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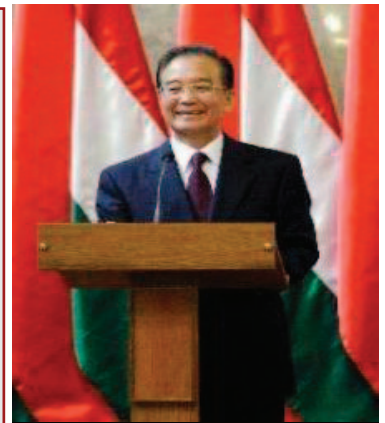
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Premier Wen Jiabao

*China Brief is a bi-weekly journal of information and analysis covering Greater China in Eurasia.*

*China Brief is a publication of The Jamestown Foundation, a private non-profit organization based in Washington D.C. and is edited by L.C. Russell Hsiao.*

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For comments or questions about *China Brief*, please contact us at [hsiao@jamestown.org](mailto:hsiao@jamestown.org)

1111 16th St. NW, Suite #320  
Washington, DC 20036  
Tel: (202) 483-8888  
Fax: (202) 483-8337

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**In a Fortnight**

IS HUNGARY BECOMING CHINA'S HUB IN CENTRAL EUROPE?

By L.C. Russell Hsiao and Matthew Czekaj

On June 24-26, Chinese Premier Wen Jiabao stopped in Budapest with great fanfare. The Hungarian government, then closing out its term as rotating presidency of the EU Council of Ministers, celebrated Mr. Wen's call on the Pearl of the Danube as an important coup for the Central European nation's efforts to attract the attention of the giant from the East. Wen's visit to Budapest was part of a tour billed to buy European debts and "help" Europe by shoring up its investments. Yet, Premier Wen's meetings with Hungarian officials were chalked up as "bilateral" instead of "multilateral" dialogues, signifying that the purpose of the visit was for business between China and Hungary rather than the European Union. During the visit, Wen and Hungary's Prime Minister Victor Orban signed a dozen agreements (Budapest Business Journal, June 26), which the Hungarian government proclaimed would create thousands of jobs in the country (Hungarian Ministry of National Development, June 23). Representing the most lucrative collection of Chinese-Hungarian economic deals to date, Wen's push to Hungary is reflective of China's growing interest in gaining economic and political access to Central and Eastern Europe (CEE).

The extensive agreements, worth around \$3.6 billion, included plans for joint investment in a Hungarian solar panel production facility; a citric acid factory

(Portfolio.hu, June 17); development of air, water and rail transportation (Budapest Business Journal, June 26); and plans to develop Hungary's neglected Szombathely airport into a major European cargo base (Budapest Business Journal, June 24). Moreover, Chinese telecommunications manufacturing giant, Huawei, "which already operates logistics centers in Hungary, announced in May it would expand its distribution center in the country, where it expects to employ 3,000 people and export a total of \$1.2 billion worth of products this year, making it Huawei's second-largest supply center in the world" (Portfolio.hu, June 27). In 2012, Huawei's Logistics Center in Hungary predicts revenues of \$3 billion (Reuters, June 8). Finally, Premier Wen promised to purchase an unspecified amount of Hungarian debt, the news of which strengthened the Hungarian forint by 0.3 percent (Bloomberg, June 27).

The Chinese-Hungarian economic relationship has been intensifying over the last several years. As early as 2009, Hu Jintao's successor-in-waiting, Xi Jinping, visited Hungary, as well as Bulgaria and Romania. Against the backdrop of a massive \$1 billion Chinese loan to neighboring Moldova that August, this push was seen as a signal of an intensification of Beijing's strategy to diversify its huge foreign reserves—and accelerate the diversification of its "go global" strategy (See "Xi's European Tour: China's Central-Eastern European Strategy Reaches for New Heights," *China Brief*, October 7, 2009). Chinese-Hungarian relations reached an even higher level with PM Orban's visit at the end of 2010. In Shanghai, Orban negotiated a Chinese buyout of Hungarian biochemical giant, BorsodChem, which China's Wanhua Industrial Group purchased for \$1.6 billion in February 2011. Then, in May 2011, Chinese State Councilor Dai Bingguo visited Budapest and met with the Hungarian president and prime minister to discuss joint business deals in transportation, aviation and energy, as well as political and cultural cooperation (Xinhua, May 14).

Premier Wen's most recent commitments in Hungary are consistent with a pattern of behavior that suggests that China is targeting these emerging markets strategically [2]. In 2010, two-way trade between China and the region surpassed 40 billion, representing an annual average growth rate of 32 percent. China's imports from the central and east European countries have grown even faster, registering an average annual rate of 38.7 percent (Xinhua News Agency, June 26). Indeed, Piraeus—the

largest shipping port in Greece, which is owned and run by the Chinese company China Ocean Shipping Co.—is specifically being used by China to reach Central European and Black Sea markets (NPR, June 8). CEE countries represent dynamic, largely developed, less saturated economies, which are still directly connected to the EU common market. Premier Wen admitted in a speech before the China-Central and Eastern European Countries Economic and Trade Forum that China is looking at the region as a useful entry point into the rich economies of Western Europe. He noted that through joint partnerships Chinese corporations can "significantly cut their business costs and get integrated into the industrial system within the EU" (Xinhua News Agency, June 26), which Prime Minister Orban also openly promoted to Chinese State Councilor Dai in May (Xinhua, May 14). Yet, Hungary appears to be edging out its neighbors as China's hub in Central Europe.

Unlike Hungary, many Central European countries have mixed feelings of closer economic ties with China. On the one hand, they actively want to attract Chinese FDI [3], and are anxious about losing out on trade and business opportunities with China (*Gazeta Prawna*, June 21; TVN24, June 10). However, there are also fears of the reliability of Chinese firms, as illustrated by the failure of the Chinese Overseas Engineering Company to finance and complete its section of a highway project in Poland, which threatens to sour ties between Warsaw and Beijing (*Financial Times*, June 7). Furthermore, allegations of exploitative labor conditions in Chinese-owned workplaces in Europe also dull Europeans' desire for this Chinese investment (NPR, June 8).

Yet, Beijing's foray into Central European markets cannot be disconnected from a longstanding political goal: to end the EU Arms Embargo. For example, following a pell mell push by Beijing to engage the Spaniards, in early 2010, Spanish officials—favorable to the idea of dropping the ban—tried to re-open the debate on the EU-China arms embargo, and Bulgaria and Romania have ostensibly warmed up to the idea, as well. China's engagement of Hungary may be seen as an attempt to buy political support from critical Central European countries whose economies depend on increasingly scarce sources of FDI.

Hungary is a member of the Visegrad Group, a loose

political grouping of the Czech Republic, Poland, Slovakia and Hungary, which has the same voting weight inside the EU as France and Germany. It is important to note, however, that its members—especially the Czech Republic, Poland, and to a degree Slovakia—are generally considered very sensitive to human rights issues, including China’s record. China may thus be trying to use Hungary as an example to its neighbors that if they toe China’s line, they will also reap the rewards of China’s generosity. Thus, the longer Europe’s economy stumbles in its recovery, the more enticing Chinese overtures will be to the region.

