The Impact of FDI and Trade Openness on the Economic Growth of the Transition Economies

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Abstract:

This paper examines effects of FDI inflows and trade openness on economic growth of three former Soviet Union economies: Kazakhstan, Armenia and Ukraine. The study uses a regression model that incorporates data sets for the period from 1992 to 2011 obtained from the World Bank. The regression result indicates that FDI inflows are positively correlated to the economic growth of the transition economies. However, impact of FDI would vary for each specific country depending on the degree of capacity of the host country to use FDI efficiently. Trade openness has also a positive effect on the real GDP per capita and lower levels of trade liberalization would impede the economic growth. This paper concludes with a discussion of how national policies can be designed to strengthen the development process in transition economies.

JEL Classification: F21, F43, O50, P31

Keywords: Foreign Direct Investment, Trade Openness, Transition Economies.

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Contents

1.0 INTRODUCTION

Foreign Direct Investment (FDI) has played a key role in the development of the Former Soviet Union (FSU) countries in their transition from centrally planned economy to free market. When the Soviet empire came to an end in 1991, these economies experienced considerable decline in output which was mostly attributed to the chaos from the system's collapse, specifically political uncertainty and underdevelopment of institutions needed to supervise the transition. Lee and Tcha (2004) noted that foreign investors have been deterred from FSU by macroeconomic instability, and lack of transparent and stable legal structures. Output decline in economies such as Kyrgyzstan, Tajikistan and Ukraine was so drastic that even in 2006 these economies did not reach the 1990s GDP levels (World Bank, 2011). However, as transitional countries have undergone the change, some of them experienced sustainable economic growth. According to the World Bank, from 2000 to 2007 the economies of Azerbaijan and Kazakhstan have been growing at approximately 17.4 and 10.1 percent respectively.

Many empirical studies regard FDI inflows as one of the important catalysts of the economic growth. Indeed, FDI has been one of the substantial drivers of productivity in FSU countries during their transition to market economy. Foreign investment contributed to the development of these nations by transferring technological advancement and managerial skills which assisted the host countries to absorb the innovative techniques of more advanced economies. Azizov (2007) argued that FDI not only promoted the economic growth in transition nations, but also helped them to sustain the growth by covering the difference between the high levels of investment and domestic savings. Moreover, transition of FSU countries to trade openness enabled them

to enter untapped markets and attain a more prominent standing in international trade arena. Each transitional nation followed different approaches in opening their economies to the foreign investment and trade, and finding the optimum level of FDI and trade liberalization would be vital for their sustainable economic growth in the long run.

This study aims to enhance understanding of the role that FDI played in stimulating GDP growth in transitional economies of Kazakhstan, Ukraine and Armenia. From a policy perspective, this analysis is important because it will help to explore the policies that these economies could further implement in order to support the economic growth and promote positive effects of FDI inflows. The relevance of this study lies in the idea that foreign investors will have a better understanding of investment opportunities in the former Soviet countries.

In addition, the objective of this research is to improve comprehending of the role that trade liberalization played in promoting FSU's economic growth. Even though, transition economies have undergone significant changes in liberalizing their borders, they have a long way to secure more prominent standing in international markets. From policy's perspective, the research is important because it will analyse gains that were achieved by liberalizing trade and investigate the programmes that will lead to further border openness. The transition economies that are studied in this paper lack the important resources for further development: their infrastructure is undeveloped; and their financial and legal systems are not enforced effectively. It is foremost important to analyse the policies that will lead to improvement of key systems in transition economies.

This paper was guided by three research objectives that differ from other studies. Many studies have been conducted on examining the effects of FDI and trade

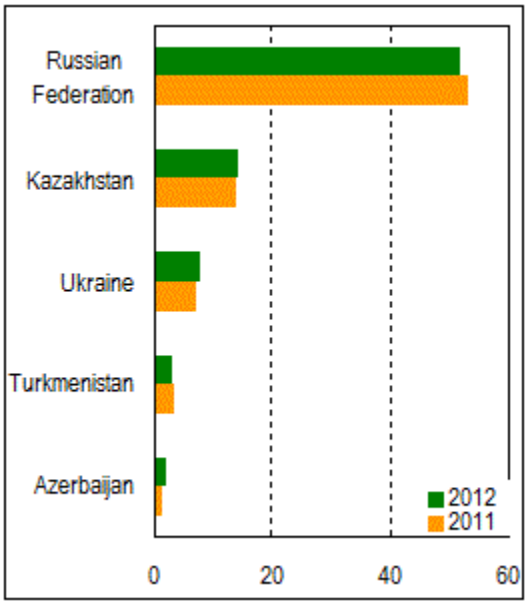
liberalization for developing and developed countries. From the viewpoint of transition economies, the research has been conducted on Central and Eastern Europe, Baltic regions; but there is very little empirical work in the literature concentrating on Kazakhstan, Armenia and Ukraine as a group using panel data model. Second, this study includes an analysis of government expenditures and credit allocated to domestic sector that has been limited in previous studies. Lastly, it analyzes policies that can be undertaken to promote economic growth in countries of focus.

The rest of the paper is organized as follows: Section 2 gives a brief literature review. Section 3 outlines the empirical model. Data and estimation methodology are discussed in section 4. Finally, section 5 presents and discusses the empirical results. This is followed by a conclusion in section 6.

2.0 TREND

Over the last two decades FSU countries have been trying to attract FDI; however, the levels of foreign investment varied dramatically across the nations. FDI flows into Commonwealth of Independent States (CIS) in 2012 reached USD 82 billion where foreign investors have been primarily interested in the area's increasing consumer markets and rich natural resources. Figure 1 shows that investment inflows have continued to be concentrated in a limited number of economies, with the top three countries: Russia, Kazakhstan and Ukraine, accounting for 84 percent of the region's total inflows in 2011 and 2012.

Figure 1: Transition Economies: Top 5 Recipients of FDI Inflows, 2011 and 2012 (billions of USD)



Source: World Investment Report UNCTAD

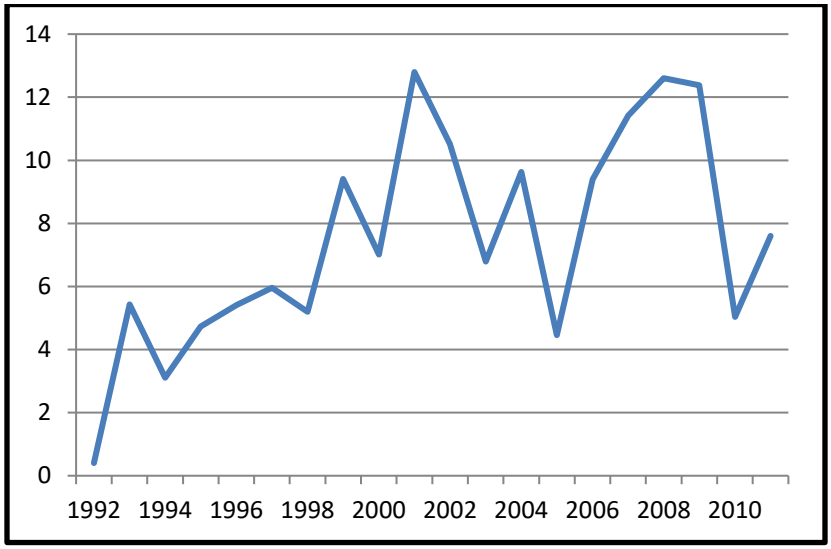
Looking into specific FSU nations, Kazakhstan is the largest landlocked country located in Central Asia. The country has an enormous amount of fossil fuel reserves and metals. Since the country became independent in 1991, it implemented a sequence of reforms to promote liberalization and foreign investment influx. According to the World Bank, since 2000 the levels of FDI increased ten times from USD 1.9 billion to USD 18.4 billion. However, FDI flows into Kazakhstan have been limited mostly to energy sector, where oil and mining sectors concentrate more than half of the FDI. Table 1 demonstrates that FDI flows in Kazakhstan increased from USD 11.5 billion in 2010 to USD 14 billion in 2012, where Netherlands, USA, France, Great Britain and China remained the largest investors. Figure 2 illustrates that FDI inflows into the country have been increasing since 1992 and in 2012 accounted for 7.6 percent of the total GDP.

