

Does Chinese investment contribute to the US economy? An analysis of selected US States' growth, employment and exports production

Syed Hasanat Shah*

Li Jun Jiang***

Hafsa Hasnat****

Abstract: This paper analyzed the impact and causal relation of outbound Chinese FDI on growth, employment and export performance of 16 selected US States by using Panel data. The contemporaneous panel fixed estimation results shows that the impact of Chinese outbound FDI on the economic growth, employment and export of selected states are insignificant. But the impact of FDI on growth turns positive and significant when interacted with States export to China. Applying heterogeneous panel causality approach on a refined dynamic panel model indicates that Chinese FDI does not cause GDP, exports and employment while the results of reverse causality confirm that US State GDP (market size) cause the inflow of Chinese outbound FDI. The overall impact of Chinese outbound investment, a small portion of the total FDI inflow to the US, varies from conditionally positive to utterly insignificant without any adverse impact on the local economy.

Keywords: Chinese out-bound FDI; US States; Panel Unit root; fixed effect; growth; employment; exports

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* Corresponding author and Faculty Member, School of Economics, Jilin University, (haist@jlu.edu.cn), 2699 Qian Jin Road, Changchun, Jilin, China.

** Dean and Professor, School of Economics, Jilin University, (lijj@jlu.edu.cn)

*** Faculty Member, Economics Department, Hua Qiao University Changchun(hafsa.hasnat@yahoo.com)

1. Introduction

In economics, the positive impact of FDI (Foreign Direct Investment) inflows on host economy is takes the place of an axiomatic truth. It is generally considered that FDI inflows bring along expertise, technology and required wherewithal that drastically changes the economic landscape of the host country. Theoretically, the calculation is very simple. Under neo-liberal paradigm - inbound FDI fills the gap between saving and investment, and thus, augment the domestic capital that pave the way for growth, enhance trade and create new jobs, while endogenous models consider long run growth as a function of technological progress and support their argument by underlining the positive influence of FDI on long term growth rate in the host economy via technology transfer, diffusion, and spillover effects. However, the reality can be different depending on the prevailing circumstances and form of investment. For example the assumption that foreign-owned firms possess superior technology is less compelling when the host country is among the world's technological leaders. Therefore, the positive effects of FDI on local economy can not be generalized, particularly when foreign investment flows from developing (capital scarce) countries to the developed (capital abundant) part of the world.

In the last three decades FDI received widespread attention, however, the focus was limited to flow of FDI from developed to developing region or with in developed region. For example more than 90 percent of FDI inflow in the US originates from Europe, North America and Japan while the rest of world contributes less than 10 percent to FDI in the US and that the share of China in overall FDI inflows to the US is only 0.6 percent. However, irrespective of small share, recently Chinese outbound investment to the US received negative and out of proportion attention which has yet to subside.

China is growing rapidly and like any other country, for China the most important thing is to keep the chain of supply intact and the wheels of growth turning. This is not possible without 'going out globally' and integrating herself in the world economy. The recent trend in Chinese outbound investment across the globe is a step in that direction. The growing confidence of Chinese firms on local level and their urge to go out globally (supported by huge pile of China's foreign exchange reserves and more than 7 percent growth rate) indicates that in the coming years Chinese firm will invest more aggressively, particularly in the US. Huge market and access to latest technology make US one of the attractive destinations for foreign investors; and Chinese firms are no exception. Similarly, infrastructure, level of financial development, skilled labor, R&D, technical know how (Hymer 1976), testing waters and acquiring credibility are some of the other plausible reasons that could explain the flow of Chinese FDI to the US.¹

Chinese outbound investment is a recent phenomenon that can be traced back to 'Going out Strategy' of Chinese government initiated in 1999. Since then Chinese investment across the globe and particularly in the US increased steadily where it jumped from \$.4 billion in 2002 to \$ 6.5 billion by 2012. Chinese investment in the US registered 70 percent increase during 2008 to 2011. Though the stock of Chinese FDI in the US is mere 0.3 percent, almost negligible when compared with Chinese investment in treasury and sovereign wealth fund in the US, but still the US government is skeptical of the motives of Chinese originated FDI. One recent example is the presidential intervention to stop the acquisition of four wind projects in Oregon by Ralls Corporation of Sany Group Ltd (China's largest heavy equipment manufacturers). US government is concerned that China state owned firms and industrial policy might acquire assets overseas only to move jobs and production back home, and therefore, in the long run Chinese investments will harm rather than help local employment and growth. This raise question about the integrity and contribution of Chinese direct investment in the US and has rekindled old fears about the political and economic impacts of FDI.

