

UN-REDD PROGRAMME POLICY BRIEF



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Fiscal incentives for agricultural commodity production: Options to forge compatibility with REDD+

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Key messages

1. Fiscal policies and incentives are often key underlying drivers of forest change that influence land use behavior in sectors that encroach on forests, although the understanding of their impacts on forests is often lacking. Fiscal policies have not been systematically examined as part of REDD+ readiness.
2. Public policy and related fiscal policy and incentives must seek coherence across sectors, in order to overcome inherent conflicts between sectors and competing land uses, and to send the right signals.
3. REDD+ provides an entry to rethink fiscal incentives for agricultural commodities as part of National REDD+ Strategies and Action Plans.

1. Introduction

Fiscal policies and incentives are often key underlying drivers of forest change that influence land use behaviour in sectors that encroach on forests, although the understanding of their impacts on forests is often lacking. Developing countries that are pursuing REDD+¹ seek to reduce greenhouse gas (GHG) emissions from the clearing and degradation of forests. Agriculture is estimated to be the direct driver for around 80 per cent of deforestation worldwide, and yet in order for countries to reverse this pressure, they must influence the underlying or indirect drivers associated with the production of agricultural commodities in an increasingly globalized economy.² The future pressures on forests are enormous. More

than 80 per cent of growth in global demand over the next 15 years for field crops, fibre and beverage crops, meat, timber and forest products, will be in developing countries, and yet the options to overcome crop and pasture yield constraints present huge technical, social and economic challenges.³ To avoid crop expansion and just meet projected crop needs by increasing production, it is predicted that crop yields would need to increase by an estimated 32 per cent more from 2006 to 2050 than they did from 1962 to 2006 during the height of the 'green revolution'.⁴ Reaching such increases in yields is highly unlikely. With global population rising to at least nine billion people by 2050, it is commonly accepted that

the resource degradation and increasingly marginal food production circumstances risk the economic and ecological stability we have come to rely on in the past.^{5,6} Our agricultural systems are reaching a productivity plateau, and often depend on spatial expansion, rather than increases in yield per hectare, for production increases.

Our natural capital - forests, agricultural lands, water - are increasingly being understood in the context of building social capital and stable economies. The Aichi Biodiversity Target number 3 calls for the elimination and reformation of incentives and subsidies harmful to biodiversity by 2020.⁷ The post-2015 sustainable development goals (SDGs)⁸ identify a range of economic, social and environmental goals that countries agree should form the basis for sustainable development moving forward. Halting and reversing land degradation and biodiversity loss, sustainably managing forests, ensuring sustainable production and consumption patterns, and promoting inclusive and sustainable economic growth are key goals.⁹ One sustainable development target specifically calls for the phasing out of inefficient fossil fuel subsidies that encourages wasteful consumption and market distortions.¹⁰ Income inequality and economic efficiency are important indicators for how far countries are along the pathway towards inclusive economic growth. The UN report, *Inequality Matters*, finds that economic inefficiency traces back to highly unequal land distribution in a significant number of developing countries, and enhancing land equity and productivity crucially must underpin broader rural development strategies.¹¹ The report finds that while some Latin American and African countries have reduced economic inequalities over the last two decades, income disparities have increased within many countries, and risk development futures. Further, the unequal distribution of public and private assets is an important determinant of spatial disparities, and this is visible in the enduring urban-rural divide. **For REDD+ countries, this requires decoupling economic growth from deforestation and forest and land degradation, and finding greater compatibility between rural development, commodity production and REDD+, for solutions towards low-carbon growth.** The redesign of fiscal incentives can help enable that transition, and this paper explores examples of and pathways for how this can work.

While decoupling economic growth from deforestation and degradation sounds simple, operationalizing the concept requires rethinking the fiscal incentive frameworks promoting agriculture and the opening of the forest frontier. The recent *New Climate Economy* report notes that many countries subsidize key agricultural inputs, such as irrigation

water and fertilizer, in order to boost productivity, but evidence suggests these subsidies can also lead to waste and environmental damage. There is an urgent need to identify how policy changes can increase the efficiency of agricultural production and reduce GHG emissions.¹² Fiscal and policy incentives that support agricultural development were usually not designed with REDD+ in mind, and thus need to be better understood and revised to identify the complementarities and conflicts between such fiscal policies and REDD+. This should include assessing how social, economic and environmental impacts and benefits associated with fiscal policies and measures can be better understood and balanced.

