

Does Foreign Political Instability Hinder China's Export?

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Abstract

China is able to export substantially despite of adverse political milieu in host nations. Such phenomenon is quite novel in existing literature, therefore current study explores the impact of foreign political instability on Chinese exports by using Panel Data of 134 countries & territories from 1992 to 2011. The results revealed that foreign political instability have positive and statistically robust impact on Chinese exports. The political instability in major and minor trading partners of China affects its trade positively but impact is higher with major trading partners. Elasticity of political instability in middle and upper middle income groups is positive and statistically significant, similar situation prevails in Middle East and North African region while it is positive and insignificant in all other regions.

Keywords: Political Instability, Exports, Generalized Method of Moments, China

1. Introduction

Since the last decade of 20th century, Chinese economy has been growing with astonishing speed. Chinese real GDP grew at an average annual rate of around 8% from 1990 to 2011. According to global economic outlook (2013), the contribution of China's output to world output increases from 4% in 1990 to 16.4% in 2012. One important factor which can be considered as a backbone to this growth is the marvelous performance of Chinese exports during this time. According to WTO, Chinese share in world exports was almost zero in 1990, but by 2011 China stood at first in exports of merchandize goods, and its share in global trade increased to 11.1% in 2012. Although, Chinese economy is currently facing many internal and external turmoil's. Internal challenges include execrating income inequalities, higher tendencies towards domestic savings, worsening youth unemployment rates, mounting corruption in public enterprises, promptly growing proportion of aging population, loss of precious agricultural land because of corrosion and growing economy, falling productions of major staple crops, rising pollution and energy shortages. Some of external challenges include the disputes in context of territories (on land and sea) with neighbors, large scale regime changes in some Arab and African countries, tensions in the Persian Gulf, the global economic slowdown and devastating situation of peace and stability in neighboring Pakistan and Afghanistan. Instability in the neighboring countries can not only has serious consequences for the respective countries but can also export instability in main land China and can consequently influence its economic and political interests in the entire region. All these internal and external challenges have full potential to yield serious outcomes for the Chinese economic interests by reducing the external demand for Chinese merchandise in the foreign markets. Although, contemporary Chinese exports have become more sophisticated, but still it faces complex domestic and external pressures, including the domestic wage rise and external pressure on Chinese government to allow its currency to appreciate. Many studies explain the role of economic variables (i.e. price level, level of income, and exchange rate) in bilateral trade, but few studies explain the role of political variables in this context. According to (Awokuse and Gempesaw II 2005), "the relationship between political instability and trade is as important as the relationship between trade and other macroeconomic and financial variables".

The purpose of current study is to analyze the role and impact of external political instability on Chinese exports from 1992 to 2011. Our sample includes 134 importing countries and territories of the Chinese products. Following the World Bank, we further divided our sample into 7 regions and 4 income groups. Due to globalization and economic openness of the world, political instability of various kinds in trading partners abroad can create a remarkable influence on Chinese exports. "Stability is a relative term. Some countries are more stable than others but few can claim to be absolutely stable"(Zheng 2012). Moreover, all countries have some domestic or international threats of different magnitudes. According to Brooking, more stable countries have some common characteristics which include efficient state institutions, government effectiveness, high degree of political legitimacy among the population, sound economic performance and policies, absence of significant anti-state opposition, rare instances of political violence, low level of social ethnic or religious tensions, infrequent occurrence of humanitarian emergencies, and capacity to mitigate natural disasters. (Oh and Reuveny 2010) define "the political risk level of a country broadly and include factors such as interstate and/or intrastate militarized conflict, religious and/or ethnic tension, political instability, weak rule of law, civic disorder, low level of democracy, public and private sector corruption, socioeconomic conditions that promote

public discontent, inhospitable investment climate, and incapable bureaucracy.”

Most of the previous research studies in context of the political and social unrest rising to political instability come to the point that these kinds of situations produce negative impacts for the bilateral trade. It also reveals that none of the studies in this domain focused on the impacts of political instability on Chinese trade. Hence, to explore the impact of changes in political and social winds in different territories of the world on Chinese trade is indeed a significant contribution in literature. For instance, political and institutional instability in euro-zone and Japan, both being the largest importers of Chinese products, produces an upshot for the Chinese exports. War and other forms of political instabilities in the Arab and some African countries can also be anticipated to produce some effects for the Chinese exports, even when the magnitude of Chinese products exported to these countries is not so large. Regime changes or revolutions in the Arab and African countries may affect the Chinese interests in these regions in the long term. For instance, China is the 3rd largest trading partner of Syria. Therefore, the ongoing unrest in this country can severely affect the Chinese trade with it. Chinese trade can be indirectly affected by the political turmoil in the Persian Gulf. Because political turmoil in this region will lead to interruptions in transportation networks, which would consequently shrink the access of Chinese products to the respective countries.

