OSSERVATORIO SULLE ECONOMIE EMERGENTI - TORINO
TURIN CENTRE ON EMERGING ECONOMIES
OEET

# EMERGING ECONOMIES N. 09 | MAY 2018

*Edited by Elena Vallino, University of Turin and OEET*

## RIFORME FISCALI PER UNO SVILUPPO SOSTENIBILE IN CINA

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Questo numero della newsletter "Economie Emergenti" è composto da diversi saggi estratti dal libro "Fiscal underpinnings for sustainable development in china" curato da E. Ahmad, M. Niu e K. Xiao (2018, Springer Singapore). Il libro contiene una raccolta di capitoli relativi al possibile percorso di sviluppo sostenibile in Cina, con un focus sulla Provincia di Guangdong. Tale provincia è stata teatro di cruciali riforme economiche a partire dall'inizio del cosiddetto sistema di responsabilità negli anni '70, diventando quindi una buona rappresentazione delle sfide dell'intera nazione. Il messaggio principale che scaturisce dal libro è la chiara necessità di ribilanciare la crescita economica verso una direzione maggiormente inclusiva e sostenibile. Le riforme fiscali e del sistema di tassazione sono considerate i principali strumenti per il perseguimento dei cambiamenti necessari.

Ehtisham Ahmad offre una panoramica sintetica e molto informativa dei modelli di governance cinesi, concentrandosi sull'importante svolta dei primi anni '90, in cui per la prima volta l'autorità per la tassazione si è spostata dalle province locali ad un organismo centrale. Da un lato la creazione di un'istituzione fiscale centralizzata e moderna contraddisse le prescrizioni "normative" dell'epoca; dall'altro lato la Cina riuscì a raggiungere una imponente crescita economica, lo sviluppo delle regioni costiere e una riduzione della povertà molto consistente. Tuttavia, i profondi cambiamenti sociali, economici ed istituzionali hanno portato all'emersione di nuove sfide che occorre urgentemente affrontare: nuove relazioni fra provincie e il centro in termini di distribuzione delle risorse e trasmissione del rischio; una crescente disuguaglianza economica e geografica; fenomeni di rent-seeking e di "hidden borrowing"; aumento esponenziale dell'inquinamento ambientale. L'articolo offre alcuni suggerimenti per affrontare questi rischi.

Xubei Luo e Nong Zhu descrivono la Provincia di Guangdong, analizzando il suo percorso di sviluppo "hub-periphery" che riflette il percorso più ampio dell'intera nazione. Suggeriscono quattro elementi che dovrebbero essere presenti in un orientamento di crescita sostenibile ed inclusiva: il supporto ad un ambiente favorevole per il business privato; incentivi per lo sviluppo dei vantaggi comparati; investimenti in forza lavoro qualificata; protezione del lato più vulnerabile della società.

Gisela Färber e Zhijie Wang delineano un' interessante comparazione fra la Cina e la Germania per quanto riguarda il debito pubblico subnazionale. Tale questione genera contraddizioni simili in entrambi i paesi: squilibri nelle relazioni fiscali intergovernative, bassi ricavi a livello locale, informazione imperfetta riguardo al reale livello di debito. Nonostante i trend positivi dell'economia globale abbiano contribuito ad una stabilizzazione dei ricavi dei governi locali, in entrambi i paesi a livello subnazionale rimangono i problemi di impegni presi per operazioni prive di finanziamenti e insufficienti ricavi provenienti dalla tassazione locale. Tale condizione ha conseguenze sul finanziamento delle operazioni che sono prerogativa delle autorità decentrate, come la sicurezza interna, l'educazione e lo sviluppo di infrastrutture.

Kezhou Xiao e Yuan Xinghou affrontano la problematica della responsabilità della spesa pubblica di fronte ai cittadini in paesi privi della competizione elettorale. Per assicurarsi che la spesa pubblica e gli investimenti in infrastrutture incontrino le preferenze della popolazione, la Cina ha sperimentato gli audit sociali, focalizzati sia sui costi e benefici sociali che sulla risposta da parte degli utenti. Nella Provincia di Guangzhou questo approccio è stato applicato alla proposta di estensione del Bus Rapid Transport System (GBRT). Nonostante questo progetto avesse ottenuto un apprezzamento a livello internazionale e fosse stato riprodotto in altri contesti, il governo cittadino ha condotto un audit sociale che ha generato una risposta negativa, fornendo solide basi per un rifiuto del progetto di espansione. Il meccanismo potrebbe essere di interesse per un vasto numero di paesi con modelli di governance differenti.

## "FISCAL UNDERPINNINGS FOR SUSTAINABLE DEVELOPMENT IN CHINA"

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This issue of the Newsletter "Emerging Economies" is composed by essays extracted from the book "Fiscal underpinnings for sustainable development in China" edited by E. Ahmad, M. Niu, and K. Xiao (2018, Springer Singapore). The book collects chapters on issues related to a possible path of sustainable development in China, with a focus on the Guangdong Province. This province hosted core Chinese economic reforms since the beginning of the Responsibility System in the 1970s, being therefore a good representation of the challenges of the whole nation. The main concept emerging from the book is the strong need for rebalancing economic growth towards a more inclusive and sustainable path. Fiscal and tax reforms are investigated as main instruments for the accomplishment of the required changes.

Ehtisham Ahmad provides a synthetic and informative historical overview of the Chinese governance models, focusing on the important shift of the early 1990s, when for the first time the tax administration authority moved from the local provinces to the center. On the one hand the creation of a centralized and modern fiscal institution contradicted the "normative" prescription of that period; on the other hand China managed to reach an impressive economic growth, the development of coastal regions and a massive reduction in poverty. However, the profound social, economic and institutional changes led to the emergence of new challenges that need to be urgently addressed:  new relations between the provinces and the center in term of resource distribution and risk transmission; rising economic and geographical inequality; rent-seeking behaviours; obscure phenomena like hidden borrowing; dramatic rise of environmental pollution. The article provides some suggestion to address these risks.

Xubei Luo and Nong Zhu write about the Guangdong Province, addressing its hub-periphery development pattern that reflects the wider development of the whole nation. They suggest four elements that should be present in a path for an inclusive and sustainable growth: the support of a favorable environment for the private business; incentives for the development of comparative advantages; investments in skilled labour force; protection of the vulnerable side of the society.