*L.C. Russell Hsiao is Editor of China Brief at The Jamestown Foundation. Matthew Czekaj is a Program Associate at The Jamestown Foundation.*

## NOTES:

1. “Węgry zabiegają o przychyłność Pekinu i chińskich inwestorów.” *BEST-OSW*. 4 Nov 2010. Accessed 14 Jul 2011 <<http://www.osw.waw.pl/pl/publikacje/best/2010-11-04/wegry-zabiegaja-o-przychylnosc-pekinu-i-chińskich-inwestorow>>.
2. See Doran, Peter B. “China’s Foray into Central Europe: Geopolitical Tourist or New Contender?” *Central Europe Digest*. 15 Sep 2010. Accessed 14 Jul 2011 <[http://www.cepa.org/ced/view.aspx?record\\_id=262](http://www.cepa.org/ced/view.aspx?record_id=262)>.
3. An illustrative example of Central Europe’s attempts to attract Chinese investment was a recent presentation made by the Ambassadors of Poland, Slovakia, Hungary and the Czech Republic in Beijing. See “Pekin: konferencja prasowa w 20 rocznicę powstania Grupy Wyszehradzkiej.” *CRI Online*. 27 May 2011. Accessed 14 Jul 2011 <<http://polish.cri.cn/561/2011/05/27/162s105270.htm>>.

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## Local Debt Problems Highlight Weak Links in China’s Economic Model

By Willy Lam

The Chinese Communist Party (CCP) leadership’s apparent failure to rein in reckless borrowing by local administrations has raised serious questions about the efficacy of the country’s stimulus package—and the viability of its vaunted economic model. Last month, the National Audit Administration (NAA) disclosed that regional governments had run up debts totaling 10.72 trillion yuan (\$1.65 trillion). Independent credit agencies have reckoned that the actual figure is around 14 trillion yuan (\$2.15 trillion), or 35 percent of the country’s GDP (Bloomberg, July 5; Voice of America News, July 5). These horrendous debts show the party-state apparatus may be losing control over the regions’ finances. More significant is the fact that 33 years after Deng Xiaoping kicked off the era of reform, the country is still dependent on old-style state investments to boost GDP growth rates. The recent data points seem to indicate that efforts by the Hu Jintao-Wen Jiabao team to focus on consumer spending and technological innovation as new engines of growth—which is the leitmotif of the 12<sup>th</sup> Five Year Plan (12FYP) of 2011 to 2015—face formidable challenges ahead.

At a State Council meeting early this month, Premier Wen said Beijing would pull out the stops to curtail borrowing by local governments as well as so-called urban development investment vehicles (UDIVs) that enjoy official backing. “The size of local government debt being formed over the past several years is relatively big and some risks loom, as some regions and industries are weak in repaying the debt,” the official Xinhua News Agency quoted the State Council statement after the meeting as saying. “Local governments must continue to clean up and standardize the financing vehicles in a timely manner” (Reuters, July 5; Xinhua News Agency, July 5). Western economists have estimated that as a result of defaults and delayed repayments, Chinese banks’ non-performing loans (NPL) ratio may soar beyond 10 percent in a few years’ time (Reuters, June 28; Hong Kong Economic Journal, June 29).

A key reason why Beijing has been unable to whip regional



cadres into line is that the “warlords” are in their own fashion following Beijing’s overall policy of relying on state-funded projects to foster economic expansion. Last year, fixed-assets investments accounted for an estimated 46.5 percent of GDP (*Global Times*, May 30; China.org.cn, April 6). In late 2008, Premier Wen unveiled a package worth 4 trillion yuan (\$615 billion)—some 50 percent of which would be bankrolled by local administrations—to sustain high-level growth in the face of the global financial crisis. The bulk of this gargantuan capital injection has gone into infrastructure projects as well as real-estate and related sectors. Given that the property market began to heat up soon thereafter, spending on housing construction and allied activities have gone into high gear since 2009. Regional officials are particularly keen on property-related areas because the sale of land and incomes such as property-transaction taxes make up at least half of local revenues. And it was not until last year—when the bubble had reached outsized proportions—that the State Council took serious measures to contain over-building and speculation (*People’s Daily*, June 7; *China Daily*, February 10).

While outlining the 12FYP earlier this year, Premier Wen said that in the interest of restructuring the economy, the State Council was lowering the annual growth rate to just seven percent. This has fallen on deaf ears in the provinces and major cities, many of which have loudly proclaimed plans to double their GDP during the five-year plan period (See “Beijing’s Blueprint for Tackling Mass Incidents and Social Management,” *China Brief*, March 25). According to Beijing University of Science and Technology economist Hu Xingdou, local cadres are convinced that faster-than-normal economic growth is a ticket to a quick promotion up the hierarchy. “They don’t mind incurring tonnes [*sic*] of debt because it’s the responsibility of their successors, if not the central government, to return the money,” said Professor Hu (VOA news, June 25; Huxingdou.com, July 1).

An even more potent incentive for officials to go after property-related businesses is private gains. Local “warlords” who have been given death or suspended death sentences this year due to illegal land- or property-related deals include the Mayor of Shenzhen Xu Zhongheng and the Vice-Mayor of Hangzhou Xu Wanyong (Sina.com, March 28; Xinhua News Agency, May 9; Guangzhou Daily, May 13). Central-level cadres have also gotten

into the act, thus rendering Beijing’s efforts to douse overzealous investments in the localities even more difficult. Last month, Li Yuan, a former Vice-Minister of Land and Natural Resources, was kicked out of the CCP after he was subjected to investigation for reportedly taking bribes from developers and related transgressions. Other senior cadres who have been jailed for property-related corruption include the Vice-President of the Supreme People’s Court Huang Songyou (China News Service, June 10; Caijing.com, June 9; Xinhua News Agency, January 19, 2010).

Moreover, given the top priority that Beijing has given to maintaining stability, the warlords are telling the central leadership that a truncation of construction and related projects could have devastating socio-economic impact. As Nottingham University Sinologist Lina Song pointed out, “for poorer areas, a sharp reduction of local public investment would mean a reduction in employment and a rise in poverty” (*New York Times*, July 6). So far, the CCP authorities’ only strategy seems to be to play up the principle that cadres “must pass muster in both ability and morality, with priority given [to] morality” to be promoted (China News Service, June 23; *People’s Daily*, July 1). “Morality” is a long-standing code word for abiding by instructions from the central leadership.

While individual economists estimate that China’s total public debt is as high as 80 percent of GDP, it is unlikely that a massive default on regional loans—triggered for instance by the bursting of the housing bubble—will plunge the nation into recession. Most of the loans are issued by domestic institutions. Moreover, the government still has a big war chest. Central revenue was 8.3 trillion yuan (\$1.28 trillion) last year. Also, the country holds \$3 trillion in foreign-exchange reserves (*The Economist*, June 2; *Wall Street Journal*, June 9). Yet, as Xu Xiaonian, Professor of Finance at the China-Europe International Business School (CEIBS) pointed out, “Beijing is merely burning money to keep the capital projects going.” Comparing China to a patient, Professor Xu noted that “burning money and printing renminbi [yuan] can make him look good, but it doesn’t mean that his sickness can be cured” (Investide.cn [Beijing], July 3; Phoenix News [Beijing], June 22).