Thus, this paper is an effort to analyze qualitative and quantitative impact of Chinese outbound investment on the selected US States that receive Chinese FDI. We

¹ China Council for the Promotion of International Trade, European Commission, and UNCTAD (2010) "Survey on Current Conditions and Intention of Outbound Investment by Chinese Enterprises"

want to measure the impact and causal relation of Chinese outbound investment on growth, employment and exports in the selected States. This will help us understand the motives and the role of Chinese outbound investment in the US economy along with the tough response from the US to the investment of Chinese origin.

The rest of the paper is divided as: section 2 consists of literature review, section 3 deals with descriptive analysis of Chinese outbound investment in the US, section 4 deals with data and methodology while section 5 discusses empirical results. Last section concludes the paper.

2. Literature review

The empirical literature on FDI and economic growth can be broadly classified into two parts: (i) The considerable direct impact of FDI on trade that ultimately increases growth (Markussen and Vernables, 1998) and (ii) the role of FDI in stimulating and enhancing the productivity of domestic firms (Borensztein et al., 1998). In the first case, macro economic studies, unlike the microeconomic empirical evidence, generally suggest positive role of FDI in generating economic activities which attracted widespread attention from scholars in the fields of international business and world economy (Barry and Bradley, 1997; Glass and Kamal, 1999; Mortimore, 2000; Hunya, 2002; Girma et al., 2005). These scholars identified a number of channels, including augmenting capital stock, technology transfer, learning by watching, and complementary inputs etc. through which FDI contribute to growth and development in host economies.

Ekhardt et al (2009) shows that FDI inflows to the US demonstrate more positive externality compared to domestic investment. Empirical evidence also confirms that US have advantage in utilizing FDI compared to other advanced states where agglomeration economies can be reaped (Head, Ries and Swenson 1995; Bobonis and Shatz 2007). Dunning (1999) argue that the type and motives of inbound FDI in advanced economies, such as the US, is different from the investment in developing economies. US attract asset seeking rather than asset exploiting type of FDI. Asset seeking FDI is largely motivated by the investing firm's search for knowledge and technology (Cantwell 1989) that does not exist or scarcely available locally.

Driffield and Taylor (2002) argued that FDI contribute highly across developed countries where the domestic and investing foreign firms have nearly same level of productivity, while other studies underscore the importance of human capital, per capita income, the role of financial development and trade openness for the positive spillover of FDI in developed countries (Borensztein et al. 1998, Blomstrom et al. 1994, Alfaro et al. 2003, Balasubramanyam et al. 1996). Alfaro et al. (2003) consider that the positive effect of FDI depends on a well established capital markets, while other consider that trade openness is an important channel through which FDI can affect growth favorably (Balasubramanyam et al. 1996). Choe (2003) adapts a panel VAR model to explore the interaction between FDI and economic growth in eighty countries in the period from 1971-1995. He confirmed the Granger causal relationship between FDI and economic growth in either direction but with stronger effects visible from economic growth to FDI than the other way around. Xiaohuai et al. (2002) using quarterly data for China found co-integration as well as bidirectional short and long run causality between FDI and growth.

