Huan Chang[1], Shou-Min Tsao[2]
REVEALING THE CAUSES AND COUNTERMEASURES AGAINST THE DECLINE IN THE QUALITY OF LIFE IN CHINA AND TAIWAN

In this study, we investigated the outcomes of Taiwan and China's long-term pursuit of current account surpluses, which has not enhanced the quality of life, but has resulted in excessive capital, thereby initiating inflation and the subsequent asset bubbles. It is argued that an increase in foreign-exchange reserves drastically reduces the quality of life (consumer confidence). Furthermore, the internationalization of China's currency (Renminbi) can help Taiwan and China escape the USD trap, prevent the asset bubble formation, and enhance the quality of life.
Keywords: *quality of life; USD trap; foreign-exchange reserves; internationalization of Chinese Renminbi.*

Хуан Чанг, Шоу-Мін Цао
ПРИЧИНИ ЗНИЖЕННЯ ЯКОСТІ ЖИТТЯ НАСЕЛЕННЯ ТА ЗАХОДИ ПРОТИДІЇ ЦЬОМУ: ЗА ДАНИМИ КНР ТА ТАЙВАНЮ

У статті проаналізовано наслідки довгострокового профіциту поточних рахунків Тайваню та КНР, головним з яких стало не підвищення рівня життя населення даних країн, а надмірність капіталу, що спровокувала інфляцію та фіктивний бум активів. Доведено, що збільшення валютних резервів суттєво знижує рівень життя населення досліджуваних країн. Укріплення міжнародних позицій китайського юаня може допомогти Тайваню та КНР вибратись з "доларової пастки", подолати фіктивний бум, а відтак і позитивно вплине на рівень життя населення даних країн.
Ключові слова: *рівень життя; "доларова пастка"; валютні резерви країни; інтернаціоналізація китайського юаня.*
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Хуан Чанг, Шоу-Мин Цао
ПРИЧИНЫ СНИЖЕНИЯ КАЧЕСТВА ЖИЗНИ НАСЕЛЕНИЯ И МЕРЫ ПРОТИВОДЕЙСТВИЯ: ПО ДАННЫМ КНР И ТАЙВАНЯ

В статье проанализированы последствия долгосрочного профицита текущих счетов Тайваня и КНР, главным из которых стало не улучшение уровня жизни населения данных стран, а чрезмерность капитала, что спровоцировало инфляцию и фиктивный бум активов. Доказано, что увеличение валютных резервов значительно снижает уровень жизни населения исследуемых стран. Укрепление международных позиций китайского юаня может помочь Тайваню и КНР выбраться из "долларовой ловушки", предотвратить фиктивный бум и соответственно позитивно скажется на уровне жизни населения данных стран.
Ключевые слова: *уровень жизни; "долларовая ловушка"; валютные резервы страны; интернационализация китайского юаня.*

1. Introduction

The unemployment rate in the US is high because of the subprime mortgage crisis, and the Congress has attributed this phenomenon to the countries (e.g., China) manipulating the exchange rate. Consequently, by focusing on levying the custom duties on countries with undervalued exchange rates, the Congress passed the

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Currency Reform for Fair Trade Act 2010 and the Currency Exchange Rate Oversight Reform Act of 2011. Liu (2011) indicated that under the quantitative easing policy, channels for relief or disposal are required for US financial instruments, and that these channels can be acquired through the same countries the US is accusing of manipulation. The relief of the US financial instruments has consistently forced countries manipulating the exchange rate into the so-called USD trap.

Lin (2012) contended that the foreign exchange reserve a country accumulated from current account surpluses caused an increase in the quality of life and the country's competitiveness. In China it was accompanied by the average annual growth of 7.5% over the last decade, the fastest in the world. Such growth is supposed to be accompanied by higher energy consumption, because industrial production, transportation, and other aspects of economic activities consume energy. However, in China there was a decline in economic activities with regard to energy consumption. Therefore, Rawski (2001) doubted the truth of China's economic growth. Rawski (2001) suggested that China's official statistics was simply too good to be true. Furthermore, China's GDP growth and the rapid accumulation of foreign exchange reserves have resulted in the imbalance between investment and consumption, as well as between expenditure and production (Knight, Wang, 2011). In 2010, the percentage contribution of China's consumption to the GDP was 36.8% (China Statistical Abstract 2011), which was considerably lower than the 62% contribution in 2000 and the 66% average of advanced Western countries (World Bank). In addition, the percentage contribution of investments to GDP was 91.3% in 2009 and 54% in 2010, which exceeded the 33% average of Western countries. Following the Rawski (2001) viewpoint on looking into various contingencies affecting the quality of life this article supports the supposition that China's real the quality of life is declining.