Equally significant is that the country’s excessive reliance on state outlays as a vehicle of growth means that the main

goal of the 12FYP—encouraging domestic consumption and technological innovation—is being jeopardized. Consumer spending has remained tepid despite a series of state incentives such as repeatedly raising the minimal wage for urban workers. The average savings rate of urban households relative to their disposable incomes rose from 18 percent in 1995 to nearly 29 percent in the late 2000's. The share of private consumption in GDP has fallen to about 35 percent, the lowest figure among large developed and emerging-market economies (Reuters, March 14; Brookings.edu, January 18). Chinese people still prefer to save given the inadequacy of medical insurance and old-age pensions. Equally important is the fact that in the past decade, while the income of the government and state-held corporations has increased dramatically, workers' remuneration as a proportion of GDP has dropped by close to one percentage point annually. Last year, workers' salaries were equivalent to a mere 25 percent of GDP, versus the world average of 55 percent (Xinhua News Agency, May 12, 2010; *People's Daily*, May 12, 2010). This phenomenon of *guofu mingqiong* ("the state getting richer while citizens remain poor") will of course depress consumer spending.

Beijing's developmental strategy of betting big on state injections has also hurt the country's once-vibrant private sector. Much of the government funds that were used to fight the global financial crisis have ended up in state-controlled firms at both the central and local levels. Even before the on-going credit crunch, private firms could get, at most, one-third of the loans made available by state banks. Since the spring, even the most resilient private enterprises—for example, those in Wenzhou, Zhejiang, long known as China's quasi-capitalist haven—have felt the pinch. Wenzhou officials have indicated that local firms have to pay some 60 percent interest rate to secure loans from underground financiers (*The Age* [Melbourne], May 4; *China Daily*, June 18). CEIBS's Xu has deplored that as a result of the over-emphasis on state investments, "the government and state-owned enterprises have increased their dominance from steel to real estate." "Thirty years of privatization have basically been brought to a halt," he said (Caing.com, January 13). The retreat of the private sector has cut into the country's ability to enhance innovation in technology and management, which is a key objective of the 12<sup>th</sup> FYP. While the World Factory seems to be making headway with technological advancement, its high-tech advantages

are similar to those of the Soviet Union and Russia: most of the exciting achievements the past decade have come from military or state-controlled laboratories and plants. State-of-the-art gadgets have included super-fast computers, high-speed trains as well as jetfighters and missiles (*Global Times*, June 11; *Guangming Daily* [Beijing] March 29). Global experience has demonstrated, however, that imaginative, user-friendly products for the consumer market usually come from private firms that are unencumbered by state fiat. The recent setback suffered by the non-state sector could bode ill for China's overall innovation drive through the rest of the decade. In his keynote speech marking the CCP's 90<sup>th</sup> birthday, President Hu Jintao admitted that "problems of unbalance, lack of coordination, and unsustainability in development are outstanding,"—and that these structural impediments must be "resolved through deepening reform." The supremo cited the magic word "reform" 44 times during his 14,000-character address (Xinhua News Agency, July 1; China News Service, July 2). The fact that Beijing has chosen to procrastinate rather than tackle urgent issues such as regional indebtedness, however, does not seem to augur well for the future of reform. According to Northwestern University Sinologist Victor Shih, who has written about irresponsible borrowings by local administrations since 2009, "The government had delayed acknowledging the problem for a long time." "After three separate internal audits conducted by the Ministry of Finance, the China Banking Regulatory Commission and the People's Bank of China last year, the State Council realized that the situation was serious," he told *China Brief*. "Now, I still think the top leadership does not want to acknowledge the full scale of local debt." Since a drastic cut-off of credits to localities would create voluminous bad debts, Professor Shih said, "Beijing's solution is to muddle along for a couple more years." The onus is on the Hu-Wen administration to show the world that it can come up with efficient and expeditious ways to grapple with the economy's myriad bottlenecks.

*Willy Wo-Lap Lam, Ph.D., is a Senior Fellow at The Jamestown Foundation. He has worked in senior editorial positions in international media including Asiaweek newsmagazine, South China Morning Post, and the Asia-Pacific Headquarters of CNN. He is the author of five books on China, including the recently published "Chinese Politics in the Hu Jintao Era: New Leaders, New Challenges." Lam is an Adjunct Professor of China studies at Akita International University, Japan, and at*

*the Chinese University of Hong Kong.*

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## Assessing the Grade Structure for China's Aircraft Carriers: Part 1

By Kenneth W. Allen and Aaron Shraberg

### INTRODUCTION

As China's maiden aircraft carrier nears its sea trials, speculation about its capabilities, missions, level of technology and the rank of its commanding officer (CO) has increased [1]. This two-part article adds to this discussion by applying the “grade” (*zhibin dengji*) system of the People's Liberation Army (PLA) to understand how the carrier might fit within the fleet structure of the People's Liberation Army Navy (PLAN). The PLA assigns grades to every officer and billet, and it also assigns grades to every vessel, operational and support unit headquarters, academic institute, and research institute, each of which the PLA views as an “organization.” For the PLA, the grade system influences the relationships between personnel, as well as between every organization in the PLA's chain of command. Grades influence personnel duties, training, career advancement, as well as every organization's command, control and coordination. As China's security environment changes and its military modernizes—along with the introduction of this and any future carriers—the PLAN will likely adjust personnel and vessels within its grade system, which will impact China's military stance on-shore and at-sea.

Part 1 of this two-part article begins with an overview of the PLAN's Table of Organization and Equipment (TO&E). It then considers how a carrier could be integrated into the TO&E, drawing attention to the PLAN's command and control (C2) structure, and discusses likely placement options for the carrier within the PLAN's on-shore organizational structure (*jidi fangyu zuozhan zhibin dengji*). Examining how the PLAN could organize its new vessel on-shore, Part 1 addresses the following key questions:

- 1) What grade will the PLAN assign this and any future carriers?

- 2) What organization will this and any future carriers be subordinate to?

Part 2 will explore the carrier's at-sea command, control, and coordination within the PLAN's at-sea task force structure (*haishang jidong zuozhan biandui zhibin dengji*) where it must work with destroyers, frigates, submarines, support vessels and aircraft [2].

