created a single RMB currency rate. In March 1979, the State Council approved the State Administration of Foreign Exchange (SAFE), marking the formal inception of the RMB exchange rate system. Since then, RMB exchange rates have been adjusted.

Table 1. Changes in China's exchange rate regime since 1949

Time	Renminbi Exchange Rate System	Description
1949 - end of 1952	Price comparison method (single float system)	National economic recovery period
1953-1972	Single fixed exchange rate system	Maintain US\$1 = RMB2.4618
1973-1980	A single fixed exchange rate system based on a "basket" of currencies	Bretton Woods collapse
1981-1984	Convergence of RMB public list price and internal trade settlement price	Reform and opening up
1985-1993	Foreign exchange transfer rates coexist with official rates	Further development of economic system reform
1994.1.1 - 2005	A single, managed floating exchange rate system based on market supply and demand	After the exchange rate convergence, China's foreign debt burden has increased and exchange rate risk has increased.
July 2005 Exchange Rate System Reform	Abolish the single dollar peg and move to a managed floating exchange rate system based on market supply and demand, adjusted by reference to a basket of currencies	Our exchange rate system is more market-oriented and dynamic

3. Analysis of the Empirical Relationship between the RMB Exchange Rate and the US-China Trade Balance

This chapter explores the connection between the nominal exchange rate of our national currency and China-U.S. trade balance under Metzler conditions, taking supply- and demand-side factors into account. This chapter uses a multi-vector regression analysis to discover, step-by-step, which factors are crucial to the trade balance between China and the U.S. We aim for a thorough, objective examination and policy recommendations.

3.1. Model Construction

Under Metzler's conditions, a change in a country's currency improves the trade balance if the total of input and output elasticity is greater than one. In fact, demand is determined by commodity prices excluding inflation, population income, and saving rates in both countries, while supply is affected by the size of the national economy and the cost per unit of labor. Regression equation: $G(C)$ is China's 1978 GDP and $G(A)$ is the US's 1978 GDP. S is the Chinese-American savings rate difference. A currency devaluation can reduce the external trade imbalance if a_{10} meets the BRM criteria.

3.2. Selection of Data

The period is from 2007 to 2016, with the annual US-China trade balance and the combined average price levels of all goods and services in China from the China Statistical Yearbook, and the average price levels and real GDP in the US from the President's Economic Report and the Statistical Abstract of the United States, respectively. IMF's World Economic Outlook compares US and China savings rates. Unit labor cost statistics are from China Economic Information Network and US Department of Commerce, BEA.

Table 2. Data on relevant variables

YEAR	D	e	P(C)	P(A)	G(C)	G(A)	h(c)	h(a)	s
2006	1442.37	797.18	471.0	203.325	219438.5	146138	11.06	68.7	47.197
2007	1632.86	760.4	493.6	211.630	270232.3	148737.5	10.91	68	49.016
2008	1710.24	694.51	522.7	213.113	319515.5	148303.75	11.04	67.5	47.050
2009	1433.42	683.1	519	217.202	349081.4	144187.5	11.54	66.7	44.986
2010	1811.88	676.95	536.1	220.866	413030.3	147838	11.44	66.3	45.879
2011	2023.24	645.88	565	227.671	489300.6	150205.75	12.25	67	43.452
2012	2188.79	631.25	579.7	231.767	540367.4	153546.25	13.12	66.8	42.135
2013	2160.64	619.32	594.8	234.819	595244.4	155833.25	15.63	67.7	43.931
2014	2370.01	614.28	606.7	236.118	643974.0	159616.5	15.97	67.5	44.074
2015	2614.05	622.84	615.2	238.257	689052.1	163715.62	16.26	66.8	42.874

3.3. Empirical Analysis

Using the data in the previous figure, a backward-looking linear regression was done in SPSS multivariate regression. First, the US-China trade balance was used as the dependent variable in a regression equation with all eight independent variables. Second, low-correlation dependent variables were deleted. Third, the best-fitting trade surplus regression model was obtained and analyzed. SPSS regressions, irrelevant component deletion, model construction.