Table 1: Foreign Direct Investment in Kazakhstan 2010-2012

FDI	2010	2011	2012
FDI Inward Flow (million USD)	11,551	13,903	14,022
FDI Stock (million USD)	82,648	95,426	106,920
Performance Index*, Ranking on 181 Economies	5	7	-
Potential Index**, Ranking on 177 Economies	-	33	-
Number of Greenfield Investments***	11	9	3
FDI Inwards (in % of GFCF****)	32.1	35.7	32.9
FDI Stock (in % of GDP)	55.8	51.2	53.5

Source: UNCTAD

Figure 2: Kazakhstan FDI Net Inflows 1992-2011 (% of GDP)

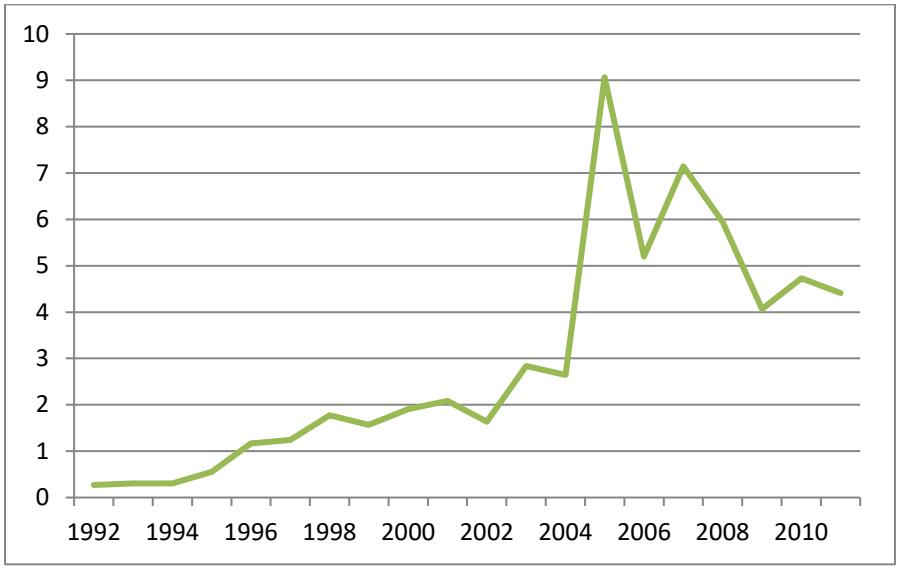


Source: World Bank Database

Another FSU country of interest is Ukraine, where FDI inflows actually declined since 2004. Figure 2 indicates FDI decreased from 4.7 percent of GDP in 2010 to 4.4 percent in 2011, accounting for USD 7.2 billion. Foreign investment influx drastically

slowed down because of economic downturns associated with political instability, corruption and inefficient legal systems. Nonetheless, among CIS countries Ukraine has significant advantages, such as large domestic market, agricultural potential, energy and mineral resources and a strategic geographic location which makes it a transit hub for Europe. It also has a diversified economy where apart from the energy sector; foreign investment is concentrated mainly in the banking and food processing sectors. Ukraine's key investors are Cyprus, Germany, Netherlands, UK, Austria, U.S. and Russian Federation.

Figure 3: Ukraine FDI Net Inflows 1992-2011 (as a percentage of GDP)

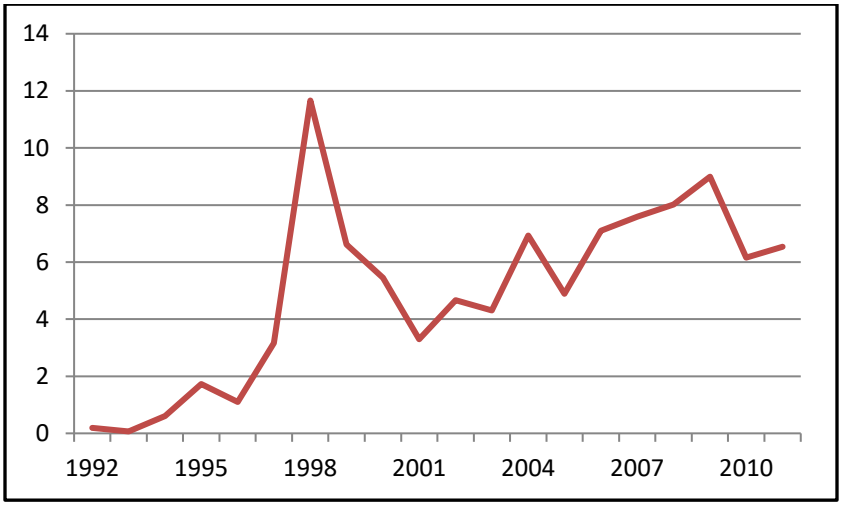


Source: World Development Indicators

Lastly, Armenia is another country of FSU that gained its independence in 1991. In 2012 the country's GDP reached approximately USD 10 billion. Armenia is considered a lower middle income level economy with GDP per capita accounting for USD 3,351. Since 1991 Armenia has liberalized its economy dramatically by implementing policies that favor FDI flux. According to the World Bank, Armenia is

ranked the first country among CIS countries for FDI appeal (2014). Recently due to the global crisis foreign investment flux decreased from USD 700 million in 2009 to USD 663 million in 2011. Figure 4 shows that in 2011 FDI flux into Armenia accounted for 6.5 percent of GDP and investment was diversified in multiple sectors such as energy, telecommunications, and metallurgy. One of the drawbacks of investing into Armenia is that the country is highly dependent on the Russian economy and European Union.

Figure 4: Armenia FDI Net Inflows 1992-2011 (as a percentage of GDP)



Source: World Development Indicators

3.0 LITERATURE REVIEW

Research on impact of FDI on economic growth has been mixed. On one hand, some studies established that foreign investment flows do not establish significant effects on long term economic growth of the host countries. The neoclassical growth theory supports the neutral effect of FDI on long term economic growth because foreign investment is considered a factor input. In this perspective, FDI only affects the nation's level of income. Doucouliagos et al. (2010) argues that FDI inflows are important as

factor inputs that would increase production; however, it is not sufficient enough to promote economic growth in long run.

In contrast, according to the endogenous growth theory, FDI is highly beneficial to the long term economic growth of the recipient countries. In this viewpoint, FDI transfers technological advancement, knowledge, and expertise accumulated in developed economies. FDI influx has the ability to raise standard of living in host economies by establishing foreign management teams that can transfer its experience and knowledge to local workers. In recent research, FDI was found an important driver force behind the development of the transition economies (Janicki et al., 2004). Transition countries were able to realize gains from FDI inflows by advancing their technology stock and acquiring expertise from multinational firms.