Gisela Färber and Zhijie Wang provide an interesting comparison between China and Germany with respect to subnational public debt. This issue generates similar contradictions in both countries: disequilibrium in intergovernmental fiscal relations, low revenues al local level, and imperfect information about actual liabilities and debt levels.  Although some positive trends of the global economy contributed to the stabilization of local governments' revenues, in both countries at the subnational level we observe the problem of a consistent commitment for unfounded mandates and an insufficient own tax revenues. This condition has consequences on the financing of the decentralized tasks like internal security, education and infrastructure development.

Kezhou Xiao and Yuan Xinghou address the issue of accountability of public spending in countries without electoral competition. In order to ensure that public spending and investments in infrastructure meet the preferences of the population, China experimented social audits that focus both on social costs and benefits as well as user responses. In the Guangzhou Province this approach has been applied to a proposal to extend the Bus Rapid Transport System (GBRT). Although this project had achieved high international recognition and was copied elsewhere, the city government performed a social audit that produced a negative response, and provided therefore a strong basis to reject its expansion. The mechanism could be of interest of a large number of countries with different governance models.

# REBALANCING, TAXATION AND GOVERNANCE: FISCAL POLICIES FOR SUSTAINABLE GROWTH

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*Le riforme fiscali in Cina del 1993/94 non hanno seguito le prescrizioni "normative", mentre si sono concentrate sulla generazione di gettito fiscale e sulla fondazione di istituzioni fiscali moderne. Hanno ottenuto un notevole successo nel raggiungimento di un crescita economica a doppia cifra, nella creazione di hub portuali e costieri e nella riduzione molto consistente della povertà. Per quanto riguarda le problematiche connesse alla crescita, occorrono nuove misure fiscali per affrontare (1) crescenti debiti e rischi nascosti, anche a livello subnazionale, (2) forti ineguaglianze a livello personale e spaziale e le rimanenti sacche di povertà, (3) l'inquinamento ambientale e la qualità della vita. Ancora una volta le opzioni relative alle possibilità di riforma devono essere consistenti al modello di governance cinese.*

## Governance models and Chinese reforms

China has operated under an administrative progression governance model for centuries, under which officials are appointed from the center and enjoy considerable autonomy. The Chinese governance system is evolving, as the economy has undergone a period of extraordinary structural change, and many modern policy instruments relating to taxation and public financial management (PFM) have been gradually introduced since the 1990s. Lessons from US-style governance models based on electoral or Salmon-type "yardstick" competition (formalized by Besley and Case (1995) have to be carefully calibrated as they might not apply to different governance models, including in China, especially where fiscal policies and institutions may not be fully developed.

Since the 1980s, China relied increasingly on local incentives and initiatives with the Responsibility System, focusing on sustainable growth to ensure full employment. The reforms underpinning the Responsibility System initiated by Deng Xiao Ping in the late 1970s, led to increasing reliance on the private initiative in coastal provinces, like Guangdong. There was also an increasing devolution of decision-making power on spending and investment decisions to local officials, and as tax administration was local on upward-revenue sharing, with the center receiving around half of the collections. The Responsibility system led to a reduction in tax rates on enterprises to leave more potentially investable resources in the hands of firms. However, this led to a reduction in the overall revenues generated, with the overall tax/GDP ratio dropping more than half to around 10%, generating pressures at the local level that were transmitted up to the center, with the central share falling to around a quarter of collections (see Chart 1).

[1] Helpful comments from Xubei Luo, Meili Niu, Nick Stern, Kezhou Xiao and Zhikai Wang and participants at Seminars at Sun Yat-Sen, Zhejiang and Peking Universities and CAFS are gratefully acknowledged. The usual disclaimer applies.

Chart 1 Evolution of tax/GDP ratios and central-local shares


Source: Ahmad, Rydge and Stern, China Development Forum 2013.

The standard recommendation, based on normative models (see Ahmad and Brosio, 2015), favored by international agencies, like the World Bank, was to "fix the spending assignments and deal with the tax reforms subsequently." China, however, chose to bolster the tax system in 1993/4, particularly by creating a central or State Administration of Taxation (SAT) that departed from the upward-revenue sharing model. SAT was tasked with implementing a modern national tax, the VAT, and other central taxes to be developed including the Corporate Income Tax, and eventually the PIT.

The 1993/4 measures were examples of a "positive" or "political economy" approach to major reforms, in that they involved a "package" of measures to offset gainers and losers from the reform. The tax-transfer nexus was particularly important to garner support from the provinces for the reform that ceded tax administration authority to the center (for the first time since the middle ages). This permitted the operation of economy-wide taxes, like the VAT, while at the same time avoiding losses for individual local governments.

The measures were based on origin-based (downward) revenue-sharing mechanism that benefitted well-off provinces from additional revenues generated by the new VAT. An equalization system preserved the interests of the poorer provinces, with more limited tax bases and higher costs of provision of public services. The most innovative measure, given the limited domestic connectivity in China at that time, was a "revenue-returned" transfer that greatly helped in concentrating resources in the coastal "hubs" for rapid export-led growth. The fiscal measures, largely maintained full employment, with significant rural-to-urban and interior to coastal migrations, with the largest reduction in poverty in any country in the past two-decades.

The success of the strategy has led to new challenges, including considerable imbalances between coastal and interior provinces, and the appearance of significant interpersonal inequalities. Further, the growth of mega-cities along the coast has led to increasing congestion and pollution, putting living standards under stress. Local governments depended on land sales to finance investments in infrastructure—leading to urban sprawl and loss of agricultural land around major metropolitan areas, as well as proliferation of off-budget accounts that also facilitated rent-seeking behavior (Wang, Wu and Ye, 2018). The limited local tax handles, together with the prohibition of direct borrowing by subnational governments, led to hidden borrowing, including by Urban Development Investment Corporations (UDICs).