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta				Lower Bound	Upper Bound
1	993.587	492.623			2.017	.293	-5265.776	7252.949
	4.278	8.926	.157		.479	.715	-109.139	117.695
	-223.232	39.040	-.846		-5.718	.110	-719.276	-327.212
	-6.085	7.501	-.157		-.911	.566	-161.394	89.233
	7.380	5.692	.682		1.293	.419	-64.967	79.686
	-34.065	8.270	-.930		-4.119	.152	-139.150	-29.020
	-18.020	18.569	-.913		-.970	.510	-253.957	217.918
	21.728	8.807	.4788		2.467	.245	-90.175	133.632
Ga	6.999	45.164	.161		.155	.902	-566.859	580.857

a. Dependent Variable: D

Figure 1. SPSS analysis results1

In Figure 1, the significance level is set to 0.05, however the sig values of all eight indicators are much higher than this, indicating that their regression coefficients are not significant. In the regression equation, the eight indicators may be multicollinear. This affects linear regressions with two or more independent variables. leading in incorrect regression coefficients Multicollinearity distorts and amplifies residual sum of squares. 3. leading many independent

variables to fail the significance test, resulting in a model with more independent variables than needed. Figure 2 shows SPSS's multiplicity diagnostic table following the regression analysis.

Collinearity Diagnostics^a

Model	Dimension	Condition Index	Variance Proportions									
			(Constant)	Pc	Pa	Ha	Hc	s	e	Gc	Ga	
1	1	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	38.627	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
	3	135.295	.00	.00	.00	.00	.10	.00	.01	.00	.00	.00
	4	327.999	.00	.08	.00	.04	.06	.03	.01	.00	.00	.00
	5	464.666	.00	.00	.00	.34	.00	.38	.00	.00	.00	.00
	6	609.605	.00	.02	.00	.33	.06	.26	.18	.02	.00	.00
	7	1446.033	.01	.03	.00	.15	.02	.33	.18	.16	.00	.00
	8	4128.008	.01	.04	.97	.00	.01	.00	.00	.32	.02	.00
	9	12679.987	.98	.83	.03	.13	.74	.00	.61	.49	.98	.00

a. Dependent Variable: D

Figure 2. SPSS generates multiplicity diagnostic tables

Figure 2 shows that 5, 6, 7, and 9 have covariance. To nullify its multicollinearity, a back-off method can be used to delete uncorrelated independent variables and then fit the model with the eliminated correlated independent variables, giving a linear fit equation with the best fit and minimal multicollinearity.

Model Summary^e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.995 ^a	.989	.904	.545213053	.989	11.652	8	1	.223	
2	.995 ^b	.989	.951	.390126270	.000	.024	1	1	.902	
3	.991 ^c	.982	.946	.408704518	-.007	1.293	1	2	.373	
4	.984 ^d	.967	.927	.477480452	-.015	2.459	1	3	.215	1.816

a. Predictors: (Constant), Ga, Ha, Pc, s, e, Hc, Pa, Gc

b. Predictors: (Constant), Ha, Pc, s, e, Hc, Pa, Gc

c. Predictors: (Constant), Ha, s, e, Hc, Pa, Gc

d. Predictors: (Constant), s, e, Hc, Pa, Gc

e. Dependent Variable: D

Figure 3. SPSS generated results

Figure 3 shows that deleting US real GDP, US labor cost per unit of product, and China's pricing level improves model fit by 0.927%. Durbin-Watson is 1.816. If there are fewer than four independent variables and DW is around two, a conclusion can be drawn. If there are fewer than four independent variables and DW is close to two, residuals are likely independent.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Ga, Ha, Pc, s, e, Hc, Pa, Gc ^b		Enter
2		Ga	Backward (criterion: Probability of F-to-remove >= .100).
3		Pc	Backward (criterion: Probability of F-to-remove >= .100).
4		Ha	Backward (criterion: Probability of F-to-remove >= .100).

a. Dependent Variable: D

b. All requested variables entered.

Figure 4. Rejection process

Figure 4 clearly shows the process of filtering the SPSS software to remove the less significant variables.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.709	8	3.464	11.652	.223 ^b
	Residual	.297	1	.297		
	Total	28.006	9			
2	Regression	27.702	7	3.957	26.001	.038 ^c
	Residual	.304	2	.152		
	Total	28.006	9			
3	Regression	27.505	6	4.584	27.444	.010 ^d
	Residual	.501	3	.167		
	Total	28.006	9			
4	Regression	27.094	5	5.419	23.768	.004 ^e
	Residual	.912	4	.228		
	Total	28.006	9			

a. Dependent Variable: D
 b. Predictors: (Constant), Ga, Ha, Pc, s, e, Hc, Pa, Gc
 c. Predictors: (Constant), Ha, Pc, s, e, Hc, Pa, Gc
 d. Predictors: (Constant), Ha, s, e, Hc, Pa, Gc
 e. Predictors: (Constant), s, e, Hc, Pa, Gc