Chowdhury and Mavrotas (2003), De Mello (1999), Nair-Reichert and Weinhold (2001) emphasize heterogeneity and tested causality for cross country panels by using mixed fixed and random (MFR) coefficient approach in order to test the impact of FDI on growth and found that FDI on average shows significant relation, but highly heterogeneous across countries, with growth. Using heterogeneous panel data, Hansen and Rand (2004) and Mahmoud and Fatima (2007) confirmed two-way causality between FDI and the level of GDP for a sample of 31 developing and six Gulf countries. Their results support the role of FDI in growth via knowledge transfers and adoption of new technology. The main exception from these general conclusions is the study of

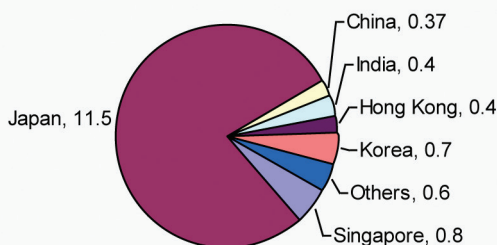
Carkovic and Levine (2002) which does not support the positive spill over impact of FDI.

Krugman (1998) also doubts the benefits associated with foreign investment and acquisition of domestic firms due to adverse selection problem, particularly at the time of financial crises where foreigners can take advantage of liquidity constraints and the domestic assets are on 'fire sale'. FDI undertaken in such situation may transfer ownership of firms from domestic to foreign firms that are less efficient, since foreigners acquire local firms because of their superior cash position as opposed to a special know-how or technological advantages.

3. Analysis of Chinese outbound investment in the U.S

Structurally Chinese economy is different from the US where US is the staunch follower of free market while China believes in social market economy. In China state owned enterprises rather than private firms are traditionally very strong and has easy access to finances. State owned enterprises absolutely controlled Chinese economy for long time even after open-up policy in 1979 and remained main investors within the country and abroad. However, in the last ten years, the share and number of state owned enterprises decreased and exposed to tough competition from private domestic and international investors. China's recent outbound FDI to the US manifest this new trend where the number of state owned investment projects decreased to half that of private investment projects². In 2012, for the first time, the value of private investment was more than the total investment of Chinese state owned firms in the US.

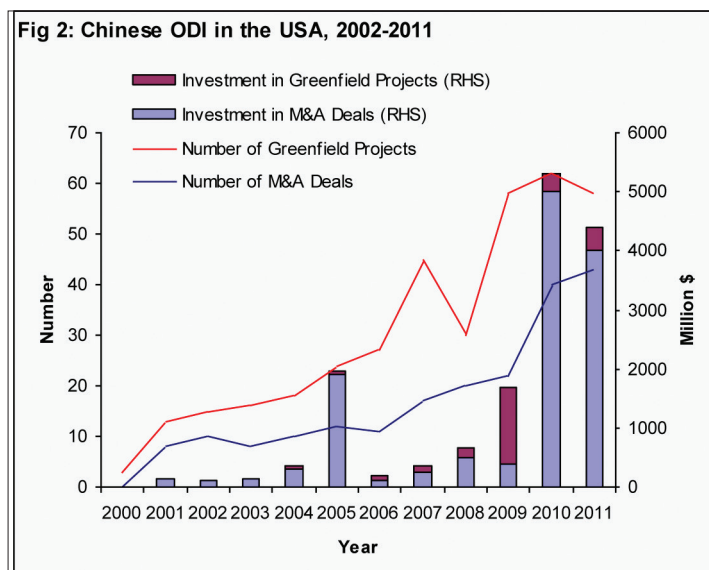
Fig 1: FDI Stock in the US by Source Country from Asia, % of total, UBO Principle



Globally the US is the most attractive country for FDI that lured more than \$ 2 trillion investment in a period of eleven years from 2000 to 2011. However, the share of Chinese FDI in the said stock is mere 0.37 percent (Fig 1). From 2000 to 2008, the accumulated direct Chinese investment in the US was just \$ 4.3 billion that surged to \$ 17 billion by 2012. This shows that contrary to global trend, the pace of Chinese investment to US picked momentum just after 2008. By one estimate, Chinese FDI in the US provides more than 25000³ jobs with an average compensation of employees 20 percent higher than the domestic firms. Chinese FDI also contributed to exports with. Selected States FDI induces exports to China in 2009 was \$121 million which is four fold higher than exports in 2008.

