

CHAPTER 2

Transparency and Local Subsidies in China and the United States^{1,2}

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Market-distorting subsidies have risen to the top of the international trade policy agenda. While the focus of policy deliberation is largely on central government largesse, less attention is given to the award of subsidies to local firms by provinces, states, and cities. Evidence on the latter awarded by sub-national bodies in China and the United States is presented here. We draw out the systemic implications of these findings for multilateral trade deliberations on transparency and subsidy notifications in particular.

INTRODUCTION

There has been growing interest in transparency in recent years. For example, the recently concluded Comprehensive Agreement on Investment (CAI) between China and the European Union (EU) mentions the word ‘transparency’ more than 30 times. The obligation of transparency now reaches far beyond the general discipline on transparency enshrined in the Marrakesh Agreement and sector-specific obligation in certain trade agreements. In principle, it has been expanded to almost every aspect of trade policy.

In fact, promoting greater clarity of trading partners’ policies and intentions has been seen as critical to a strong rule-based trading system since the creation of the multilateral trading system just after the Second World War. The diplomats who negotiated the General Agreement on Tariffs and Trade and later the World Trade Organization (WTO) saw transparency, together with non-discrimination and national treatment, as one of the foundational principles of the system.

The exchange of information on trade policies, inquiries into specific measures that have been applied, and monitoring of government trade policy actions – especially since the onset of the Global Financial Crisis – are vital components in the work of the WTO. Today, nearly every WTO agreement contains provisions on transparency and WTO members have called for enhanced transparency provisions in virtually every negotiation held in the run-up to the eleventh Ministerial Conference (MC11).

1 The authors thank participants at two meetings of the China-EU Dialogue on WTO Reform for their suggestions.

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The Trade Policy Review mechanism mandates that trade policies of all WTO members be regularly reviewed by the WTO Secretariat and subject to scrutiny in meetings of members in the Trade Policy Review Body. In negotiations to open markets further or to improve trade rules, governments believe possession of relevant information is essential to determine the scope of any deal that may be struck and its implementation.

Yet subsidies have a pride of place in discussions on transparency at the WTO for three reasons. First, as the Chairman of the WTO Committee on Subsidies and Countervailing Duties noted on 27 April 2021 ‘...despite reminders to members to submit their notifications in time, 80 members have still not submitted their 2019 notifications. In addition, 67 members still have not submitted their 2017 subsidy notifications, and 57 have still failed to submit their 2015 notifications.’³ Furthermore, as a review of the minutes of this Committee’s meetings reveals, some notifications are seen as incomplete or deficient in some other respect.

Second, as numerous reports by the Global Trade Alert have shown, governments have made extensive resort to selective subsidies during the Global Financial Crisis, in the years of recovery that followed, and again once the Coronavirus pandemic hit. With the notable exception of the China-US trade war, taxing imports has declined in use and subsidies, often under the radar screen, have been deployed instead. Subsidies, it seems, have become the discriminatory tool of choice. The reluctance of many G20 governments to cooperate with the WTO Secretariat’s monitoring of subsidies is telling.⁴

Third, it is often asserted – not necessarily with much evidence – that subsidisation is a key feature of state-driven forms of capitalism. The absence of centralised inventories of subsidies in leading trading nations has made it difficult to refute allegations made by trading partners of the extent and transparency of subsidies. Combined with the second point mentioned above, subsidies have become a growing source of trade tensions between major trading nations, and this has been central to discussions on market distorting policies and on the appropriate relationship between WTO membership and economic development priorities.

A comprehensive discussion of the sources of market-distorting subsidies ought to recognise that many levels of government can award state aid. In Federal constitutional structures, such as the United States, cities and states cannot resort to internal border taxes and so different forms of state largesse are often seen as the principal form of selective policy. Even in jurisdictions such as China, which claim to have unitary government, it does not follow that each level of government knows exactly how much subsidisation is taking place in other levels. The quantum and transparency of subsidisation may be affected by constitutional privileges and obligations.

3 WTO news item: https://www.wto.org/english/news_e/news21_e/scm_27apr21_e.htm.

4 Indeed, the WTO secretariat stopped including information on so-called General Economic Support measures in their G20 trade monitoring reports on account of the lack of cooperation.

