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GLOBALIZATION AND THE GROWTH OF CHINESE CITIES

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Abstract

China experiences rapid growth in urbanization. This paper investigates whether openness may, *ceteris paribus*, partly explain the urbanization process. Trade openness and foreign direct investments are often regarded as important explanatory variables during the nineties. However, the impact of the later is expected to be positive, as FDI are mostly concentrated in few urban areas, whereas the impact of the former is a priori less clear. A cross section of 132 cities (data are averaged over the period 1992-1998) is used to carry out an econometric analysis. Trade openness appears only significant and negative for the sub-sample of coastal cities, when Beijing, Tianjin and Shanghai are excluded from the data. Foreign direct investments are significant and positive for the sub-sample of cities with more than one million inhabitants. These results contradict the common view of openness as a positive factor of urbanization in the nineties.

Résumé

La Chine connaît une croissance rapide de sa population urbaine. Cet article cherche à mesurer la contribution de l'ouverture à ce phénomène. L'ouverture commerciale et les investissements directs étrangers sont perçus comme des facteurs explicatifs importants. Toutefois si l'impact des investissements directs étrangers est a priori positif, l'impact de l'ouverture commerciale apparaît plus ambigu. Une coupe instantanée de 132 villes (données moyennes sur la période 1992-1998) permet de réaliser une analyse économétrique. L'ouverture commerciale n'est significative (et négative) que pour le sous-échantillon des villes côtières (Beijing, Tianjin et Shanghai exclues). Les investissements directs étrangers sont significatifs (et positifs) uniquement pour le sous-échantillon des villes de plus d'un million d'habitants. Ces résultats contredisent partiellement l'idée communément admise de l'ouverture facteur positif d'urbanisation dans les années quatre-vingt-dix.

Key words: China, cities, FDI, openness, panel data, trade, urbanization

JEL classification: R0, O1.

I INTRODUCTION

Urban concentration is a complex phenomenon which differs greatly from one country to another and in the course of the time and which, as suggested by Henderson (2000), depends on the level of development. The urbanization processes that occurred in Europe and in northern America during the nineteenth and twentieth centuries were quite different from the one currently observed. Some features of the present process are worth pointing out (Cohen, 2003). First, the scale of the present change is unprecedented: urbanization is occurring at a rapid pace, the number of large urban agglomerations is growing, the average size of cities is increasing, and urbanization is not only the result of migration but also of natural increase. Second, as in countries enjoying high income per capita, the largest part of the population is already living in cities, urbanization concerns mainly the developing countries where most of the heavily populated cities are located. Third, the extent of urbanization depends partly on globalization. Even if globalization reduces the need for spatial proximity, it induces changes in the organization and in the location of firms. The quest for better efficiency means to seek economies of scale and external economies. Then, the process of international integration is often seen as a reason for the agglomeration of activities and for an increasingly urbanized society. However, agglomeration and urbanization are not equivalent but they partly are. The process of urbanization may be explained by the concentration of service activities and by external economies which are two key features of agglomeration.

As Cohen (2003, p.37) puts it: “Globalization has allowed individual cities to break away from the fate of their national economies. Increasingly success or failure depends on the ability of municipal governments to capitalize on the assets of the local environment and to provide the modern infrastructure, enabling environment and low-wage, flexible workforce demanded by modern businesses”. This is especially relevant for China where decentralisation has given to cities a noticeable political power. Furthermore, cities are important economic actors as for instance, some of them are direct partners for foreign firms through joint-ventures agreements.

China is experiencing a rapid growth in urbanization. With more than 379 millions city-dwellers in 1998, China had the largest urban population in the world. There is wide consensus that the patterns of urbanisation are unusual since the end of the seventies. Some works have focused on the influence of China’s confusing definitions of urban areas on the process itself (Chan, 1994, Zhang and Zhao, 1998). Many have tried to explain Chinese urbanisation. However, despite all these achievements, there still remain some puzzles. For instance, is urbanization linked to the opening up of China? In this paper, we explore the assumption that trade openness and foreign direct investments (FDI) may partly explain that process during the nineties.

The growth of cities is one of the major concerns for the central government in the coming years. It's goal is, as exposed in the last Five Year Plan, to reduce the inequalities between provinces, and also between rural and urban areas. The government wants to develop the infrastructures between and within provinces. This should help to modernise the inland provinces and should also help to slow down the concentration of activities into coastal regions.