All these imminent changes emphasize the need for qualitative as well as empirical investigations of the role of political instability in determining the direction and scale of Chinese trade. Current study empirically explores the extent to which Political instability in other countries can influence Chinese export by using data covering two decades (from 1992 to 2012). This study used alternative estimation techniques including ordinary least square, dynamic panel fixed effect, dynamic system Generalized Method of Movement and dynamic system Generalized Method of Movements two step to get economically and econometrically suitable results.

To measure the impact of foreign political instability on Chinese exports, we constructed the political stability index on the basis of 12 indexes, consisting of different ranges. These 12 indexes include almost all characteristics of stable nations suggested by Brooking. Political stability index include government stability, socioeconomic conditions fueling public discontent, investment profile, internal conflict, and external conflict lie in the range from 0 to 12. Corruption, military involvement in politics, ethnic tensions, and government democratic accountability are distributed on the range from 0 to 6, while bureaucracy quality covers the range from 0 to 4. The aggregate index is the sum of all these 12 indexes which ranges from 0 to 100, where 0 denotes complete political instability and score of 100 means no instability or absolute stability in a country.

Our results reveal that political instability abroad has a positive and statistically significant effect on Chinese export. While, political instability in major trading partners show (8.8%) more increase in Chinese exports as compared with the minor trading partners. Political instability in Middle East & North Africa and Middle and Upper Middle Income countries has statistically significant and positive effect on Chinese exports. The sign of coefficients of all other independent variables is as expected except the real exchange rate. In some cases its coefficient has expected negative sign, while in most cases it is positive and statistically insignificant. Both foreign income and population produced positive and statistically significant impact on Chinese exports. The results provide ample evidence in support of the view that political instability abroad can have significant influence on Chinese exports.

The reminder of this paper is organized as follows. Section 2 gives an overall picture of export performance of China in recent years. To link the study with the proper frame of the scientific works, Section 3 provides a synthesis of literature related with the role of political instability, economic growth and bilateral trade. Data source and methodology are presented in Section 4. Results are discussed in Section 5. Final section concludes the study.

2. Export Performance of China

This section provides an overview of Chinese exports pattern to different regions and income groups since 1992. Table 1 shows that in 1992, China's total trade with East Asia and Pacific region was 69.412%, whereas with Europe & Central Asia and North America, it was recorded as 12.823% & 10.893% respectively. Although East Asia & Pacific region are still China's major trading regions but in 2011 China's trade with this region declined from 69.412% to 39.695%, while Chinese exports to Europe & central Asia and North America increases to 23.534% & 18.470%, respectively. After the East Asian financial crises of 1996-97, we observe a drastic decline in Chinese exports to this region from 57.165% in 1997 to 50.168% in 2000. But on the other side this crisis also provided China an opportunity to export goods to Europe & Central Asia and North America. If we look at percentage share of Chinese export to these regions in Table 1, it shows significant increase after 1996-97. Another reason of increase in Chinese exports to Europe and central Asia could be the appreciation of Euro after 1995-96 against US dollar, which made Chinese products cheap for European countries. From 1991 to 2011, Chinese exports to Europe & Central Asia and North America increased, but after mortgage crises of 2008-09 in United States of America (USA) and Europe, Chinese export to these two regions declined, but still much higher than 1991.

Table 1 further reveals that after the mortgage crises of 2008-09 in United States of America (USA) and Europe; there has been immense increase in Chinese exports to Latin America & Caribbean region. From 1992 to 2011, we observe a huge increase in Chinese exports to all regions of the world, but it gives emergence to one short coming in Chinese export policy which is the low level of export to the neighboring south Asian region. Recent agreements between China and Pakistan in context of the construction of a rail and road route between Xingjian (China) to Gwadar (Pakistan) is expected to not only increase Chinese exports in south Asian countries but it would also provide China with access to the central Asian states, which will further expand its market. In 2011, Chinese exports to the South Asian region increased as compared to 1992, but its growth is not as marvelous as in other regions of the world, even when China's export with the East Asia & Pacific region decreased in 2011 in comparison with its level in 1992. Table 1 also shows that in 1992, Chinese export to high income countries was 86.245% whereas it was only 1.954% to low income countries. Over the time, Chinese export to lower income, lower middle, and upper middle income countries increases while it decreases to high income countries. Chinese export to lower middle and upper middle income countries increased from 3.165% and 6.982% in 1992 to 10.057% and 15.053% in 2011, respectively. On the other side, Chinese exports to high income countries declined from 86.245% in 1992 to 70.578% in 2011. Although Chinese export to low income countries also increased over the time but this increase is not significant.

