Panel III: Regional Models of Development of China

Wither the Local Autonomy under the "China Model"?
The Political Economy of China’s 2008 Stimulus Package

Szu-chien Hsu
Institute of Political Science, Academia Sinica
Hans H. Tung
Graduate Institute of East Asian Studies, National Chengchi University
This paper studies the effect of China’s 2008 stimulus package on the economic basis of its central-local relationship. The literature on China’s de facto federalism has long focused mainly on the regulatory framework (e.g., tax system) defining the relationship between the central and local governments. Nonetheless, the breakout of the financial crisis in 2008 that took its origin in the US housing market and the emergence of the “China Model” where the central government plays a dominant role in local economic governance call for a more dynamic understanding of this relationship. That is, since the late 1970s’, the main economic resources local governments were able to tap into have been the growing foreign trade with and exports, in particular, to foreign markets of advanced economies. The resources generated this way enabled provincial governments to be less reliant on fiscal transfers from the center and therefore more capable of taking local initiatives. However, this economic underpinning of local autonomy has been greatly undermined as one of the key economic engines, international trade, was out of whack after the 2008 financial crisis, and foreign demands were replaced by the state-led domestic stimuli. More critically, the fact that the 2008 stimulus package had a strong state-sector bias where the economic sectors benefited were largely those heavily invested by the state gives rise to a more profound implication that provinces having larger private sectors would lose more economic ground. We test these arguments by examining the (province-wise) distributional effects of the stimulus package in 2008 in terms of how much additional domestic trade (demands) was created for provinces with different ownership structures. The research will help students of China’s political economy not only foresee the possible trajectory the Chinese economy might take after the government decided to transform its outward-oriented economy, but also assess the post-crisis central-local relationship.

Keywords: Central-Local Relationship, China Model, Market-Preserving Federalism

*Institute of Political Science, Academia Sinica; email: sh81@gate.sinica.edu.tw
†Graduate Institute of East Asian Studies, National Chengchi University; email: htung@nccu.edu.tw
1 Introduction

What effect does economic downturn have on political (dis)integration of nation-states? During the high tide of economic globalization, scholars wondered if economic openness gave rise to various forms of political disintegration ranging from higher degrees of devolution demanded by subnational jurisdictions (Hiscox, 2003; Sheng, 2007) to breakup of nations (Alesina et al., 2000; Bolton and Roland, 1997; Sorens, 2004). Writing in a post-crisis era, we wonder instead: Does global economic hardship make national-level political authorities reclaim their victory in a battle with subnational units that used to enjoy benefits from freer trade and more porous borders.

Especially, in the context of China’s central-local relationship, international trade had been one of the major economic engines bringing wealth to local governments and helped them gain more autonomy from the center before the crisis. While, as Sheng (2007) points out, during this period, China’s central government did try to rein in this centrifugal force by imposing some fiscal constraints (e.g., lower tax retention rates) on coastal provinces, it would be difficult to deny the fact that these provinces did enjoy higher bargaining power against the center than they would do otherwise. As a consequence, it is natural to ask if the breakout of financial crisis in China’s key trading partners – i.e., the US as well as the EU – and the resulting decline in the foreign demands from these western markets would also affect its central-local relationship. Moreover, in the end of 2008, the Chinese government responded to the crisis with a gargantuan stimulus package up to 4000 Billion RMB as an attempt to replace the missing foreign demands. What effect does the package have on the tug-of-war between China’s central and local governments?

While there hasn’t been much data available for us at this point (less than two years since the financial crisis struck and the stimulus package was launched) to measure the post-crisis central-local relationship, in this paper, we provide an assessment by developing a dynamic
framework for the economic foundation of China’s central-local relationship and analyzing the content of the stimulus package. More importantly, this analysis will also have a profound implication for the hotly-debated issue on what the China model is.

The paper is structured as follows. Section 2 develops a dynamic framework for understanding China’s central-local relationship, which allows us to assess the effects of both the financial crisis and the 2008 stimulus package. Then we provide a detailed account of the 2008 stimulus package in Section 3, and a simple test of the state-sector bias of the package in Section 4. Section 5 concludes with some conjectures about the future of China’s central-local relationship and the model of economic governance.