The paper proceeds as follows. In Section II, we briefly summarize the salient features of the urbanization process; Section III uses data on Chinese cities to test the impact of openness on urbanization prior to the accession to WTO. Our analysis uses different sub-

samples of cities and two indicators for openness: trade and foreign direct investments. For most sub-samples openness does not seem to exert an impact on the urbanization process. When significant, trade and FDI have opposite effects. Section IV concludes.

II Some characteristics of the Chinese urban process

When the communist government seized power in 1949, more than two thirds of the urban population was located in the eastern provinces. The coast also contained close to half of the Chinese cities, including most of the largest ones. The central region was predominantly rural and was characterized by small cities. The western region was almost wholly rural though it had some medium-sized cities. In a decade, the urban population of the eastern provinces doubled, with large centres such as Shanghai. In the central provinces, the average size of cities did not climb as much as it did in the coastal area, but the urban population increased threefold. This can be explained by an increase in the number of cities. From the mid-1950s to the beginning of the reforms, the government policy of discouraging the growth of large cities appeared to have some effects². In addition, the bias against coastal regions stimulated the growth and the development of interior cities, including Lanzhou, Wuhan, Xian and Zhengzhou. Thus, in 1980, the central regions represented a third of China's urban population, while half of the urban population was concentrated in the eastern region (National Bureau of Statistics, 1981).

With the reform process, China's urbanisation has been proceeding along two different tracks: one is the traditional urbanisation sponsored by the government and the other is the spontaneous urbanisation driven by local economic development and market forces.

During the Sixth Five Year Plan (1981-1985), urbanization was still largely restricted by the *Hukou* system. This reflected "the bias against urbanization and its association with capitalism, Western moral pollution, and potentially counterrevolutionary forces" (Au and Henderson, 2002, p.5). In the same time, the growth of smaller cities was promoted with the possibility of transferring *Hukou* from rural areas to these small cities. But, owing to successful reforms in agriculture and to a higher productivity, a surplus of workers appeared in the rural areas. As a consequence migration increased and the government became less strict. The *Hukou* system is still in operation but controls have been tempered and the rules have changed during the nineties. It is possible for farmers to enter freely into cities. There is thus a large "floating population" (non allowed migrants). Cities become more attractive with the growing unemployment (or underemployment) in rural areas. Now, the Chinese government has to manage in the same time growing inequalities between rural and urban areas and negative externalities created by urbanization.

Moreover, the new urban policy has used large cities as the engine of regional growth. Cities are expected to serve as growth centres for the countryside through externalities and spill-over effects. First Guangzhou and later Shanghai and Tianjin were given the privilege and the powers to modernise. In addition, the government recognized the advantages of the coastal provinces. The government designated other types of growth centres, in particular five special economic zones and 14 coastal opened cities. More generally, cities and towns have had a greater autonomy to respond to market forces. Now the cities themselves contain and manage the migrant flows.

As a consequence of the relaxation of criteria for classifying towns in 1984 the level of urbanization was boosted (Lee, 1989).

Another aspect of the urbanisation process is, since 1978, the development of TVEs and foreign investment, facilitating the transformation of rural areas into urban ones. Foreign

²Between 1953 and 1978, the urban ratio fluctuated around 15% (Yusuf and Wu, 1997).

investment is an important factor contributing to the growth of spontaneous urbanisation. It provides the bulk of funds needed for new urban development and participates to the transformation of the economic and employment structures (Zhu, 1999). For example, the urban development of the city of Fuqing in the Fujian province has been mainly driven by intensive foreign capital inflows. As an additional incentive, China's urbanisation has been propelled by local forces: the development of TVEs which provide employment opportunities. Jinjiang in the Fujian province illustrates the urbanization through the transformation of rural employment structures and the development of TVEs. In provinces like Jiangsu, Zhejiang and Guangdong, there are some other examples of this rural-urban transformation (Zhu, 1999).

III An Econometric Analysis of the Chinese's Urbanization in the 90's

3.1 Data issues

Provincial data come from the *Comprehensive Statistical Data and Materials on 50 Years of New China* (National Statistical Bureau, 1999). The data at the city level were obtained from *Xin zhong guo cheng shi wu shi nian* (National Statistical Bureau, 2001).