Table 1: Percentage Share of the total Chinese Exports to Different Regions and Income Groups in Selected Years

Year	Countries Included	1992	1995	2000	2005	2010	2011
East Asia & Pacific	17	69.412	59.115	50.168	43.489	38.971	39.695
South Asia	04	1.284	1.688	1.523	2.095	3.651	3.756
Latin America & Caribbean	25	1.257	2.099	2.845	3.055	5.777	6.378
Sub Saharan Africa	29	0.966	0.761	1.424	1.744	2.775	2.938
Europe & Central Asia	39	12.823	15.073	18.722	22.994	24.297	23.534
Middle East & N. Africa	18	2.543	2.462	3.091	3.649	5.105	5.226
North America	02	10.893	17.651	22.203	22.962	19.416	18.470
Low Income	20	1.954	1.810	1.431	1.317	2.340	2.460
Lower Middle Income	31	3.165	4.521	5.033	6.178	9.568	10.057
Upper Middle Income	38	6.982	6.044	7.341	9.918	14.220	15.053
High Income	45	86.245	84.386	84.123	80.374	71.983	70.578

Source: Authors own calculation on basis of UNCOMTRADE SITC, Rev 3 data.

3. Relationship between Political Instability and Bilateral Trade:

It is generally believed that political stability is a prerequisite for economic growth. Although political instability hinders economic growth, still there is disagreement among scholars on the channels of its effects. Some believe that political instability induces uncertainty in the policies which affects incentives of economic agents and therefore growth (Alesina, Özler et al. 1996), while others believe that incumbent and unstable political government behaves more myopically according to their own agenda, which also affects the economic performance of the respective government (Persson and Svensson 1989; Alesina and Tabellini 1990). Political instability affects economic growth through its adverse effects on property rights, which in result lowers domestic investment (Barro 1991; Svensson 1998). In politically unstable environments, investors may decrease investment in fixed capital stocks, and change their portfolios to more liquid and portable assets (Feng 2002). According to (Carmignani 2003) the common manifestation of political instability anywhere in the world is that it yields uncertainty. It reduces the supply of capital as well as labor, and discourages investment due to increased risk of capital loss, resulting in capital flight and brain drain. It also hinders the establishment of property rights, which is an important determinant of evaluating gains associated with impersonal exchange. Broadly speaking, it creates ambiguities about the country's future economic and political strategies and regimes' future preferences, further wounding the investors' confidence on respective economies. These are the main reasons that put political stability at the center of economic growth. Other studies, however, could not establish a negative relationship between political instability and growth (Londregan and Poole 1990; Campos and Nugent 2002; Campos and Nugent 2003). (Davis and Thomas 2010) studied the impact of political instability democracies and autocracies. They found that it has different implications for both systems according to its scale and manifestation.

According to (Awokuse and Gempesaw 2003) "Political instability can affect international trade directly through its effects on its income and prices and indirectly through its impact on other economic variables such as investment in physical capital". Political instability in a country not only negatively affects the country's exports but its growth as well, because of production inefficiency and disruption in production due to labor strikes or political unrest (Alesina and Tabellini 1989). Politically unstable government or frequent regime

changes in a country also affect the exports of a country negatively. Due to uncertainty of returns on investment in politically uncertain countries, investors prefer to move their investment into a politically safe country.

Several studies have shown that political instability adversely affects the investment and income inequality (Barro 1991; Alesina and Rodrik 1994; Persson 1994; Easterly and Levine 1997). There is bilateral causation between political instability and income inequality. Income inequality leads to political instability, which subsequently can reduce not only the domestic but foreign investment in that country. This situation not only influences the production efficiency of a country but also hampers its exports and ultimately the growth. According to (Srivastava and Green 1986), politically stable nations have higher exports.