2 China’s Central-Local Relationship: A Dynamic Perspective

2.1 The Economic Origin of Local Autonomy

To assess the effect of China’s 2008 stimulus package and explore its implications for central-local relations, we first identify pillars of China’s de facto federalism and then analyze how they are affected by the stimulus package. The original formulation of China’s (market-preserving) federalism is presented in Montinola et al. (1995). The authors argue therein that China’s economic success since the economic reform had been owing to the decentralized nature of China’s governance structure and the de facto checks-and-balances arising from it. In their discussion of the durability of the federalism, Chinese style, they also contend, among other things, that

...some regions have already accumulated sufficient wealth in a way that the central government can not easily take away because the regional governments followed a strategy of ”storing wealth in people and in enterprises.” The regional
governments also have greater vested interest in continuing the reform. (69; emphasis added)

While it is not made explicit in the article, this statement in fact allows for a more dynamic understanding of the market-preserving federalism. That is, a key condition of the sustainability of the federalism, Chinese style, lies in the very fact that there are independent sources of economic resources that helped provincial governments gain more autonomy from the center. Similarly, in Lieberthal’s seminal piece on the concept of “fragmented authoritarianism,” he also points out:

...the reforms’ decentralization of budgetary authority enabled many locales and bureaucratic units to acquire funds outside of those allocated through the central budget, which they could use to pursue their own policy preferences. This cushion of "extrabudgetary" funds in turn permitted many locales to become less sensitive to the policy demands from higher levels. (1992: 8; emphasis added)  

In other words, in a counterfactual sense, if provincial governments were to lose their control over their local economies and therefore extrabudgetary funds, the very foundation of their ability to take local initiatives would also be undermined.

More contextually, what is missing in the picture painted by Montinola et al. (1995) is the key background of China being an outward economy. That is, since late 1970s’, the main economic resources local governments are able to tap into had been the growing foreign trade with and exports, in particular, to foreign markets of advanced economies such as the US and the EU. The resources generated this way enabled provincial government to be less reliant on fiscal transfers from the center. However, this economic underpinning, given that all other political conditions are held constant, has been greatly undermined after the financial crisis broke out in the US. When one of the key economic engines, international trade, was out of whack due to diminishing demands from foreign markets and China’s central government
attempted to replace them with domestic demands, the original balance of power between the center and local governments in the tug-of-war of policy autonomy is also very likely to be shaken up.

In a nutshell, the political implication of this is straightforward, when the central government controls the lifeline of provincial economies against the background of dwindling demands from external markets, it calls into question how much autonomy regional governments can still enjoy and those that rely more on foreign trade and their (local) private sectors are predicted to take a larger hit. The following section provides a simple model formalizing this dynamic perspective.

2.2 A Simple Model

Now we present a simple policy bargaining model to capture our dynamic perspective presented in the previous section and also lays down the framework for our empirical analysis that follows. To simplify the analysis, the model developed below only consider a bilateral relationship between the central government, denoted by $G_C$ and a representative local government, denoted by $G_L$. Given a certain degree of local discretion over policy implementation, the latter enjoys control rights over how policy is finally carried out at the local level, but the former may influence this policy implementation decision by providing a subsidy $S$ to the latter.

It is assumed that the policy space is a real number line. We refer any generic policy implemented locally as $\tau$, which could mean the implementation of tax rates, industrial targets, or labor standards. $G_C$ and $G_L$ have preferences over policy implementation and the subsidy represented by

$$u_{G_C} = -\alpha_{G_C} \frac{(\tau - \tau_{G_C})^2}{2} - S$$

$$u_{G_L} = -\alpha_{G_L} \frac{(\tau - \tau_{G_L})^2}{2} + S$$

(1)  

(2)
where $\tau_{GC}$ and $\tau_{GL}$ are $G^C$’s and $G^L$’s ideal policies, and $\alpha_{GC}0$ and $\alpha_{GL}0$ represent respectively the degrees to which $G^C$ and $G^L$ value policy over the subsidy. One thing to be noticed here is that the first terms in both expressions are negative since, unless their best polices are implemented, any deviations from their best polices will be viewed as disutility. In other words, (1) and (2) break down the utilities of the governments at both levels into two parts: deviation from the idea policy and the subsidy received or spent. In addition, they also to a large extent capture the dynamic central-local relationship in terms of their conflicts in policy implementation. The location of the implemented policy relative to their respective ideal policy points reveals the side that triumphs in this policy tug-of-war. For instance, when the local government is able to implement its idea policy (i.e., $\tau = \tau_{GL}$), the first term in (2) becomes 0 and its utility is completely determined by $S$. However, the value of $S$ in this scenario is also the lowest. When $\tau_{GL}$ is implemented, (1) becomes

$$u_{GC}(\tau_{GL}) = -\alpha_{GC} \frac{(\tau_{GL} - \tau_{GC})^2}{2} - S$$

which has the greatest policy distance and therefore the value of $S$ here has to be the smallest in order not to be lower than the central government’s participation constraint. When the opposite is the case, the same reasoning leads to the conclusion that the value of $S$ in this scenario will be the greatest so the representative local government would be willing to participate in the policy game.