The early focus of reforms was to consolidate revenues, and generate resources for redistribution and investment.  Consequently, the VAT implemented in 1994 was of the "investment type" that did not provide credit for taxation on capital goods, and the business tax largely on services was left in the hands of local administrations. A decade later, the focus turned to efficiency, with the move to a consumption-type VAT and rationalization of the CIT with a 25% rate. The VAT reforms were continued in 2016, with the absorption of the business tax largely on services. This measure was designed to reduce the cost of doing business, and to facilitate the refund of the full VAT along the value-chain on exports. However, the removal of the last tax handle under the control of the local governments makes them entirely dependent on transfers and shared revenues, which are no different in this respect—with no room to raise additional resources in case of need, for example, to pay for any liabilities incurred. This reduces the "accountability" of local officials for decisions that they take as liabilities become the responsibilities of other jurisdictions.

Since the late 1990s, there has been a progressive improvement in public financial management instruments and generation of information on budgets and spending, such as treasury single accounts and the use of international standards for budget classification and accounting and tracking public spending. This involved the adoption of the IMF's Government Financial System Manual (GFSM) 2001/14 standards, including accruals and balance sheets at all levels of government. While significant and possibly better than in some other G20 countries, this process, is far from complete, especially at the lower levels of government where most of the spending transactions take place—particularly for utilities and local SOEs, and accounts payable (see Ahmad and Zhang, 2018).

This evolution of policies and institutions since 1993 has implications for the governance model. The first relates to the overall incentives facing local officials, and whether the risks and opportunities of their actions can be linked to their relevant jurisdictions or whether these are likely to spread to higher levels, particularly to the central government (Liu Shangxi and Li Chengwei, 2018, who examine the links and transmission mechanisms between financial, fiscal and social risk).  This is critical in establishing hard budget constraints and ring-fencing liabilities, and in addressing the new challenges of rebalancing of the economy and generating sustainable and equitable growth.

Full information on sources and uses of public funds and possible risks associated with public policy are critical in the effective operation of the administrative progression model. However, both own-source taxes and improved governance are critical in establishing proper incentives for local officials, also to prevent the buildup of liabilities and rent-seeking behavior. Indeed, transplanting measures from the US, such as the issuance of local bonds, while desirable as a tool in the medium-term, might not function as expected and shift risk to higher levels of government if not linked to own-source revenues and ability of the relevant sub-national jurisdictions to service debt.

A combination of national infrastructure policies with local connectivity and improved public services is critical in generating incentives for sustainable local "hubs" away from the coastal metropolitan areas. One of the consequences of the Belt and Road Initiative (BRI) is to change relative costs and opportunities in lagging regions, and generate incentives for sustainable growth, especially in the Western and interior regions of China. While the nationally financed physical infrastructure is a necessary condition, a package of measures, including subnational taxes and transfers and improved local services in less well-endowed areas, will be needed if the experiences with infrastructure investment in Europe is a guide (Ahmad, Bordignon and Brosio, 2016).

Guangdong provides a very useful example of the sorts of measures needed for the rebalancing agenda—both within provinces and within China (Luo 2018, Xiao 2018). The wider realization of substantially expanding production possibility frontiers depends both on new technologies that will be greatly influenced by the tax reforms as well as the investment in connectivity infrastructure implied by the BRI.

**Managing risk: clean cities, inclusive and sustainable growth**

A sustainable development agenda for China in the immediate future, and in keeping with the governance model, must manage risk, address poverty and inequality, and enhance the quality of life and the environment. These form a formidable albeit interlinked policy agenda that focuses on clean cities that provide high quality employment opportunities, taking advantage of new trading patterns and value chains due to innovations and new technological advances and trading patterns, including with the BRI. We focus here mainly on options for developing the tax and governance agenda, as this provides the enabling environment for the structural changes.

The first set of issues relates to own-source revenues for hard budget constraints. The options are different for provinces and large metropolitan areas on the one hand and smaller cities on the other. The easiest source of own-revenues for the former group lies in "piggy backed" taxes or surcharges on national taxes and with SAT administration. The most prominent is on the personal income tax, and also provides the possibility of an expansion of the base to non-wage income—particularly from assets and cross checked with information on lifestyles that is available at the local level. The gap in the revenue performance of the Chinese PIT with other middle income and OECD countries is considerable, and provides a basis for tapping the fastest growing revenue base with attendant benefits for anchoring borrowing and liabilities of all sorts, including PPPs. Another option, that also applies to smaller cities, is a surcharge or piggy back on a national carbon tax. This yields immediate benefits to reduce emissions and congestion, with the possibility of the most congested cities having a higher marginal tax without the fear of a race-to-the-bottom competition.

The US-style property-tax based on ownership and valuation has not worked in China in the experimentation in Shanghai and Chongqing. This model has also not worked well in most emerging market economies with complex ownership structures. Options include a simple tax based on occupancy, with relatively manageable bands indicating relativity and linked to the cost of local service delivery—this is akin to a "beneficial tax" as outlined by Alfred Marshall over a century ago. A variant has been operating in the UK since the early 1990s, and is being experimented with in other emerging market economies. Of course, this option would have to be linked judiciously with user-charges, and would also form the basis for local borrowing, including liabilities arising from PPPs.

Many of the required PFM measures have already been introduced in China, including the GFSM2014 framework and associated balance sheets at all levels of government. This will also entail the development of integrated financial information systems, and Treasury Single Accounts. However, the development of local government balance sheets will take time to implement through all relevant lower levels of government. However, given that the identification of risks is a matter of priority, in the short-run, information from PBC's monetary survey could be used to identify cities or regions with above normal credit usage—to pinpoint problem cases and the need for further audit.

In conclusion, a "package" of measures at the local and city-level will be needed to build on the national and cross-border investments in connectivity, including the BRI. We have identified several options to deal with risks, distribution and the environment. Additional work will be needed to make them operational.