In this chapter we discuss the reaction by certain governments to the subsidy-related notification deficit at the WTO. While that notification deficit is normally expressed in terms of late or missing notifications, in principle the degree of notification could be contrasted to known inventories of subsidies awarded. Such inventories are, however, largely missing in many jurisdictions and so the rest of the paper focuses on what is known about the trade-related aspects of sub-national subsidies, an important data gap. To fix ideas, these data gaps are discussed in the context of China and the United States. Implications for the reform of the WTO approach to transparency are drawn in the concluding section.

2. THE NOTIFICATION DEFICIT IN SUBSIDIES AND WTO MEMBERS' REACTION

Underpinning the notion of transparency in the multilateral trading system is the faith that members place in each other to provide the information on a timely basis necessary to monitor trade policy choices accurately and effectively. Overall, members provide this information through a process called notification. Yet, as noted earlier, there is a significant notification 'deficit' in the area of subsidies, taken to mean that many governments have failed to make notifications at all or have made them with a significant delay.

Certain WTO members have advanced proposals in various negotiating forums that would address this shortcoming. The United States made an initial proposal at the Council for Trade in Goods in November 2017. That proposal was amended and subsequently Argentina, Australia, Canada, Chinese Taipei, Costa Rica, the European Union, Japan, and New Zealand joined as co-sponsors. On 11 April 2019, at a meeting of the Council of Trade in Goods, the head of the US delegation motivated the proposal as follows:

'This lack of transparency is problematic for traders, and it undermines the proper functioning and operation of the WTO Agreements... From a systemic perspective, it is also very difficult to develop, evaluate and assess negotiating proposals to improve operation of various WTO agreements without the information that should have been provided under existing WTO notification obligations... Lack of compliance with basic notification obligations also undermines confidence in the system. If Members cannot comply with the most basic obligations, what certainty can there be that they are complying with the more substantive ones?'⁵

The United States and co-sponsors took a carrot and stick approach to encouraging the submission of required notifications. Developing countries could seek technical assistance from the WTO Secretariat in preparing notifications. The proposal also included 'modest administrative measures that acknowledge that sustained problems in compliance should have at least some consequences'.⁶

5 <https://geneva.usmission.gov/2019/04/12/procedures-to-enhance-transparency-and-strengthen-notification-requirements-under-wto-agreements/>.

6 <https://geneva.usmission.gov/2019/04/12/procedures-to-enhance-transparency-and-strengthen-notification-requirements-under-wto-agreements/>.

American representatives specifically distinguished between the submission of notifications in the first place and the quality of such submissions, noting that their proposal referred only to the former. Separately, in respect to subsidies, the United States put forward a proposal on transparency and the need for greater diligence in notifications.⁷

China submitted a WTO reform proposal, which recognised that members' overall fulfilment of notification obligations still falls short of the requirements under various WTO agreements. It seems that this observation applied to notification of subsidies by members. Still, China's tone was mild, stating that 'due to their limited capacity and other constraints, some members could not submit the notifications on time.' Moreover, it argued in the meantime that 'the quality of counter-notifications submitted by some members still needs further improvement.'⁸

Recognising that the notification deficit, among others, detracts from the 'operational efficiency' of the WTO, China made several proposals: 'Firstly, developed members should lead by example in submitting comprehensive, timely and accurate notifications. Second, members should improve the quality of their counter-notifications. Third, members should increase exchange of their experiences on notifications. Fourth, the WTO Secretariat needs to update Technical Cooperation Handbook on Notifications as soon as possible and intensify training in this regard. Fifth, developing members should also endeavor to improve their compliance of notification obligations. Technical assistance and capacity building should be provided to developing members, in particular LDCs, if they are unable to fulfil notification obligations on time.'⁹

Interestingly, when it comes to the transparency concerning subsidies, in a separate section on trade remedies in the same WTO reform proposal, China switched to focus on greater transparency towards the processes that governments use to determine whether and to what extent imports have been dumped or subsidised, particularly in investigations involving small and medium size enterprises.

In sum, there is a general recognition of the notification deficit regarding subsidies among WTO members. Yet China has taken a broader approach to this issue. While it has sought to address under-notification, it brought counter-notifications and their apparent deficiencies into the discussion. With respect to subsidies, China sought to bring the transparency of countervailing duty investigations into the discussion. For China, the issue of transparency regarding subsidies is not only concerned with notification, but also associated with the approach to the determination of the subsidies. China concurred with others about the importance of technical assistance to build notification-related capacity in developing countries.

7 Proposed guidelines for submission of questions and answers under Articles 25.8 and 25.9, G/SCM/W/557/Rev.4, 26 October 2020.