Moreover, the functional form both (1) and (2) take is apparently quasi-linear. In other words, there are no wealth effects since the marginal benefit of a change in $\tau$ is independent of

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1 One conceptual issue here is what the situation would be like when the central government chooses not to participate. Is this likely? When the central government opts out of the contracting situation modeled here, we would expect China to fall into a chaos close to anarchy since the central government essentially gives up governing the country and lets local governments do whatever they want. As a matter of fact, before 1949, there did exist periods when China had no central authority. However, there is no period in post-1949 China that bears any resemblance with its anarchic past and therefore it is justified to apply the model developed in this paper to study our question of interest.
$S$, and utility is freely transferable between $G^C$ and $G^L$. These preferences may be represented graphically by plotting indifference curves in $(\tau, S)$ space in Figure 1. In general, $\tau_{GC}$ does not have to be on the right-hand side of $\tau_{GL}$. Without loss of generality, this assumption is simply made for exposition purposes. The convex shape of $G^L$'s indifference curve means that a greater amount of subsidy, $S$, from $G^C$ is needed to make $G^L$ remain indifferent between a policy and her ideal one, $\tau_{GL}$. On the contrary, as far as $G^C$ is concerned, the shape of her indifference curve is concave since $G^C$ needs to offer a greater subsidy to move the final policy closer to her ideal one $\tau_{GC}$.

Formally, an efficient bargaining outcome must solve

$$\max_{\tau, S} u_{GC} = -\alpha_{GC} \frac{(\tau - \tau_{GC})^2}{2} - S \quad \text{ s.t. } u_{GL} = -\alpha_{GL} \frac{(\tau - \tau_{GL})^2}{2} + S \geq u_{GL} \quad (4)$$

where $\overline{u}_{GL}$ is some constant. Neither actor can be made better without making the other worse off. (Equivalently, we could write the problem as maximizing the local government’s utility, given the constraint the central government be left with some $\overline{u}_{GC}$.)

It is then straightforward that the constraint must hold since if the relationship is strict inequality, the central government can apparently be made better off by reducing the amount
of the subsidy \( S \) to meet \( \pi_{GL} \) and, as a consequence, the solution to the maximization problem specified in (4) won’t be an equilibrium. As a result, we can derive from the constraint the following result,

\[
S = \pi_{GL} + \alpha_{GL} \frac{(\tau - \tau_{GL})^2}{2} \quad (5)
\]

which can be substituted into (4) to simply the problem

\[
- \alpha_{GC} \frac{(\tau - \tau_{GC})^2}{2} - \alpha_{GL} \frac{(\tau - \tau_{GL})^2}{2} \quad (6)
\]

where \( \pi_{GL} \) is dropped since it is simply a constant. Deriving (6)’s first order condition and solving for \( \tau \) yields,

\[
\tau^* = \frac{\frac{\alpha_{GL}}{\alpha_{GC} + \alpha_{GL}} \tau_{GL} + \frac{\alpha_{GC}}{\alpha_{GC} + \alpha_{GL}} \tau_{GC}}{\frac{\alpha_{GL}}{\alpha_{GC} + \alpha_{GL}} + \frac{\alpha_{GC}}{\alpha_{GC} + \alpha_{GL}}} \quad (7)
\]

Given quasi-linearity, any efficient bargaining process results in a policy that is a weighted average of \( GC \)'s and \( GL \)'s most-preferred policies, where the weights correspond to the value each places on policy relative to the subsidy. Particularly, when policy is relatively important to \( GL \) (\( \alpha_{GL} \) is large relative to \( \alpha_{GC} \)), then \( \tau^* \) will be closer to \( \tau_{GL} \). Conversely, when the the local government is relatively more concerned with the subsidy provided by the central government (\( \alpha_{GL} \) is small relative to \( \alpha_{GC} \)), then \( \tau^* \) is close to \( \tau_{GC} \).