China is going through another phase of transformation where structural changes at home encourage Chinese firms to find their prospects by investing in developed

economies. Thus acquiring rich-world brands and technologies, learning how to operate under advanced regulatory regimes, and gaining experience in providing higher value-added services are now part of the diverse mix of motives driving Chinese firms to the US. Chinese firms have finances but majority of them are investing abroad for the first time. Therefore, they prefer to collaborate with the local firms. By 2011 the accumulated Chinese investment in the US M&A was \$ 13.5 billion compared to \$ 2.8 billion in Greenfield investment (Fig 2). The number of deals in M&A experienced rise which shows that firms from China are aspiring to join hands with a partner in the US, while firms in the US going through a troubled time and anticipating China's economic rise, welcome Chinese investment.



Empirical evidence supports the argument that Greenfield investment generates more jobs compared to M&A. However, M&A played equally important role in maintaining jobs in the US after the 2008 crisis. M&A saved several troubled US firms from bankruptcy and successfully turned them productive. Chinese buyers depended on local staff because human talent, experience and know how of US firms are rooted locally and not prone to easy transfers. That's why Chinese firms retained local staff (e.g. Lenovo overtaking of IBM) after acquiring a US business. M&A by Chinese firms also provides synergies with existing operations and opened the venues for partners to access market, cheap input materials and economies of scale in Chinese market. Chinese investment in the US is concentrated to a few States rich in energy resources, advance industrial asset and latest technology e.g Texas and California. This pattern of Chinese FDI corroborates earlier studies of Coughlin et al. (1991); Head et al. (1995); Bobonis and Shatz, (2007) which shows that the agglomeration economies of advanced US States attract more inbound FDI

4. Methodology and data

4.1. Unit root testing

The usual first step in empirical testing in time series data is stationarity test. Traditional tests in this regard are ADF (Augmented Dickey and Fuller) and PP (Philip Pearson) tests. However, the ADF and PP tests are originally meant for single time series and may suffer from low statistical power in unbalanced panels and small samples like ours. Therefore, in our case we rely on IPS (Im, Pesaran and Shin; 2003) and Fisher

Chi based panel unit root tests. IPS test can be described as

$$\Delta S GDP_t = \alpha_0 + \delta t + \rho S GDP_{t-1} + \sum_{j=1}^p \phi_j \Delta S GDP_{t-j} + v_t \quad (4.1)$$

The null hypothesis for IPS panel unit root test is

$$H_0 : \rho_i = 0 \text{ for all } i \quad (4.2)$$

against the alternative

$$H_1 : \rho_i < 0, \text{ for } i = 1, 2, \dots, N_1, \text{ and } \rho_i = 0, \text{ for } i = N_1 + 1, N_1 + 2, \dots, N \quad (4.3)$$

The alternative hypothesis allows some (but not all) of the individuals to have unit roots. IPS deals with the weaknesses of ADF by taking averages of the ADF individual unit root test statistics for each of the cross sectional units 'i' in the panel and therefore can be applied to balanced as well as unbalance panel data. Equation 4.1 considers unobserved effects and heterogeneous time trend when it is testing for panel unit roots at level. In case our test fails to reject the null at level, we move to test for a unit root in 1st difference.

Similarly, the Fisher-type test uses p-values from unit root test for each cross-section i and take the following form.

$$P = 2 \sum_{i=1}^n h \dot{p}_i \quad (4.4)$$

which has a χ^2 distribution with 2N degrees of freedom. The null and alternative hypotheses of Fisher tests are the same as in the IPS test.

Determining the order of integration helps tackle the spurious relation among the dependent and explanatory variables on one hand and provide information whether long run relation i.e. co-integration among the variables of interest can be tested or not, on the other. If the variables are of same order of integration and none of the control variables is of a higher order of integration than that of dependent variables, then co-integration analysis is applicable, otherwise not.