8 China's proposal on WTO reform, WT/GC/W/773, 13 May 2019.

9 Ibid.

In the view of some analysts, China is the target of enhanced subsidy notification requirements.¹⁰ To round out assessments of Chinese central government subsidisation, and to facilitate a fact-based assessment of what is at stake, our attention turns to the subsidies offered by China's local governments. We then balance that discussion with some evidence of the resort to subsidies by American cities and states.

3. LOCAL SUBSIDIES IN CHINA AT A GLANCE

In recent years, in order to respond to the country's call for mass entrepreneurship and innovation, and to cultivate strategic emerging industries, government agencies at all levels have introduced a large number of favourable support policies. Among these subsidies are one of the most commonly used measures for governments to support the development of enterprises.

Unfortunately, the exact amounts of subsidies paid are often unknown, possibly ranging from hundreds of billions to a few trillions of yuan. A study by Haitong Securities, a leading investment firm in the country, shows that the subsidies granted to companies in 2017 was estimated at more than 430 billion yuan.¹¹

TABLE 1 RBA BALANCE SHEET (\$ BILLION)

Department granting subsidy at local level	Types of subsidies			
Bureau of Science and Technology	Technology development	Platform construction	Innovation and entrepreneurship	Achievement award
Bureau of Industry and Information	Industrialisation	Informatisation	Technology innovation	Market development
Bureau of Development and Reform	Project of strategic importance	Novel industries	Important project construction	Platform
Bureau of Commerce	E-commerce	Trade fair and exhibition	Foreign trade	Urban consumption promotion
Bureau of personnel administration	Retaining of talented personnel	Social insurance premium allowance	Re-employment	Employee training and education

¹⁰ For example, see Gao, H (2018), 'The WTO transparency obligations and China', *Journal of Comparative Law*, 12(2): 329-355.

¹¹ Haitong Securities, How much are the subsidies?. Available at: <https://www.htsec.com/jfimg/colimg/upload/20180813/4301534146895711.pdf>.

Bureau of Market Regulation	Branding and Trademarking	Quality management	Patent application	Standardisation
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3.1 Forms of local subsidies available

The main forms of government subsidies include financial grants, interest rate reductions (subsidised credit), tax rebates, and free allocation of non-monetary assets.

(1) Financial grants are unpaid funds allocated by the government to support enterprises. This type of state support usually has strict policy conditions. Only enterprises that meet the reporting requirements can apply for grants, and the specific uses of funds are stipulated at the time of appropriation. Examples include the fixed grain subsidies allocated by the financial department to enterprises and incentives to encourage enterprises to place fired employees in re-employment.

(2) Subsidised credit refers to the subsidy provided by the government to the interest payments on loans by an enterprise in order to support the development of a specific field or region in accordance with the country's macroeconomic situation and policy objectives. There are two main ways to discount interest: one is that the financial department directly pays the funds to the beneficiary enterprises; the other is that the financial department directly allocates the interest discount funds to the lending bank, and the lending bank provides loans to the enterprise at a preferential interest rate lower than the market interest rate.

(3) Tax rebates involve the repayment of tax to the enterprise by the government in accordance with the relevant regulations of the state. Thus, it is a government subsidy given in the form of preferential taxation. Direct tax reductions, tax exemptions, increase in tax credits, and partial tax credits are examples.

In each of the three examples above, the government does not directly provide assets to an enterprise.

(4) The free allocation of non-monetary assets mainly including land use rights, forests, etc.

3.2 Subsidies available to enterprises at different stages of growth

Start-up companies, which refer to all types of companies that have just been established and do not have sufficient funds and resources, may apply, in light of their industry field, asset scale, cost input, intellectual property rights, and sales, for subsidies designed for technology research and development, technical services, industrialisation results, informatisation construction, fixed asset investment and construction, and other fund subsidies or interest subsidy policies.

In addition, such companies may also be eligible for tax reduction and exemption policies, high-tech enterprise designation, technology contract registration, and deduction of R&D expenses. Entrepreneurial support projects, including entrepreneurial competitions, entrepreneurship-driven employment, entrepreneurial talent awards, etc. may also be provided to start-ups.

Growing enterprises, which have begun to emerge in an industry and enjoy rising market shares, the gradual enhancement of market competitiveness, the gradual increase of enterprise scale, and the gradual improvement of enterprise qualifications, are often eligible for incentives for research transformation, R&D environment improvement or R&D investment subsidy policies, new OTC listing support policies, and tax reduction and exemption policies.