China is divided into 27 provinces plus 4 provinces having the status of municipality : Beijing, Tianjin, Shanghai and Chongqing³ (*cf.* appendix 1). The definition of urban areas is exceedingly complex, moreover, it has evolved with the course of the time. Two main concepts emerge:

1) cities (shi) which have generally more than 100 000 inhabitants. The large urban agglomerations (1 million inhabitants or more) concentrate one third of the total urban population. There were in 1998 threefold more large urban agglomerations than there were in 1978.

2) towns (zhen) represent the main element of the present urban strategy. Nowadays there are around 18 000 towns against 2664 in 1982.

Cities and towns include some districts that are actually rural areas inhabited by farmers. The "cities yearbook", *Xin zhong guo cheng shi wu shi nian*, covers the two first levels of areas⁴ officially designated as cities with a provincial administrative supervision. Rural districts are excluded.

The "hukou" system classifies the population into categories: rural/urban and agricultural/non agricultural. The first distinction is based on a location criterion while the second is based on the economic activity.

We consider only people living in urban districts and being non agricultural by profession (Zhang and Zhao, 1998, Chen and Coulson, 2001). Owing to an unrecorded migration from rural areas to urban areas, the data inevitably underestimate the urban population in the cities forming the sample (*cf.* appendix 2). In other respects, some inconsistencies render the data unreliable. Observations have been excluded from the sample if at least one of the following features has been noticed:

- A legal status change has occurred
- City experiencing large variations in non agricultural population not induced by a legal status change.
- Discontinuities in time series that cannot be corrected for.

³ These four cities have central State administrative supervision.

⁴ According to Zhang and Zhao (1998), "...cities are ranked in three levels: the first is equivalent to the authority of a province, the second is equivalent to the authority of a prefecture, and the third is equivalent to that of a county." p. 331.

The sample includes 132 cities, it covers the whole country except Tibet. Data have been averaged over the period 1992-1998.

3.2 test of the impact of openness on urbanisation

The following equation is estimated:

$$\begin{aligned} nonagripop_c = & \alpha + \beta_1 upoc_p + \beta_2 area_p + \beta_3 gdp cap_c + \beta_4 sec ond_c + \beta_5 tert_c + \beta_6 road_p \\ & + \beta_7 trade_p + \beta_8 fdi_p + \beta_9 tve_p + \beta_{10} BTS + \beta_{11} cap + \beta_{12} sez + \varepsilon \end{aligned}$$

where the subscript c ($c=1, \dots, 132$) indicates a variable at the city level, and the subscript p indicates a variable at the provincial level.

The dependent variable, *Nonagripop*, represents total non agricultural population of the city excluding rural districts.

The explanatory variables considered are :

UPOC is the urban population in the province outside of the considered city. It serves as a control variable like in Ades and Glaeser (1995).

The land area in km^2 of the province, *AREA*, is also a potential determinant of concentration of non agricultural population whose sign is a priori ambiguous.

As is usual in the literature, urbanization is expected to grow with level of income per capita, *GDPCAP* measured as the real GDP per capita at the provincial level. A positive relationship is expected as a higher level of GDP per capita means more diversified activities and hence greater industrialization.

City growth can be connected to the industrialization process, either because there exist increasing returns in the output process (Krugman, 1991), or because natural advantages may explain geographic concentration of population (Ellison and Glaeser, 1999). Anyway, increasing returns and natural advantages are complements rather than substitutes (Henderson, 1988). Urban concentration is positively explained by the expansion of the secondary, *SECOND*, and tertiary, *TERT*, sectors. This expansion creates incentives for firms and workers to settle down in city to get benefits from spill-over effects and externalities. *SECOND* is measured as the share of the secondary sector in GDP at the city level and *TERT*, as the share of the tertiary sector in GDP at the city level.

Road infrastructures, *ROAD*, may have two opposite effects. By reducing transportation costs, better roads may either reinforce the attraction of some cities by easing access to markets or make deconcentration of activities to neighbouring cities easier. In China, the impact of the length of roads at the provincial level (in kilometres) is a priori unclear. This variable, the only one available for roads, gives information about the quantity but no about the quality.