Given the asymmetry in the relationship between the central and the local governments and our question of interest (i.e., local autonomy), we suppose the weight the central government attaches to policy relative to subsidy is unchanged and set \( \alpha_{GC} \) to be some constant \( \overline{\alpha}_{GC} \). A new expression for the equilibrium policy implemented can be given by:

\[
\tau^* = \frac{\frac{\alpha_{GL}}{\overline{\alpha}_{GC} + \alpha_{GL}} \tau_{GL} + \frac{\overline{\sigma}_{GC}}{\overline{\alpha}_{GC} + \alpha_{GL}} \tau_{GC}}{\frac{\alpha_{GL}}{\overline{\alpha}_{GC} + \alpha_{GL}} + \frac{\overline{\sigma}_{GC}}{\overline{\alpha}_{GC} + \alpha_{GL}}} \quad (8)
\]
From the perspective of the local government, the degree to which it can ignore the subsidy offered by the central government and retain its policy autonomy depends on the amount of benefits it gains from other alternative sources of funding. As our previous analysis has shown, international trade, and foreign demands of the goods produced within its jurisdiction especially, had empowered local government to be less responsive to requests made by the center. Now since this source of resources has been substantially reduced owing to the financial crisis, we can then expect $\alpha_{GL}$ to be lower than it used to be. As a result, the equilibrium policy $\tau^*$ will also be moved closer to $\tau_{GC}$ and the local government’s policy autonomy undermined.

3 The 2008 Stimulus Package and the Vicissitude of “China Models”

3.1 The Investment of the Stimulus Package

While the global financial crisis hit the western world in late 2008, it also worsened China’s external economic environment. For China as an economy deeply integrated with the global system, such an external shock seriously threatened China’s economic growth. Following the stimulus policy made by the US government, on the 5th of November 2008, the State Council of China also announced a stimulus package to cope with such an economic crisis. It mainly focused on infrastructure with an emphasis on government investment as the means.

According to the announcement made by the State Council in November 2008, ten stimulus measures were proposed by its Standing Meeting held on November 5, 2008, and it was estimated that to realize these ten stimulus measures would require 4 trillion Yuan RMB (585 billion USD) till the end of 2010. These ten measures are reported to include: hous-

ing renovation, rural infrastructure, transportation construction (railway, highway, airport),
public health and cultural development, environmental protection, technological innovation,
earthquake relief and reconstruction, lifting urban and rural residents’ income, value-added
tax reform, and expanding credits for rural sector and small businesses. It was later re-
ported that within the 4 trillion of investment, only 1.18 trillion was invested by the central
government, and the rest came from local fiscal budget, local government bonds (issued by
central government on behalf), policy-directed loan, enterprise bonds, bank loan, and social
investments. 

The National Development and Reform Commission (NDRC) made another report in
May 2009 to reveal a revised and more detailed breakdown of how these 4 trillion would be
spent. According to this report, the largest category “transportation and infrastructure
construction” accounted for 37.5% (1.5 trillion), and the second largest category “earthquake
reconstruction” accounted for 25% (1 trillion). If we add the “rural infrastructure” and
the “transportation” category together, then these two categories (that have to do with
infrastructure) accounted for 46.8%, almost half, of the total package. The categories of
public health and environmental protection, which may be regarded as the construction of
the social safety net for ordinary citizens, accounted only less than 10% of the whole package.
Table X shows the major categories and their percentage in the stimulus package according
to the NDRC report.

In 2009, while most of the major economies were still faltering through the shadow of the
global financial crisis, China was able to successfully achieve an annual GDP growth rate

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3“Reviewing the 4 Trillion Investment; Government Investment Loosens,” Ciaxin Net, Sep. 20,

4The National Development and Reform Commission publicizes the constitution of the 4 tril-
lion investment and the progress of the items invested by the central government,” National De-
05/21/content11413419.htm, access time: 7/28/2011.
Table 1: Constitution of the 4 trillion stimulus package according to NDRC

<table>
<thead>
<tr>
<th>Major categories</th>
<th>Amount (Billion RMB)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing renovation and provision</td>
<td>400</td>
<td>10%</td>
</tr>
<tr>
<td>Rural infrastructure</td>
<td>370</td>
<td>9.3%</td>
</tr>
<tr>
<td>Transportation and infrastructure construction</td>
<td>1500</td>
<td>37.5%</td>
</tr>
<tr>
<td>Public health, education, and culture development</td>
<td>150</td>
<td>3.8%</td>
</tr>
<tr>
<td>Environmental protection projects</td>
<td>210</td>
<td>5.3%</td>
</tr>
<tr>
<td>Technological innovation and industrial restructuring</td>
<td>370</td>
<td>9.3%</td>
</tr>
<tr>
<td>Earthquake reconstruction</td>
<td>1000</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td><strong>4000</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: NDRC Website.

of 8.7%. China sees itself as an indispensable stable engine for the world economy. The advocacy of "China Model" became even more vocal with such an economic success, even to the extent that such a model shall be a replacement of the Western model of economic growth. This success is accomplished by heavy investment in a series of infrastructure and the booming of real estate to compensate the loss from export.