Some economists also believe that even though FDI inflows provide various benefits to the economies, growth depends entirely on the ability of host countries to use foreign investment efficiently. Borensztein et al. (1998) find that a positive impact of FDI on growth is attained only for the countries that have accrued a “minimum threshold stock of human capital”. Lensink and Morrissey (2001) also state that FDI has a positive impact on the economic growth but they caution that this result is not 'entirely robust'. It is important to take into consideration labor skills of the population and the ability of the workforce to use the technology efficiently. Zhang (2001) suggested that economic growth can be promoted by FDI but host country conditions such as trade regime and macroeconomic stability are more important in stimulating long run economic development.

Campos and Kimoshita (2002) examined the effects of FDI on the transition economies of FSU and concluded that FDI inflows promote economic growth in these regions. They stated that one of the reasons for the gap between economic theory and econometric evidence on FDI is that the theory tends to equate FDI to technology transferred, while in other countries FDI incorporates an array of arrangements that goes well beyond pure technology transfer. In this viewpoint, the transition economies of the FSU were more successful in utilizing FDI than many other developing countries because they had access to educated workforce.

Literature review regarding trade openness indicates that liberalization is also beneficial to economic growth. According to Nannicini and Billmeier (2011), trade liberalization in transition economies tends to have a positive effect on the pattern of real GDP per capita and making the transition without opening up to trade considerably hampers growth. Nath (2009) also examined the effects of trade openness and FDI on growth of per capita real GDP in 13 transition economies of Central and Eastern Europe, and the Baltic region from 1991 to 2005. He found that significant positive effect of trade on growth is a robust result for transition economies of this region and domestic investment appears to be more important driver of growth. However, FDI did not establish significant effect on growth in these transition economies. In addition, Umaru et al. (2013) investigated the effect of openness of the Nigerian economy on its growth in real GDP and discovered that openness, foreign exchange rates, and balance of payments had a positive impact on the growth of output in Nigeria. On the other hand, FDI and total external debt were affecting negatively the growth of output in Nigeria.

According to the research studies there is no single effect established by FDI, and it depends on each country's conditions that are specific and unique. However, economists believe that trade liberalization tends to have beneficial and long term impact on GDP growth in developing nations. To conclude the literature review, it is important to note that FDI and trade openness can promote economic growth and provide spillover effects if countries have minimum threshold level of human capital and they have stable macroeconomic and political environment.

4.0 DATA AND EMPIRICAL METHODOLOGY

4.1 Data

The relationship between economic growth and FDI is examined in this study by using panel annual data from 1992 to 2011 for three transitional countries: Kazakhstan, Ukraine and Armenia. Data sets were obtained from the World Development Indicators website which represents the primary World Bank data collection. Summary statistics for the data are provided in Table 2.

Table 2: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
GDPCAP	60	3.085905	11.21799	-40.74694	38.05724
FDI	60	5.119752	3.529507	0.0665938	12.79754
FIXEDCAP	60	23.0687	5.906372	12.4554	39.76162
TRADE	60	86.88725	19.02993	45.97086	149.3366
PRIVCRED	60	22.15621	20.4763	0	76.29221
GOVEXP	60	14.53474	4.331699	9.987041	27.39892

4.2 Empirical Model

Following Sethi and Sucharita (2013) this study adapted and modified the regression model to measure the effects of FDI and trade openness on economic growth. Private Credit (PRIVCRED) and Government Expenditures (GOVEXPEND) were added as additional independent variables and the model could be written as following:

$$GDPCAP = \alpha o + \beta 1\ (Yo)_{i,t} + \beta 2\ (FDI)_{i,t} + \beta 2\ (FIXEDCAP)_{i,t} + \beta 3\ (TRADE)_{i,t} +$$

$$+ \beta 4\ (PRIVCRED)_{i,t} + \beta 5\ (GOVEXPEND) + \varepsilon$$

The following is a description on the variables used in this study, and the way data has been constructed for each variable:

The dependent variable is the $GDPCAP_{i,t}$ represents the growth rate of per capita GDP in country *i* at year *t*. $Yo_{i,t}$ is the initial per capita GDP growth of country *i* at year

t-1. Appendix A and B provide data source, acronyms, descriptions, expected signs, and justifications for using the variables.

Independent variables consist of five variables. First independent variable is FDI which denotes the net foreign direct investment inflow as a percentage of GDP to country *i* at year *t*. It represents a net inflow that is needed to acquire a lasting management interest in an enterprise operating (10 percent or more of voting stock) in an economy other than the home country of the investor. It is measured as the sum of equity capital, reinvestment of earnings, other long-term, and short-term capital as shown in the balance of payments (World Bank Indicators, 2013). This series show net inflows from foreign investors, and it is divided by GDP. The sign between inward FDI and GDP per capita growth is expected to be positive and statistically significant due to the high absorptive ability of selected countries to realize gains from knowledge transfer and technology spillover effects.

Second independent variable, FIXEDCAP represents gross fixed capital formation as a percentage of GDP in country *i* at a year *t*. It includes land improvements, plant, machinery, and equipment purchases; and the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. The fixed capital formation is expected to have a positive relationship with per capita GDP growth, as higher levels of capital formation enhance infrastructure in transition countries and it is expected to promote GDP growth.

Next independent variable is TRADE which represents the degree of trade openness. It is calculated as the sum of exports and imports of goods and services in country *i* at a year *t* divided by the country's GDP. The sign is also expected to be

positive and statistically significant, as increase in trade openness spurs economic growth by letting countries to access new markets and promoting an increase in productivity.

Fourth, PRIVCRED represents domestic credit provided to private sector as a percentage of GDP in country *i* at a year *t*. It refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable. Domestic credit to private sector is expected to exhibit a positive relationship with per capita GDP growth as higher levels of credit to private sector available encourages transfer of savings into productive domestic sectors and in the long run should positively affect GDP.

Lastly, GOVEXP represents general government final consumption expenditure as a percentage of GDP in country *i* at a year *t*. It contains all government current expenditures for purchases of goods and services; it also includes most expenditure on national defense and security, but excludes government military expenditures that are part of government capital formation. The government expenditure is expected to have a positive relationship with GDP per capita growth; however, it is not expected to be significantly significant.

5.0 EMPIRICAL RESULTS

The empirical estimation results are presented in Table 6. A Hausman specification test was conducted to determine the correct model specification. A rejected null confirms that a Fixed-Effects model is the more consistent model.

Table 2: Regression results for the Economic Growth in Transition Economies

	Per Capita GDP Growth
CONSTANT	7.342 (11.2)
FDI	1.540 ** (0.454)
FIXEDCAP	0.243 (0.209)
TRADE	0.258*** (0.073)
PRIVATECRED	-0.200 ** (0.067)
GOVEEXPEND	-2.462*** (0.568)
R^2	0.4594
F-statistics	8.84***
Number of obs.	60

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively. Standard errors in parentheses

The results of the regression highlighted in Table 2 differ slightly from the results provided in the literature review. The variables that are statistically significant in impacting per capita GDP growth of the transition economies are FDI inflows, trade openness, domestic credit to private sector and government expenditures. The model confirms the expected positive relationship between FDI influx and GDP growth. This result was also seen in the study conducted by Flexner (2000) who employed Ordinary Least Squares (OLS) estimation to examine the effect of FDI on per capita GDP growth over the period 1990-1998 in transition economies. He found that FDI had a statistically significant and positive impact on per capita GDP growth. A one percent change in FDI inflow increases per capita GDP by 1.540 points, holding everything else constant. This

trend is witnessed because of the high quality of foreign capital invested into Kazakhstan, Armenia and Ukraine and the absorption capability of local firms and citizens to realize growth enhancing spillover effects of FDI.