Openness is made up of international trade and of FDI. The impact of trade openness is a priori ambiguous. If openness means giving preference to a large coastal city then it may increase urban concentration (Henderson, 2000). However, according to new economic geography, trade openness may be a factor of urban deconcentration (Ades and Glaeser, 1995; Fujita, Krugman and Venables, 1999), as transport costs decline. Provincial trade openness, *TRADE*, is measured by the ratio of exports plus imports to provincial GDP. FDI may increase concentration as they are located in only a few areas. Moreover, to get benefits from FDI, domestic firms have to be located close to these areas. The ratio of Foreign Direct Investments to GDP, *FDI*, is supposed to have a positive effect on the non agricultural population.

The share of the workers in township and village enterprises in the total provincial employment, *TVE*, creates incentives for people not to migrate in cities. TVEs are very specific to China, as they contribute to transform rural areas. For instance, in the case of Fujian, Zhu (2000) argues that the TVEs change the structure of employment to industrial activities.

We also controlled for the provincial capitals, *CAP*, which are the more attractive cities because they are the main industrial, commercial and administrative centre of the province. This is even more true of Beijing, Tianjin and Shanghai, a dummy, *BTS*, controls for their impact. As the status of Chongqing changed in 1997, Chongqing has been excluded from the sample. The dummy *SEZ* (special economic zones)⁵ takes into account the preferential status given to some cities.

The variables, averaged over the period 1992-1998, are transformed in logarithm, the coefficients can thus be interpreted as (constant) elasticities.

3.3 Econometric Results

Table 1 reports OLS results, with standard errors between brackets. Three tests have been conducted and the P values are reported under each equation. First, the Bera-Jarque test never rejects (at the 5% level) the null that the residuals are normally distributed. For equation (7) a dummy variable for Suzhou has been introduced into the equation. Second, the White test never rejects (at the 5% level) the null of homoscedasticity. Third the RESET test does not reject (at the 5% level) the null that the functional form is correct. For equation (3) the P value is close to the 5% level.

Regressions are conducted on two samples: the whole sample and the sub-sample of the cities with more than one million inhabitants. From a statistical point of view, the data available for these latter cities are of better quality, more homogenous and coherent. From an economic point of view, they represent a large share of the total urban population and their attractiveness power is higher than the smaller cities.

For the equations 1 to 4 table 1, variables *UPOC*, *GDPCAP*, *SECOND*, *TERT* and *CAP* are significant and positive. Several papers show that the non agricultural population in China tends to concentrate in the wealthiest areas (Kojima, 1995). Hence the GDP per capita plays positively on the non agricultural population. As expected, the share of secondary and tertiary sectors in GDP have a large and significant effect on the concentration of the non agricultural population. Lastly, the capital city dummy is positive and significant. Kojima shows the extreme degree of population concentration in provincial capital cities. This phenomenon is observed whatever the development level of the province considered (equations 1, 3 and 7).

The variable *TVE* shows interesting results when we decompose our two samples according to geographic areas. Hence, we have considered cities located in coastal provinces and those located in central and western provinces. This variable appears significant with a negative impact on the non agricultural population for the cities in the coastal region when Beijing, Tianjin and Shanghai are excluded from the sample (equations 9 and 10). In the non coastal region (equations 7 and 8), first, the share of the workers in the TVEs is relatively low compared to the coastal region, as TVEs products are mainly for export. Second, the TVEs are more productive and efficient in the coastal provinces (OECD, 2002). If we consider the coastal provinces (equations 3, 4, 9 and 10), the attractiveness of the TVEs on the population appears only significant when *BTS* are excluded.

⁵9 The Special Economic Zones are Shenzhen, Zhuhai and Shantou (Guangdong) created in 1979, Xiamen (Fujian) in 1980 and Hainan island in 1988.

The variable *Road* has a significant negative impact when we consider the sub-sample of the larger cities located in the whole provinces (equation 2) or in the coastal provinces (equation 4). This variable has a positive influence on the non agricultural population for cities in coastal provinces when *BTS* are excluded (equation 9). These results do not really support Henderson's arguments that for developing countries, "*increased infrastructure density strongly reduces urban concentration*" (2002, p.100).

FDI have a positive and significant effect on urban population, only for cities over 1 million inhabitants and *SEZ* have no impact on these cities (equations 2 and 6). However, *SEZ* have a significant negative impact when the whole sample is considered (even if *BTS* are excluded; equations 1 and 5)⁶.