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# HUB-PERIPHERY DEVELOPMENT PATTERN AND INCLUSIVE GROWTH: CASE STUDY OF GUANGDONG PROVINCE[2]

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*Il pattern di sviluppo cosiddetto "hub-periphery" dell'economia del Guangdong rappresenta una sorta di miniatura dell'economia cinese nel suo complesso. Il Pearl River Delta si è trasformato in un centro economico a livello regionale. Suggeriamo un approccio basato su quattro pilastri per supportare una crescita inclusiva dell'economia del Guangdong in un ottica di sostenibilità: (1) migliorare l'ambiente per il business, (2) sostenere la realizzazione dei vantaggi comparati latent, (3) aumentare i livelli di competenze della forza lavoro per favorire un upgrade della struttura di produzione, (4) proteggere i segmenti più vulnerabili della società.*

## Hub-periphery development

Since the late 1970s, institutional and economic reforms have played a crucial role in the unprecedented development of the Chinese economy. The reforms have provided the basis for the transition to market economy and facilitated the integration of the domestic market with the international market. Thanks to the advantageous factor endowment and favorable policy inclination, the coastal region soon took off. Export-oriented and globalized industries are largely concentrated in the coastal region and low tech and resource based industries are mainly located in the inland region. The dynamics of the coastal provinces and the relative stagnation of the inland provinces configure a center-periphery regional growth structure (Lu, 2008; Naughton, 1999; Chen and Fleisher, 1996).

Guangdong province, once an economic backwater, is a pioneer in the process of reforms and opening-up. The development pattern of Guangdong, to a certain extent, is a miniature of that of China. The average growth rate of Guangdong has been higher than the "four Asian dragons" during the periods when they took off. The economy is highly concentrated: the Pearl River Delta produces 80 % of the regional GDP and over 95 % of the exports and imports, attracts over 90 % of the foreign direct investment, and hosts 90 % of the migrant population.

The Pearl River Delta (PRD), drawing from its first-nature comparative advantages in factor endowments and proximity to Hong Kong SAR, China and Macau SAR, China, and the second-nature advantages as first-movers in the reforms in attracting and retaining domestic and foreign resources, has developed into a regional economic center and well-known world factory, with many highly specialized towns and cities (Tuan and Ng, 2004). The long-term development of the economy of Guangdong is conditioned by the sustainable upgrade of the industrial structure and that of job

[2] The authors would like to thank Ehtisham Ahmad, Ahmad Ahsan, Shahrokh Fardoust, Chorching Goh, Sanjeev Gupta, Khalid Ikram, John Litwack, Teresa Ter-Minassian, Meili Niu, Kezhou Xiao, Chunlin Zhang, and participants at the conference of Financing Local Investments within a Sustainable Development Strategy for P.R. China (organized by Asia Research Center, London School of Economics & Sun Yat-Sen University, January, 2015) for valuable comments.

creation to attract and retain the needed skills as well as provide workers (including migrant workers) adequate access to social services of good quality.

### Labor migration and production structure

Worldwide, labor migration is a powerful tool to reduce distance to economic opportunity. In China, the gradual reform of the Household Registration System (Hukou) reduced the constraint on domestic labor mobility. The significant inflow of capital and the development of an export-oriented economy in the coastal provinces created strong demand for labor. The large-scale migration from rural areas and inland regions to urban areas and coastal regions provided coastal and urban areas with a flexible labor supply at reasonable costs and contributed to the rapid development of their labor-intensive industries. This in turn accelerated the formation and expansion of the small and medium size cities in the coastal provinces and increased the potential for the exploitation of economies of scale.

A similar story applies for Guangdong, with PRD (especially Guangzhou, Shenzhen, and Zhuhai) as the hubs. The inflow of migrant workers largely contributed to the rapid development of Guangdong. The average gross inflow of migrants amounted to some 1.06 million per year. With an average outflow of migrants of some 0.84 million, this results in a net inflow of migrants of 0.22 million. The net immigration rate gradually increased since 1978 - Guangdong officially became the most populous province in 2005 - it peaked around 2006, and fluctuated downward in the recent years. This "demographic dividend" has played a significant role in contributing to the economic development in Guangdong.

As the economy has developed, the production structure in Guangdong has gradually changed. The ratio of the primary, secondary and tertiary industries changed from 29.8 %, 46.6 %, 23.6 % in 1978, to 5.5 %, 51.6 %, 42.9 % in 2008, and to 4.9 %, 47.3 %, 47.8 % in 2013. The capital-intensive industries are slightly more concentrated spatially (mainly in PRD) than the labor-intensive industries. The concentration of resource intensive industries – while still high - is declining, with the emerging structural diversification in the West Wing and Mountain Area.

The Pearl River Delta has become one of the world's major manufacturing bases (for example, electronic information industry), attracting investments from many multinational corporations and international consortia. The rest of the province, hosted a significantly higher share of the primary sector and lower levels of urbanization and export-orientation.

### Double transfer and policy suggestions

Since the mid-2000s, to facilitate the upgrade of the production structure and support the sustainable long-term development, the government of Guangdong and the State Council have implemented several reform and development plans, particularly, the "Double transfer" - transfer industries from the Pearl River Delta to the rest of the provinces; and transfer labor in the lagging regions from the primary sector to the secondary and tertiary sectors, including transfer of high-skilled labor to the Pearl River Delta.

More specifically, “double transfer” means, first, strengthening the technological and innovation capacity of the PRD and phasing in the upgrading of its production structure with a focus on the advanced manufacturing sector and modern service sector. Second, reducing the economic development gap between the PRD and the rest of the province and speeding up the intra-provincial relocation of industries to support the catching up of the lagging Northern mountainous areas, and the east and west wings.

There are signs that “double transfer” policies might have started bearing fruits. Many industrial transfer parks have been created in Guangdong and some labor-intensive industries in the PRD have been transferred to the rest of the province. There also have been cases of industrial transfer from Guangdong to Jiangxi, Hunan, and Sichuan.

**Policy suggestions**

Global experience and the economic geography literature suggest that the most effective policies for promoting long-term growth are those that facilitate geographic concentration and economic integration, both within and across regions and countries. The path of development counts. To support the development of the economy with the existing economic center and lagging areas, government initiatives should not focus on “reducing the gaps of the productive capacity” across cities, but “moderate differences in economic welfare” between them.

A successful transfer of industries is not about spreading the economic activities equally across geographic areas, but about facilitating the allocation and reallocation of capital and labor to the areas where they best suit the comparative advantages. To achieve a geographically more balanced development pattern efficiently and effectively, the implementation of the double transfer strategy needs to draw on the respective comparative advantages of the Pearl River Delta and the lagging periphery with a focus on the upgrading of the production structure and labor structure in both areas in an inclusive and sustainable manner.