The model also validates the expected positive correlation between gross capital formation and growth of per capita GDP. A one percent increase in capital formation expenditure raises per capita GDP by 0.243 points, ceteris paribus. The result is consistent with Barro's findings (1991) who claimed that the rate of physical capital formation positively influences the rate of a nation's economic growth. Capital formation investment can promote economic growth by ensuring that industries obtain the required finance for further growth and development which promotes economic growth in long run.

The model also verifies the expected positive relationship between trade openness and economic growth in transition economies. A one percent rise in trade openness increases per capita GDP by 0.258 points, holding everything else constant. The empirical results are also is consonant with the theory provided by Umaru et al. (2013), and show that increase in trade openness has a positive impact on the growth of output. Openness to international trade promotes the diffusion of knowledge across borders and increases productivity in domestic markets competing with their international counterparts which acts as a driving force for economic development in post-communist nations.

Domestic credit to private sector demonstrated an unexpected negative trend in stimulating economic growth in Kazakhstan, Armenia and Ukraine. According to the model results, a one percent increase in domestic credit decreases economic growth by

0.200 basis points, ceteris paribus. The result of this study leads to conclusion that financial system in studied transition economies is weak and insufficiencies in allocating credit to domestic sector exist.

Government expenditure has a negative relationship with per capita GDP growth in countries of focus. This variable is statistically significant at 1 percent level, and a one percent increase in government expenditure decreases per capita GDP growth by 2.462 points, holding everything else constant. This result is consistent with the studies of Barro (1991) who examined 98 countries for the period of 1970-1985 and found a significant negative relationship between government expenditures and per capita GDP growth. The negative trend can be explained by the possibility of crowding out effect when government spending can deter private spending which is considered to be more significant in promoting economic growth. Moreover, the negative relationship between government spending and economic growth can be explained by existence of high levels of corruption in government systems of Kazakhstan, Armenia and Ukraine.

Lastly, total number of observations used for the regression is 60. The correlation coefficient between dependent and independent variables is 0.4594, which shows that 45.94 percent of the variation in per capita GDP growth can be explained by the regression. Moreover, F test statistic with 5 numerator degrees of freedom and 52 denominator degrees of freedom is 8.84, and it is statistically significant at 99 percent level.

6.0 CONCLUSION

In summary, the results show that FDI exhibits significant and positive effect on economic growth of the transition economies of Kazakhstan, Ukraine and Armenia. By far, these economies have been successful in attracting FDI; however, the foreign investment influx has been limited primarily in energy and mining sectors. Being highly dependent on energy sector might have a negative effect on long term economic growth. The policy implication is that the transition economies should attract FDI to other sectors which create employment and income in a larger scale. Investment in infrastructures and export-led manufacturing sectors can contribute more and FDI is imperative in this case.

Other important determinants of economic growth in Kazakhstan, Ukraine and Armenia over 1992-2011 period were trade openness and gross fixed capital formation. Trade liberalization promoted economic development in transition economies through rising levels of productivity. By opening to international trade, these economies increased the production of goods and services in which they had competitive advantage. They were also able to capture technology and foreign goods through purchases of imports, indirectly bringing in innovation. In order to further promote long-term economic growth, policies that focus on reducing tariffs, regulations and licensing requirements should be undertaken. These reforms will ease the entry process for domestic and foreign firms to compete in markets. Gross fixed capital formation played an important role in promoting economic growth as well. Capital formation acted as a driving force for development in countries of focus by increasing physical capital stock in domestic economy and by promoting technological advancement. More emphasis should be made on providing tax

incentives for businesses to increase their investment in equipment which will positively affect the economy of transition countries.

Domestic credit to private sector and government expenditure showed a negative and statistically significant impact on economic growth of the transitional economies. The unexpected result could be explained by high levels of corruption existing in post-soviet regions, leading to inefficient allocation of resources. In order to reduce high levels of corruption, economic reforms that aim for increased competition in markets and creation of small businesses, should be encouraged. Increasing the scope and improving the functioning of markets will lower state's power and reduce the possibility of bribery payments to state officials. Overall, the transition economies of Kazakhstan, Armenia and Ukraine have been successful in promoting economic growth since their initial transition from centrally planned economy; however, they have to consider some policy reforms in order to further promote economic growth and reduce their dependence on income generated from energy sector.

One possible suggestion for future research is to perform analysis on each specific country rather than a group to find more precise relationship between GDP growth and explanatory variables.

Appendix A: Variable Description and Data Source

Acronym	Description	Data source and Period
$g_{i,t}$	The dependent variable represents the growth rate of per capita GDP	World Development Indicators , 1992-2011
FDI	Foreign Direct Investment flows by country in millions of dollars	World Development Indicators, 1992-2011
FIXEDCAP	Gross fixed capital formation, includes land improvements, plant, machinery, and equipment purchases; and the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings.	World Development Indicators, 1992-2011
TRADE	The sum of exports and imports of goods and services in country i at a year t divided by GDP	World Development Indicators, 1992-2011
PRIVCRED	Domestic credit to private sector, refers to financial resources provided to the private sector by financial corporations	World Development Indicators, 1992-2011
GOVEXP	General government final consumption expenditure. It contains all government current expenditures for purchases of goods and services; it also includes most expenditure on national defense and security, but excludes government military expenditures that are part of government capital formation.	World Development Indicators, 1992-2011

Appendix B- Variables and Expected Signs

Acronym	Variable Description	What it captures	Expected sign
FDI	FDI Inflow (% of GDP)	Higher FDI inflows can increase economic growth by transferring technological advancement and expertise to host countries	+
FIXEDCAP	Gross fixed capital formation (% of GDP)	Higher levels of fixed capital formation lead to improvement in infrastructure and promote industries obtaining the required finance for further growth and development	+
TRADE	Trade openness (% of GDP)	Openness to international trade promotes the diffusion of knowledge across borders and increases productivity in domestic markets competing with their international counterparts which acts as a driving force for economic development	+
PRIVCRED	Domestic credit to private sector (% of GDP)	Higher levels of credit provided to private sector leads to increased business spending and expansion of the economy	+
GOVEXP	General government final consumption expenditure (% of GDP)	Increase in government spending leads to higher levels of GDP	+

References

Azizov, A., (2007), "Determinants of FDI in CIS countries with Transition Economy", *Master Thesis*, Aarhus School of Business.

Barro, R. J., (1991), "Economic growth in a Cross Section of Countries", *Quarterly Journal of Economics*, 106: 407-43.

Borenztein, E., De Gregorio, J. and Lee, J.W. (1998). "How Does Foreign Direct Investment Affect Economic Growth", *Journal of International Economics*, 45: 115-135.

Campos, N.F., and Kimoshita, Y., (2002), "Foreign Direct Investment as Technology Transferred: Some Panel Evidence from the Transition Economies", *The Manchester School*, 70 (3): 398-419.

Carkovic, M. and Levine R. (2002), "Does Foreign Direct Investment Accelerate Economic Growth?", University of Minnesota.

Choe, J.I. (2003), "Do foreign direct investment and gross domestic investment promote economic growth?", *Review of Development Economics*, 7(1): 44-57.