Mature companies, whose size, scale of production, profit and market share are close to their optimal state, and whose marketing capabilities, production capabilities, and R&D capabilities are also well established, may undertake some national-level science and technology plan projects. They may also choose to apply for national-level special funds for science and technology, the qualifications of municipal enterprise technology centres, municipal engineering technology research centres or key laboratories, enterprise research and development institutions, and enterprise listing subsidies, and actively participate in the customisation of industry standards and national standards, and trademarks development.

Subsidies are even made available to companies in transition, such as those undertaking technology upgrading, staff re-employment and exit support for enterprises with high-energy-consumption.

In addition, local governments even provide subsidies to listed companies headquartered in their respective regions. Recently, 21st Century Economic News, a leading financial news agency, reported that some of the most profitable state-owned enterprises, such as banks, received various government subsidies. The report found that A-share listed companies in the first three quarters received a total of 105.548 billion yuan in government subsidies, exceeding the profits made by their net profits.¹²

3.3 Subsidies tailored to the special needs of various industries

Subsidies are available to a large number of targeted industries. For example, enterprises in software industry can apply for subsidies from the Bureau of Industry and Information and Bureau of Commerce. Meanwhile, companies in the IT industry and bio-chemical and pharmaceutical industry may reap subsidies more from the Bureau of Science and Technology.

¹² A-Share Listed Firms compete for Government Subsidies: the amount of subsidies obtained by 505 listed firms has exceeded their total profits, 21st Century Economic News. Available at <http://epaper.21jingji.com/>, or, alternatively, <https://stock.hexun.com/2019-12-25/199786169.html>.

Other forms of subventions include R&D subsidies from the Bureau of Science and Technology and a talented personnel allowance from the Bureau of Personnel Management and Social Security.

Awards for branding and trademarking are generally available to all sorts of enterprises.

In sum, there is a multi-faceted framework of subsidies from different departments of local governments.

4. INCENTIVES FOR CHINESE LOCAL GOVERNMENTS TO RESORT TO SUBSIDIES

Empirical studies have shown decentralisation is instrumental to economic development as local governments are given more autonomy.¹³ Even authoritarian states, which by definition are averse to direct political accountability, stand to benefit from decentralising.

Even though it is a unitary country, China introduced a policy of decentralisation in order to galvanise sub-national governments to develop local economies. In this regard, two factors are noteworthy. One is that, on this logic, economic growth is entwined with an active government role as part of the Chinese model for economic growth. The other is that the leaders of local governments are evaluated for promotion primarily in terms of the economic performance, or GDP, of the regions they administer. Consequently, local governments, or more precisely their leaders, have an incentive to provide subsidies to targeted enterprises.

Given these two factors, once local governments are given autonomy to use their own budget or to borrow money to encourage the growth of local economies, they are better positioned to take advantage of the financial resources at their disposal for the purpose of providing subsidies to targeted or championed enterprises. Moreover, they are increasingly inclined to resort to subsidy use for the desired economic growth.

In addition, there are inadequate constraints on local government budgets and borrowing. More alarmingly, certain local governments have applied to the central government for repayment or writing-off of any bad debt incurred by the former. This has given rise to a growing confidence, on the part of local government, in the central government playing the role of the lender of last resort. This has reinforced the tendency of local governments to borrow.

In sum, local governments have the incentive to offer subsidies and there are relatively loose constraints on local governments doing so. Thus a dependency on the subsidy policy for the desired economic growth of their municipalities, cities, prefectures, and counties has arisen.

¹³ See Lin, J Y and Z Liu (2000), 'Fiscal Decentralization and Economic Growth in China,' *Economic Development and Cultural Change*, 49 (1): 1-21. And Zhang, T and H Zou (1998), 'Fiscal Decentralization, Government Spending and Economic Growth in China', *Journal of Public Economics*, 67: 221-240.

Furthermore, enterprises, particularly state-owned enterprises, and prospective investors, have developed a reliance on subsidies for their growth. Investment location has also been affected. While subsidies, as non-recurring profit and loss income of listed companies, boost the business performance of the subsidised enterprise, even more companies, which suffer from 'blood transfusion dependence', rely on financial subsidies to sustain themselves while making losses. For example, in order to preserve the 'shell' of listed companies, local governments have continuously injected special subsidy funds to help companies maintain their 'shell'. In this manner, resource allocation has been skewed by local government subsidies.