### PLAN ORGANIZATION

The U.S. military and the PLA differ with regard to grades and ranks because the U.S. military assigns grades to officers and billets, but not to organizations, whereas the PLA assigns grades to every officer and billet, *as well as* to every organization. Each PLAN vessel, including an aircraft carrier, is viewed by the PLA as an organization and is assigned a grade that is the same as that of its CO and political commissar (PC) who are, because of the PLA's military and political dual leadership system (*junzheng shuang shouzhang zhibin dengji*), considered co-equals [3]. An overview of the PLAN's grade structure is as follows [4]:

- PLAN Headquarters (*haijun*) is a military region (MR) leader-grade (*zhengdajunquzhibin dengji*) organization, and the PC is an MR leader-grade officer; however, at this level, the PLAN commander is currently a CMC member-grade (*junwei weiyuan*) officer. This is the only exception to the rule of the commander and PC having the same grade.
- Each of the PLAN's three fleet headquarters (*jiandu*) is an MR deputy leader-grade (*judajunquzhibin dengji*) organization, and each fleet commander and PC are concurrently assigned as an MR deputy commander and deputy PC, respectively.
- The PLAN's eight support bases are corps deputy leader-grade (*fujunzhibin dengji*) organizations.
- The PLAN's vessel *zhibin dengji*/flotillas are division leader-grade (*zhengshizhibin dengji*) organizations that serve as the on-shore headquarters for destroyers, speedboats, combat support vessels and submarines, as well as some landing ships, submarine chasers and frigates.
- The PLAN's vessel *dadui*/squadrons are regiment leader-grade (*zhengtuanzhibin dengji*) organizations that serve as the on-shore headquarters for the remaining types of vessels in the PLAN's

inventory, including some frigates.

Every PLAN organization is assigned one of 15 PLA grades, which provides the basis for the PLA's C2 structure. Table 1 shows the protocol levels of the PLAN's headquarters and the corresponding grades assigned to their subordinate combat and support vessels [5].

**TABLE 1: GRADE STRUCTURE FOR PLAN HEADQUARTERS AND VESSEL TYPES**

Grade	Headquarters	Vessel Types
MR leader	PLAN HQ	None
MR deputy leader	Fleet HQ	None
Corps leader	None	None
Corps deputy leader	Support Bases	None
Division leader	<i>Zhidui</i> (flotilla)	None
Division deputy leader	None	Nuclear-powered submarines
Regiment leader	<i>Dadui</i> (squadron)	Destroyers
Regiment deputy leader	None	Frigates, large service ships, conventional-powered submarines

As a rule, no vessel can be assigned the same grade as that of the organization to which it is subordinate. For example, nuclear-powered submarines and destroyers can only have a grade subordinate to a *zhidui*, while frigates and conventional-powered submarines can be subordinate to either a *dadui* or *zhidui*. As a result, the grade of the organization that commands the PLAN's carriers must be at least one grade higher than the carrier itself.

PLAN TIERED COMMAND STRUCTURE: FOUR ON LAND AND THREE AT SEA

According to *China's Navy 2007*, the PLAN has a four-tiered on-shore vertical (*zongxiang*) and horizontal (*bengxiang*) leadership, C2 and coordination structure, and a three-tiered at-sea C2 and coordination structure. The PLAN's vertical structure consists of the following [6]:

- PLAN Headquarters is the highest tier, the service's supreme command staff, and the functional department that implements leadership over all PLAN units for the Central Military Commission (CMC) and the four General Departments (General Staff Department, General Political Department, General Logistics Department, and General Armament Department).
- The three fleet headquarters make up the second tier. They comprise the "campaign component"

possessing the leadership and command staff for a certain strategic direction. The three fleet headquarters (North Sea, East Sea, and South Sea) receive leadership not only from PLAN Headquarters but also from their respective MR headquarters.

- Support bases make up the third tier and are primarily responsible for the comprehensive support of all naval forces within their area of responsibility.

- *Zhidui* and garrisons (*shuijingqu*) make up the fourth tier. Garrisons, which are also division leader-grade organizations, are responsible primarily for coastal patrol, coastal defense, and protecting fishing boats.

When the fleets conduct at-sea task-force operations, the PLAN employs only a three-tiered at-sea C2 structure that includes PLAN Headquarters, the fleet headquarters and the *zhidui*. This structure will be further explored in Part 2.

Within the PLAN's horizontal leadership, C2 and coordination structure, all four tiers have fairly equivalent staff and functional departments, even though their names may be slightly different:

- PLAN headquarters, support bases, and garrisons have four first-level departments: Headquarters, Political, Logistics and Equipment.
- Each fleet headquarters has two first-level departments: Headquarters and Political. The fleet headquarters does not have a Logistics Department or Equipment Department.
- Mirroring the PLAN Headquarters, the support bases and garrisons have four first-level departments: Headquarters, Political, Logistics and Equipment.
- *Zhidui* have three first-level departments including



a Headquarters Department, Political Department and an On-shore Service Department that is equivalent to a Logistics Department.

#### CARRIER GRADE

In the PLA, C2 is conducted vertically between organizations of different grades, and coordination is conducted horizontally among organizations of the same grade within the same service or, increasingly, between services. Therefore, because the carrier will likely be part of a larger on-shore organizational structure and at-sea task force structure, the PLAN must account for the grade structure of the supporting vessels (destroyers, frigates, submarines, and supply ships), as well as the aircraft units (fixed-wing and helicopter divisions and regiments) when choosing the carrier's grade. Interactions between the carrier and higher-, equal- and lower-grade personnel and organizations, including an on-shore headquarters and other vessels, will largely be determined by the carrier's assigned grade.

Within the current TO&E there appear to be two options for the carrier's grade. The first option is that the carrier will be assigned the grade of division leader and the CO and PC will have the primary rank of senior captain and secondary rank of rear admiral. The second option is that the carrier will be assigned the grade of corps deputy leader and the CO and PC will have the primary rank of rear admiral and secondary rank of senior captain [7]. As noted earlier, the grade assigned to the carrier will affect every billet on the carrier. For example, if the carrier is assigned the grade of corps deputy leader, then the grade for every officer billet on the carrier will be one grade higher than that of a division leader-grade organization.

If the PLAN's current organizational structure remains unchanged, then it is highly probable the carrier will be directly subordinate to a fleet headquarters. The reason for this is that a division leader-grade organization (i.e. the carrier) cannot be subordinate to another division leader-grade organization (i.e. *zhibui*). Furthermore, since a 2004 restructuring, the corps deputy leader-grade support bases do not command any combat vessels and all combat vessel *zhibui* are directly subordinate to the fleet headquarters. However, there is a slight possibility this may change once the carrier is introduced.

There are two possible options for dealing with the fact that there are no current headquarters organizations below the fleet headquarters to which the carrier could be subordinate. The possible options involve creating one of two new headquarters organizations between the carrier and the fleet headquarters. The new headquarters could be a corps deputy leader-grade organization if the carrier is assigned the grade of division leader, or it could be a new corps leader-grade organization if the carrier is assigned the grade of corps deputy leader. If the PLAN goes either of these routes, it must then consider whether to re-subordinate the combat vessel *zhibui* and support vessel *zhibui* to the new headquarters or to keep them, especially the combat vessel *zhibui*, as organizations directly subordinate to the fleet headquarters.

If the PLAN decides not to create an intermediate headquarters between the carrier and the fleet headquarters, then it might consider restructuring the fleet headquarters itself. Each fleet headquarters has a Headquarters Department (*siling bu*), which has a subordinate Operations Division (*zhuozhan chu*) responsible for subsurface and surface vessels. During the 2004 restructuring, the PLAN abolished the Naval Aviation Headquarters in Beijing and pushed greater responsibility down to each fleet aviation headquarters. To absorb an aircraft carrier, the fleet headquarters might create a separate Carrier Division (*hangkong mujian chu*) under the Headquarters Department that is equal to its Operations Division and can coordinate with the fleet aviation headquarters and a carrier.