Doucouliagos, H., Iamsiraroj, S., and Ulubasoglu, M., A., (2010), "Foreign Direct Investment and Economic Growth: a Real Relationship or Wishful Thinking?", *School Working Paper*, Deakin University, Melbourne.

Janicki, H.P. and Wunnava, P.V., (2004), "Determinants of Foreign Direct Investment: Empirical Evidence from EU Accession Candidates", *Applied Economics,* 36: 505-509.

Lee, M., and Tcha, M., (2004), "The Color of Money: The Effects of Foreign Direct Investment on Economic Growth in Transition Economies", *Review Of World Economics*, *140* (2), 211-229.

Lensink, R., and Morrissey, O., (2001), "Foreign Direct Investment: Flows, Volatility and Growth in Developing Countries', Mimeo, University of Nottingham.

Nannicini, T., and Billmeier, A., (2011), "Economies in Transition: How Important is Trade Openness for Growth?", *Oxford Bulletin of Economics and Statistics*, 73 (3), 287-314.

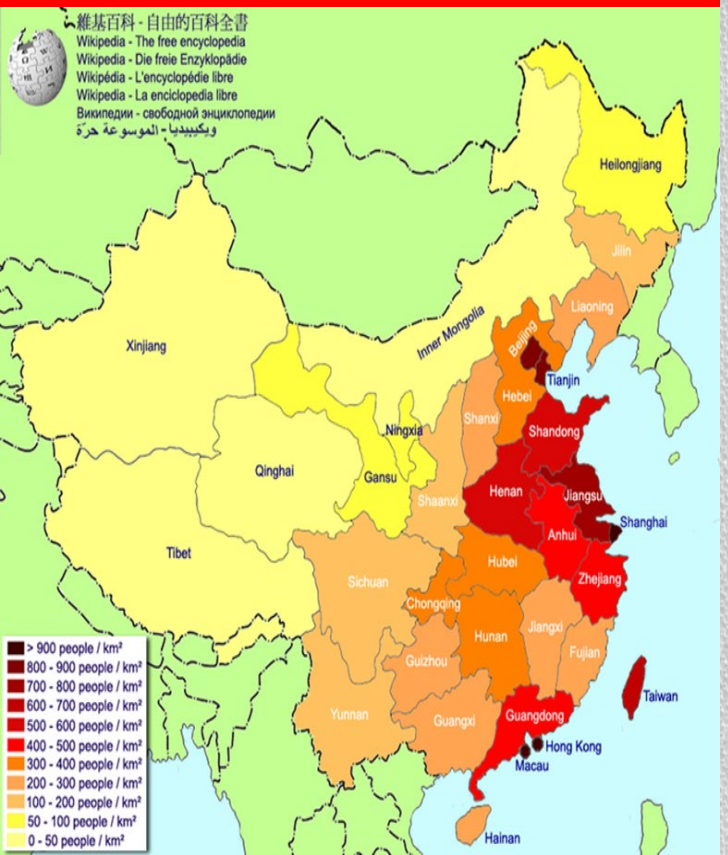
Nath, H. K., (2009), "Trade, Foreign Direct Investment, and Growth: Evidence from Transition Economies", *Comparative Economic Studies*, 51 (1), 20-50.

Umaru, A., Donga, M., and Hayatudeen, S. Z., (2013), "An Empirical Investigation into the Effect of Openness of the Economy on the Growth of Output (RGDP) in Nigeria from 1986-2010", *Journal of Emerging Trends in Economics and Management Sciences,* 4(6): 554-564.

UNCTAD, (2010), “Investing in a Low-Carbon Economy”, *World Investment Report,* United Nations.

Zhang, K.H. (2001), “Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America”, *Contemporary Economic Policy*, 19(2): 175-185.

World Bank (various years). *World Development Indicators.* Washington D.C.: World Bank.



CHINA'S RENMINBI: "OUR CURRENCY, YOUR PROBLEM"?

Regina Castro
Nicolas Eceizabarrena

Agenda

- Introduction and History Overview of the RMB
- Interventions of the Central Bank
- Revaluation of the Renminbi
- China's Trade Partners
- Lessons from China's Neighbors
- Decisions Faced by China
- Effects of the RMB Appreciation
- Discussion Questions

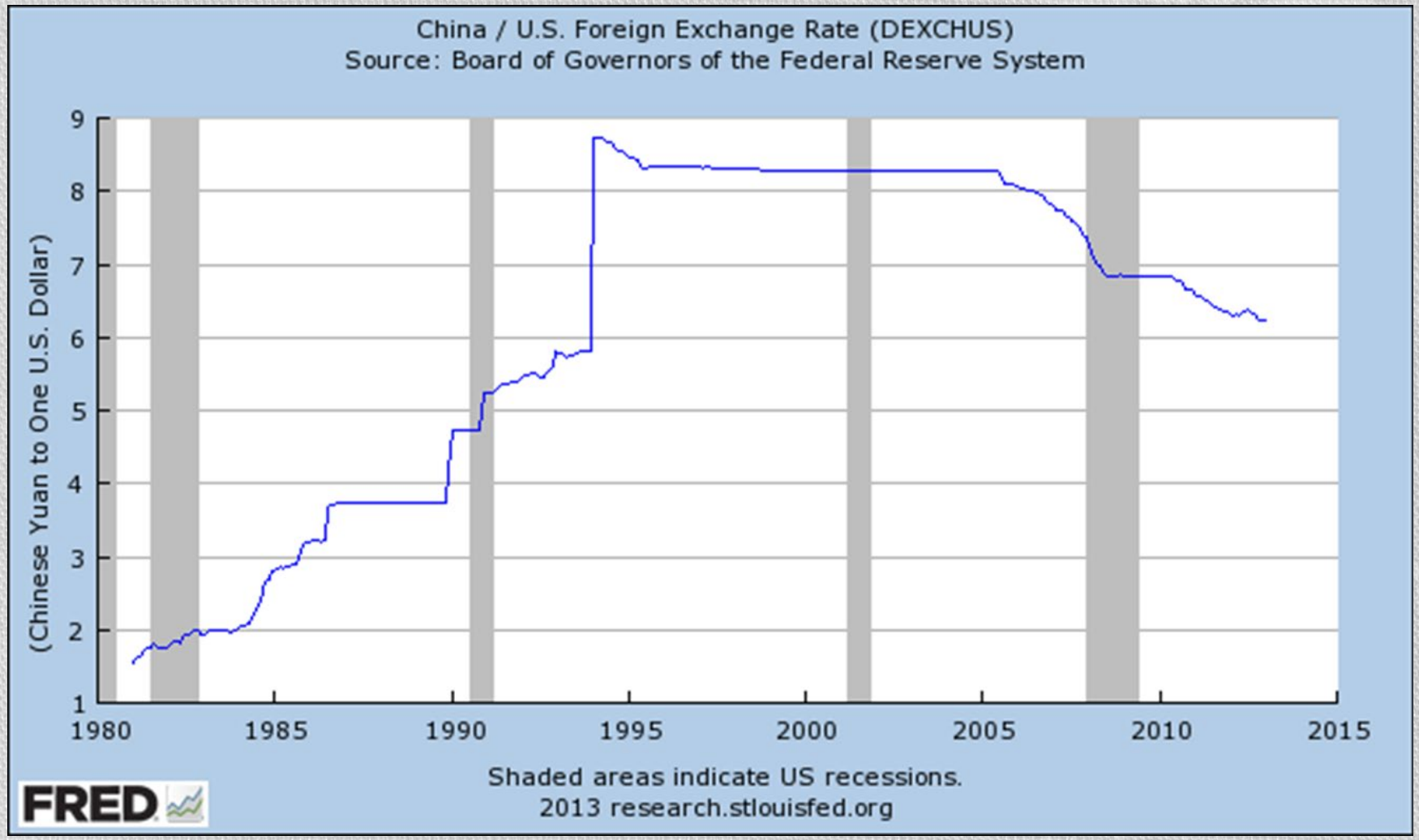
Introduction

- 2006: Many countries claimed that China's currency, the yuan, was significantly undervalued
- China was manipulating the exchange rate to suppress the prices of its exports
  - Attractive for FDI inflows into China
  - Costing other countries thousands of jobs
- De Facto Peg to the US Dollar
  - Not in line with market forces
  - Halting true appreciation
  - Maintained by Chinese Central bank intervention