5. EVALUATION OF THE TRANSPARENCY OF CHINESE LOCAL SUBSIDY POLICIES

5.1 General evaluation of the local subsidy policies

(1) Industrial policy has huge impact on subsidies. It is often found that all enterprises in favoured industries enjoy 'subsidy banquet'. Moreover, the new energy auto subsidy policy once gave rise to rampant subsidy fraud.¹⁴

(2) State-owned enterprises are favoured by the subsidy policy. In theory, all eligible enterprises may apply for subsidies. For example, eligible private enterprises and small and medium-sized enterprises may apply for and obtain local fiscal funds at all stages of development (in the seed stage, start-up stage, initial growth stage or rapid growth stage of their development), as long as they comply with national and local industrial policies. In reality, a Xinhua News Agency report disclosed in the first half of 2014 that of a total of 32.3 billion yuan of government subsidies, 61.64% went to 854 local state-owned enterprises and central state-owned enterprises.¹⁵

(3) Local borrowing is the primary source of local subsidy. Since local governments have no right to formulate measures related to tax incentives, local subsidy policies are often bond financed and tax related.

(4) Allocation of subsidies is not efficient. Since many local departments or bureaus are involved in subsidy granting and, consequently, there are many types of policies, many companies eligible for subsidies may not be aware of those policies or don't know how to apply for subsidies. Also, owing to bureaucracy, subsidy processing and payment is often delayed.

14 Wang, M (2018), 'A Study of the Subsidy Policy for New Energy-driven Automobile', PhD dissertation submitted to Beijing Jiaotong University.

15 Xinhua Viewpoints: A Perspective of the attainment of government subsidies by enterprises , 19 November 2014: http://www.gov.cn/xinwen/2014-11/19/content_2780740.htm.

On the whole, subsidies are not efficiently allocated. In recent years, the steel, cement, building materials, and other industries have received large amounts of subsidies, and this is theorised to have caused overcapacity. The survival of such firms has become a worrying problem. Some listed companies to which local subsidies are channelled have continued to lose money.

Given the uneven distribution of subsidies and the low efficiency of the subsidy policy, there have been calls for strict restriction of local government in granting industry subsidies.¹⁶

5.2 Transparency evaluation of the local subsidy policies

According to the *Report on Fiscal Transparency of Chinese Municipal Governments 2020*¹⁷ released by Tsinghua School of Public Administration, among the 294 governments at the prefecture-level and above across the country, the overall situation of fiscal transparency and openness was significantly better than that of the previous year. However, the openness and transparency of their fiscal expenditures, and of the final accounts of 388 governments at the county level and below in the country, still needs to be improved.

Given the complex framework of local subsidies, the incentive of local governments to offer subsidies, and the relatively loose constraints on local government financing of subsidies, it is difficult for the central government to have a clear nationwide account of the extent of local government subsidisation.

Although China is a unitary country, the central government, which is obligated to notify the WTO about its subsidy policies, does not have the full capability to collect all necessary information about local subsidies. Under these circumstances it would not be surprising if the central government was unable to provide complete and accurate information on the country's local subsidies.

6. STATE AID AWARDED BY US SUB-NATIONAL GOVERNMENTS

Like their Chinese counterparts, US state and city officials can deploy state largesse to support the development of their local economies.¹⁸ While the incentives faced by policymakers differ across these two jurisdictions, US politicians have a keen electoral interest in improving the well-being of their local populations.

¹⁶ Strictly restrict local government in granting industry subsidies, *China Energy News*, 25 May 2020. In addition to strict restriction of local government in granting industry subsidies, the recommendations include Industrial subsidy policy has shifted from differentiation and selectivity to inclusive and functional, introduce the cap control and performance review of industrial subsidies, and actively and effectively promote international negotiations on industrial subsidy rules.

¹⁷ An abstract of the Report is available at <http://news.xinhua08.com/a/20201119/1964222.shtml>.

¹⁸ For a more detailed analysis of this matter see Evenett, S J (2021), 'Economic Statecraft: Is There a Sub-National Dimension? Evidence from United States-China Rivalry', *World Trade Review* 20(2): 220-237.

Given the prohibition in the U.S. Constitution on states erecting barriers to internal trade in goods, arguably US officials are more dependent on tax and subsidy tools than their Chinese counterparts. The purpose of this section is to provide a brief overview of the resort by US sub-national bodies to state aid for business.