The impact of political instability on economic growth is not direct. It directly influences investment and exports and consequently influences economic growth. Although previous literature explains the role of political instability in economic growth, but very few studies analyzed the role of political instability in bilateral trade. For the countries of the developed world in general and developing world in particular, economists emphasize on an economic strategy which reflects export promotion and substitution of imports from within the country. Bilateral trade in the background of economic variables such as price level, level of income, and exchange rate has been extensively studied. There are very few studies that analyzed trade in the canvas of political instability. Political instability is an important determinant of bilateral trade, like any other important macroeconomic and financial variable (Awokuse and Gempesaw II 2005). Therefore, it cannot be ignored while evaluating the performance of export sector. (Morrow, Siverson et al. 1998) view that democratic governments and political alliances foster bilateral trade among countries. According to (Ades and Chua 1997), political instability, institutional disruptions, and civil wars result in skilled labor migration and destruction of infrastructure necessary for production and trade. (Oh and Reuveny 2010) unveil that increase in political risk substantially reduces bilateral trade. Political instability and potential threat of future government actions to restrict trade leads to reduction in current volume of international trade (Pollins 1989; Dixon and Moon 1993; Morrow, Siverson et al. 1998; Awokuse and Gempesaw 2003).

Trade empowers economic development which fosters peace and stability in the respective country (Sachs, Warner et al. 1995). It also minimizes internal conflicts by strengthening government and discourages rebellions (De Soysa 2002; Fearon and Laitin 2003), because even rebels can find better alternative sources of earning in the respective country (Collier and Hoeffler 1998; Fearon and Laitin 2003; Ross 2004). Moreover, instability breeds insecurity. It also induces a fall in the efficiency and management of domestic institutions. Both of these factors increase the cost of bilateral trading operations, making it difficult to keep these relationships alive or to generate the new ones. Insecurity, according to (Anderson and Marcouiller 2002), is just like an invisible tax on trade. It increases the cost of traded goods for some countries, exposing them at to a comparative disadvantage. (Nunn 2007) confers that compared to resource legacies, implementation of flawed treaties have more severe effects on trade. In the domain of other social instabilities, (Easterly and Levine 1997) argues that ethnic and linguistic differences are also one of the main hindrances in implementation of beneficial policies for economic development in sub-Saharan Africa (SSA).

Economic costs of war depend on its scale and duration and become clearly manifest after the war is over. Some of its major consequences include rise in inflation and capital flight from the respective countries torned by civil strifes (Davies 2008). Civil wars severely affect the bilateral trade (Martin, Mayer et al. 2008). (Sambanis 2004) finds that unrest and instability actually shake the confidence of traders and investors. Domestic policies infested with uncertainties reduce private investment, especially in the developing countries (Roubini 1991; Blomberg and Hess 2006). (Anderson and Marcouiller 2002) studied the impacts of many types of violence on international trade. They concluded that terrorism, internal conflicts, and external conflicts severely affect the economy and yield statistically significant impacts for the bilateral trade.

It is evident from literature that political instability has significantly impacts on the exports of a country, and it can be either positive or negative. It can affect economic growth negatively which leads to a reduction in the income of respective country, consequently leaving it with less ability to pay for imported goods. Thus, the demand of Chinese exports declines due to political instability abroad. Political instability in importing countries may lead to an increase in demand for Chinese exports. This is possible only when the political instability in the importing countries affects the production of goods, but not the means of transportation in respective territories, due to frequent production stoppages because of social and political unrest. Chinese export to those countries can also increase, if they serve as a substitute for the domestic production. This phenomena is true only in short run. (Awokuse and Gempesaw II 2005)'s findings agree with this because they believe that US agricultural exports increase only when political instability in trading partners disrupts their agricultural production but not the means of transportation.

(Bashir, Xu et al. 2013) argue that adverse regime change in China's trading partners can affect the Chinese exports negatively. They also conferred that revolutionary wars in its trading partners also affect Chinese exports negatively, but this result is not statistically robust. In the long run, as the domestic production increases in importing countries, with the recovery of their political and economic systems, their reliance on

Chinese exports decreases. High political instability is likely to foster short run political time horizon, and government will reduce investment in the long term projects, such as education and health, and focus on short term and politically motivated and economically unfeasible projects (Fosu 1992; Fosu 2002). The short sightedness of politically unstable governments also serves as a source of increase in Chinese exports, because the respective government exports serve as an immediate substitute to fulfill the demands of local people. To actually increase the production efficiency, a country needs some structural reforms which usually take long time. From the literature we can conclude that political instability, in the countries having bilateral trade with China, can be an important determinant of Chinese exports.