For development to be sustainable and inclusive in Guangdong, we suggest a four-prong approach to improve the business environment, support the realization of latent comparative advantages, upgrade the skill level of labor force to support the upgrade of production structure, and protect the vulnerable. Developing own-source revenues at the local level (including both own-source taxes and equalization transfers) and ensuring sustainable access to credit are key elements to support the emergence of the new hubs and their sustainability.

The business environment in Guangdong, in particular the major cities in the Pearl River Delta, is among the best in China. Further improvement can strengthen its attractiveness to investment and spur innovation and fair competition. An enabling business environment can provide a level playing ground for all regions, hub or periphery, the needed institutions and regulations to attract and retain private investment. The sustainable development of the economy in Guangdong depends on how it can deal with the three “Ds”: realizing the benefits of agglomeration economies through a higher density of economic activities in its major urban centers (particularly developing the PRD as global economic centers), overcoming the distance factor by making a concerted effort to improve regional transportation and communications infrastructure (linking the lagging Northern mountainous areas and the East and West Wings with the PRD), and eliminating internal and external divisions to promote intra- and inter-provincial market integration and strengthen Guangdong's participation in the global economy moving up the value chain (Huang and Luo, 2009).

Special regional policy can be used in an appropriate manner to support the regions to move towards their latent comparative advantages. Improving market institutions can create and protect effective competition in the market. Measures can include addressing externality and coordination issues – such as provision of infrastructure, logistics, finance, skilled labor. The experiences of the East Asian newly industrialized economies in using the off-the shelf technologies to build on the advantage of backwardness and upgrade their industrial structure in the past decades are successful examples (Lin, 2012). In line with the support to the establishment of Industrial Transfer Parks, facilitating the private sector actors to choose the right locations for investment with the right level of technology and capital/labor intensity can help. Local governments can closely follow the comparative advantages of factor endowment of the economy to accelerate the proper upgrading of the production structures of the Pearl River Delta and the lagging regions and better match the demand and supply of labor while supporting the creation of more and better jobs in the secondary and tertiary industries. Facilitating the relocation of industries from PRD to the less developed regions in an appropriate manner can help accelerate the process and result in mutual benefits.

Building the skill level of the labor force, including the local labor force and the migrant labor force, can play an increasingly crucial role in the sustainability and inclusiveness of development. As the economy of Guangdong, particularly the PRD, is undergoing the upgrading of structure from labor-intensive to capital-intensive or technology-intensive industries to maintain competitiveness in the global market, the demand for skilled workers increases. Provision of on-the-job training and vocational skill training can play an important role in attracting labor and enhancing their quality, which is not only important for the sustainable economic development of the province but also the inclusiveness and harmoniousness of the society. To support development in a sustainable manner, the government needs to improve the skill level of the labor force to support the sustainable upgrade of production structure.

Measures to strengthen an inclusive social protection system require improving the equal access to social services such as health care and education (and the quality of such services) and providing targeted support to the vulnerable, including migrant workers and their families. Appropriate design and implementation of the local policies, for example, provision of water and sanitation as well as health care clinics, in addition to the national policies are crucial. In an economy where the informal sector is non-negligible (the share of migrant workers who work in the informal sector is even larger), it can be a question for policy debate whether and how to use general revenue and user fees to fund such services. The potential sources of financing can include income taxes, property taxes, and value-added taxes.

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## SUBNATIONAL PUBLIC DEBT IN CHINA AND GERMANY - A COMPARATIVE PERSPECTIVE

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*Sintesi*

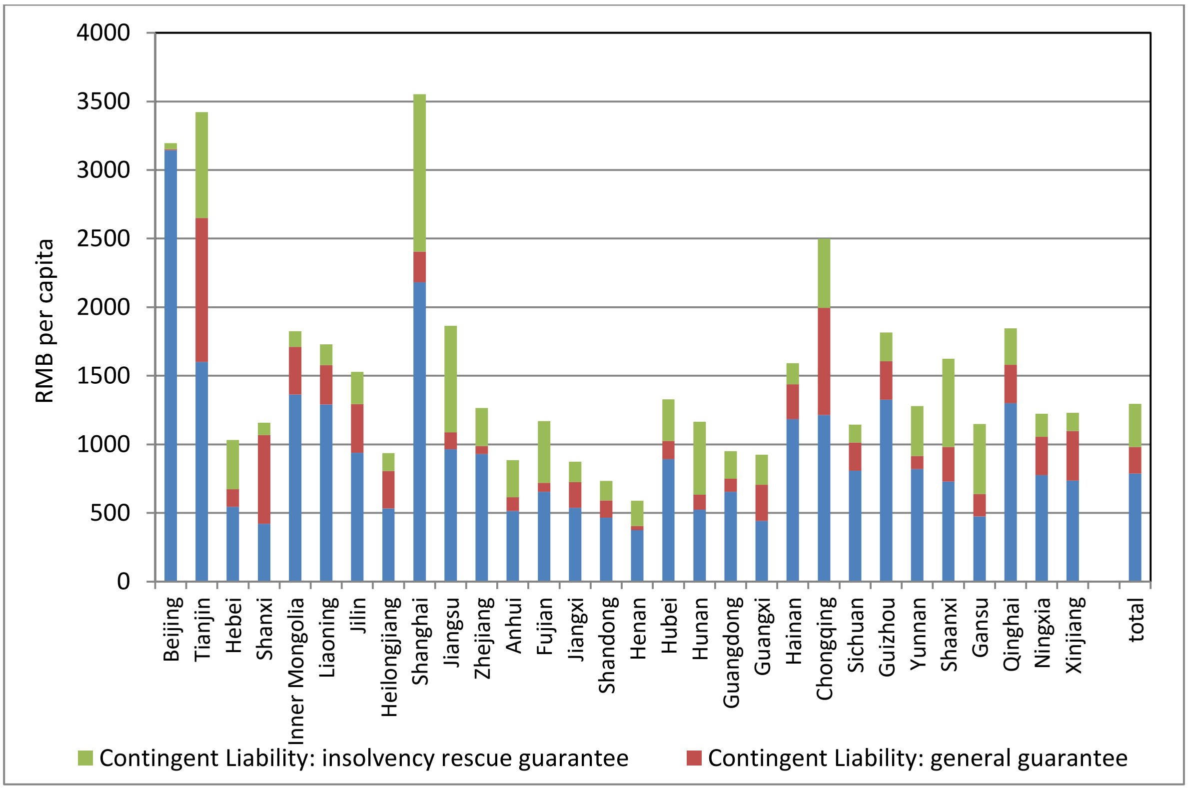
*Il debito pubblico subnazionale costituisce un problema sia per la Cina che per la Germania. In entrambi i casi disequilibri nelle relazioni fiscali intergovernative, gettito da fonti proprie inadeguato o assente a livello subnazionale, informazione incompleta sul livello reale del debito pongono rischi e sfide molto seri. Misure ad hoc per mantenere l'indebitamento sotto controllo, compresi i cosiddetti "freni del debito" in Germania, o l'emissione di bond locali in Cina, difficilmente sono sufficienti e potrebbero peggiorare la situazione. Nonostante differenze nei rispettivi sistemi di governance, vi è molto da imparare dalle esperienze di uno e dell'altro.*