3.2 The Vicissitude of Different "China Models"

However, the way to utilize the stimulus package by focusing on infrastructure has been criticized by many as stressing too much on the already existing tilt toward "investment" over "consumption" for driving the economic growth. Such a tilt has been argued to have led to multiple negative consequences for further unbalancing the structure of the economy. For example, the percentage of "fixed-investment share of GDP" increased from 42% in 2008 to 47% in 2009 and almost 50% in 2010. In comparison, the same share in Japan never

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6 See for example, Jacques (2009).

exceeded 34% in the 1960's when its economic growth rate peaked. At another side of the same coin is the phenomenon that "consumption" has been accounting for less and less percentage of the GDP growth. Actually, in comparison with other major economies, the percentage of consumption as in the contribution to the GDP growth has already become lower before the global financial crisis and the stimulus package, from around 50% in the 1980’s, dropping to around 40~50% in the 1990’s, and then sharply dropping to lower than 40% after the millennium. The stimulus package only exacerbates such a trend (Naughton, 2010: 78-9; Tong, 2010: 63).

It is necessary to stress here that the unbalanced economic structure was not created by the global financial crisis or the stimulus package. It has been a trend that the economic growth in China depended more upon investment and export and less on consumption. As Yasheng Huang has adeptly observed, there have been different "policy models" in creating the economic growth for China in the past three decades. From his perspective, the "policy model" (labeled as the "Washington Consensus" by him) that emphasizes "financial liberalization, private entrepreneurship, and political opening" and was dominant in the 1980s has been replaced by another "policy model" that emphasizes "state financial controls, state ownership of firms, and political controls" (labeled as the "Beijing Consensus") in later years (Huang, 2010). The major purpose of this paper is not to approve or disapprove Huang’s point that one policy model is superior to another. Rather, it intends to point out that different, or competing, policy models or development models may exist concurrently for driving China’s economic growth. In contrast to Huang's models, this paper points to another pair of development models: the "pro-state-sector cum investment-driven model" versus "pro-non-state-sector cum export driven model." The global financial crisis and the 4-trillion stimulus package only made such a contrast more conspicuous, and enabled the former more dominant over the later.

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8 Cao, Jianhai (2009), "The Long Term Risk of Expanding Investment to 'Ensure Growth'," Macroeconomics (Hongguan Yanjiu), No. 4.
Several consequences have ensued from such a ”pro-state-sector cum investment-driven” strategy: the expansion of the state-sector and the recession of the non-state sector; the fast growing accumulation of local government debt; the overcapacity and inefficiency of the infrastructure construction; the property bubble; and the pressure for inflation. All these lead to questioning of the sustainability of such a mode of economic growth (Naughton, 2010: 87; Tong, 2010: 65). The following will focus on two major effects relevant to this paper: the change of local government’s role, and the expansion of the state sector versus the recession of the non-state sector.

3.3 Local Government as A Lender And Investor

As mentioned above, the stimulus package was only partially invested by the central government. Local governments are expected to make parallel investment to respond to the projects planned by the central government. In order to do so, most local government established so-called ”local government investment companies” (地方融资平台) to make loans from the state banks for investing in local infrastructure projects. The local governments usually provide state-owned land or assets as collateral, and thus these debts are off official balance sheets and hard to monitor. In June 2011, the head of China’s National Audit Office Liu Jiayi warned of the sharp rise of these poorly managed local loans and the possible financial risks hidden behind them. With the pressure from the central government to implement the stimulus package, the local government investment companies borrowed loose money from the state banks and invest in many local infrastructure projects that are said to be of ”low quality” and ”oversupply”. This phenomenon has become particularly tangible as

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9Local governments in China are not allowed to issue bonds. 
many newly-built bridges collapse and the high-speed train accident in early 2011.