3. Model and Estimation Technique

We used the following export demand function to measure the impact of foreign political instability on Chinese export.

$$\text{LnExp}_{ijt} = \beta_0 + \beta_1 \text{LnExp}_{ijt} + \beta_2 \text{LnY}_{jt} + \beta_3 \text{LnY}_{it} + \beta_4 \text{LnPop}_{jt} + \beta_5 \text{LnPs}_{jt} + \beta_6 \text{LnRer}_{jt} + v_t + \eta_i + \varepsilon_{it}$$

Where $j = 1, \dots, 134$ denote Chinese trading partners, $t = 1992, \dots, 2011$, $i = \text{China}$,

$v_t =$ time specific effect and $\eta_i =$ country specific effect.

Table 2 explains all variables in detail along with data sources.

We cannot apply Ordinary least square (OLS) method of estimation to above mentioned model, because country specific effect is unobservable and included in the error term. We observed that lagged dependent variable and other independent variables are not strictly exogenous, so they may be correlated with country specific effect. Due to endogeneity of one or more independent variables, simple panel model results are biased. One solution of the problem is to use within groups fixed effect model, but according to (Bond 2002) panel fix effect (FE) estimates are badly biased downward in small sample, however they are biased upward in large sample. In current study, our data set has large number of countries and small time dimensions so we used Arellano Bond dynamic panel generalize method of movements (DGMM) method, because we can use all uncorrelated variables with error term including lagged and difference variable as instruments. In the presence of endogeneity, generalized method of movements method (GMM) gives reliable results. We will prefer dynamic system generalized method of movements (DSGMM) over dynamic difference generalized method of movement (DDGMM) method, because difference generalized method of movement perform poorly if there is missing value in data (Roodman 2006).

Another disadvantage of difference generalized method of movements is that we lost a large number of observations due to differencing equation. In current model, most of the variables are random walk or close to random walk. In such a situation, it is better to use System generalized method of movements (SGMM) instead of difference generalized method of movement (DGMM), because SGMM approach produces more efficient and precise estimates compared to DGMM. SGMM approach achieves it by improving precision and reducing sample biasness (Bond 2002; Baum 2006; Roodman 2006; Roodman 2007).

Table 2: Variable Description, Sources and Summary Statistics*

Variable	Description	Source	Obs.	Mean	Std. Dev.	Min.	Max.
Lnextp	Value of Chinese export to country j (constant2005USD)	UN COMTRADE	2623	8.479	1.093	4.694	11.512
Lny	GDP per capita (constant 2005 USD)	USDA	2680	3.543	0.707	1.881	4.944
Lnpop	Population in millions	USDA	2680	7.015	0.683	5.250	9.075
Lnrer	Real exchange rate (2005 USD)	USDA	2680	-0.434	1.254	-3.699	6.145
Lnychn	Chinese per capita GDP (constant 2005 USD)	USDA	2680	3.120	0.222	2.746	3.496
Lnps	Political instability index (range 0-100 where 0 mean complete political instability while 100 mean completely politically stable)	ICRG	2573	0.695	0.108	-0.133	0.872

*Ln is natural log of a variable and value of all variables is log value, USDA = United States Department of Agriculture. ICRG = International country Risk Guide by PRS group.

4. Results and Discussion

The results of six regression models are summarized in Table 3. Dynamic OLS estimates are summarized in Column 2, while column 3 and 4 present the results of Panel FE model and dynamic system generalized method

of movement (DSGMM), respectively. Column 5 depicts the estimates of dynamic system generalized method of movement (DSGMM) with two-steps. All variables in OLS model in column 2 are statistically significant, except real exchange rate and foreign political instability. The estimated coefficient of foreign GDP per capita and population are not only positive but also statistically significant in all regression models. It provides evidence that when the GDP per capita income and population of a country engaged in bilateral trade with China increase, Chinese exports to the respective country also increase. Sign of estimated coefficient of Chinese GDP is also positive. It effects on Chinese export are statistically significant in all regression models. The coefficient of all independent variables, in dynamic system GMM and dynamic System GMM with two steps are statistically significant, except the real exchange rate which is positive but statistically insignificant. The income elasticity of foreign GDP in both models is 0.144 and 0.136 while export price elasticity is 0.0004 and 0.0003, respectively. Notably only income elasticity has expected sign and statistically significant. Export price elasticity sign, in major trading partner dynamic system models, is negative and statistically significant. Negative sign reflects the loss of Chinese export revenue, because of Chinese currency (RMB) appreciation due to international pressure in recent years. The currency was appreciated in context of many major trading partners. Nonetheless, this is not true in minor trading partners' estimation results, where this sign is positive but statistically insignificant.