4.2. Model specification

We assume that the relationship between FDI and growth (exports and employment) is linear and given by

$$S GDP = \alpha + \beta C F D I + \phi Z \quad (4.5)$$

Where S GDP is the log values of US States GDP while C F D I is the log values of Chinese outbound investment in the selected US states and Z is the set of conditioning information to control for other factors associated with economic growth for heterogenous panel data, the model may be described as

$$S GDP_i = \alpha + \beta C F D I_i + \phi Z_i + \varepsilon_i \quad (4.6)$$

Where $i = 1, 2, \dots, N$ and $t = 1, 2, \dots, T$

N refers to the number of countries and T refers to time for States in the panel, while α is country specific intercept or fixed effect parameter. We will extend the same model to capture the impact of Chinese FDI (CFDI) on employment and exports by replacing S GDP with Ump (employment level) and SXT (exports). Z will incorporate different variables accordingly.

The vector of other explanatory variables (Z) associated with the economic growth, employment and exports of States can be divided into two categories: internal and external. Internal variables include wage rates (Wr) and employment level (Ump) while external variables include the world GDP minus US GDP (WWS), States total export (SXT). Thus for GDP, employment and export we rely on following three models from 4.7 to 4.9 as

Model 1

$$SGDP_t = \alpha + \beta_{1i}CFDI_t + \beta_{2i}WWS_t + \beta_{3i}SXT_t + \beta_{4i}Ump_t + \varepsilon_t \quad (4.7)$$

Model 2

$$Uem_t = \alpha + \beta_{1i}CFDI_t + \beta_{2i}SGDP_t + \beta_{3i}SXT_t + \beta_{4i}WWS_t + \beta_{5i}W_t \quad (4.8)$$

Model 3

$$SXT_t = \alpha + \beta_{1i}CFDI_t + \beta_{2i}SGDP_t + \beta_{3i}WWS_t + \beta_{4i}W_t + \varepsilon_t \quad (4.9)$$

In order to capture the impact of Chinese FDI in combination with States exports to China, we will replace SXT with $XTMC$ (States total export minus export to China) and $CFDI$ with FXC (interaction variable of Chinese export with Chinese FDI in States). Similarly we hypothesize that the impact of Chinese investment in the US States, β'_{1i} , in 4.10 is the function of export to China i.e. $\beta'_{1i} = \beta_{1i} + \beta_{5i}SXC_t$
 $SGDP_t = \alpha + \beta'CFDI_t + \phi Z_t + \varepsilon_t \quad (4.10)$

Replacing β'_{1i} and variables of vector of Z as we did in equation 4.7, we get the following

$$SGDP_t = \alpha + \beta_{1i}CFDI_t + \beta_{2i}WWS_t + \beta_{3i}SXT_t + \beta_{4i}Ump_t + \beta_{5i}(CFDI * SXC)_t + \varepsilon_t \quad (4.11)$$

This gives us a model that includes the path of FDI impact both individually as well as interactively. Now to analyze the causal relation between $SGDP$, and $CFDI$, we convert our models to dynamic panel by presenting the dependent variables as a function of lags of itself and other right hand side variables in equation 4.11. (Same process is employed for dynamic panel form for Ump and SXT , however with different Vector of explanatory variables)

$$SGDP_{t-1} = \alpha + \beta_{1i}CFDI_{t-1} + \beta_{2i}WWS_{t-1} + \beta_{3i}SXT_{t-1} + \beta_{4i}Ump_{t-1} + \beta_{5i}(CFDI * SXC)_{t-1} + \varepsilon_t \quad (4.12)$$

Following Nair-Reichert and Weinhold (2001), we orthogonalize the candidate causal variables ($CFDI$) after the linear influences of the remaining right-hand side variables have been taken into account

4.3 Data description and sources

It is important to mention that Chinese outbound investment in the US is a recent phenomenon and the flow is sporadic on State level. For that reasons we include those States in our study who received Chinese foreign investment at least for half of the time period (Appendix table 1). Similarly, table 2(Appendix) illustrates the nature and source of data. We consider the role of Chinese out bound direct investment ($CFDI$), State GDP ($SGDP$), States total exports (SXT) and level of employment (Ump) along with World GDP minus US GDP (WWS) and States wage rate (Wr) as variables of interest. Similarly we devised $XTMC$ (States total exports minus exports to China) and FXC

(which is an interaction variable of Chinese outbound investment to US states and US States export to China) by using simple arithmetic. We took the log of all the variables except Ump and wr. The data is collected from different sources ranging from China's National Bureaus of Statistics to private and public organization of the US. The range of the data is from 2002 to 2011. For all the regressions we used Stata 11 and some of the results are cross checked by Eviews 7.