International trade has no significant effect, except for the coastal cities without *BTS* where it appears negative (equation 9). This result supports Krugman and Livas' hypothesis. One can note that these cities are located in the most advanced provinces regarding the reform process.

IV. Conclusion

Using data at a city level, this article has examined the impact of the open-door policy on the Chinese urbanisation. There is some econometric evidence that during the nineties foreign direct investments had a positive effect on urbanisation for the largest cities (over one million inhabitants). On the reverse, urban population concentration is negatively related to international trade for the cities located on the coast. For the whole sample, international trade has no significant impact.

The results seem more robust for variables not related to openness. For instance urban population concentration appears to be positively explained by the level of development, measured by the GDP per capita, the size of the secondary and of the tertiary sectors in the economy. The TVEs, distinctive feature of the Chinese economy, have a negative impact on urban concentration, as expected.

The sample does not cover the entry of China into WTO. One could expect further liberalisation, a greater mobility for people and capital and thus an increase in the concentration of activities and population in the prosperous urban areas. In anticipation of this phenomenon, the Central Government has launched, in 2000, the Western Development Policy. It also tries to promote a more balanced urban growth.

⁶ In the remaining equations, the dummy variable *SEZ* never appeared significant and so has been excluded.

Table 1 : Econometric Results

Dependent variable: average non agricultural population in city (1992-1998)