Subnational public debt is a problem in both China and Germany—and there are lessons to be drawn from each country for the other. Total public debt amounted to 54% of GDP in China in 2012 and 74% in Germany in 2015 of which subnational governments (provinces, prefecture cities, counties, towns and villages) had a share of 53% in China and respectively 37% Länder and local governments in Germany. Subnational public debt significantly varies across the lower levels of government and among the governments at the same level. The total amount of subnational pubic debt is not very transparent: in China, it has not been counted among the official public debt data because the budget law did not permit direct borrowing until 2015, and much of the debt was due to "off budget" special vehicles and entities owned by local governments. In Germany, local governments in certain states borrowed illegally (so-called cash credits) against their current accounts over many years, or accumulated arrears.

In Germany, the liabilities of a few Länder have been examined critically. Similarly, the high level of indebtedness at the local level in China has begun to attract attention, and managing local risks is one of the main elements of the 2018-20 reform program adopted by the government after the 19th Party Congress. The Chinese National Audit Office reported that local government obligations were 17.9 trillion Yuan (2.56 billion Euro or 30.44% of GDP) by the end of June 2013, which is 1.5 times as high as the debt of the central government .

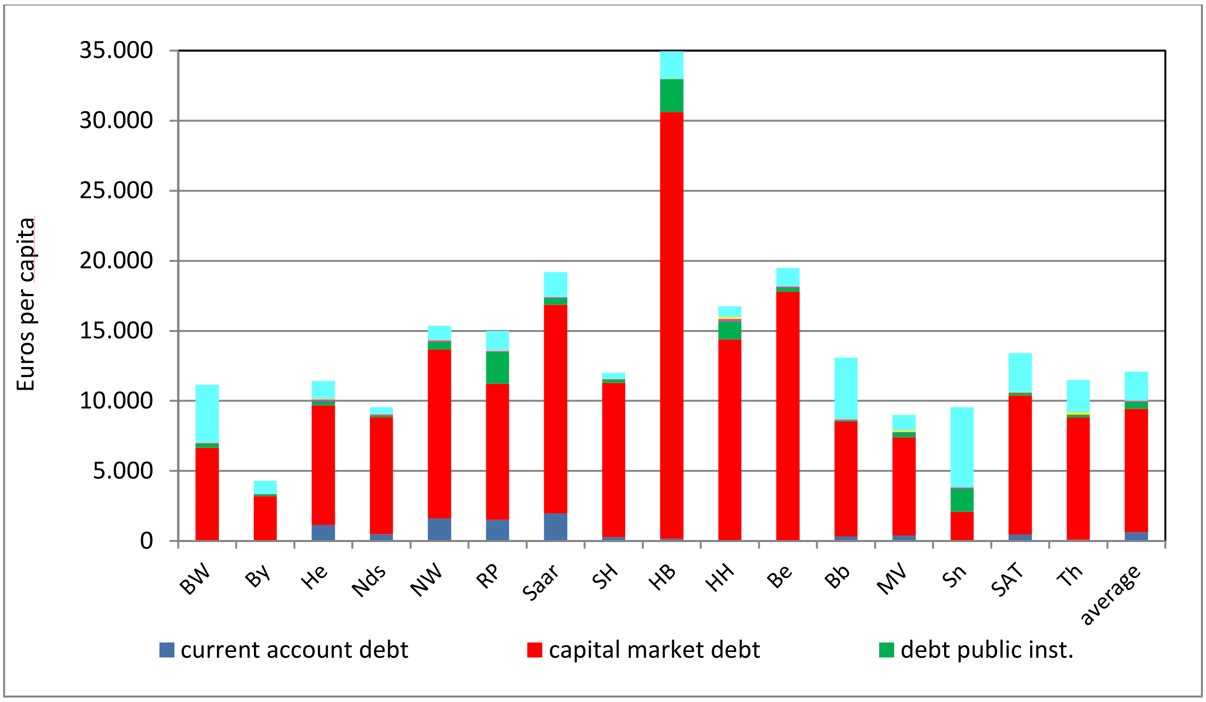
Since January 2015, China has allowed provincial governments to issue bonds directly for the first time, but the financing dilemma has not changed for the lower levels of local government. Germany in contrast has adopted the so-called debt brake in 2009 requiring balanced budgets from 2016 for the Bund (Federal Government) and from 2020 for the States. Municipalities and counties expect increased budget pressure with declines of transfer payments when the States consolidate their budgets, and also push functions down to the level that is not subject to the balanced budget rule.

Table 1. Subnational debt in China aggregated at provincial level per capita (2012)




Source NAO (2013), author's calculations

Table 2. Debt of State and Local Governments in Germany, end-2014




Source: Federal Statistical Office, authors' calculations

## Debt Limits, Sustainability and Preventing Bail-Outs

The effective (legal and illegal) subnational debt is influenced by many factors. Among these are the legal rules for borrowing and repayment terms, the theoretical background applied in the specific system of fiscal federalism, and the institutional settings for supervision and sanctions. Subnational governments in both China and Germany are currently looking for ways out of their financial crisis respectively, with more sustainable financing of public expenditures. Both are facing the goals of increasing, maintaining and securing economic growth that crucially depends on efficient infrastructure investments with sustainable financing profiles. Therefore, a working concept of 'sustainable' public debt is crucial for the long-term growth and economic competitiveness in both countries.