5. Results and discussion

5.1. Panel unit root result

Table 1 presents the result of Im-Pesaran-Shin (2003) and Fisher (phillip-perron) panel unit root test. All the variables except CFDI and FXC are non-stationary at level. However, these variables become stationary after first differencing. Based on IPS and Fisher (pp), the decision of stationarity is consistent.

Table 1: IPS and Fisher panel unit root test p values

Variables	Im,Pesaran and Shin		Fisher (Philip-perron)		Decision
	Level	First Difference	Level	First Difference	
SGDP	0.1320	0.0311**	0.1101	0.0000*	I(1)
WWS	0.6517	0.0002*	0.9507	0.0035*	I(1)
CFDI	0.0000*		0.0000*		I(0)
FXC	0.0000*		0.0000*		I(0)
SXT	0.9530	0.0000*	0.9990	0.0000*	I(1)
XTMC	0.9350	0.0000*	0.9986	0.0000*	I(1)
Ump	0.5380	0.1002***	0.6452	0.0000*	I(1)
Wr	0.9570	0.0001*	0.9995	0.0000*	I(1)

Source: Authors calculation

*,** and *** significant at 1, 5 and 10 percent level respectively

5.2. Contemporaneous fixed effect model estimation

Our results for Model 1, based on contemporaneous fixed effect panel estimation in table 2, shows that the effect of Chinese outbound investment (CFDI) on States growth (SGDP) is insignificant while that of total States export (SXT) and level of employment (Ump) have significant impact on SGDP where one percent increase in State exports increase States GDP by 0.4 percent while a percent increase in unemployment reduces States GDP by 0.005 percent. However the result in Column 2 of table 2 for the role of Chinese investment changes when we replace CFDI by interaction variables FXC and SXT by XTMC. The impact of FXC is significant and positive, while impact of XTMC and Ump remained unchanged. We can interpret that the positive result for interaction variables negates the adverse impact of Chinese outbound FDI in the US States.

Result for Model 2 in column 3 and 4 indicate that the role of CFDI and FXC are insignificant and does not affect employment level. However, CFDI and FXC carry the expected negative sign. On the other hand the negative and significant relation of Ump with SGDP, WWS, SXT and positive relation with Wr depict that as the State GDP along with world GDP and States total exports increases, unemployment level in States decreases.

Ump in table 2 increases when Wr increases showing a negative impact of wage rise on employment. One of the reasons that CFDI and FXC role in reducing unemployment are insignificant is that most of the Chinese investment in the US preferred M&A on Greenfield investment. Therefore, the true impact of Chinese FDI creating employment opportunities in the US States is difficult to be captured. The results in columns 5 and 6 of table 2 capture the impact of Chinese FDI on the US States total export and the States export to rest of the world excluding China (FXC). The result shows that the role of CFDI in SXT and FXC in XTMC is insignificant. This indicated that like employment level, Chinese FDI does not play role in promoting States Export. Positive and significant impact of WWS shows that US States exports

heavily depends on the growth of world economy where a one percent increase in world output increases States export by 0.7 percent.