Similarly, elasticity of political instability is positive and statistically significant in all dynamic system models in Table 3, but it is positive and statistically insignificant in OLS and Panel FE model. Positive sign of political instability coefficient reveals that when political instability in a country engaged in trade with China increases, Chinese export with it also increase.

Table 3: Impact of Foreign Political Instability on Chinese Export

Variables	OLS	Panel FE	System GMM	System GMM (Two Step)	System GMM (Major Trading Partner)	System GMM (Minor Trading Partner)
L.Inexp	0.907 (0.013)*	0.610 (0.023)*	0.792 (0.040)*	0.793 (0.042)*	0.849 (0.41)*	0.755 (0.411)*
Lny	0.065 (0.014)*	0.667 (0.205)*	0.144 (0.043)*	0.136 (0.046)*	0.067 (0.026)*	0.142 (0.043)*
Lnrrer	-0.0004 (0.003)	0.335 (0.016)**	0.0004 (0.007)	0.0003 (0.010)	-0.021 (0.007)*	0.008 (0.007)
Lnpop	0.084 (0.013)*	0.639 (0.174)*	0.194 (0.042)*	0.194 (0.046)*	0.052 (0.026)***	0.211 (0.044)*
Lnps	0.076 (0.063)	0.301 (0.220)	0.212 (0.092)**	0.231 (0.117)***	0.259 (0.131)***	0.171 (0.103)***
Lnychn	0.207 (0.030)*	0.705 (0.092)*	0.453 (0.081)*	0.453 (0.086)*	0.273 (0.095)***	0.572 (0.088)***
Constant	-0.650 (0.110)*	-5.874 (1.458)*	-1.590 (0.344)*	-1.585 (0.368)*	-0.164 (0.242)*	-1.753 (0.356)*
AR1 Test p-value			0.000	0.000	0.000	0.000
AR2 Test p-value			0.601	0.601	0.326	0.532
Sargan Test p-value			0.000	0.000	0.000	0.000
Hansen Test p-value			0.000	0.000	0.995	0.000
R2	0.975	0.912				
No of observation	2411	2411	2411	2411	805	1874
No of Countries	134	134	134	134	29	105
No of instruments			64	64	61	63

* Statistical significance at 1% ;** Statistical significance at 5%;*** Statistical significance at 10% ;**** Robust standard error in brackets while Windmeijer (2005) small sample robust stand error correction applied in two-step model.

According to (Cukierman, Edwards et al. 1992; Collins 1996), political instability can indirectly affect

the level of imports demand via its impact on domestic prices, income interest rate, unemployment, and exchange rate. It can also enhance the rate of capital flight and reduce investment in physical capital, which lead to reduction in economic growth. Low economic growth means reduction in income and ending up in reduced ability of importing country to pay for imports.

Results of empirical analysis in this study reflect that when political instability in the countries engaged in bilateral trade with China increases, it consequently increases the demands for Chinese exports. This result contradicts with the view that political instability reduces imports from foreign countries. According to (Awokuse and Gempeasaw II 2005), in the situations when imports serve as an alternative to the losses in domestic production of a country caused by political instability then it will certainly increase the demand of imports. Results inferred from our estimations agree with these findings. In fact, political instability induces a shock in the domestic production at least for a specific period of time. Nonetheless, this decline in production also leads to decline in the real GDP, which reduces the demand of Chinese exports in long run. Compared to income elasticity of political instability, relative elasticity increases in all dynamic system GMM models (Table 3). If there is 1% increase in political instability in the countries engaged in trade with China, it increases Chinese exports by 25.9% if the country comes in the list of major trading partners, and by 17.1% in case of a minor trading partner. The effect of political instability on the increase of Chinese export in context of the major trading partners is found 8.8% higher as compared with the minor trading partners.

Results of dynamic system GMM (Table 3) show that there is no Arellano Bond test (AR1) serial correlation in any model of dynamic system generalized method of movement (DSGMM), but p-values of AR2 test in all (DSGMM) models reveal that there is 2nd order serial correlation in all models, which is required for DSGMM correct model specification. Sargan test in all models is in line with theory, but we cannot reject the null of Hansen J test in case of major trading partner model which mean that model has valid instrument. Hansen J test checks the joint validity of GMM and IV instruments. We reject the Hansen J test null hypothesis in all dynamic system GMM models except for the major trading partners, which means that either one or both assumptions are questionable in these models. This raises question on the weakness of lag instrument. But difference in Hansen test for subset find that null hypothesis cannot be rejected which supports the validity of instruments.