#### CARRIER AIRCRAFT

Within this organizational structure it is not yet clear how naval aviation aircraft will be organized on shore and aboard the carrier. Currently, each fleet has several air divisions (*hangkongbing shi*), each of which has two or more subordinate regiments (*hangkongbing tuan*). In addition, each fleet has independent regiments (*duli tuan*) or independent groups (*duli dadu*) that are composed of specialty aircraft, such as helicopters or reconnaissance aircraft. The aircraft assigned to the carrier while at sea may or may not be assigned to independent units while on shore.



## CARRIER PERSONNEL

The PLAN's vessels are organized into a command staff, which consists of the CO, PC, and executive officer (XO), plus various operational and administrative branches (*bumen*) [8]. Each branch chief is an officer, who serves as a duty officer when the vessel is in port and as a watch officer on a rotational schedule when the vessel is out to sea. Before 2003, aviation branch officers were either helicopter pilots with no vessel experience or vessel officers with no aviation experience. However, in 2003 the PLAN completed training for the first group of officers with both vessel and aviation experience to serve in the Aviation Branch (*hangkong bumen*) for vessels with helicopters assigned. The officers first attended four years of cadet pilot training at the Naval Aviation Engineering Academy and then attended the Dalian Vessel Academy for 18 months to learn about vessels. Upon graduation, they were assigned as aviation branch chiefs on vessels to coordinate helicopter operations. The next batch of students graduated in 2008, but those students spent an even longer period of time at the Dalian Vessel Academy before being assigned to a vessel [9]. This is most likely the same program the PLAN is using to train Aviation Branch chiefs for its aircraft carriers.

## CONCLUSION

As of this writing, a grade has likely been signed, sealed and delivered to the maiden carrier. With the current grade structure in place, China's carrier will likely be a division leader-grade or a corps deputy leader-grade organization. The assigned grade will affect every officer billet onboard the carrier, and it will also affect how this new vessel interacts with other vessels, many of which will directly support it during at-sea deployments. The carrier will be subordinate either directly to a fleet headquarters, a corps deputy leader-grade headquarters, or perhaps a newly-created corps leader-grade headquarters. The headquarters will be responsible for managing all on-shore activities of the carrier including personnel duties, training, as well as ship supply and maintenance. With the introduction of this and any future carriers, the PLAN will likely adjust personnel and vessels within its grade system to meet its security requirements on-shore and at-sea.

*Kenneth W. Allen is a Senior China Analyst at Defense Group Inc. (DGI). He is a retired U.S. Air Force officer, whose extensive service abroad includes a tour in China as the Assistant Air Attaché. He has written numerous articles on Chinese military affairs. A Chinese linguist, he holds an M.A. in international relations from Boston University. Aaron Shraberg is a Research Associate at DGI. His work focuses on China's science and technology policies, research and development. He holds an M.A. degree from George Washington University's Elliott School of International Affairs.*

## NOTES:

1. Some examples include the following: Ian Storey and You Ji, "China's Aircraft Carrier Ambitions," <http://www.globalsecurity.org/military/library/report/2004/art6-w04.htm>. Andrew S. Erickson and Andrew R. Wilson, "China's Aircraft Carrier Dilemma," found at <http://www.usnwc.edu/getattachment/095c6b68-6707-4030-a142-8f07e9aeb524/China-s-Aircraft-Carrier-Dilemma---Erickson,-Andre>. Russell Hsiao, "Who Will Command China's Aircraft Carrier?," *China Brief*, Volume 11, Issue, 12, July 1, 2011.
2. Hu Guangzheng, ed., *Teaching Material for Comparing Chinese and Foreign Military Organizational Structure (Zhong Wai Junshi Zuzhi Tizhi Bijiao Jiaocheng)*, Beijing: Academy of Military Science Publishers, July 1997. 153-155.
3. Information available at: <http://www.defence.org.cn/article-2-21999.html>.
4. See *China's Navy 2007*, Office of Naval Intelligence. This document can be found at <http://www.fas.org/irp/agency/oni/chinanavy2007.pdf>.
5. Information for this section comes primarily from the Office of Naval Intelligence's report *China's Navy 2007*.
6. *China's Navy 2007*, Chapter 1.
7. In the PLA, each grade has a primary and a secondary rank assigned. The primary rank for division leader-grade officers is senior captain and the secondary rank is rear admiral. The primary rank for corps deputy leader-grade officers is rear admiral and the secondary rank is senior captain. Officers rarely receive a promotion in grade and rank at the same time. As a result, there are times when the CO and PC may have different ranks, but they are still the same grade, which is the

grade of the vessel or headquarters.

8. PLAN sources translate *bumen* (部门) as “branch.” In the U.S. Navy, they are called departments, each of which has subordinate divisions.
9. PLA Daily, “Graduate Officers go to their posts” 22 July 2003 at [http://chinadaily.com.cn/en/doc/2003-07/22/content\\_247537.htm](http://chinadaily.com.cn/en/doc/2003-07/22/content_247537.htm). PLA Daily, “Dalian Naval Academy recruits pilot cadets for the first time,” 5 September 2008, at [http://english.chinamil.com.cn/site2/news-channels/2008-09/05/content\\_1462801.htm](http://english.chinamil.com.cn/site2/news-channels/2008-09/05/content_1462801.htm).

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## Implications of China’s Economic Penetration of North Korea

By Gordon G. Chang

Three days after leaving China—where he pledged to work for peace—Kim Jong Il threatened to wage war against South Korea (Yonhap News Agency, May 30). The highly provocative comments from the North Korean regime at the end of May were interpreted as a sign of Chairman Kim’s defiance of Beijing, after a week-long visit that Korea watchers termed “disastrous.” Indeed, there are moments when Beijing and Pyongyang do not see eye to eye—such as this May during Kim Jong Il’s trip—but in essence the North Koreans know that the Chinese have to support them. That is why Kim felt confident enough to threaten South Korea so soon after returning from his most recent excursion to China. Increasingly over time, China and North Korea have been forging a tight economic partnership, which makes Mr. Kim more indebted to Beijing. The relationship appears headed toward greater strategic convergence as a result of China’s unprecedented economic penetration of the North.

During the May trip, Kim and his Chinese hosts rarely found themselves on the same page. The North Korean, for instance, wanted to talk aid, while Chinese leaders spoke of economic development. When both sides discussed economic development, China’s officials took positions that displeased the easily irritated Kim. Premier Wen Jiabao, for instance, rejected the notion that the

Chinese central government would come to his assistance by getting directly involved in development projects in the North. “China hopes that economic cooperation is achieved through normal business processes and we believe provinces and businesses need to become more proactive,” he said (*Chosun Ilbo*, May 27).

Kim was so upset after talking with Mr. Wen that he reportedly ordered his economic advisors to boycott his subsequent meeting with Chinese leader Hu Jintao. As a result, the Chinese delegation at the meeting was three times larger than the North Korean one although protocol usually requires them to be of equal size (*Chosun Ilbo*, May 27).