The potential of a home-based financial crisis looms even larger as the central government has made extra efforts to curb the real estate market. Since most local governments rely heavily on developing real estate for its major fiscal income source, the slow down of the real estate market may imply the decreasing of their public finance income and the devaluation of the public assets that they use as collateral. In other words, the falling real estate market implies the local governments may default their debt, and thus the risk of increasing non-performing loan for the state banks.

The central government has already been alert on such a scenario and thus has carried out strict supervision on this issue. Another financial problem, however, is more chronic, that is, inflation. The 4 trillion stimulus package, as described above, was planned to rely on funds from multiple financial sources. However, it was found that the major source was from printing new currency. The increase of China’s monthly M2 was between 25% and 30% in most of 2009 and early 2010 months. If we deduct the economic growth and export, the increase of currency supply from the stimulus package could be as high as between 10% to 15%. If the investments made from the stimulus package have not created enough jobs and income for consumption, then it surely would have created inflation pressure. Such an inflation pressure tends to exacerbate the already serious income inequality since usually inflation affects the poor people most. Facing such a pressure, the central government in 2011 started to tighten the monetary supply and created another round of tightening for the macro economic environment.

syndicate.org/commentary/roubini37/English, access time: 7/28/2011.

In short, the stimulus package brings about the changing role of local governments in economic development. The global financial crisis has curtailed the economic base from which the local governments acquire independent economic autonomy from export and local private enterprises. After the stimulus package, the local governments have to rely more on borrowing money from the state banks, and local economic development has been more dependent on infrastructure projects and real estate market. Such a change did not start only after the 2008 stimulus package, but it has been amplified by it and become more overwhelming. The local government has been shifted from facilitating the model of “export driven economic growth” to “investment driven economic growth.” And to use the metaphor suggested by the model this paper developed earlier, this implies that for the local government $\alpha_{GL}$ will become lower as the income from foreign trade subsides, and the increasing reliance on bank loans controlled more by the central polices implies the increase of $S$. 

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3.4 The Expansion of the State Sector and the Recession of Non-State Sector

Except for the local debt and inflation, another phenomenon becoming more conspicuous after the stimulus package is the "expansion of the state sector and the recession of the non-state sector" (進退). This phenomenon refers to the development that the market share by the state owned or state invested enterprises has been expanding whereas that of the non-state enterprises recessing. There has been a debate in China whether this is actually a fact or in which sectors this is a fact, and to what extent such a development has been a consequence of the global financial crisis and the stimulus package. The Chinese journal "Chinese Entrepreneurs" (中國企業家) conducted a survey on this issue. It sent out 308 questionnaires to entrepreneurs in China and received 113 responses back during April 7-15, 2011. According to this survey, 70% of the respondents felt that there was a phenomenon of the expansion of the state sector and the recession of the non state sector.¹²

According to the same survey, there were actually multiple reasons for such a phenomenon, and the global financial crisis and the stimulus package were only part of the reasons. The other two more important reasons were the "promotion plan for ten major industries" and "financial institution environment." The "promotion plan" initiated by the central government helped the central level large state enterprises to acquire beneficial loans. These include the car industry, ship building industry, and steel industry. As for the "financial institution environment," it refers to the fact that the major state banks have always been more lenient to the state-owned enterprises and strict to the non state enterprises, and the fact that in response to the inflation pressure created by the stimulus package the central government tightened monetary supply since 2011. However, there were still 50% of the

respondents agreed that the "stimulus package" was also the reason why the phenomenon of expansion of state sector and recession of the non state sector became more serious. The industrial sectors that suffered most from this phenomenon include: civil aviation, steel, coal, and new energy. Such a phenomenon even took place in some industries which SOE’s traditionally did not enjoy any advantage, such as the mobile phone retail. The reason is that their upstream sector is occupied and monopolized by some powerful SOE’s which started to extend to the downstream sectors. In those infrastructure projects that the 4 trillion stimulus package mostly spends on, the private sector has always played a peripheral, if not trivial, role. The package only expands the already existing dominance that the state sector has long enjoyed. Furthermore, there are also reports claiming that most of these infrastructure investment projects were allocated to the inland provinces instead of the coastal provinces.