China and Germany both have attempted to address subnational borrowing recently at the state/provincial level, albeit in different ways. China has permitted the issuance of bonds at the provincial level within limits, whereas Germany has introduced a balanced budget rule for the Länder, moving towards the situation that used to operate in China.

What both countries have in common is the absence of effective own-source revenue handles at the state/provincial level. These raise questions about the incentive compatibility and credibility of the reform measures in both cases, given major imbalances in the structure of intergovernmental fiscal relations.

The spending pressures and absence of own-source taxes generate incentives for provincial/state political decision-makers to cover costs by "hidden" borrowing. This is often through public enterprises and public-private partnerships (PPPs) which are able to borrow for investment purposes (financial leasing, federal highways, economic projects, reconstruction of public buildings, etc.). While the data may not be reflected in the official statistics, in fact tax-payers continue to carry the financial risks over the medium-term. Therefore, in both countries the recent data on subnational public debt are incomplete.

The lack of transparency generates the risk that capital markets may overestimate the true dimension of future payment obligations and start speculating against the governments—as was the case during the Euro debt crisis. However, there are other problems related with poorly quantified subnational public debt. These include the effectiveness of comprehensive debt limits, the political economy of preventing bail-outs, and the need for risk management in national and/or international capital markets. Public debt regulations must include valid and controllable debt limits, which are accepted by the public on the one hand and rules for cases of bail-out situations on the other hand, in order to prevent these from occurring or limit damage for the whole public sector and/or the economy.

## Risk Management and the Capital Market

The budgetary risks if public debt is too high can create turbulence in the capital markets. These risks are common, as seen recently in the EU countries during the crisis (Ahmad et al. 2016). One of the main risks, compounded with weak recording and monitoring of liabilities (Ahmad 2016) is that public liabilities can accumulate unnoticed in the balance sheets of banks and financial institutions, hidden by often unrealistic valuations of asset prices, particularly property.

An important share of local debt in China is still held by the so-called shadow banks. The term shadow banking refers to banks that operate outside the formal banking system and is defined as the system of credit intermediation that involves entities and activities outside of the regular banking system in a broad sense. There are many risks associated with shadow banking systems, since they are not regulated financial institutions. The most significant risk stems from the leverage that they are able to operate by not holding as much in reserves as traditional banks.

Chinese local government have intensively used special instruments, so-called local government financing vehicles (LGFV), for funding local infrastructure projects for many years. This hidden local debt were mostly borrowing short-term funds that accumulated an increasing amount of repayments from year to year.

Despite the developed capital market in Germany, in a mid or long run, all subnational governments bear considerable budgetary risks from their high debt. Will the homogenous rating of all German governments continue despite the tremendous differences of public debt of states and local governments? Will the highly indebted local governments succeed in balancing their accrual accounts and maintain positive equity capital? Will the debt-relief pro-grams for local governments in many Länder, which each cost several hundred million Euros, lead to the reduction of illegal cash loans? Although, local governments have no problems finding adequate offers for loans and other credits from privately owned financial institutions, will the public-owned banks be able to pitch in when European financial markets regulations become tighter?

A 1931 law prevents local insolvency. Local property, needed for the provision of constitutional mandated local goods and services, cannot be impounded. It is unclear until today whether the States are liable for excessive debts of their municipalities and counties. State governments carefully try to prevent highly indebted communities going to the State Constitutional Courts in order to transfer a share of their local debt to the States. In recent years, experts report that many small communities had problems to renew their loans from private banks; and state-owned banks offered new credits. This breaches any "no-bailout" criterion for hard budget constraints and opens up a tendency for bargaining in relation to sub-national debt.

**Recent reforms**

The recovery of the global economy has helped to stabilize subnational governments' revenues. China and Germany differ only at the first view with concern to subnational public debt. It is remarkable that China has started to legalize borrowing at the provincial level and an annual ceiling is set. The majority of the provincial LGFVs were transferred into loans while in total subnational public debt has been still growing up to 16.6 trillion RMB by November 2017. In contrast, Germany requires balanced budgets at the state level from 2020. It is noteworthy that the debt brake at the intermediate level was needed to reinforce fiscal prudence in Germany, given the absence of own-source revenues at this level, a positive limit was seen as infeasible. Since 2012, German States have reduced their total debt by about 10%, which be the end of 2017 only amounted to 17.7% of GDP.

At the prefectural, county and city level in China, public debt continues to be illegal. German local governments (cities, villages and counties) carry forward the traditional rules and limits for local debt permitting borrowing for investment financing as long as the communities are able to service interest payments and the mature redemptions. The regulations in both countries obviously counter-balance each other. Particularly the requirement of balanced budgets and the formal ban of borrowing stand in opposition to the 'golden rule' of investment finance according to which the costs of the long lasting infrastructure should be transferred to the benefitting taxpayers' generations. Both countries obviously lack a true theory of sustainability and a practice of transparent borrowing transactions, which clearly identifies the risks for future taxpayers.

The most important problem in both countries obviously is that subnational governments do not respect the regulations and interdictions of public debt. Official data, although improved and enlarged in the recent years, do not provide a true picture of public debt. There are numerous loopholes in both countries concerning forms of debt or de facto-debt, which are not counted in the debt statistics. The ban on borrowing or debt limits which conflict with the specific political rationality of the governmental decision-makers seems to generate an incentive to creatively evade the officially stipulated subnational debt. In both countries, there are incentives to push down the liabilities to municipalities with more complex instruments, like PPPs, so that they are harder to identify and control. In China, the volume of subnational PPPs has reached 17.8 trillion RMB by the end of November 2017. German subnational governments prefer more hidden forms of contracts or shift borrowing activities to their state-owned enterprises, which do not count among the public sector statistics.

In both countries, the problem, which has caused the critical development of subnational public debt is unsolved: a heavy burden of unfunded mandates on the one hand and insufficient own tax revenues of the other hand. And decentralized tasks like education, internal security, and development and modernization of infrastructure become more and more important being threatened to be swamped out by unfunded mandates. Therefore, the expansion of subnational public debt will continue unnoticed, adding to systemic risks and eventually become a burden for future generations.