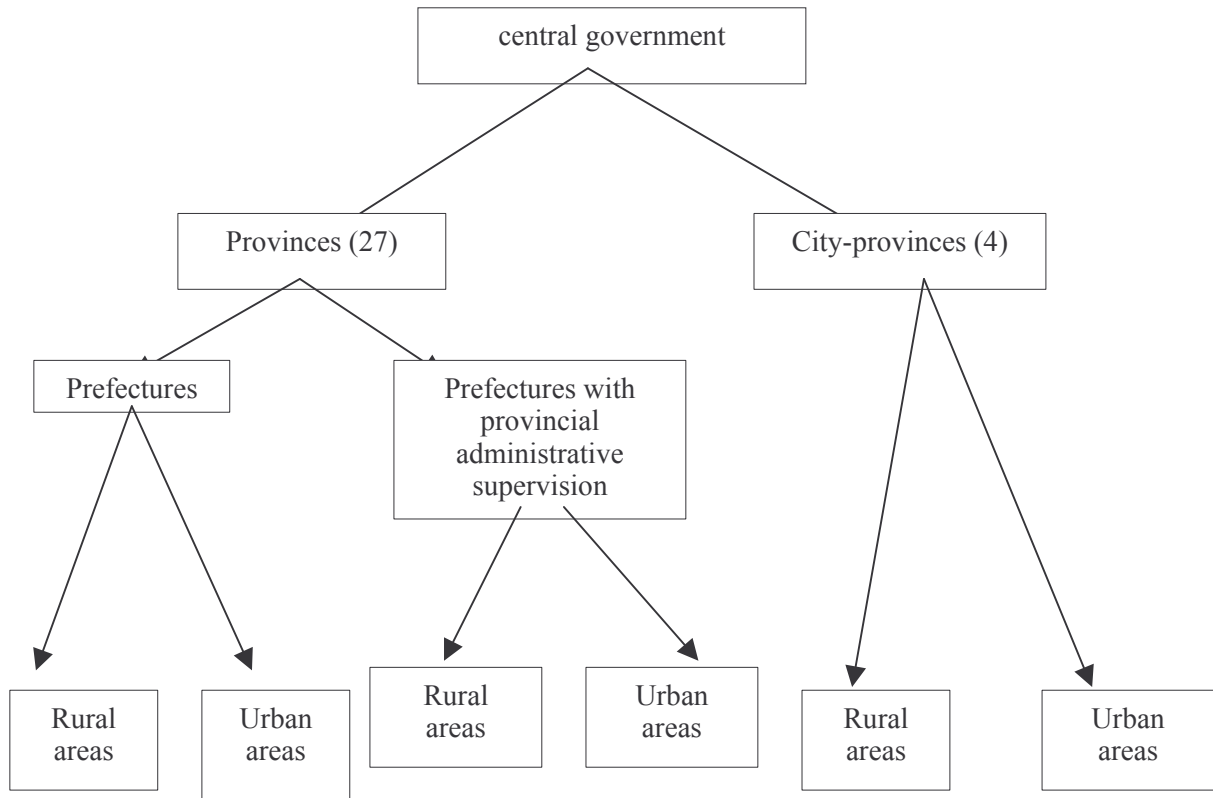
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Upoc</i>	0,3231 (3.14)	0,5799 (5.01)	0,5312 (4.08)	0,8369 (4.12)	0,3256 (3.06)	0,5953 (4.81)	0,3950 (3.01)	0,2784 (1.18)	0,7463 (4.21)	0,9309 (4.93)
<i>Area</i>	0,1780 (1.48)	0,3639 (2.26)	0,1638 (0.25)	0,9760 (1.67)	0,1700 (1.38)	0,3477 (2.17)	0,2903 (1.61)	0,1308 (0.55)	-3,0626 (1.75)	-2,7993 (1.26)
<i>Gdpcap</i>	0,2553 (3.16)	0,3662 (2.80)	0,3415 (2.63)	0,5357 (2.39)	0,2566 (2.13)	0,3676 (2.65)	0,1444 (1.24)	0,3454 (2.11)	0,3879 (3.05)	0,5838 (2.86)
<i>Second</i>	1,0999 (5.20)	1,3681 (6.11)	1,0032 (3.26)	1,1820 (3.83)	1,1004 (5.08)	1,3746 (5.75)	1,1874 (3.76)	1,2865 (3.12)	0,9163 (2.88)	1,1689 (3.66)
<i>Tert</i>	0,7219 (5.99)	0,7045 (2.18)	0,7092 (3.73)	0,6928 (1.31)	0,7337 (6.07)	0,7219 (2.18)	0,6474 (3.44)	0,6887 (1.54)	0,7962 (3.98)	0,6534 (1.28)
<i>Fdi</i>	0,1429 (1.26)	0,2585 (2.19)	-0,2460 (1.37)	0,0889 (0.27)	0,1377 (1.19)	0,2461 (2.09)	0,2537 (1.37)	0,1500 (0.72)	0,0386 (0.22)	0,2508 (0.87)
<i>Tve</i>	-0,3190 (2.03)	-0,3378 (1.89)	-0,5212 (1.04)	-0,3043 (0.72)	-0,3330 (2.05)	-0,3756 (1.90)	-0,2957 (1.57)	-0,0421 (0.13)	-2,7362 (2.23)	-3,0082 (1.91)
<i>Road</i>	0,0564 (0.32)	-0,3893 (1.80)	-0,0892 (0.16)	-1,1706 (1.98)	0,0873 (0.49)	-0,3334 (1.48)	-0,1737 (0.85)	-0,0519 (0.18)	2,5507 (1.93)	2,1190 (1.35)
<i>Openness</i>	0,0635 (0.64)	-0,1282 (0.80)	-0,0206 (0.10)	-0,1366 (0.40)	0,0717 (0.73)	-0,1125 (0.70)	-0,0315 (0.13)	0,3613 (1.35)	-0,6072 (1.98)	-0,6929 (1.61)
<i>BTS</i>	2,3921 (8.06)	2,7512 (5.90)	3,0293 (3.35)	3,6943 (3.73)						
<i>Capital</i>	1,0376 (8.54)	0,6606 (3.69)	1,0457 (5.13)	0,5872 (1.75)	1,0388 (8.57)	0,6623 (3.72)	1,0989 (6.03)	0,5920 (2.38)	1,0043 (5.14)	0,6408 (2.13)
<i>Sez</i>	-0,7089 (2.87)	-0,4610 (1.36)			-0,7288 (2.93)	-0,4915 (1.42)				
<i>Intercept</i>	-10,2826 (5.86)	-11,1273 (5.24)	-12,1245 (3.62)	-13,2285 (2.63)	-10,6166 (5.98)	-11,8209 (5.17)	-8,5086 (3.14)	-7,9713 (2.20)	-6,9821 (1.40)	-8,5984 (1.04)
<i>Number of obs</i>	132	57	65	32	129	54	67	25	62	29
<i>F-test</i>	53.26	75.68	22.28	63.27	34.23	44.19	23.27	34.99	14.22	83.26
<i>R²</i>	0.75	0.86	0.79	0.41	0.68	0.82	0.71	0.87	0.42	0.83
<i>Bera-Jarque</i>	0.35	0.64	0.25	0.84	0.37	0.62	0.13	0.40	0.37	0.82
<i>White</i>	0.80	0.70	0.87	0.24	0.71	0.71	0.71	0.58	0.32	0.14
<i>RESET</i>	0.37	0.24	0.07	0.30	0.46	0.26	0.35	0.35	0.61	0.72