Acemoglu and Robinson (2012) asserted that corruption of the political system is the root of economic recession. However, in China, where the economy is planned, political centralization and continual corruption have not inhibited the substantial growth of the economy. Conversely, the United States, which considers itself democratic, has entered the period of economic recession and declines in international competitiveness. King and Levine (1993) and Guiso, Sapienza, and Zingales (2004) have suggested that in the zones that impose financial market integration, the financial development of a country or region has a definite effect on economic growth and development. Taiwan's economy is classified as a typical export-oriented economy, and internationalization and liberalization of its economy have reached a high level; thus, the stock markets in Taiwan are substantially affected by external factors (Wang, 2008). Furthermore, the externality or export-oriented nature of Taiwan's economy can be observed from the correlation effects between Taiwan and China's stock markets (Hu, 2007). Consequently in this study, we investigate the disruptive effects that the correlation relationship and the USD trap have on the quality of life in Taiwan and China.

The long-term pursuit of current account surpluses and the accumulation of foreign exchange reserves in USD have several instantaneous and evident side effects:

(1). Reduction of national consumption (the quality of life)

Although USD is earned when Taiwan and China export provides commodities and labor services to the United States, these funds are accumulated in central banks

as foreign exchange reserves and are not used for consumption or to enjoy international commodities and services.

(2). Asset bubble trap caused by USD reserves

The majority of Taiwan and China's foreign exchange reserves are valued in U.S dollars. It depreciation causes the foreign exchange reserves of various countries to depreciate rapidly too. Consequently, this reduces open market operations of central banks and allows the United States to continuously adopt a quantitative easing policy, subsequently entangling Taiwan and China into the USD trap.

(3). Capital (liquidity) surplus

Since 2006, the excess liquidity in China has become the primary cause of price inflation, stock and real estate (housing) price increases, and investment and economic acceleration.

Previous literatures (Lin, 2011; Lu, 2006; Zuo, 2006) have indicated that the primary reason that China possesses excess or surplus capital is that the money supply (M2) occupies an excessive proportion of its GDP. Furthermore, Liu and Wray (2010) attributed the origin of the financial crisis to China. However, adjustments made to monetary policies (e.g., raising the interest rate) clearly have not triggered an increase in China's production, but have raised loan costs, which has subsequently reduced actual production and welfare (Wang & Cai, 2010). In response, Taiwan and China can only sustain the value of their currencies against USD to increase their exports; consequently, these two countries are caught in the USD trap.

2. Data collection

The data used in this study is dated back to 1980, which was the start of foreign exchange reserve accumulation in Taiwan, to 2011. The data were used to investigate the impact that the changes in Taiwan and China's foreign exchange reserves have had on the quality of life and we get our data form DataStream database. To the best of our knowledge prior literature never discusses the topics about the regional finance cross Taiwan Strait. Therefore, our analysis makes 3 main contributions to the regional finance literature: First, we achieve prevention against the deficiencies caused by the gradual formation of financial market integration under the Economic Cooperation Framework Agreement (ECFA) for Taiwan and China; Second, because the causes and results of foreign exchange reserve accumulation in Taiwan, China, and East Asian countries are similar, we endeavor to apply the outcomes of this study to various East Asian countries, particularly to financial market integration under the ASEAN+3 (China, Japan, and Korea). Therefore, this study contributes to the theory's development of regional finance. Third, we provide an economic development proposal in response to the decline of the high inflation rate in China. Because the central bank of China has to issue basic currency to offset the trade surplus which results in the inflation, the internationalization of China's currency (Renminbi) can inhibit the high inflation in China.