Table 2: Fixed effect model panel estimations

Dependent Variables	Model 1 (SGDP)		Model 2 (Ump)		Model 3 (with)	
	With CFDI	with FXC	With CFDI	with FXC	SXT & CFDI	XTMC & FXC
C	0.0170 (0.000)*	0.02534 (0.000)*	2.117 (0.000)*	2.4663 (0.000)*	-0.0388 (0.013)*	-.0775 (0.025)**
SGDP			-35.8418 (0.003)*	-37.2916 (0.012)**	2.5910 (0.000)*	2.7071 (0.000)*
CFDI	-0.00161 (0.133)		-0.0722 (0.251)		0.0074 (0.283)	
FXC		0.0021 (0.033)**		-0.0959 (0.162)		0.009 (0.120)
WWS	0.0046 (0.937)	0.0005 (0.998)	-21.9188 (0.000)*	-22.1338 (0.000)*	0.7618 (0.000)*	0.7687 (0.000)*
SXT	0.0452 (0.017)**		-6.1232 (0.002)*			
XTMC		0.0443 (0.015)**		-5.6900 (0.003)*		
Uem	-0.0054 (0.000)*	-0.0056 (0.000)*				
Wr			0.4169 (0.000)*	0.4232 (0.000)*	0.0107 (0.412)	-0.0110 (0.413)
R2	0.69	0.70	0.84	0.84	0.60	0.60
F-statistics	83.72 (0.000)	73.94 (0.000)	42.92 (0.000)	47.70 (0.000)	34.00 (0.000)	34.24 (0.000)
Tolerance	0.306	0.296	0.151	0.157	0.394	0.398
VIF	3.26	3.37	6.27	6.33	2.15	2.51

Source: Authors calculation

*,** significant at 1 and 5 percent level

p values given in parenthesis are based on Heteroskedastic consistent t-statistics

5.3 Causality Test for Dynamic Heterogeneous Panel Data Model

Our analysis in the previous model based on contemporaneous non-dynamic fixed effects panel estimation assumed homogeneity across the States where heterogeneity was restricted only to intercepts. However, to measure causal relation, we relaxed the assumption of homogeneity in equation 4.12 and applied Nair-Reichert and Weinhold (2001) approach. A lag length of one is selected and the results are given in table 3.

From results in table 3, the insignificant value of the mean estimated coefficient of the orthogonalized causal candidate shows that FXC does not affect GDP, while the significant values of reverse causality shows that GDP does affect FXC. However, the rest of the variables, based on the insignificant values of mean estimated coefficient,

show no causal relation (Upper and lower bound estimation approach based on Kemal et al. (2007) is given in appendix).

Table 3: Reichert and Weinhold panel causality analysis (with SXT and CFDI)

		Causality	Reverse Causality
Model 1	Estimated Coefficient	-0.056	0.784
	Standard Error	0.017	0.201
	LB (Confidence Interval)	-1.002	-1.554
	UB (Confidence Interval)	1.455	0.512
	Est. Coefficient Variance	0.015	0.073
Model 2	Estimated Coefficient	-0.010	0.014
	Standard Error	0.038	0.042
	LB (Confidence Interval)	-1.445	-0.741
	UB (Confidence Interval)	1.931	0.711
	Est. Coefficient Variance	0.043	0.032
Model 3	Estimated Coefficient	0.961	-0.1178
	Standard Error	0.0116	0.032
	LB (Confidence Interval)	-1.121	-0.135
	UB (Confidence Interval)	1.860	2.180
	Est. Coefficient Variance	0.012	0.077

Source: Author calculation

6. Conclusion

This study analyzed the empirical relationship of Chinese outbound FDI on growth, employment and export of selected US States and reached to the conclusion that Chinese outbound FDI does not contribute to the growth, employment and export performance of the selected States, however, Chinese FDI significantly and positively affect growth prospects of selected States when it interacts with States exports to China. Similarly, the significant two-way causal relation of interaction variables with States GDP does not report negative impact of Chinese FDI on the US economy which clears the Chinese FDI of wrong doing and political bashing but indicate that Chinese FDI does not bring in any idea or technical know how to positively contribute to the local economy. Chinese firms are taking advantage of their superior cash position (Krugman, 1998) to establish themselves in a huge market like the US. Our results also remind us of Japan bashing in 1980's by US lobbies when Japanese investment in the US was hugely criticized and considered to be the root cause of US economic adversities contrary to the empirical evidence of positive role of Japanese investment.

Therefore, securing strategic interest on one hand but counting every Chinese penny invested in the US as a strategic move by an adversary will negatively affect the US economy, particularly in an environment where Chinese and US interdependence is increasing and US is badly in need of financing and growing markets like China. Similarly, Chinese investors are needed to increase investment in innovative Greenfield projects with significant contribution to the local economy and avoid high profile acquisitions in order to avoid unnecessary attention. Though China Japan relations are

going through tough times these days, still China can learn a lot from the experience meted out to Japanese outbound FDI in the US during 1980's and how Japanese firms pacified the concerns of the host economy.