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Appendix 1: Administrative organisation



Appendix - 2: Cities in the sample

Prov	City	Prov	City	Prov	City
pekin	Beijing	jiangsu	Huayin	hunan	Changsha
tianjin	Tianjin	jiangsu	Changzhou	hunan	Changde
hebei	Handan	jiangsu	Zhenjiang	hunan	Hengyang
hebei	Tangshan	zhejiang	Wenzhou	hunan	Xiangtan
hebei	Shijiazhuang	zhejiang	Hangzhou	hunan	Zhuzhou
hebei	Qinhuangdao	zhejiang	Huzhou	hunan	Shaoyang
hebei	Langfang	zhejiang	Ningbo	guangdong	Guangzhou
hebei	Zhangjiakou	zhejiang	Zhoushan	guangdong	Zhanjiang
hebei	Baoding	zhejiang	Jiaxing	guangdong	Zhongshan
shanxi	Datong	anhui	Huainan	guangdong	Dongguan
shanxi	Taiyuan	anhui	Hefei	guangdong	Qingyuan
shanxi	Yangquan	anhui	Bengbu	guangdong	Shantou
shanxi	Suzhou	anhui	Huaibei	guangdong	Yangjiang
shanxi	Changzi	anhui	Wuhu	guangdong	Maoming
inner mong	Baotou	anhui	Anging	guangdong	Jieyang
inner mong	Chifeng	anhui	Ma anshan	guangdong	Shenzhen
inner mong	Hohhot	fujian	Fuzhou	guangxi	Nanning
liaoning	Shenyang	fujian	Quanzhou	guangxi	Qinzhou
liaoning	Anshan	fujian	Xiamen	guangxi	Guigang
liaoning	Dalian	jiangxi	Nanchang	guangxi	Liuzhou
liaoning	Fushun	jiangxi	Xinyu	guangxi	Guilin
liaoning	Huludao	shandong	Linyi	hainan	Haikou
liaoning	Yingkou	shandong	Jinan	sichuan	Chengdu
liaoning	Liaoyang	shandong	Zibo	sichuan	Neijiang
liaoning	Fuxin	shandong	Weifang	sichuan	Leshan
liaoning	Dandong	shandong	Taian	sichuan	Suining
liaoning	Benxi	shandong	Laiwu	sichuan	Mianyang
liaoning	Jinzhou	shandong	Zaozhuang	sichuan	Guangyuan
liaoning	Panjin	shandong	Rizhao	sichuan	Zigong
Jilin	Jilin	shandong	Qingdao	sichuan	Panzhuhua
Jilin	Changchun	shandong	Dezhou	sichuan	Yibin
heilongjiang	Harbin	shandong	Jining	guizhou	Guiyang
heilongjiang	Gigahaer	shandong	Dongying	guizhou	Zunyi
heilongjiang	Jiamusi	henan	Zhengzhou	guizhou	Luipanzhui
heilongjiang	Yichun	henan	Luoyang	yunnan	Kunming
heilongjiang	Shuangyashan	henan	Anyang	shaanxi	Xian
heilongjiang	Jixi	henan	Xinxiang	shaanxi	Weinan
heilongjiang	Mudanjiang	henan	Kaifeng	shaanxi	Baoji
heilongjiang	Hegang	henan	Pingdingshan	gansu	Tianshui
heilongjiang	Daqing	henan	Jiaozuo	gansu	Lanzhou
shanghai	Shanghai	hubei	Wuhan	qinhai	Xining
jiangsu	Nanjing	hubei	Yichang	ningxia	Yinchuan
jiangsu	Wuxi	hubei	Ezhou	xinjiang	Urumqi
jiangsu	Nantong	hubei	Xiangfan		
jiangsu	Liyungang	hubei	Huangshi		

Note: cities with more than one million inhabitants are in bold characters.