According to (Bond 2002) dynamic panel GMM regression results are valid only if estimated coefficient of lagged dependent variable lies between obtained OLS and FE model coefficient. Our Dynamic system GMM results in column 4 of Table 3 reveal that estimated coefficient of lagged export (0.792) lies above than panel FE (0.610) and less than the dynamic OLS estimated coefficient (0.907) and also statistically significant. All dynamic GMM models in Table 3 also fulfill (Roodman 2007) steady state condition that estimated coefficient of lag dependent variable is less than unity in absolute value. Our dynamic panel model also fulfills (Arellano and Bond 1991; Roodman 2006; Roodman 2007) condition that number of instruments should be less than number of observations otherwise weak instrument can cause biased results. To test the validity of instruments we used the difference in Sargan /Hansen test, also known as C-Test. All four p-values in all dynamic models indicate that we cannot reject null that the instrument used in GMM and IV parts are valid.

To check the robustness of our results, we divided our sample into seven groups by using the World Bank regional classification. Table 4 presents the Dynamic system GMM model results on regionally disaggregated data. We find a wide variation in the estimated coefficient signs across different regions. Income elasticity is statistically significant at 1% for South Asia, Europe & Central Asia and Middle East and North African regions. Income elasticity (0.705) is highest in North American region but statistically insignificant, while income elasticity in South Asian region is least (0.035) and statistically significant. Export price elasticity in Sub-Saharan Africa (0.027) is statistically significant at 5% while it is insignificant in all other regions. Similarly, population elasticity is significant in all regions except East Asia & Pacific, South Asia and sub-Saharan Africa. Our key interest variable – political instability – is only statistically significant in Middle East & North African regions at 1% significance level, while its coefficient has positive sign in all other regions but not significant.

Table 4: Effect of Regional Political Instability on Chinese Exports

Variables	East Asia & pacific	South Asia	Latin America & Caribbean	Sub-Sahara Africa	Europe & Central Asia	Middle East & North Africa	North America
L.lnexp	0.932 (0.039)*	0.767 (0.066)*	0.557 (0.104)*	0.841 (0.092)*	0.697 (0.666)*	0.671 (0.055)*	-0.022 (0.035)
Lny	0.035 (0.035)	0.085 (0.037)	0.352 (0.079)*	0.055 (0.076)	0.188 (0.048)*	0.281 (0.089)*	2.217 (0.705)
Lnrer	-0.009 (0.005)	0.324 (0.254)	-0.002 (0.026)	0.027 (0.012)**	0.014 (0.021)	-0.026 (0.017)	1.113 (0.203)
Lnpop	0.063 (0.040)	0.082 (0.046)	0.330 (0.090)*	0.108 (0.086)	0.307 (0.077)*	0.290 (0.066)*	0.924 (0.037)**
Lnps	0.239 (0.151)	0.083 (0.204)	0.381 (0.341)	0.251 (0.262)	0.536 (0.387)	0.552 (0.180)*	0.161 (0.279)
Lnychn	0.156 (0.058)**	0.527 (0.091)*	1.017 (0.273)*	0.464 (0.188)**	0.663 (0.166)*	0.737 (0.140)*	1.614 (0.044)**
Constant	-0.548 (0.294)***	-0.124 (0.605)	-3.251 (63.65)*	-1.158 (0.518)**	-2.684 (0.807)*	-2.839 (0.709)*	-13.052 (2.802)
AR1Test p-value	0.001	0.058	0.02	0.002	0.003	0.008	0.255
AR2 Test p-value	0.110	0.110	0.351	0.254	0.216	0.371	0.434
Sargan Test p-value	0.000	0.089	0.000	0.000	0.000	0.000	0.002
Hansen Test p-value	1.000	1.000	0.999	0.997	0.958	1.000	1.000
No of Observation	307	76	475	526	647	342	38
No of Countries	17	4	25	29	39	18	2
No of Instruments	58	57	57	59	62	57	38

* Statistical significance at 1% ;** Statistical significance at 5% ;*** Statistical significance at 10% ; **** Robust standard error in brackets

To further check the robustness of results we divided our sample by World Bank income classification into four groups: low income, middle income, upper middle income, and high income countries. Dynamic system GMM results in Table 5 reveal that middle income elasticity (0.267) is highest while low income countries have least income elasticity (0.091). The value is statistically insignificant for the low income countries, while income elasticity in all other three groups is statistically significant. In contrast to income elasticity, price elasticity is positive and statistically significant in low income countries but it is statistically insignificant in all other income groups.