3. Theoretic foundations and hypotheses

3.1. The Foreign exchange reserve myth. Typically, a country's current account surplus causes the country's currency to appreciate. Thus, the consumption power or ability (welfare) of the country's citizens increases in contrast to those of partner countries. However, China and Taiwan have not demonstrated this. In May 2011, the RMB real effective exchange rate index (REER) was 118.26, which was similar to the

highest point achieved in 1998. This indicated that in the past 13 years, the current account surplus resulting from rapid economic development in China has not been reflected in the exchange rate. In September 2011, the REER of the New Taiwan Dollar (NTD) was 90.67 (Taipei Foreign Exchange Market Development Foundation), which was lower than that at the end of 2000 (105.58), suggesting that the New Taiwan dollar depreciated against USD. Furthermore, in the past 11 years, Taiwanese current account surplus has not been reflected in the exchange rate, but has demonstrated opposite trends.

The factor driving the above phenomenon is that, in recent years, the double surplus China's current and capital accounts and financial accounts have created the necessity in USD. Consequently, the later should appreciate. However, when Chinese citizens require the use of the foreign exchange surplus they have earned, they must sell foreign currency to banks, and central banks then buy the currency from these banks. Ultimately, this causes USD appreciate against RMB. According to the 2010 investigation conducted by the International Monetary Fund (IMF elibrary-Data), global foreign exchange reserves increased from USD 1.5182 trln in 2000 to USD 5.1230 trln in 2010, of which the share of the reserves in USD itself was 61.82%. Moreover, the global proportion of foreign exchange reserves for emerging countries and developing countries was 27.03% in 2000 and 47.13% in 2010. Thus, the balance of payment surplus for a country is either reflected in that country's currency appreciation or in the accumulation of foreign exchange reserves. The difference depends on whether the central bank intervenes in the foreign exchange and the level of such intervention.

3.2. Dilemmas and games

3.2.1. Two reasons have caused the accelerated accumulation of USD reserves in Taiwan and China:

(1). Considerations on the structure of capital cost:

After the World War II, as a measure for resisting the Soviet Union, the USA partnered with and supported Japan. This enhanced Japan's industrial development and increased both the income of Japanese citizens and labor costs. With this trend, Japan was later replaced by the 4 Asian tigers (Hong Kong, South Korea, Singapore, and Taiwan) because of their cheaper labor costs mostly. Nevertheless, the labor markets of the Asian tigers are now being replaced by that of China. Because cost reductions are limited, the only method for continuously creating the current account surpluses is to permanently purchase foreign currencies, specifically USD, to suppress and restrict local currency appreciation and reduce the export costs.

(2). The impact of the financial crisis:

Financial accounts in Asian countries are mainly composed of marketable or negotiable securities with high interest rates, used to attract "hot money" inflow. Once hot money is withdrawn, the loss is in excess of the current and capital account surpluses. Thus, no foreign currencies are available for central banks to supply open market operations, causing a country's currency depreciate considerably. Consequently, after the Asian financial crisis, various Asian countries endeavored to accumulate massive current account surpluses to supply future open market operations. This is also the reason for the accumulation of voluminous foreign exchange reserves.

Therefore, China and Taiwan must export commodities to the United States at low prices to develop a current account surplus, but must also purchase US financial instruments valued in USD, especially negotiable or marketable securities to maintain low costs. Subsequently, the current account surpluses return to the US in the form of financial accounts. This is how the United States has sustained its survival and power over the past decades and during the periods of current account deficit (Duncan, 2004; Wang, 2011).

Hypothesis 1: An increase in foreign exchange reserves is negatively correlated with a country's consumption power (the quality of life).

3.2.2. Three methods can enable China and Taiwan overcome the USD trap:

(1). Economic transition

The transition of Taiwan and China's industries from original equipment manufacturing (OEM) to the creation of original brands is the only approach for mitigating their dependence on the USA and its dollar, and subsequently avoiding the conditions induced by the United States. However, this transition cannot be immediately achieved, and requires accommodation regarding government dynamism, national intelligence, and the enhancement of education to ensure successful implementation.