The private sector has not only suffered because of the disadvantages in getting the contract from the stimulus package, but also because the worsening macro financial conditions created by the stimulus package. On the one hand, the private sector suffered from a shrinking export market and a rising domestic labor costs; on the other hand, it became difficult to make money from manufacturing, and the real interest rate in recent years has been negative. There was two ways the private enterprises do about their capital: one was to invest in real estate, and another was to escape to overseas. Given the second also costly, many private enterprises pour their money into the real estate. However, due to the suppressing policies of the central government on the real estate market, many private enterprises could not get their investments back from such a slumping market, nor could they make loans from the unfriendly state banks. Many of them borrowed money from underground financial institu-

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13 Ibid.
14 Ibid.
15 An official from Zhejiang Province said in an interview that most of the projects in the stimulus package were assigned to the middle and western provinces. Coastal provinces such as Zhejiang did not share much of the pie. See "Reviewing the 4 trillion package: the government policies went from tightening to loosening," Caijing Net, Sep. 20, 2010, http://biz.cn.yahoo.com/ypen/20100920/ 28212.html.
tions which charge short term interest rate of 30 to 36% if with collateral and 60% to 72% if without. This is how many private enterprises go bankruptcy in the later half of this year 2011. Although the central government has long promulgated the so-called “36-items policy” to provide assistances to the private sector, not many provinces really put that policy into effect.

In short, although the stimulus policy with the heavily state investment aimed at encouraging the private investment, the actual consequence was quite the opposite. The private sector not only suffered from the shrinking export market after the global financial crisis, it was actually also excluded from the development directly brought about by the stimulus package. Furthermore, the indirect consequence of a worsening macro-economic environment (tightening monetary supply) ensued from the stimulus package wreaked unexpected havoc on many of the private enterprises. The once proud ”Wenzhou Model” developed by the Zhejiang private sector now faces a breakdown given many Wenzhou private entrepreneurs either go bankruptcy or escape from their defaulted debt. From this perspective, those provinces with more state sector are indirectly subsidized due to the beneficial effects created by the stimulus package, no matter as an intended or unintended consequence. If these provinces are inland provinces, they happen also to be the provinces that originally relied less on export for their development. In other words, these provinces with larger state sector not only tend to receive larger $S$ (subsidy) as noted in our model, but also tend to have smaller original value of $\alpha_{GL}$ since they did not rely have export as an autonomous income source.

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17The full name of the policy is ”Circular on encouraging and guiding civilian investments and healthy development by the State Council” (國務院關於鼓勵和引導民間投資健康發展的若干意見) promulgated on May 7, 2010. The policy encourages private sector to invest in infrastructure projects and some other industrial sectors monopolized by the SOE’s. See the Chinese Central Government Website, http://www.gov.cn/zwgk/2010-05/13/content_605218.htm, access time: 7/28/2011.

4  A Simple Test of State-Sector Bias in the 2008 Stimulus Package

In addition to the descriptive account in Section 3, we offer another empirical analysis in this section to support the theoretical argument proposed in Section 2. More specifically, our theoretical discussion in Section 2 predicts that $\alpha_G$ in (8) to dwindle owing to the breakout of financial crisis in 2008 and the resulting falling in global demands for China’s products. The consequence of the global financial crisis in 2008 in terms of trade can be readily seen in Figure 3.

Figure 3: Provincial Export Ratio: 2008-2010

![Figure 3: Provincial Export Ratio: 2008-2010](image)

Obviously, while the provincial growth rates of export ratio in 2008 (green bars) were all positive, those in 2009 (red bars) were almost negative across the board except in three provinces (Guangxi, Hainan, Sichuan), and it was not until 2010 did the growth rates (blue
bars) bounced back.

By contrast, while we found the provincial exports to decrease in 2009, the volume of domestic trade between each province and the rest of China was nonetheless still increasing in the same year as evidenced in Figure 4.19

Figure 4: Growth in Provincial Domestic Trade 2009

Since the stimulus program was launched in the end of 2008, it was supposed to take effect in 2009 and reflect in the provincial domestic trade documented in Figure 4. In other words, these increases can substantially capture the “new” demands that were created by the stimulus program the central government adopted and ate away the local autonomy once it became one of the major economic sources for local governments. The implication is twofold, on the one hand, the stimulus package gave rise to distributional effects across different sectors, ownership structures, and provinces. The sectors that were more capital-

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19There are no data on the bilateral trade between individual provinces.
intensive and had more state-owned enterprises were the major beneficiaries of the stimulus package as our first-cut analysis in Section 3 reveals. On the other hand, those provinces that have larger private sectors were made losers of both the financial crisis and the domestic stimulus program owing to its state-sector bias. These provinces are also going to lose their economic underpinnings used to buttress their relative autonomy against the center. As a consequence, if we could prove the existence of the state-sector bias in the stimulus package, we would be able to raise our confidence in the theoretical conjectures made in the previous section.