Table 5: Effect of Political Instability in Different Income groups on Chinese exports

Variables	Low Income	Middle Income	Upper Middle Income	High Income
L.Inexp	0.924 (0.081)*	0.692 (0.055)*	0.691 (0.078)*	0.813 (0.046)*
Lny	0.091 (0.123)	0.267 (0.085)*	0.173 (0.089)***	0.135 (0.069)***
Lnrrer	0.019 (0.009)**	-0.028 (0.019)	0.010 (0.012)	-0.015 (0.016)
Lnpop	0.042 (0.085)	0.330 (0.067)*	0.288 (0.079)*	0.179 (0.052)*
Lnps	0.362 (0.297)	0.509 (0.165)*	0.609 (0.233)**	-0.083 (0.251)
Lnychn	0.253 (0.135)***	0.668 (0.125)*	0.723 (0.199)*	0.361 (0.098)*
Constant	-0.826 (0.480)	-3.022 (0.659)*	-2.637 (0.741)*	-1.095 (0.419)**
AR1 Test p-value	0.015	0.002	0.003	0.001
AR2 Test p-value	0.315	0.828	0.172	0.817
Sargan Test p-value	0.004	0.000	0.000	0.000
Hansen Test p-value	1.000	0.991	0.972	0.823
No of Observation	379	572	654	805
No of Countries	20	31	38	45
No of Instruments	58	59	62	61

* Statistical significance at 1%; ** Statistical significance at 5%;*** Statistical significance at 10%
**** Robust standard error in brackets

We observe an interesting trend in elasticity of political instability, which is positive in all four income groups. Interestingly, elasticity of political instability is statistically significant in middle and upper middle income groups while insignificant in lower and high income group. P-value of Hansen test of over-identifying restriction reported in Table 4 and 5 prove that joint validity of our instruments cannot be rejected. A necessary condition of the system GMM estimator is that the difference error term is not serially correlated, which can be confirmed by p-value of AR2 test in Table 4 and 5. All test results expressed that System GMM results in table 4 and 5 are reliable and pass all mandatory tests.

5. Conclusion

Since 1990, China not only observed a huge growth in its exports volume, but its share in world export market has been increasing every day. It does not mean that Chinese exports sector is not suffering with problems and hurdles. Although many previous studies investigated Chinese export sector problems but hardly few studies investigated the impact of political instability as a bilateral trade determinant.

The purpose of this study is to analyze the impact of foreign political instability on Chinese exports by using dynamic system GMM. Our panel data sample included 134 importing countries and territories of Chinese products covering a time span of around two decades (from 1992 to 2011). We included political instability along with economic variables like income of the population and real exchange rates as determinants of Chinese exports demand. Dynamic system GMM results revealed that foreign political instability increased Chinese exports. Moreover, instability in China's major trading partners increased Chinese exports 8.8% higher as compared with the minor trading partners. All other independent variables' coefficients have expected sign except real exchange rate, which produced positive sign and statistically insignificant. To check the robustness of estimation results, we divided our sample into 7 regions and 4 income groups. Dynamic system GMM estimation results show that elasticity of political instability is positive and statistically significant in Middle East and North African region while it is statistically insignificant in all other regions. It confirms our hypothesis that the changing political scenario in Middle East and Africa has potentials to affect Chinese exports. Income elasticity

of middle, upper middle, and high income groups are positive and statistically significant but price elasticity is positive and statistically significant in low income countries, whereas it is statistically insignificant in all other income groups. Elasticity of political instability is positive and statistically significant in middle and upper middle income groups whereas it is positive and statistically insignificant in low and high income groups.

Although this study illuminates many new dimensions but still it has two shortcomings. First, due to certain limitations, the results of the analysis provide only a short term vision of impacts of political stability (in a country engaged in trade with China) on Chinese exports. Second, according to the set frame of this study, we used total value of exports. In this context, future research can focus on disaggregated export by products, to analyze the potential impact of foreign political instability on Chinese trade. Policy implications of current study for the Chinese policy makers are that along with the economic problems, they should also consider the changing political situations in many countries and regions of world to safeguard the Chinese future economic interests. Exporters in China should not only diversify the export goods but also find access to the new markets. In this context, the rail and road route between China and Pakistan if actualized can make a marked different for Chinese exports.

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