After Chairman Kim’s visit to China—the third in 13 months—Chinese interlocutors are telling their American counterparts that they are increasingly frustrated with him. Those who accept Beijing’s line always point to Chinese displeasure with North Korea’s October 2006 detonation of a small atomic device, its first known test of a nuclear weapon. They invariably note that China voted for U.N. Security Council sanctions on the North that October, and again in June 2009. Yet, Beijing’s assertions are belied by its increasing economic interaction with the destitute Democratic People’s Republic of Korea.

The DPRK, as the Kim regime calls itself, launched a charm offensive to obtain aid from the United States, South Korea, Japan, and the rest of the international community to weather global condemnation of its 2006 nuclear test. Pyongyang abruptly ended that campaign three years later in late 2009 after the passage of additional sanctions imposed by Security Council Resolution 1874.

Why was Pyongyang no longer concerned by sanctions after the enactment of a *second* set of them? Because the North Koreans knew that the Chinese had their back. Wen Jiabao traveled to Pyongyang in October 2009 to mark 60 years of diplomatic ties between China and North Korea. During the visit, the Chinese premier inked commercial pacts, pledged additional assistance, and announced construction of “a new highway bridge over the Yalu River.” As a Chinese netizen noted soon after the crucial announcements, “It must be a huge encouragement for North Korea that, when the whole world is isolating them, our premier is there to give them hope” (Al Jazeera, October 5, 2009). Moreover, the extensive investments

also sent a message to the international community that Beijing was willing to undercut U.N. sanctions through its economic relations with Pyongyang.

Security Council Resolution 1874 prohibits most commercial contacts with the North. Paragraph 19 of the Resolution calls on U.N. member states “not to enter into new commitments for grants, financial assistance, or concessional loans to the DPRK, except for humanitarian and developmental purposes directly addressing the needs of the civilian population, or the promotion of denuclearization.” Paragraph 20 calls on members “not to provide public financial support for trade with the DPRK . . . where such financial support could contribute to the DPRK’s nuclear-related or ballistic missile-related or other WMD-related programs or activities.”

The deals announced by Wen in October 2009 were so far-reaching that, in all probability, they violated Resolution 1874, and Chinese investment into the North has grown since then from most indicators. Last December, for instance, a Chinese enterprise signed a \$2 billion investment pact to build, in its first phase, three piers in the northeastern port of Rason (*Korea Times*, February 1). That is on top of a highway and railroad from neighboring Jilin province in China to the Rajin-Sonbong economic zone in that city. The announcement followed a series of disclosures about increasing Chinese involvement there, where a Chinese enterprise has already built a pier and is about to begin work on a second one. China also leased, for 10 years, another port facility in strategically located Rason.

Furthermore, at the western end of the 850-mile border, Chinese enterprises are planning to develop special zones on two islands in the Yalu near the Chinese border city of Dandong, the heart of one of the fastest growing areas in China. The Chinese, according to an announcement in June, will get a 100-year lease to Hwanggumpyong Island. Eventually, there will be another zone on nearby Wihwa Island. Local boosters are surely exaggerating when they say that Dandong and Hwanggumpyong will be “the hot ground for investors worldwide,” and reports of an \$800 million project seem fanciful at this stage, but there will eventually be Chinese money flowing into North Korea near the mouth of the Yalu (*China Daily*, June 25; *Global Times*, October 29).

Trade between the two nations, a vital barometer of that relationship, increased from \$370 million in 1999 to \$3.47 billion last year. At this point, more than half of the North’s international commerce is with China, up from 25 percent in 1999. Last year, trade between China and North Korea increased 29 percent from 2009 (Yonhap News Agency, May 27). North Korea’s exports to China rose 51 percent, and China’s exports to the North were up 21 percent (*Telegraph* [London], February 16).

Chinese aid soared from \$400 million in 2004 to \$1.5 billion in 2009 and apparently continued the upward trend in 2010, in part because Beijing took up the slack as Seoul cut off food assistance to its northern neighbor. At least half of China’s foreign aid now goes to the DPRK [1].

China invested \$3.5 million in the North in 2003. Five years later, China supplied \$41.2 million of the \$44.0 million in foreign direct investment into Kim’s Korea, according to United Nations statistics. Today, annual investment, in light of the money pouring into Rason, is undoubtedly many times larger.

The two economies are now so connected that Jeremy Paltiel of Carleton University observes that the increasing interaction between China and the North is falling into “a pattern not seen since the 1950s” [2]. The South Koreans fear that Chinese leaders want to make the DPRK their “fourth northeast province” (*Foreign Policy*, December 30, 2010), which would mean the end of the dream of a united Korean nation.

Nothing says “colony” more than the presence of foreign forces. In January, Beijing repeatedly denied rumors, surfacing in the South Korean media, that it was planning to base troops in the DPRK. “China will not send a single soldier to other countries without the approval of the UN,” the Defense Ministry said to the *Global Times*, a Communist Party–run tabloid (*Global Times*, January 17). South Korea’s main papers had carried stories that Beijing was negotiating the entry of Chinese troops. In a sensational article, the *Chosun Ilbo* reported in mid-January that sources said Chinese forces were already on North Korean territory. In the east, some 50 armored vehicles and tanks had crossed the Tumen River at night, about 30 miles from Rason in the middle of December. At about the same moment in the west, jeeps of the

People's Liberation Army were seen in Dandong heading to the North Korean city of Sinuiju, just south of the Yalu River (*Chosun Ilbo*, January 17). If these reports were accurate, China's troops were back in the North for the first time since they withdrew from the Demilitarized Zone in 1994.

Furthermore, last October, Beijing, through the *Global Times*, denied another South Korean article stating that up to 3,000 Chinese troops would help modernize Pyongyang's forces (*Global Times*, October 21, 2010). Some speculated that the soldiers were supposed to seize defectors and "suppress public disturbances." An unnamed South Korean official, quoted in *Chosun Ilbo*, said that "they're apparently there to protect either facilities or Chinese residents rather than for political or military reasons" (*Chosun Ilbo*, January 17).

So far, no one has confirmed the presence of PLA elements in North Korea, an indication that the newspaper reports may be untrue. Yet, even as Chinese security analysts professed surprise at the articles in the Seoul papers, it is common knowledge in Beijing that China's officials have had discussions with their North Korean counterparts about this matter for some time. For decades, the Chinese have wanted to control the mouth of the Tumen, now held by Russia and North Korea.

If there is any indication that the Kim regime is failing, it is its willingness to talk to the Chinese about allowing their troops into the DPRK. After all, Kim Jong Il bases the legitimacy of his rule on *Juche*. "*Juche*" literally means "master of one's self" or self-reliance. Nations without *Juche* were said to be colonies; so South Korea, for instance, was branded a puppet of the United States. North Korea is now becoming China's puppet.

Yet, does economic heft give Beijing leverage over North Korea's increasingly dangerous foreign policy? "Yes, China is taking over the North Korean economy, but that does not mean they are going to take over politics," argues noted Korea watcher Andrei Lankov. "The reason is the North Korean elite do not take care of the well-being of the people, so economic growth is not as important as in other countries" (*South China Morning Post*, December 12, 2010).