Figure 5. Significance test of the regression equation

Figure 5's equation significance tests show that, except for the first model, all three pass (which is not excluded). The fourth model, which eliminates US GDP, US labor cost per unit of product, and China's pricing level, has a larger F-statistic, indicating higher relevance.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
4	(Constant)	1084.308	126.727		8.556	.001
	Pa	-221.684	33.393	-6.798	-6.639	.003
	Hc	-7.483	2.551	.694	2.933	.043
	s	36.126	6.655	.986	5.428	.006
	e	-20.969	9.244	-1.062	-2.268	.086
	Gc	21.607	5.624	4.762	3.842	.018

a. Dependent Variable: D

Figure 6. Rejection process

Figure 6 shows the model's multiple linear regression equation after removing US unit labor cost and Chinese pricing:

$$\ln D = 1084.3 - 221.7 \ln P(a) - 7.5 \ln H(c) + 36.1 \ln s - 20.9 \ln e + 21.6 \ln G(c)$$

The model's corrected coefficient of determination is 0.927, therefore this regression link explains 92.7% of the dependent variable's variation. The series is normal based on the Durbin-Watson homoscedasticity test and has no autocorrelation.

3.4. Analysis of the Empirical Results

e's natural logarithm coefficient is -20.9, a negative number. Metzler's condition fails, the RMB exchange rate (direct markup) declines, and our currency gains, exacerbating the trade gap between the two nations. This proves that a stronger RMB won't reduce the U.S.-China trade deficit. In this time period, U.S. prices rose while U.S.-China trade fell. It can be concluded that the effect of the average price level in China on China-U.S. trade was not significant during this time period, and that it was more difficult to observe the effect during the decade from 2006 to 2015, when China was properly regulated. This suggests that the price elasticity of commodities traded between the US and China is likely to be low and that a rise in US prices, for example for soybeans and maize, would not significantly affect US exports to China. The US-China trade balance is impacted by China's labor cost per unit of output. As the cost of living rises, Chinese wages rise, raising the labor cost per unit of output in foreign-owned enterprises. As a major manufacturing nation, China exports to the U.S., but growing labor costs discourage exports and reduce its surplus with the U.S. China's real GDP changes with US-China exports and imports. If

China's economy expands, so does the surplus between the two countries. The rise in China's internal economic production is accompanied by a steady improvement in its domestic infrastructure and an increase in the technological sophistication of coastal enterprises selling technology abroad, especially to the United States. Therefore, China's economic growth, industrial base, and technical improvement cannot be neglected in light of its trade surplus with the U.S. The difference in the two countries' saving habits and rates is a key factor. If domestic savings can't support excessive domestic investment, overseas trade can balance the savings-investment gap by using foreign capital inflows. If the US saves more than it invests, the deficit will be countered by trade imbalances with China, capital outflows, etc.

Table 3. Share of savings and investment in the US and China

Savings as a share of GDP	China	United States
1980-1989	30%	20%
2008	50%	11%
Investment as a share of GDP	China	United States
1980-1989	29%	23%
2008	46%	14%

From 1980 to the present, China's savings rate has been higher than the US savings rate, and its pace of growth has been far higher. China's savings rate has grown faster than investment as a proportion of GDP. Both China's savings-investment gap and trade imbalance widened throughout this time. Traditional Chinese saving as a precaution may explain China's high savings rate. Higher savings rates have cut domestic financing costs, improved China's trade balance, and boosted the economy. Lower U.S. savings rates may be linked to Americans' flexible view of wealth. The US dollar became the international standard currency when the Jamaican system replaced the forest system in the 1970s. Its total issue was no longer limited by precious metal reserves. The US could issue more dollars to cover a trade deficit. Many countries, especially China, have huge US dollar reserves due to trade surpluses and will buy US government bonds to finance the US trade deficit. As the world's currency, the U.S. can borrow and consume, and unchecked consumption tends to grow. Overconsumption and low savings have led to lower savings than investment, worsening the trade deficit.