As in China, there is no centralised inventory of subsidies and tax breaks awarded by US cities and states to the private sector. In another parallel to the Chinese experience, US sub-national officials do not necessarily welcome oversight of their issuance of state aid. This is evidenced by the fact that not every US city and state complies with Statement number 77 of the U.S. Government Accounting Standards Board, which has, since August 2015, mandated publication of tax abatements provided to firms.¹⁹

According to the *Goods Jobs First* initiative, which has assembled what GASB 77 filings have been made public, approximately \$54 billion in tax abatements have been declared for the years 2017-2020. The actual total is likely to be larger, on account of reporting lags for 2020 (where the current recorded total of \$7.3 billion is less than half of the annual average reported totals for the three preceding years). Any suggestion that the scale of US sub-national subsidies is trivial can be set to one side.

For the purposes of this chapter, however, information on the resort to sub-national government subsidies was extracted from the Global Trade Alert database. Information has been collected since November 2008 on different types of subsidies (and other potential trade distortions) undertaken by state bodies at all levels of government (supra-national, national, and sub-national). At the time of writing, this database included information on over 31,000 policy interventions undertaken worldwide that affect any form of cross-border commerce (therefore, going beyond trade in goods).²⁰

As far as subsidy announcements are concerned, the Global Trade Alert database includes information on the introduction, expansion, contraction, and removal of subsidies so long as the amount of the change involved exceeds \$10 million. This helps weed out subsidies and subsidy changes likely to have limited commercial impact, in particular cross-border commercial impact.

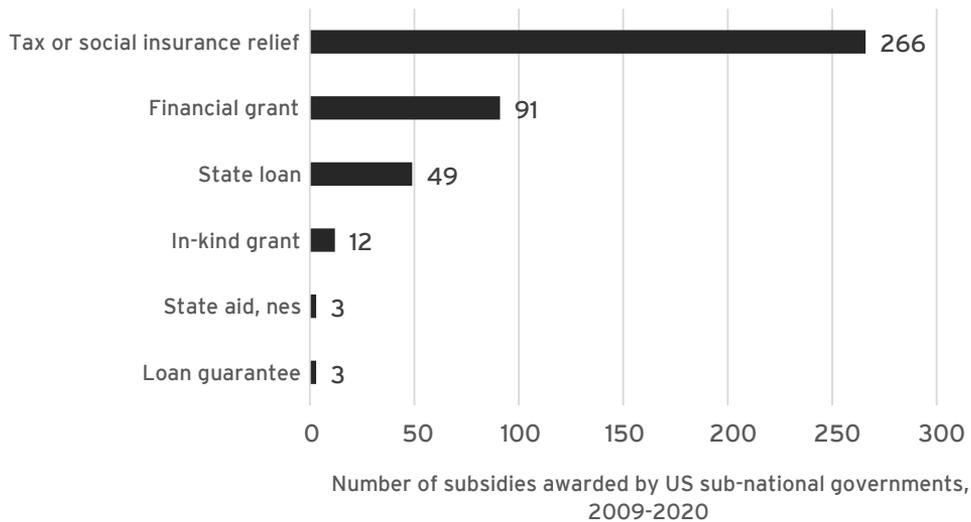
Like the rest of the entries in the Global Trade Alert database, there is a strong preference to use official documents to record any subsidy award. However, if a firm declares receipt of state aid then this can substitute for an official source. In exceptional cases, a media report or press announcement can be used to document a sub-national subsidy award, although this is not the preference, and confirmation from several press reports is typically sought in such cases.

¹⁹ https://www.gasb.org/jsp/GASB/Document_C/DocumentPage?cid=1176166283745&acceptedDisclaimer=true.

²⁰ For further details about the manner in which information is collected and coded in the Global Trade Alert database see Evenett, S and J Fritz (2020), *The GTA Handbook*. 14 July. Available in the third panel of this URL: https://www.globaltradealert.org/data_extraction.

In late April 2021, the Global Trade Alert database contained information on 424 instances when US cities or states introduced or increased the value of subsidies worth more than \$10 million. Forty states were responsible for the overwhelming majority of these subsidies (cities offered large tax breaks far less often.) New York was responsible for 65 such subsidies, Connecticut for 64, and California for 37.

FIGURE 1 OF THE 424 INSTANCES OF SUB-NATIONAL GOVERNMENT SUBSIDIES AWARDED IN THE USA, 62% WERE IN THE FORM OF TAX BREAKS



Source: Global Trade Alert database, data extracted on 29 April 2021.

Three types of subsidy account for nearly all of the 424 US sub-national government subsidies recorded in the Global Trade Alert database. The prevalence of tax breaks and relief on employment-based taxes is highlighted in Figure 1. Almost three times as many tax breaks were awarded than financial grants, the second most used policy instrument. State loans come in third, at 49 entries. Loan guarantees and in-kind grants are rare in this data source, perhaps marking a difference with observed Chinese sub-national practice.