(2). Internationalization of Renminbi

An asset bubble emerged in China because a capital surplus that could not be dissipated was developed and was subsequently accumulated in real estate or housing markets. Therefore, in 2011, China began promoting RMB capital account convertibility, thereby overcoming the dependence on USD. However, opening capital accounts may possibly attract international speculators and hot money inflow, both of which can negatively affect China's finance.

Hypothesis 2: An increase in the current period foreign exchange reserves is positively correlated with the development of the real estate or housing market in the current period.

Hypothesis 3: An increase in the current period foreign exchange reserves is negatively correlated with the development of the stock market in the subsequent period.

(3). Citizens' possession of foreign exchange (Zhou, 2011)

When current accounts occupy an excessively large proportion of GDP, earnings in USD are returned to the United States in the form of financial accounts, thus reducing the quality of life. Consequently, decreasing the proportion of current accounts in the GDP has become an essential undertaking for Asian countries and China first of all. Table 1 shows the outcome of China's efforts in recent years to reduce the proportion of current accounts in the GDP. However, this action may possibly eliminate USD from open market operations and subsequently reintroduce the threat of an Asian financial crisis similar to the one in 1997.

Table 1. **The proportion of China's current account surplus in the GDP**

Year	Current account/GDP (%)
2005	7.1
2006	9.3
2007	10.6
2008	9.6
2009	6.0
2010	5.2
2011	4.0

Source: Compiled from Xiaochuan Zhou, governor of the People's Bank of China.

3.3. The quality of life. Enhancing the quality of life is a method to increase the living standards. Because countries such as China and Taiwan usually undergo a return of current account surpluses to bonds and stocks valued in USD (Duncan, 2004; Wang, 2011), a growth in net exports does not lead to increased welfare. Li and Guo (2011) asserted that the net export is the external demand, and that the internal demand as well as consumption and investment are additional economic variables that can truly create the quality of life characteristics. Moreover, the trend in which currency or exchange rate reform leads to the internationalization of RMB can enhance the foundation or essential dimensions of economic development (Guo, Xiong, 2011) and subsequently accelerate the enrichment of the quality of life.

Hypothesis 4: The internationalization of Chinese Renminbi is positively correlated with China's consumption power (the quality of life).

We substituted the internal demand with the dependent variable (i.e., changes in the consumer confidence index, ΔCCI_t; the quality of life), and adopted the internationalization of RMB as the main independent variable. If the liberalization or reform of the exchange rate increased the internationalization of RMB, the dummy variable for exchange rate reform (DERR) was given as 1, otherwise it was 0. From Table 3, we observed that the relationship between China's ΔCCI_t and changes in the foreign exchange reserve of China ($\Delta CFER\_t$) was negative and significant. This result is consistent with the theory of Rawski (2001) than the cumulative GDP growth in China was no more than official claims and China's real quality of life is declining. In addition, the interaction of DERR and $\Delta CFER\_t$ was positively and significantly correlated with ΔCCI_t. This indicated that internationalizing RMB mitigated the reduction in the quality of life caused by foreign exchange reserves. Furthermore, ($\beta 5/\beta 4$) is equivalent to 74.55%, which implies that 74.55% of the examined effect (the reduction in the quality of life triggered by foreign exchange reserves) was mitigated by internationalizing Renminbi, whereas the remaining 25.45% of the effect was mitigated by employing two additional methods (the citizens' possession of foreign exchange and industrial transition). Furthermore, the impact of China's exchange rate reform on Taiwan can be deduced from Table 4. The changes in Taiwanese consumer confidence index ($\Delta TCCI\_t$) were negatively and significantly correlated with the changes in Taiwan's foreign exchange reserves ($\Delta TFER\_t$), but the interaction of $\Delta TFER\_t$ and DERR was positively and significantly correlated with $\Delta TCCI\_t$. Hence, a linkage correlation relationship between the foreign exchange reserves of Taiwan and China does exist. The main reason motivating this relationship is that Taiwan is highly dependent on China. Consequently, when information regarding the replacement of USD with RMB is announced, the tendencies of Taiwan's international reserves will react accordingly.