There is some measure of truth in Lankov's assertion,

and there are many reasons why the North Koreans often resist Beijing. They believe, for instance, that the Chinese fear what might happen if their regime falls. They also realize North Korea furthers many of China's objectives, and they know there is no consensus in Beijing to change its decades-old policy of supporting them.

Yet, ultimately the Chinese can demand obedience from the Kim regime. How can they do that? China can bring down Kim Jong Il by turning off the tap, literally. Beijing provides an estimated 90 percent of North Korea's energy. In addition to that, the Chinese are the source of 80 percent of the North's consumer goods and 45 percent of its food [3].

Moreover, China's relative leverage over North Korea has grown because South Korea's has diminished. Seoul, under President Lee Myung-bak, has cut off most contacts with Kim's regime especially after the two belligerent acts last year—the March sinking of the Cheonan and the November shelling of Yeonpyeong Island. South Korea still permits its companies to operate in the Kaesong Industrial Complex, but inter-Korean trade has fallen off due to restrictions put in place by Seoul last year (Yonhap News Agency, July 3). The unintended—but inevitable—result is that the South Koreans are ceding influence to the Chinese.

The Chinese continually tell the international community that they do not have much pull in Pyongyang, but by now that contention is wearing thin. Beijing is using its cash to dominate the North Korean economy, and as it does so it is seeking to exert real control over the Kim family's state. Yet, as China gains influence, one sees no improvement in North Korea's external behavior, as would be expected if Beijing were truly upset with its ally.

By bolstering Kim Jong Il's economy, China is giving the diminutive dictator the resources to build his nuclear arsenal. As he does so, the North is destabilizing South Korea, bedeviling Japan and keeping the United States off balance. Decade in and decade out, Chinese officials continue high level exchanges with their North Korean counterparts (*Wen Wei Po* [Hong Kong], July 8), permit oil to flow to the North, and insist on protecting Pyongyang in international forums. Now, China is clearly acquiring real clout in the DPRK. Soon, we should see a moderation in the North's behavior if Chinese officials are telling us



the truth.

*Gordon G. Chang is the author of Nuclear Showdown: North Korea Takes On the World. Follow him on Twitter @GordonGChang.*

#### NOTES:

1. The Congressional Research Service reports “about half” of Beijing’s aid goes to its North Korean ally, but it appears that China provides additional assistance through back channels. For the CRS report, see Dick K. Nanto and Mark E. Manyin, “China-North Korea Relations,” Congressional Research Service, December 28, 2010, <http://www.fas.org/sgp/crs/row/R41043.pdf>
2. Jeremy Paltiel, “What Is Going on Between China and North Korea?” CanKor Report, October 27, 2010, [http://www.cankor.ca/index.php?page=home&page\\_id=254&ref=news&ci=38703&cu=32030&t=1289077045](http://www.cankor.ca/index.php?page=home&page_id=254&ref=news&ci=38703&cu=32030&t=1289077045)
3. Jayshree Bajoria, “The China-North Korea Relationship,” Council on Foreign Relations, October 7, 2010, <http://www.cfr.org/china/china-north-korea-relationship/p11097>

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## Cloud Computing Zone Tests “Chongqing Model”

By Matt Luce

In March 2011, the municipal government of Chongqing announced its intention to construct a special economic “cloud computing zone” (*yun tequ*), the largest such zone in Asia (*Nanfang Zhoumo*, June 16). Not only will this initiative offer participating foreign companies with the unique IT services provided by the “cloud,” but it will also allow these companies to circumvent the “Great Firewall” that restricts the Chinese public’s internet access. Chongqing’s local government expects this endeavor to help attract foreign businesses, and moreover, that it will represent a new model for Chinese economic development.

Yet, cloud services and the purported internet freedom provided by the Chinese government give rise to questions about information security and the underlying intentions of the Chinese leadership. The cloud zone has come under fire both for its seemingly two-faced policy of allowing unrestricted internet for foreign companies only, and for its attempt to get foreign companies to store information in a facility run by a government reputed to steal sensitive data from foreign entities. In order to reinvent itself as a successful cloud computing hub, Chongqing’s government will have to convince foreign businesses that high-tech information services can thrive in an authoritarian socialist economy.

#### ATTRactions OF THE CLOUD ZONE

Cloud computing allows for the outsourcing of a wide range of IT services. The fundamental aspect of cloud computing is that data storage and processing is done remotely, often by a third-party service provider. Data can then be stored remotely and software and processing power can be rented out as needed rather than requiring a large initial investment of infrastructure, allowing a cloud computing subscriber to essentially outsource its entire IT department. Cloud computing also allows companies to avoid issues of internet bandwidth and software licensing by outsourcing these issues to the cloud provider.

Chongqing’s government has advertised itself as willing to subsidize this type of cloud zone, and that translates into a large provision of ready-made IT infrastructure and services for any company willing to make the move (*Forbeschina.com*, June 17). Since larger companies often spend millions of dollars and significant manpower just to manage their email and other data systems, the cost savings delivered by a government-subsidized cloud zone like Chongqing’s would certainly be a compelling incentive.

Unrestricted internet access within the cloud zone would also be attractive to foreign businesses choosing a location to set up a local office in China, since within China’s “Great Firewall” censorship regime, access to ubiquitous websites like Google and Microsoft.com is often unreliable and can make even daily business operations arduous. Yet, provisions to escape the Great Firewall for foreign companies, larger Chinese companies and research institutions, and even savvy private citizens

are nothing new. For years, anyone rich or well-connected enough can acquire a VPN (virtualized private network) from one of China's official internet providers, establishing a direct link with the worldwide web and bypass Chinese censorship policy [1]. At least until recently, the ease and convenience of using a VPN left little reason to relocate to any kind of special zone like Chongqing's.

In recent months, however, even these methods have become less dependable, with disruptions to foreign websites eroding the usefulness of VPNs. Not only do Chinese VPN providers have a financial disincentive to allow users to access foreign websites, since they have to pay for the foreign internet flow, but it may also be that Chinese web censors are clamping down on the VPN loophole in the Great Firewall (*South China Morning Post*, May 25). If this is the case and VPNs lose their allure, then the internet freedom of Chongqing's cloud zone would prove itself more than just a publicity gimmick and begin to attract serious attention from potential subscribers.

In a vacuum, these features should be a significant draw for foreign businesses, but it remains to be seen if the advantages outweigh possible risks of signing up for an untested cloud provider overseen by a regional Chinese government. The snap-response of many pundits may be that no foreign business would trust the Chinese government with its data (Voice of America, June 21), but the issue is more complicated, and it may be that the reputation of the cloud provider and the zone's location matter more than the trustworthiness of the Chongqing government. While the Chinese government's attitude toward information security is certainly a factor, the stability of the service provider (as well as the area's geological stability) may be what makes or breaks the deal.

#### THE RISKS OF CHINESE CLOUDS AND CHONGQING'S GEOGRAPHY

In the West as well, private cloud computing services give rise to questions of trust and information security. There is a limit to what can be safely stored in a cloud administered even by a reasonably trustworthy third party, because beyond just the possibility of data theft by an unscrupulous cloud provider, there is always a chance that data can be lost through accidents or natural disasters striking the data center, or through the sale or bankruptcy of a fly-by-night cloud provider.