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Appendix

Table A1: Selected States

California, Florida, Georgia, Illinois, Indiana, Massachusetts, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Virginia, Washington

Table A2: Data description and source

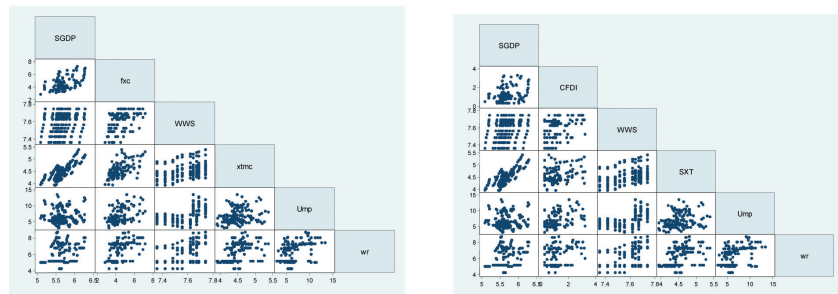
Variables	Description and Source
SGDP	Log value of States GDP (million US dollars) Bucarue of Economic Analysis, www.bea.gov
WWS	Log of World Gross Domestic Product minus US GDP (million US dollars) US GDP and World GDP collected from World Bank WDI
CFDI	Log of Chinese FDI in selected States (million US dollars) Data published by the Asia Society (An American Open Door? Maximizing the Benefits of Chinese FDI), compiled by Rhodium group
FXC	CFDI * SXT (Interaction Variable) Log values of States total exports (million US dollars)
SXT	World Trade Center, New Orleans www.tcn.org/tradestats/staterankings.htm Log values of States exports to China (million US dollars)
SXC	The US China Business Council www.uschina.org/public/exports/2000_2011/full_state_report.pdf
XTMC	SXT-SXC(Interaction Variable) Annual Unemployment Rate of States
Ump	RI Department of Labor and Training www.dlt.ri.gov/lmi/laus/us/annavg.htm Minimum wage rate of States
Wr	US Department of Labor http://www.dol.gov/whd/state/stateMinWageHis.htm

Table A3: Pair-wise correlation panel data (with CFDI and SXT)

SGPD	SGDP	CFDI	WWS	SXT	Ump	Wr
SGP	1.0000					
CFDI	0.22827	1.0000				
WWS	0.0205	0.3398	1.0000			
SXT	0.7947	0.2892	0.3089	1.0000		
Ump	-0.0014	0.3715	0.5424	0.1851	1.0000	
Wr	0.2551	0.3002	0.6406	0.4330	0.4772	1.0000

Table A4: Pair-wise correlation panel data (with FXC and XTMC)

SGPD	SGDP	FXC	WWS	XTMC	Ump	Wr
SGP	1.0000					
FXC	0.4987	1.0000				
WWS	0.0205	0.4722	1.0000			
XTMC	0.8021	0.5825	0.2925	1.0000		
Ump	-0.0014	0.4130	0.5424	0.1743	1.0000	
Wr	0.2551	0.4984	0.6406	0.4099	0.4772	1.0000

Figure A1: Correlation graph with FXC and CFDI**Confidence interval for causality analysis:**

We build confidence intervals around zero (the first element in the estimated vector θ_1 which is $\theta_{1[1]}$ is tested to be zero) to test for the significance of the mean of the estimated coefficient on the causal variable. The lower and upper bounds are given below and the mean coefficient values within this interval are considered not different from zero.

$$\text{LB (Confidence Interval): } [(-2)^* \sqrt{N} \tilde{\sigma}_{\tilde{\theta}_{1[1]}} - \tilde{\theta}_{1[1]}] / \Delta_{r1}$$

$$\text{UB (Confidence Interval): } [2^* \sqrt{N} \tilde{\sigma}_{\tilde{\theta}_{1[1]}} - \tilde{\theta}_{1[1]}] / \Delta_{r1}$$