4.1 Data Source and Variable Construction

In order to conduct such a test, we collect data on provincial trade, both domestic and foreign, and ownership structures in all provinces. The former is taken from a Chinese economic database maintained by China Economic Information Network, and the latter from another database, China Data Online. Moreover, we further divide our sample into two sub-samples according to the share of industrial output of the state-sector in each province. The provinces that are above the median of the ratios \( \frac{\text{State-Sector Industrial Output}_i}{\text{Total Industrial Output}_i} \) of province \( i \) are grouped together, while those below the media are alternatively labeled.
Table 2 lists individual provinces falling into the two above- and below-median groups respectively. It is obvious that most of the provinces in the above-median group are inland ones as we suggested in the previous section.

As far as the measure to be compared is concerned, we use growth ratio in domestic trade (i.e., \( \frac{\text{Increase in Domestic Trade in 2009}}{\text{Domestic Trade in 2008}} \)) to control for provinces’ previous levels of...
reliance on domestic trade.

4.2 Results

Table 3: The T-Test Results

<table>
<thead>
<tr>
<th>Group</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16</td>
<td>.1526592</td>
<td>.0027187</td>
<td>.0108749</td>
<td>.1468643</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>.1634643</td>
<td>.0031285</td>
<td>.0121089</td>
<td>.1567407</td>
</tr>
<tr>
<td>combined</td>
<td>31</td>
<td>.1578788</td>
<td>.0022546</td>
<td>.0125533</td>
<td>.1532742</td>
</tr>
</tbody>
</table>

**diff** = mean(0) - mean(1)

Ho: diff = 0
t = -2.6129
degrees of freedom = 29

Ha: diff < 0

Pr(T < t) = 0.0070

Ha: diff != 0

Pr(|T| > |t|) = 0.0141

Ha: diff > 0

Pr(T > t) = 0.9930

Table 3 documents the results from conducting a two-sample t-test. The results confirm our hypothesis that the mean growth ratio in domestic trade is different (higher) with statistical significance in the group of provinces with above-median state-sector ownership structure from (than) that in another group with below-mean state-sector ownership structure.

5 Conclusion

This paper studies the effect of China’s 2008 stimulus package on the economic basis of its central-local relationship. The literature on China’s de facto federalism has long focused mainly on the regulatory framework (e.g., tax system) defining the relationship between the central and local governments. Nonetheless, the breakout of the financial crisis in 2008 that took its origin in the US housing market and the emergence of the so-called "China
Model” where the central government plays a dominant role in local economic governance call for a more dynamic understanding of this relationship. That is, since the late 1970’s, the main economic resources local governments were able to tap into have been the growing foreign trade with and exports, in particular, to foreign markets of advanced economies. The resources generated this way enabled provincial governments to be less reliant on fiscal transfers from the center and therefore more capable of taking local initiatives.

However, this economic underpinning of local autonomy has been greatly undermined as one of the key economic engines, international trade, was out of whack after the 2008 financial crisis, and foreign demands were replaced by the state-led domestic stimuli. More critically, the fact that the 2008 stimulus package had a strong state-sector bias where the economic sectors benefited were largely those heavily invested by the state gives rise to a more profound implication that provinces having larger private sectors would lose more economic ground.

An examination of the qualitative materials shows that after the global financial crisis and the implementation of the stimulus package, two phenomena took place in China: first, the change of the role of the local government from a facilitator of private sector and export-driven growth to an ally of state-sector and an agent of investment-driven growth led by central government; second, the expansion of the state-sector and the recession of the non-state sector. If such an observation is the fact, then those provinces with more state-sector should have benefited more from the stimulus package and thus should have achieved greater growth from domestic demands to replace the lost gain from foreign trade.

We conducted a t-test to verify these hypotheses by examining the (province-wise) distributional effects of the stimulus package in 2008 in terms of how much additional domestic trade (demands) was created for provinces with different ownership structures. The result confirms our hypothesis that the mean growth ratio in domestic trade is higher with statistical significance in the group of provinces with above-median state-sector ownership structure.
than that in another group with below-mean state-sector ownership structure. The research will help students of China’s political economy not only foresee the possible trajectory the Chinese economy might take after the government decided to transform its outward-oriented economy, but also assess the post-crisis central-local relationship.
References