A Brief History of the Renminbi

- Since 1969, the official name of China's currency had been renminbi or RMB
- Before 1978
  - Strict central planning and economic independency
  - The renminbi was pegged to a basket of currencies
- After 1978
  - China launched "open door policy"
  - Currency was devalued multiple times
  - 1988: Creation of market determined rates in "swap centers" weakened the importance of the official exchange rate.
  - 1994: US$1 = RMB8.7
  - The de facto exchange rate was a peg to the US$

Yuan / USD Exchange Rate



Restrictions on the Convertibility of the RMB

- The RMB was convertible for operations on the current account
  - Importers and exporters could freely exchange the RMB against other currencies
- Tight control on the capital account
  - Savings abroad China
  - Portfolio investments
- An exception to restrictions on the capital account was FDI

CB's Interventions

- Limiting the amount of foreign currency in circulation.
- Pilling up in Foreign Reserves
- Increasing the money supply

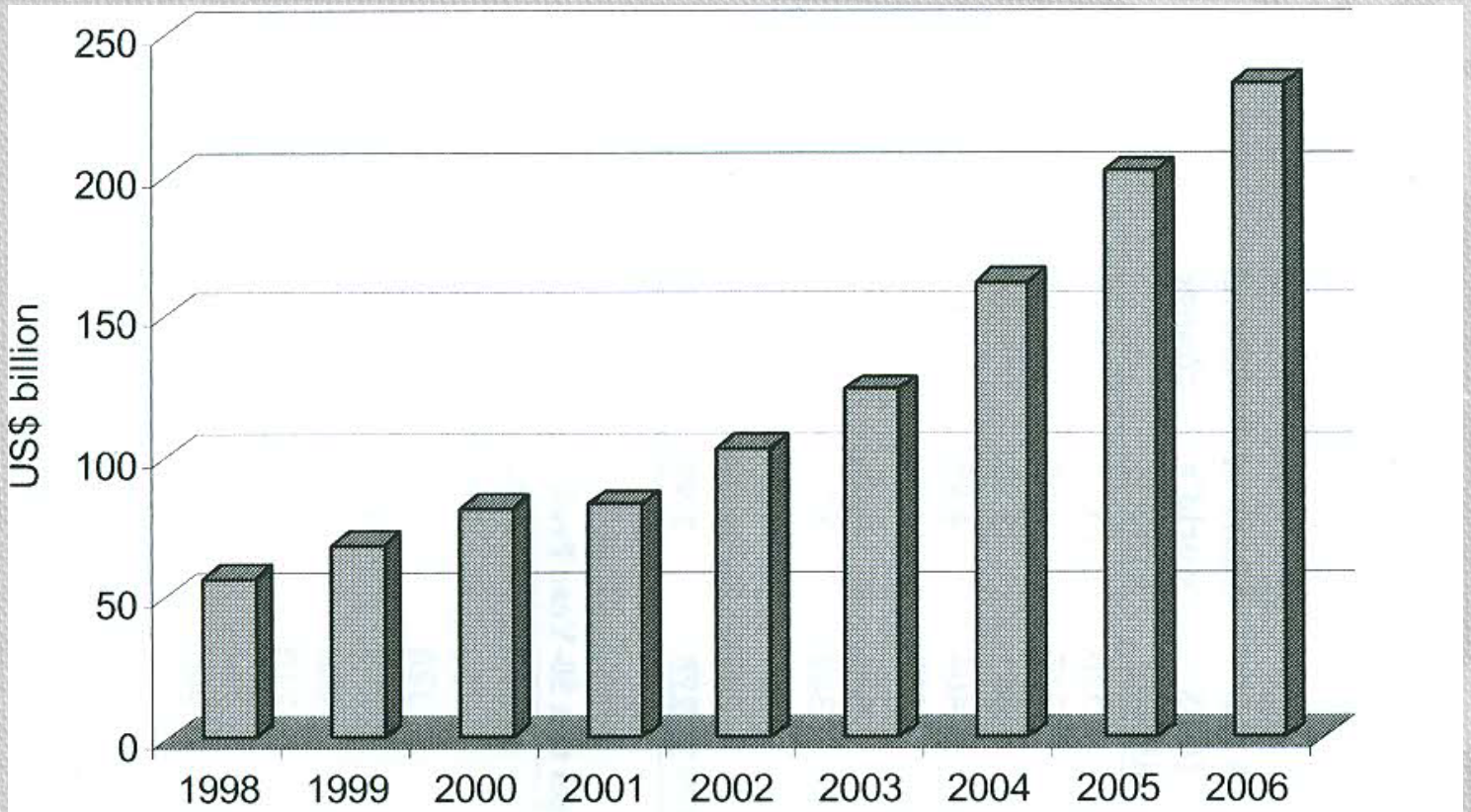
Abandoning Peg to USD

- On 2005, China dropped peg to the USD and started to track a basket of currencies.
- RMB was revalued and was allowed to float within a 0.3% band against the USD.
- Led to the appreciation of other Asian Currencies
- Despite RMB's appreciation, international pressures for a more vigorous appreciation continued.

Economists Conclusion

- The RMB was undervalued
  - Extent of devaluation ranging from 10% to 50%
- The currency undervaluation would be unsustainable in the long-run
  - Goldstein (2004): protectionist actions among China's larger trading partners
  - Frankel (2004): consequences of an overheating economy
- A large one time appreciation will put China in an equilibrium position
- McKinnon (2005) argues that China's domestic market is too undeveloped to handle large scale setbacks, where sanitation of the financial markets must be undertaken first.

US Merchandise Trade Deficit with China



Source: US Census Bureau, Foreign Trade Statistics, http://www.census.gov/foreign-trade (accessed 29 June 2007)

FDI Inflow into China and Sources of FDI

Year	FDI (US$ billion)
1979–1984	3.1
1985	1.7
1989	3.4
1990	3.5
1991	4.4
1992	11.0
1993	27.5
1994	33.8
1995	37.5
1996	41.7
1997	45.3
1998	45.5
1999	40.3
2000	40.7
2001	46.9
2002	52.7
2003	53.5
2004	60.6
2005	60.3
2006	63.0

Sources:

China Statistical Yearbook, http://www.stats.gov.cn/english/ (accessed 29 June 2007).

For 2006, MOFCOM, press announcement (preliminary data).