3.4. USD and asset bubbles. Previous studies have indicated that the mass inflow of foreign capital typically includes non-performing loans, which maintain a mutual and causal relationship with the asset bubble (Duncan, 2004; Liu, Wray, 2010; Wang, 2011).

Between 1991 and 1993, the influx of foreign capital into the 4 Asian tigers caused a dramatic increase in international reserves of various Asian countries. For example, the international reserve of Malaysia increased by 150%, and the influx of

capital into Malaysian banks resulted in excess capital and the subsequent lending and borrowing frenzy. Consequently, the national asset management company Danaharta absorbed 40% of the banking system's total non-performing loans, which composed 30% of all loan amounts.

In 2009, the loan capital of China's banks peaked at RMB 9.59 trln, which is more than double of the RMB 4.6 trln reached in 2008. USD became a surplus liquidity in emerging countries (Lin, 2011), which caused a flood of non-performing loans, leading to the emergence of the asset bubble.

Based on Table 2, $\Delta CFER\_t$ was positively and significantly correlated with China's expenditure on housing and the real estate market in the ($t+1$)th period (CEH_t+1) and negatively and significantly correlated with the changes in Shanghai's stock index in the ($t+1$)th period (ΔSH_t+1). This result suggests that the excess capital resulting from an increase in foreign exchange reserves accumulates at real estate markets, thereby causing drops or bubbles at the stock market in the subsequent period. Moreover, $\Delta CFER\_t$ and China's unemployment rate (CH_Unemp_t) exhibited a positive and significant relationship, indicating that the asset bubble that resulted from an increase in foreign exchange reserves caused the unemployment rate to rise. According to Table 3, China's ΔCCI_t was negatively and significantly correlated with CH_Unemp_t. In addition, the interaction of DERR and CH_Unemp_t was positively and significantly correlated with China's ΔCCI_t. Furthermore, ($\beta3/\beta2$) is equivalent to 77.61%, which suggests that 77.61% of the examined effect (i.e., the extent of the increase in the unemployment rate prompted by foreign exchange reserves) was mitigated by internationalization of RMB, and the remaining 22.39% of the effect was reduced by employing two additional methods (i.e., citizen possession of foreign exchange and industrial transition). Overall, the results showed that incorporating exchange rate reform and liberalization (DERR) reduced the unemployment rate and enhanced the quality of life.

3.5. USD and inflation. Previous studies have verified that an increase in foreign exchange reserves (in USD), causes a country demonstrate a domestic capital surplus (Duncan, 2004; Ma, 2010; Wang, 2011). Moreover, excess capital leads to inflation (Chen, 2008; Liu, Wray, 2010; Zhang, 2009; Zhang & Wang, 2011). Inflation signifies a reduction in people's consumption power or ability, which is a representation of a reduction in the quality of life. Following the subprime mortgage crisis, the US executed a quantitative easing policy, which resulted in global inflation. The United States released large amounts of USD, and subsequently increased the prices of raw materials, thereby enforcing imported inflation upon various countries worldwide (Chen, 2008; Zhang & Wang, 2011), particularly those that required massive resource imports or chose to focus on the status of USD. For instance, China's policy for salary adjustment transmitted inflation across the world. According to Table 3, China's ΔCCI_t and changes in China's inflation rate (ΔCH_Infl_t) demonstrated a negative and significant relationship. In addition, ($\beta7/\beta6$) is equivalent to 95.25%, which suggests that 95.25% of the examined effect (i.e., the extent of inflation increase triggered by the foreign exchange reserve) was mitigated by internationalizing Renminbi, and the remaining 4.75% of the effect was reduced by employing two additional methods (i.e., citizen possession of foreign exchange and industrial transition). This result indicates that the internationalization of RMB alleviated the effect of inflation. Based

on Table 3, we also identified that the internationalization of RMB dramatically reduced the impact that foreign exchange reserves in USD had on China's quality of life to 17.95% $((\beta4 \times 0.6182^3 + \beta5) / (\beta0 + \beta1))$, that is, it diminished 82.05% of the negative effect.