Even in the most trusted cloud system, users make a conscious decision between what can be safely stored and what is too great a risk to expose to a third party. Cloud storage is a practical choice for data like corporate email, since email is already insecure and a well-informed user will not send critical information by email. Moreover, the loss of old email will not usually shutter a business. Sensitive financial data or intellectual property, on the other hand, are not good candidates for cloud storage, since any potential data theft or loss could cripple a business.

If even large Western cloud providers are not entirely trusted, to say nothing of smaller, less well-known Western cloud providers, do Chinese providers deserve to be trusted even less? Previous conflicts between Western companies and Chinese authorities over data security have left many in the West suspicious that the Chongqing cloud zone is nothing but a trap (Voice of America, June 21). Yet, even if the Chongqing government had the goal of stealing data, it would not have access to the kinds of data that were previously a target in the Google cyber break-ins. Storing data in Chongqing's cloud may carry a risk, but companies will inevitably be discerning with what they put on the cloud, as they would with any cloud provider.

In any case, the dependability and reputation of the cloud provider should be of larger concern than the reputation of the Chongqing government. Chongqing's government has designated PacNet, one of the largest telecom and data service providers in Asia, to provide the software and mainframes that will power the cloud zone [2]. While PacNet is relatively well-known in Asia, convincing American or European companies to subscribe to its services might be a tougher sell.

Issues of trust aside, the greatest risk of Chongqing's cloud zone may be that it lies in a recently active earthquake zone. For obvious reasons, some companies may balk at the prospect of losing the entirety of their data if the cloud zone's mainframes are destroyed in an earthquake. While this may not draw the same media attention as suspicion of an unscrupulous Chinese government, it is nonetheless a significant factor in the decision of companies to relocate. To successfully attract companies to participate, Chongqing's government may have to demonstrate that its infrastructure is at least

earthquake-resistant.

#### CHONGQING SEEKS A NEW DEVELOPMENT MODEL

Chongqing may seem an unusual choice for a cloud computing hub, and its pursuit of a new special economic development zone would appear to reflect the ambitions of its leadership more than its current role in the Chinese economy. Chongqing has been a major manufacturing base for decades, but its production is aimed primarily at the Chinese military and, in more recent years, the Chinese middle classes, with 90 percent of its manufactured goods going to the domestic market [3]. As a result, Chongqing's economy had one of the fastest growth rates in China since foreign demand collapsed in 2008, maintaining 14.3 percent growth when coastal China's growth rate lagged [4].

However successful, Chongqing's economy has in the past followed a middle-income industrial model. Its possibilities for expansion are also limited, since it is landlocked and would have difficulty pursuing the same export-driven growth path that coastal cities pursued before it. Today, Chongqing's leadership, especially its ambitious Party Secretary Bo Xilai, would like to see it leapfrog ahead and become a model of a high-tech, international, service-driven economy. Since cloud computing is a perfect example of the foundation for a high-tech, service driven industry, Chongqing's cloud zone can be seen as one of the first steps in making it an economic test zone, much like Shenzhen was in the early 1990s.

Yet the goal of the "Chongqing model" experiment is very different from that of the "Shenzhen model". The Chongqing government believes in the merits of socialism rather more than is the modern Chinese norm, and envisions a strong role for the government in regulating the economy. Under Bo Xilai's leadership, Chongqing has resurrected socialist welfare programs, a strong role for government in the economy and popular "red culture," among other efforts aimed at restoring the "virtues of socialism." Xi Jinping, the presumptive successor to Hu Jintao to become China's next Party Secretary, is reportedly also a close colleague of Bo Xilai, and has seemingly endorsed the Chongqing model as a way forward for the Chinese economy (See "Xi Jinping's Chongqing Tour: Gang of Princelings Gains Clout,"

*China Brief*, December 17, 2010).

There are understandable concerns that this greater role for government may be at odds with the information freedom required for data processing in the cloud zone. While cloud computing is a perfect opportunity for a region attempting to develop its IT service portfolio, China has historically had little success with the industry as a result of its information control policies. China's neighboring peers Singapore, India, and Malaysia have all had significant successes developing remote data processing services (a major component of cloud computing), but China has been noticeably absent from the party due to its strict controls on information flow (*Nanfang Zhoumo*, June 16).

Chongqing's new commitment to cloud computing implies at least a certain tolerance for information freedom. Much like the modern Chinese economy as a whole, the Chongqing economic model is a mixture of conflicting strategies. The old Chinese model of economic freedom alongside social control, as represented by Shenzhen, has existed for over thirty years and displayed remarkable success. The Chongqing model seems to change the equation slightly, providing more economic regulation and at the same time less information control. The cloud zone appears to fit into this larger Chongqing model, but it remains to be seen what role the government plans to play in its administration. Bo Xilai and Xi Jinping seem to be trying to integrate the potentially conflicting priorities of creating a wider role for government in business and at the same time promoting industries that can only thrive with greater information freedom.

#### A SYMBOL OF SOMETHING LARGER?

On the surface, Chongqing's cloud zone does not appear to offer anything novel to a foreign company looking to set up shop. Foreign businesses currently possess proven ways to escape China's internet censorship, and companies like IBM have already blazed the trail of cloud computing in China [5]. Yet, the new cloud zone does offer itself as a milestone, and its sheer scale sets it apart. If successful, it could dampen suspicion that has been on the rise in recent years of the Chinese government's attitude toward data privacy and foreign business. If the Chinese Communist Party (CCP) can go even further and encourage growth in new high-tech industries while

retaining oversight and promoting Bo Xilai's concept of "new socialist virtue," then Chongqing could represent a significant step toward a viable new Chinese economic model.

*Matthew Luce is a researcher and Chinese linguist at Defense Group Inc's Center for Intelligence Research and Analysis, where he does primary source research and analysis of China's science and technology policies and development programs. Mr. Luce's research and writing focuses on cyber security, C4ISR-related technologies, and China's ethnic relations. He has worked and traveled extensively in China and speaks and reads fluent Chinese.*

NOTES:

1. For more information on China's VPN system see China Unicom's VPN website: <http://www.unicomamericas.com/mpls-vpn.html>, and an independent report on China's VPN market: <http://www.reportsnreports.com/reports/75733-ip-vpn-market-forecast-in-china-to-2016.html>.
2. "Pacnet Joins New Cloud Computing Initiative in China," March 2, 2011, [http://www.pacnet.com/inter/index.asp?pg=about-pacnet\\_newsroom&view=singlenews&page=11&year=2011](http://www.pacnet.com/inter/index.asp?pg=about-pacnet_newsroom&view=singlenews&page=11&year=2011).
3. Bo Zhiyue and Chen Gang, "Bo Xilai and the Chongqing Model," *East Asian Policy*, 42-49, July 17, 2009. [http://www.eai.nus.edu.sg/Vol1No3\\_BoZhiyueChenGang.pdf](http://www.eai.nus.edu.sg/Vol1No3_BoZhiyueChenGang.pdf).
4. *Ibid.*
5. "Made in IBM Labs: IBM to Build First Cloud Computing Center in China," February 1, 2008, <http://www-03.ibm.com/press/us/en/pressrelease/23426.wss>.

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