Source of FDI in 2004	FDI (US$ million)
Hong Kong	18,998
Virgin Islands	6,730
South Korea	6,248
Japan	5,452
United States	3,941
Taiwan	3,117
Cayman Islands	2,043
Singapore	2,008
Samoa	1,129
Germany	1,058
Netherlands	811
United Kingdom	793
Australia	663
France	657
Canada	614

Source of FDI in 2005	FDI (US$ million)
Hong Kong	17,949
Virgin Islands	9,022
Japan	6,530
South Korea	5,168
United States	3,061
Singapore	2,204
Taiwan	2,152
Cayman Islands	1,948
Germany	1,530
Samoa	1,352
Netherlands	1,044
United Kingdom	965
France	615
Canada	454
Australia	401

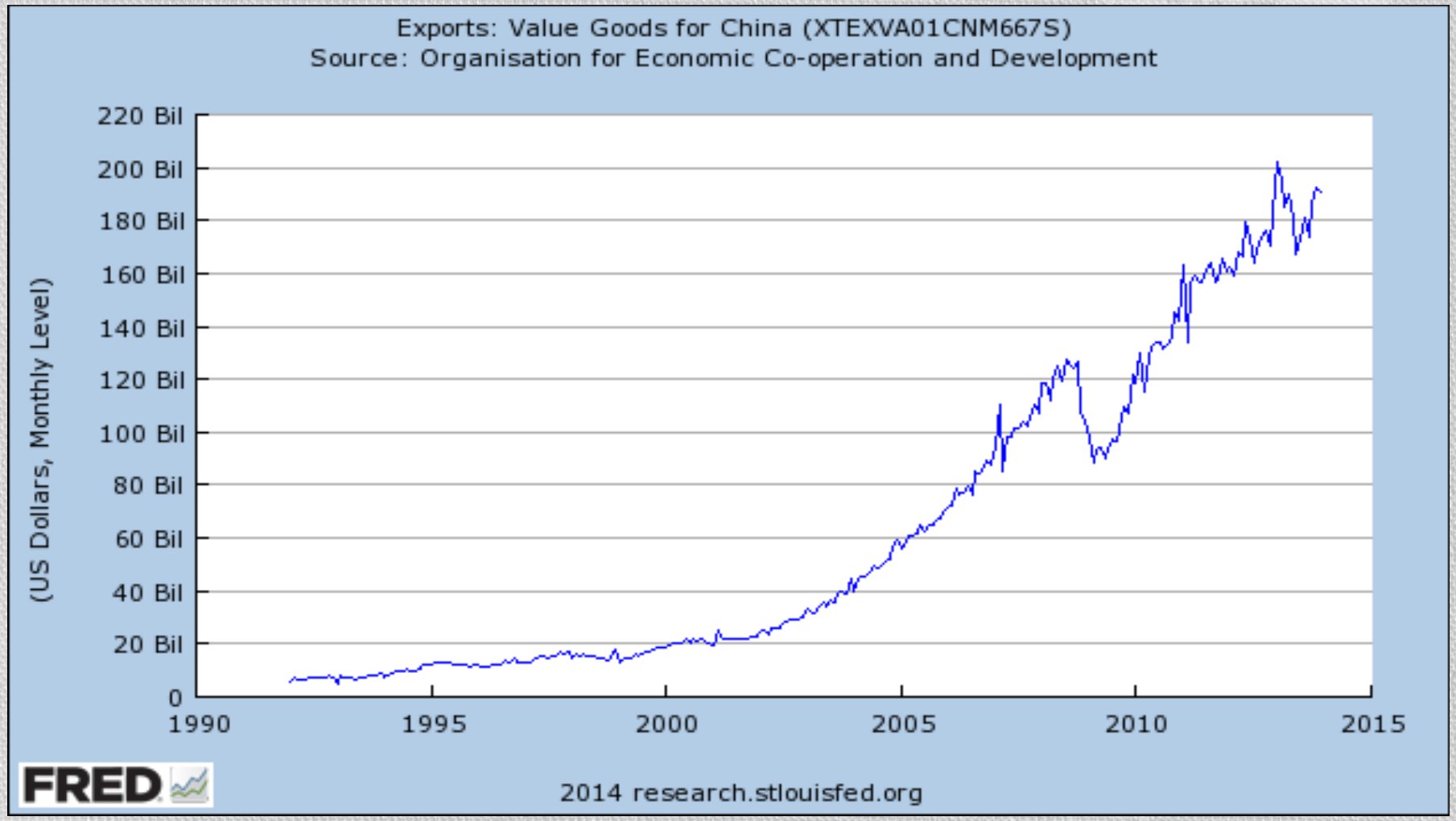
China's Response

- China argues
  - Aren't significantly undervaluing their currency
  - China had large deficits with other countries
  - PBoC's interventions benefitted the US

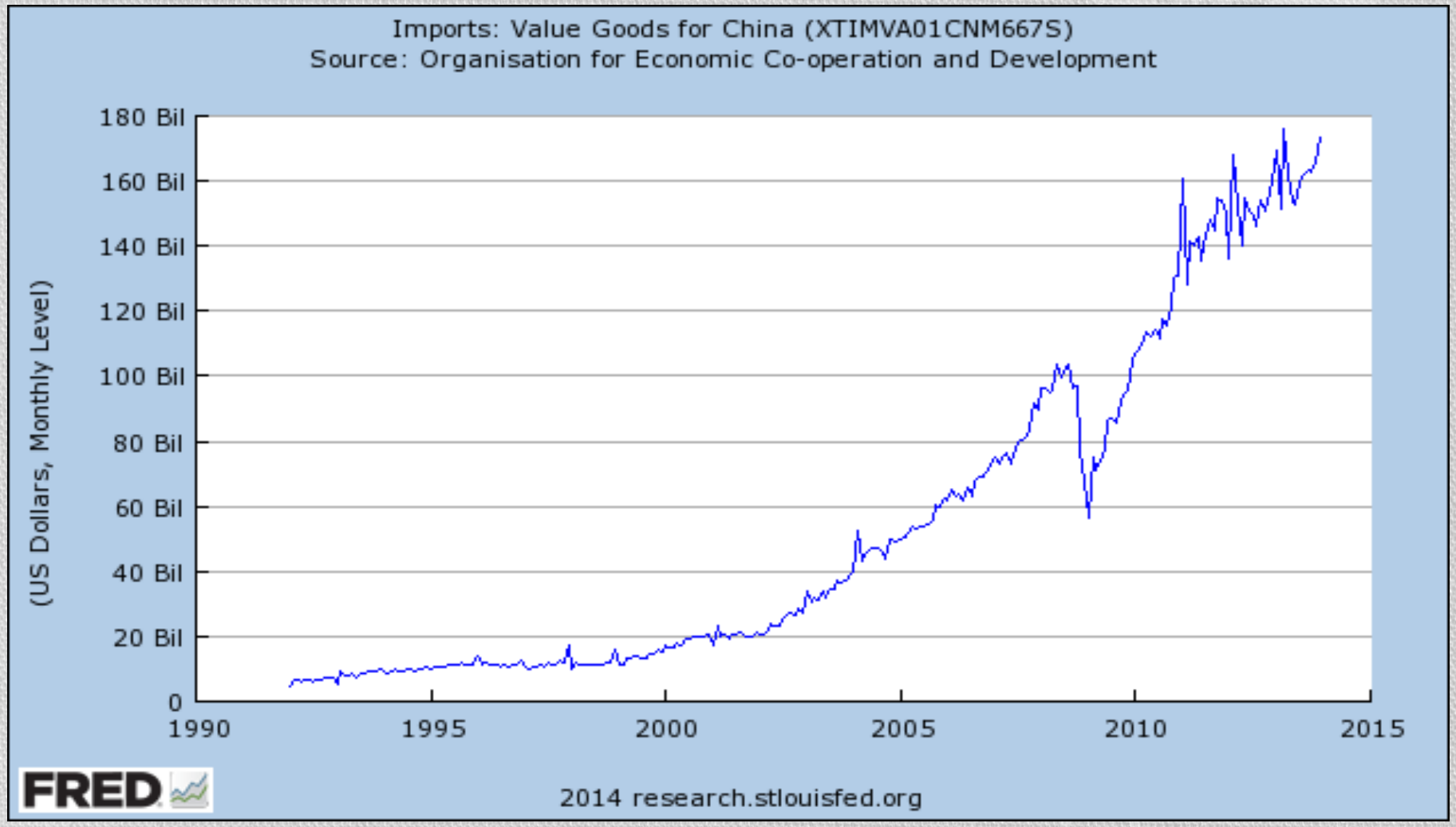
Unit in US$ billion	2005			2006		
Country or region	Exports	Imports	China's trade surplus (+)/ deficit (–)	Exports	Imports	China's trade surplus (+)/ deficit (–)
Total	762.0	660.1	101.9	969.1	791.6	177.5
North America	174.7	56.3	118.4	219.1	66.9	152.2
EU	143.7	73.6	70.1	215.4	114.9	100.5
Asia	366.4	441.5	-75.1	455.8	525.5	-69.7
ASEAN	55.4	75.0	-19.6	71.3	89.5	-18.2
Africa	18.7	21.1	-2.4	26.7	28.8	-2.1
Latin America	23.7	26.8	-3.1	36.0	34.2	1.8
Oceania	12.9	18.0	-5.1	16.0	21.3	-5.3
United States	162.9	48.7	114.2	203.5	59.2	144.3
Hong Kong	124.5	12.2	112.3	155.4	107.9	47.5
Canada	11.7	7.5	4.1	15.5	7.7	7.8
Singapore	16.6	16.5	0.1	23.2	17.7	5.5
India	8.9	9.8	-0.8	14.6	10.3	4.3
Australia	11.1	16.2	-5.1	13.6	19.3	-5.7
Brazil	4.8	10.0	-5.2	7.4	12.9	-5.5
Thailand	7.8	14.0	-6.2	9.8	18.0	-8.2
Philippines	4.7	12.9	-8.2	5.7	17.7	-11.9
Saudi Arabia	3.8	12.2	-8.4	5.1	15.1	-10.0
Malaysia	10.6	20.1	-9.5	13.5	23.6	-10.1
Japan	84.0	100.5	-16.5	91.6	115.7	-24.1
South Korea	35.1	76.8	-41.7	44.5	89.8	-45.3
Taiwan	16.5	74.7	-58.1	20.7	87.1	-66.4