3.6. The linkage correlation between Taiwan and China. In 2007, Taiwan and China's stock markets demonstrated a correlation effect for the first time, becoming inextricably intertwined thereafter. Consequently, we predict that if the foreign exchange reserves in USD in China increase, China's stock market can be affected, and this impact may also be reflected on Taiwan's stock market.

Hypothesis 5: China's current period foreign exchange reserve amount is negatively correlated with Taiwan and Taiwan's stock market performance in the subsequent period.

According to Table 4, Taiwan's (t)th period $\Delta TCCI\_t$ is positively and significantly correlated with changes in Taiwan's stock index for securities in the ($t+1$)th period (ΔTSI_t+1). However, the interaction of $\Delta CFER\_t$ and ΔTSI_t+1 is negatively and significantly correlated with Taiwan's $\Delta TCCI\_t$.

This shows that the amount of China's foreign exchange reserves and Taiwan's stock market demonstrate a negative and significant effect, thereby verifying the correlation between Taiwan's stock market and China's financial market. This result is consistent with the theory of Hu (2007) that there are linkage correlation effects between Taiwan's and China's financial market.

3.7. External debts. Because external debts may negatively affect a country's sovereign credit rating and entice improper investment behaviors such as those related to hot money, the severity of external debt impacts the quality of life of citizens. The debt efficiency standard is composed of 4 indicators: (1) the GDP growth rate; (2) the yield rate of public debts over the period of 10 years; (3) the difference between the GDP growth rate and the yield rate of public debts over the 10 years; and (4) the proportion of liabilities or debts within GDP. In this study, we adopted the fourth indicator, the proportion of liabilities or debts in GDP, to determine the efficiency of external debts.

We employed the proportion of external debt in GDP ($\Delta EDebt\_t$) as the control variable. According to Tables 3 and 4, both Taiwan and China's $\Delta EDebt\_t$ exhibited a negative and significant correlation with ΔCCI_t. This demonstrates that $\Delta EDebt\_t$ has a negative impact on the quality of life.

In this study, the model entails 3 types of analyses as follows. A simple regression analysis was used to test the hypotheses. Regression in (1) was used to test the effect of foreign exchange reserves on housing expenditures, stock market performance, and unemployment rate:

$$\Delta CFER\_t = \alpha_0 - \alpha_1 CHE\_t+1 - \alpha_2 SH\_t+1 + \alpha_3 CH\_Unemp\_t + \varepsilon_1 \qquad (1)$$

Regression in (2) was used to test the effect of the RMB internationalization on the quality of life.

$$\Delta CCI\_t = \beta_0 + \beta_1 DERR - \beta_2 CH\_Unemp\_t + \beta_3 DERR \times$$
$$\times CH\_Unemp\_t - \beta_4 CFER\_t + \beta_5 \Delta CFER\_t \times DERR - \qquad (2)$$
$$- \beta_6 \Delta CH\_Infl\_t + \beta_7 \Delta CH\_Infl\_t DERR - \beta_8 \Delta EDebt\_t + \varepsilon_2$$

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[3] In 2011, USD occupied 61,82% of China's foreign exchange reserves.

Regression in (3) was used to test the effect of linkage correlation effects between Taiwan's and China's financial markets.

$$\Delta TCCI\_t = \gamma_0 - \gamma_1 \Delta TFER\_t + \gamma_2 DERR + \gamma_3 \Delta TFER\_t \times$$
$$\times DERR - \gamma_4 \Delta CFER\_t + \gamma_5 \Delta TSI\_t+1 - \gamma_6 CFER\_t \times \Delta TSI\_t+1 - \quad (3)$$
$$- \gamma_7 \Delta EDebt\_t + \varepsilon_3$$

Table 2. **Relationship between foreign exchange reserves, housing expenditures, stock market performance, and unemployment rate**

$\Delta CFER\_t = \alpha_0 - \alpha_1 CHE\_t+1 - \alpha_2 SH\_t+1 + \alpha_3 CH\_Unemp\_t + \varepsilon_1$	
	Dependent Variable $\Delta CFER\_t$
Independent Variable	Mainland China
Intercept	-0.0113
(t-value)	(-0.08)
CHE_t+1	0.1319**
(t-value)	(2.10)
ΔSH_t+1	-0.2213***
(t-value)	(-3.10)
CH_Unemp_t	0.9269***
(t-value)	(2.99)
Adjusted R-Square	0.6979

t-value; *, **, *** represent the significance at the 10%, 5%, and 1% levels, respectively.
Source: DataStream database.