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# BRTS AND INVESTMENT FADS: CIVIC ENGAGEMENT AND FISCAL DISCIPLINE

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*Sintesi*

*I paesi privi del processo di competizione elettorale come strumento per la garanzia sull'accountability della la spesa pubblica e gli investimenti dispongono dello strumento della social audit per raggiungere obiettivi simili. Tale strumento si basa sulla soddisfazione degli utenti  e su un'analisi completa dei costi e dei benefici sociali delle alternative possibili. Questo approccio potrebbe fornire risultati più sostenibili di quelli basati unicamente sulla competizione elettorale. Una proposta di estensione della Bus Rapid Transport System (BRTS) di Guangzhou è stata respinta in seguito ad una social audit, nonostante avesse raggiunto un vasto riconoscimento internazionale. Tale meccanismo può essere utilizzato in un ampio numero di paesi con modelli di governance differenti.*

In countries without electoral or "yardstick" competition, ensuring that public spending and infrastructure investment meets the preferences of the population, and also leads to sustainable development, requires mechanisms for public engagement. China has begun experimenting with social audits to evaluate public spending, that focus both on social costs and benefits as well as user responses to examine whether to continue with a given program.  This applies also to projects that have been acclaimed internationally and copied elsewhere—such as the  Guangzhou Bus Rapid Transport System (GBRT), and the city government had a strong basis to reject an expansion of the "award winning" GBRT that has been a model for others around the world (see Table 1). Indeed, without such direct feedback and evaluation mechanisms even with electoral processes, such programs would likely continue because of donor pressure, as many of the social costs and risks are not perceived by citizens within typical electoral cycles.

The GBRT project in Guangzhou spans from Tianhe Sports Center to the Huangpu Summer Garden, a total length of 22.9 km. This project was first proposed in 2008, and construction started in January 2009, and finished on February 2010. As shown in Table 1, the GBRT became one of the signature BRT projects in the world, with estimated cost at 2.1 billion RMB. To raise funds for the GBRT project, City Investment Group was charged with the leading role from obtaining bank loans, along with support from Guangzhou city's public funds.

The GBRT project, one of the largest in Asia, the second largest in the world, a  performance or social audit was conducted jointly by the Audit Bureau of Guangzhou and the Public Management Research Center, Sun-Yatsen University. This was designed to determine the subjective and objective conditions of existing operations. The metrics of the auditing are divided into two parts: (1) the construction aspect, mainly from project and financial management of project, comparing the realized and proposed goals; (2) the operating aspect, mainly from indicators relating to the speed, passenger capacity, coverage, facilities, secondary congestion and environmental impact and others. In addition to objective metrics, measurements from questionnaire survey and telephone surveys are used to gauge public satisfaction. The results were juxtaposed against alternative transport models—including dedicated bus lanes and expansion of the metro system.

Table 1: BRT Systems in the World

| City | BRT System (*Corridor Name*) |
|---|---|
| Guangzhou, China | GBRT (*Zhongshan Avenue*) |
| Yichang, China | Yichang BRT |
| Bogotá, Colombia | Transmilenio (*Americas, Calle 80, Calle 26, Norte-Quito-Sur, Suba, and El Dorado*) |
| Curitiba, Brazil | Curitiba BRT (Linha Verde) |
| Rio de Janeiro, Brazil | BRT (TransCarioca, TransOlimpica) |
| Belo Horizonte, Brazil | MOVE (*Cristiano Machado*) |
| Lima, Peru | El Metropolitano (*Line 1*) |
| Guadalajara, Mexico | Macrobús (*Line 1*) |
| Mexico City, Mexico | Metrobús |
| Monterrey, Mexico | Ecovia |
| Medellin, Colombia | Metroplús |
| Guatemala City, Guatemala | Transmetro (*Eje Sur*) |
| Dar es Salaam, Tanzania | Dar es Salaam bus rapid transit DART (Kimara-Kivukoni, Kimara-Morocco, Kimara-Kariakoo) |

Source: Institute for Transport and Development Policy.

The results of the performance auditing turned out to be surprising. On the objective measures, the average speed did not reach the expected targets, leading to complaints about increasing traffic jams. The parallel and cross-roads became even more crowded, with noticeable congestion. In terms of economic efficiency, public subsidies on GBRT systems perform less efficiently than that of normal bus routes. Compared with further extensions of GBRT projects, the auditing report concluded that the construction of new bus lanes would be more cost-effective in terms of public service delivery, together with minimizing overall congestion and pollution.

The auditing report was not only sent to the Municipal Leadership for review, but also given significant media coverage. Deputies in the Guangzhou Municipal People's Congress and the city party leadership evaluated the social audit results in examining options for an expansion of the GBRT, along the lines of the CPC Central Committee's decisions on increasing the role of performance auditing over the reform process. After a careful review process, including technical views from the City Traffic Commission, City Project Construction Committee, and the City Investment Group, the party leadership decided to cancel a new phase of BRT building process in 2014. Given the overall transportation requirements of a metropolitan area with the size and density of Guangzhou, it was argued that the GBRT was much more expensive than dedicated bus lanes, without causing secondary congestion on parallel and cross roads, and did not compete with the metro in terms of citizen preferences and volume of traffic.

In short, the GBRT experience, as presented in the case study by one of the senior officials involved, Mr. Yuan, presents a unique perspective on public engagement and fiscal performance in countries without electoral competition. Unlike in the models of authoritarian or "mixed" development in which a group of elites, either local, or the external donor community, "dictate" what is best for the people, the city party leadership in Guangzhou engaged the public with independent reviews through formal (e.g. local People's congress) and informal (e.g. media outlets) channels. Considering evidence from all stakeholders, the party leadership revised its investment policy and fiscal decisions in light of both subjective and objective evidence, including costs and benefits, public convenience as well as environmental considerations. The fact that the GBRT has become an international "role model" was appropriately not a factor in the decision. The social audit mechanism can be used effectively in other governance systems, including with electoral competition, and intermediate systems that are found in most emerging market economies.

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