Complaints are often made by US analysts and officials about the scale of Chinese sub-national subsidies. It turns out that US states are not shy of handing out billion-dollar-plus incentive packages to local firms, as the examples in Table 1 show. This table does not include the highly publicised bidding competition between US cities and states triggered by Amazon's announcement to create a second headquarters in September 2017. A total of 238 US cities and states competed for this multi-billion-dollar prize. New York's bid included incentives valued at \$3.5 billion.²¹ Concerns have been rightly expressed about the public finance implications of large subsidies by US sub-national governments.

²¹ See <https://www.brookings.edu/research/five-economic-development-takeaways-from-the-amazon-hq2-bids/>.

TABLE 2 EXAMPLES OF US BILLION DOLLAR PLUS FINANCIAL SUPPORT OFFERED BY US CITIES AND STATES

Year	Sub-national jurisdiction	Recipient	Amount
2010	Michigan	Chrysler	\$1.3 billion
2012	Louisiana	Semper Energy	\$2.1 billion
2012	Oregon	Nike	\$2 billion
2016	Louisiana	Sasol USA Corporation	\$1.5 billion
2016	Louisiana	Sabine Pass Liquefaction	\$1.2 billion

Source: Global Trade Alert database, data extracted on 29 April 2021.

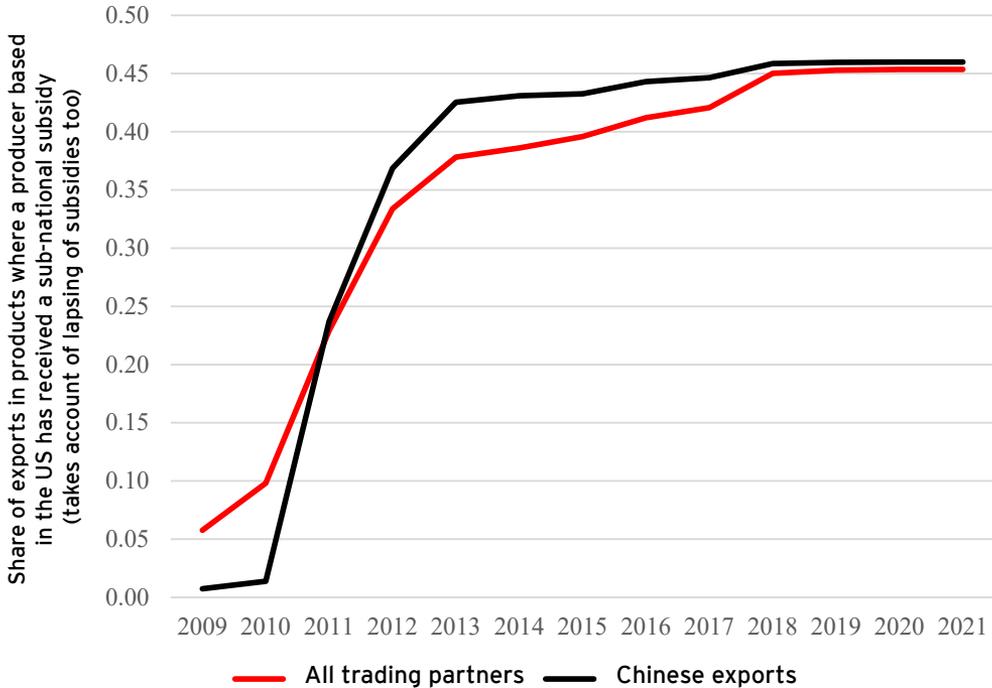
One advantage of using the Global Trade Alert database is that, for sub-national subsidies to goods producers, steps were taken to conservatively identify the products produced by the subsidy recipient. Knowing the relevant HS codes²² of such products allows analysts to calculate, for each year, the share of total US goods imports that compete against local firms that have benefited from either a subsidy or a subsidy increase. These trade coverage calculations take account of the date when a subsidy is introduced or increased and any subsequent date of removal or subsidy reduction. Any failure to document relevant US sub-national subsidies implies that the import coverage estimates based on the Global Trade Alert database and reported below are likely to understate the true exposure of foreign trade partner exports to subsidisation by US sub-national governments.