Table 3. **Correlation for the adoption of RMB internationalization to eliminate the problems related to foreign exchange reserves and increase the quality of life**

$\Delta CCI\_t = \beta_0 + \beta_1 DERR - \beta_2 CH\_Unemp\_t + \beta_3 DERR \times CH\_Unemp\_t - \beta_4 \Delta CFER\_t + \beta_5 \Delta CFER\_t \times DERR - \beta_6 \Delta CH\_Infl\_t + \beta_7 \Delta CH\_Infl\_t \times DERR - \beta_8 \Delta EDebt\_t + \varepsilon_2$		
Dependent Variable ?CCI_t		
Independent Variable	Expected Sign	Mainland China
Intercept		0.1243
(t-value)		(1.72)
DERR	+	0.0025**
(t-value)		(2.44)
CH_Unemp_t	-	-1.7317*
(t-value)		(-1.94)
DERR×CH_Unemp_t	+	1.3439**
(t-value)		(2.06)
$\Delta CFER\_t$	-	-0.1788*
(t-value)		(-2.20)
$\Delta CFER\_t \times DERR$	+	0.1333**
(t-value)		(2.27)
ΔCH_Infl_t	-	-0.4903***
(t-value)		(-2.86)
$\Delta CH\_Infl\_t \times DERR$	+	0.4670**
(t-value)		(2.27)
$\Delta EDebt\_t$	+	0.5333**
(t-value)		(2.21)
Adjusted R-Square		0.7887

t-value; *, **, *** represent the significance at the 10%, 5%, and 1% levels, respectively.
Source: DataStream database.

Table 4. **Foreign exchange reserves and Taiwan and China's correlation relationship**

$\Delta TCCI\_t = \gamma_0 - \gamma_1 \Delta TFER\_t + \gamma_2 DERR + \gamma_3 \Delta TFER\_t \times DERR - \gamma_4 \Delta CFER\_t + \gamma_5 \Delta TSI\_t+1 - \gamma_6 \Delta CFER\_t \times \Delta TSI\_t+1 - \gamma_7 \Delta EDebt\_t + \varepsilon_3$		
Dependent Variable $\Delta TCCI\_t$		
Independent Variable	Expected Sign	Mainland China and Taiwan
Intercept		0.0498
(t-value)		(5.20)
$\Delta TFER\_t$		-0.1095***
(t-value)		(-3.88)
DERR		0.0400***
(t-value)		(3.51)
$\Delta TFER\_t \times DERR$		0.3784***
(t-value)		(2.60)
$\Delta CFER\_t$		-0.0922***
(t-value)		(-3.32)
ΔTSI_t+1		0.0560**
(t-value)		(2.81)
$\Delta CFER\_t \times TSI\_t+1$		-0.3712**
(t-value)		(-2.85)
$\Delta EDebt\_t$		-0.1534
(t-value)		(-2.80)
Adjusted R-Square		0.8970

t-value; *, **, *** represent the significance at the 10%, 5%, and 1% levels, respectively.
Source: DataStream database.

4. Conclusion and recommendations

USD has dominated the global economy for approximately 70 years and has thus deeply and extensively affected the world. When discussing China, complex issues arise because of numerous factors impacting the economic development of Chinese socialism. For example, domestically, the phenomenon of growth in state-owned enterprises operations and decline in private enterprise operation influences the country's development (Chen, Lee, 2013), and internationally, factors affecting China's economic growth include USD and the internationalization of RMB. In this study, we concentrated our attention on international or external topics to investigate China and the correlation between Taiwan and China's financial statuses and USD. Nevertheless, the issues related to China's domestic state-owned enterprises and private enterprises maintain the largest impact on China as well as on the relationship between Taiwan and China. Whether this factor is the primary reason that would enable China potentially replacing the United States as the global power requires more in depth investigation.

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