Source: MOFCOM, http://english.mofcom.gov.cn/static/column/statistic/ie.html/1 (accessed 29 June, 2007).

Chinese Exports



Chinese Imports



Lessons from China's Neighbors

- The Appreciation of the Japanese Yen
  - 1950 – 1971: The yen was fixed at ¥360 to the US$
  - Exports were increasing by 16.9% annually
  - In the early 1970s: high inflation in the US and US$ was devalued.
  - The yen was floated: exchange rate of ¥ 271 in 1973 and ¥ 227 in 1980

- 1985: The Plaza Accord
  - US$ lost half of its value against the yen and the Deutsche Mark
  - Reduced US trade deficit with Europe
  - Japan was affected by the appreciation of the yen
  - Expansionary policy in Japan generated property and stock bubble

The Asian Crisis

- Many Asian countries had their currencies pegged to the US $
- Between 1995-1997: the US $ appreciated sharply
  - Current account deficits in East Asian countries
  - Investment inflows from developed countries
- 1997: Speculators attacked Asian currencies
  - Peg to the US $ was abandoned
  - Collapse of currencies
- During the crisis, China maintained its peg to US$
  - Devaluation of the RMB to avoid further instability

The Peg of the HK Dollar to the US Dollar

- Since 1983: HK$ 7.8 to the US$ with a small fluctuation margin between HK$ 7.75 and HK$ 7.85

- Currency board system

  - HK Monetary Authority had to adjust domestic interest rates to the US

  - Despite the Asian Crisis, HK refused to devalue its currency

  - Status of HK as a financial center

Facing Important Decisions

- Reevaluation of the RMB posed risks that had to be dealt with
  - International Reserves
  - Retaliation by trade partners
  - Drop in exports
- Need to reform banking sector before lifting capital controls
- “Go Abroad Policy”
- Export Tax

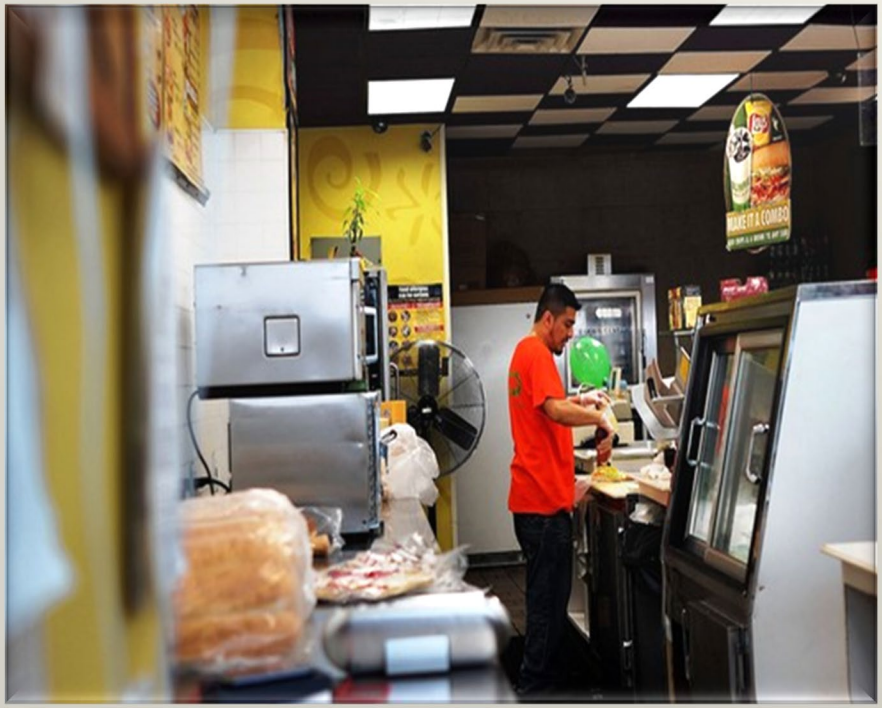
Effects of RMB's Appreciation

- An appreciation of the RMB has major implications:
  - Chinese export prices will increase while decreasing in other parts of the world
  - Allow some countries to reduce trade deficit with China
  - Loss of FDI inflow into China
  - An increase in Chinese labor cost could negatively affect a lot of companies across the globe who have operations set in China

Discussion Questions

- What are the future challenges that China must overcome in order to have their domestic policy succeed? What are the other reforms China must implement to fuel the economic growth with internal consumption?

- International pressures to have the RMB appreciate are started to pay off and thus causing China to lose its competitive edge on exports due to the stronger currency. How this is going to affect businesses around the world and prices for inputs and final products?



Wage-Rise Report Sees Fewer Jobs, Less Poverty

By Eric Morath, Damian Paletta and Carol E. Lee

02/20/2014

Minimum Wage Raise