Figure 2 reports sharp growth since 2009 in the share of US goods imports that compete against local firms which have received subsidies from US cities and states. The shares are reported for all US goods imports and for US goods imports from China. In both cases, by 2021, approximately 45% of such imports faced subsidised US competitors. Given the scale of US goods imports, these estimates imply trade exposure running into trillions of US dollars.

Interestingly, foreign trade partner export exposure to US sub-national subsidies took off well before the US-China trade war, indeed before the years typically associated with populism and the growth in electoral popularity of Donald Trump. However, the finding that Chinese export exposure rose faster than that for all US trading partners may be consistent with US cities and states offering more financial support to local firms facing enhanced competitive pressure from China. Thus, defensive considerations may well have influenced the decisions taken by US city and state officials.

22 Harmonized Commodity Description and Coding System.

FIGURE 2 FORTY-FIVE PERCENT OF GOODS IMPORTS INTO THE UNITED STATES CURRENTLY COMPETE AGAINST AT LEAST ONE LOCAL RIVAL THAT HAS RECEIVED A SUBSIDY FROM A US CITY OR STATE



Sources: Global Trade Alert database, data extracted on 29 April 2021.

FIVE DOMESTIC POLICY RECOMMENDATIONS AND THEIR IMPLICATIONS FOR ENHANCING TRANSPARENCY AT HOME AND AT THE WTO

Five policy recommendations follow from our accounts of American and Chinese logical government subsidies. As shown in our assessment of the export exposure of foreign companies to American sub-national subsidies, it should be evident that trading partners as well as domestic constituencies have a stake in reforms to subsidies awarded by sub-national governments. Those benefits arise from enhanced transparency of subsidy awards and a better allocation of whatever subsidies are awarded. Profound reforms would probably have beneficial public finance implications, as fewer tax breaks would be offered (in the case of American cities and states) and lower levels of public sector debts (relevant to both the American and Chinese cases).

The first recommendation is to discipline local government resort to subsidies for business development. Hard questions need to be asked about the rationale for each subsidy. What market failure is being tackled? What type of subsidy, if any, is the right response? Does the subsidy actually increase the overall quantity of the desired commercial activity – or

does it merely reshuffle resources across sub-national jurisdictions? A related matter is to reduce the incentive of local government officials to grant subsidies. Enterprises should be weaned off subsidies and tax breaks as well.

The second is to better align whatever government support is offered with enterprise needs. Consideration should be given to providing enterprises with a ‘menu’ that can be selected independently within a pre-established quota of funding support. It is recommended to combine the resources available to government departments, such as industry funds, financial subsidies, scientific research project support, etc. to form a service ‘menu’ on the government supply side. Within the allocated quota, the enterprise will choose the support method in accordance with its own development needs, so that the policy will be closer to the needs of the enterprise.

The third is for China to introduce a centralised and coordinated approach to subsidy in one region. Establishing a centralised managerial mechanism is recommended to administer the subsidy policy in the region.

The fourth is to enhance the transparency of the decision-making process concerning the award of subsidies. An inventory of all sub-national subsidy policies should be assembled by pooling information about the policies of all levels of local departments and bureaus. This could be combined with firm-level and industry information (on tax payments, employment, environmental performance etc.) and an algorithm deployed to score each application for a subsidy programme. Such ‘policy calculators’ can be designed for every level of sub-national government, to be made available to all the enterprises of prospective investors in the particular region. Greater openness and transparency of local subsidy policies could be accomplished by rolling out such calculators nationwide.

The fifth recommendation is to make full use of the Big Data techniques to collect information on the award of local subsidies. Modern technology will allow government departments to evaluate in a timely fashion the pertinence, effectiveness and sustainability of policies, and continuously improve the technocratic underpinning of policy formulation.

These five policy recommendations are intended, among others, to make local government more accountable concerning the use of the policy instrument of subsidy and to discourage local governments from over-reliance on this policy instrument to boost economic growth.

As local subsidy policy becomes more transparent, then it will be possible for central governments in Beijing and Washington, DC, to submit more and more extensive notifications of sub-national subsidies to the WTO. This, in turn, will allow for more evidence-based deliberation of the cross-border ramifications of local subsidy policy, potentially reducing trade tensions in cases where resort to subsidisation is shown to be less significant than initially feared.

A key lesson here is that international transparency practices have their roots in the institutions that deliver transparency of domestic policy. International deliberations on trade policy transparency should not only consider whether national governments

have the personnel and expertise to make WTO notifications but also whether domestic institutional arrangements to collect needed information exist in the first place. Further consideration should be given to whether multilateral disciplines are needed on the latter.

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