4. Analysis of Other Factors Affecting US-China Trade

4.1. Global Industrial Restructuring

National trade barriers are being reduced as globalisation increases. Multinational firms participate in foreign direct investment, decomposing the production process of commodities into independent linkages spread to many countries and areas before improved transportation. By utilising its factor advantages, the host nation can produce the component cost-effectively and optimise production. During the Clinton administration, the information network revolution fueled a new American economy. Asia replaced the US's low-value-added production structure. During fast industrialization, the "Four Asian Tigers" prioritised the development of manufacturing industries and built a complementary manufacturing network system. China, which controls the East Asian industrial system, is near the end of manufacturing. Component imports for East Asia's expanding economies and completed goods exports to Europe and the U.S. have expanded proportionally. By establishing foreign-owned factories in China, growing Asian economies have moved their trade surpluses with the US to China, resulting in a huge increase in China's exports to the US. According to the IMF's World Economic Outlook, China's overall external trade balance is 100% of its bilateral trade balance with the US. This means

that a large percentage of China's trade surplus with the U.S. is offset by other countries that have invested and established industries on the mainland.

4.2. Export Control Issues in the United States

The US's high-tech export restrictions to China also contribute to the trade disparity. Modernizing China has created a technology gap. The US has traditionally limited China's exports. The US emphasizes its massive trade imbalance with China while limiting China's exports of high-tech items, causing tension in the development of commerce between the two countries. This contradicts the facts that the US is the world's technological leader and China needs enormous technology imports. Restrictions on cutting-edge domestic technology imports into China have exacerbated the trade imbalance by making it harder for the latest US technology to enter China.

5. Policy Recommendations

In recent years, the RMB has risen, and the US-China trade deficit has widened. Even with additional appreciation, the China-U.S. trade deficit won't be fixed.

5.1. Promoting Reform of the RMB Exchange Rate System

The local currency's competitiveness would also increase through marketization of the exchange rate, and marketization of our exchange rate system might hasten the internationalization of our currency. At the same time, our government may create a strategy to address the issue of external pressure causing the RMB exchange rate quickly and flexibly to appreciate unilaterally. The first is to fully implement the pertinent provisions of the World Trade Organization and the World Monetary Fund, in a fair and effective manner, to actively respond to the U.S. accusations against China's exchange rate manipulation; second, if the U.S. adopts a quantitative monetary easing policy, China can investigate and protest against the U.S. behavior of harming China's foreign exchange reserves.

5.2. Expanding Domestic Demand and Stimulating Consumption

Chinese population generally has conservative consumption patterns, and domestic demand is not properly boosted. China should continue its efforts to gradually create a comprehensive and institutionalized social security system to promote domestic consumption; at the same time, it should set up a social credit system, actively combat domestic fake and subpar goods, maintain market order, and encourage people to switch from "foreign consumption" to domestic consumption and have faith in domestic products.

5.3. Restructuring the Domestic Economy of the Country

The relatively low cost of labour and other costs have drawn a lot of foreign capital to establish factories and investments in China since the reform and opening up of the country. However, the majority of the sectors that China has seized control of are low-value-added, energy-intensive sectors that are further along in the production chain. The United States and China's trade balance has widened as a result of China's massive investment in industries geared toward processing trade, which also depletes local resources and demographic benefits. Therefore, China should work to advance science and technology, create a research and development strategy that integrates academia and industry, provide greater support for research units, and increase the value added to products.

References

- [1] Zhou, W.G. and Li, Liang, "The Impact of Nominal RMB Exchange Rate Changes on the US-China Trade Balance - An Empirical Analysis Based on the Robinson-Metzler Conditional Perspective", *Research in Financial Economics*, Vol. 11, 2011.
- [2] Guo Tingting, "The impact of RMB exchange rate changes on China as well as the world economy", *Financial Forum*, No. 21, 2016.
- [3] Zhu Weiwei, "Who is the main cause of the trade imbalance between China and the United States - Empirical evidence from the perspective of product heterogeneity by industry in China and the United States", *World Economic Studies*, No. 9, 2014.
- [4] Shen Guobing, "U.S. Export Controls and the U.S.-China Trade Balance Problem", *World Economics and Politics*, No. 3, 2006.
- [5] Liu Wei, "Exploring RMB exchange rate appreciation and trade imbalance between China and the US", *International Financial Studies*, No. 9, 2006.
- [6] John Whalley, External Sector Rebalancing and Endogenous Trade Imbalance Models, *Contemporary Economics*, 2012:20-26.
- [7] Qiang Sun, an Analysis of the Influence of the Real Exchange Rate of RMB on the Chinese Foreign Trade Dependence Ratio, *International Management Review*, 2008: 38-45.