A. Definitions

Box 1 below provides a set of working definitions for the full range of subsidies and fiscal incentives that affect production and land use. The definition of fiscal policies and incentives should be broad enough to capture the range of fiscal instruments that affect land use and forest cover change. This research adopts the World Trade Organization's (WTO), Food and Agriculture Organization of the United Nations (FAO) and Global Subsidies Initiative definitions of subsidies and fiscal incentives. The WTO defined a subsidy to exist if a benefit is conferred through: direct transfers of funds (e.g., grants, loans); potential direct transfers of funds or liabilities (e.g., loan guarantees); foregone government revenue (e.g., tax credits); government provision of goods or services; government payments to a funding mechanism, or entrusting a private body to carry out what would normally be a government function; and income or price support as understood in GAT agreements of 1994.

The FAO adopted a broader definition (in the fisheries context) than the WTO, defining subsidies as government *actions* or *inactions* outside of normal practices that modify - by increasing or decreasing - the potential profits by industry in the short-, medium- or long-term. The FAO definition thus includes direct and indirect financial transfers and services, regulations and lack of intervention for purposes of affecting industry profit, which are outside of normal practices. This definition includes the direct and indirect transfer of funds and liabilities, various forms of tax relief, the provision of access to capital, land, water and public infrastructure at below-market rates (which can also include in-kind support), as well as market and price support. Intergovernmental fiscal transfers can also function as a fiscal incentive, giving sub-regional governments the means to distribute incentives to the private sector, rather than central government (this is a 'pass-through').

Consumption mandates are not included in the WTO definition, yet are a primary means through which government-led demand-side measures influence land conversion activity for commodities, such as biofuel-blending mandates. The Global Subsidies Initiative considers the market price support enabled by consumption mandates to be a subsidy. Mandates can have the effect of driving demand and prices, thus improving producer access to capital in

financial markets to meet the demand.

While the above provides an expanded definition of subsidies, there are also fiscal incentives that do not constitute subsidies. Fiscal policy is the means through which governments adjust spending, taxes and their national economies, thereby enabling subsidies and fiscal incentives.

Box 1: Definitions of subsidies and fiscal incentives

- The WTO defines* a subsidy as ‘any financial contribution by a government, or agent of a government, that confers a benefit on its recipients.’
- The FAO uses a broader definition** and classifies subsidies into four main categories: (1) direct financial transfers; (2) services and indirect financial transfers; (3) regulations; and (4) lack of intervention.
- In addition, the Global Subsidies Initiative further refines the WTO definition to include the market price support enabled by consumption mandates to be a subsidy.*** Consumption mandates are commonly utilized to increase demand for biofuels, and are a primary means through which government-led demand-side measures influence land conversion activity for commodities.

This analysis refers to fiscal policies and incentives as all activities captured in the above definitions. For more detail on definitional aspects, refer to Kissinger, G., forthcoming.

* World Trade Organization, 1994. Agreement on Subsidies and Countervailing Measures.

** Food and Agriculture Organization of the United Nations (FAO), 2004. Guide for identifying, assessing and reporting on subsidies in the fisheries sector. FAO, Rome.

*** Gerasimchuk, I., R. Bridle, C. Beaton, C. Charles, 2012. State of Play on Biofuel Subsidies: Are policies ready to shift? IISD, Winnipeg, Canada.

Table 1 identifies the different types of fiscal incentives that are generally observed in production and land use, which meet the composite definition of fiscal incentives. While

fiscal incentives can be directed towards all stages in the production and manufacturing supply chain, the focus here is on those primarily targeted towards production.

Table 1: Types of fiscal incentives

Type	Example
Grants and other direct payments	Transfers to companies or producers to cover specific costs, payments or vouchers to consumers to cover a portion of costs (such as for cooking oils) <i>Example: Cooking oil subsidies, subsidized land, fertilizer subsidies, inputs (planting materials, herbicides), rural development grants</i>
Tax concessions	Allowing firms not to pay a tax that it would otherwise owe as an inducement to invest <i>Example: Income tax deduction or exemption, lower foreign taxes, accelerated depreciation and amortization, loss-carry forward provisions, Value-Added Tax exemptions, biofuel import and stamp duty relief, tax holidays</i>
In-kind subsidies	Non-monetary benefits that confer a benefit on the recipient <i>Example: Privileged or streamlined land access and permitting, publicly-funded research providing private benefit, corruption</i>
Cross-subsidies	Market transfer or price discrimination within the scope of one unit <i>Example: Electricity and irrigation use within a public utility</i>
Credit subsidies and government guarantees	Below-market interest loans, underwriting risk and loan guarantees, incentives promoting foreign investment <i>Example: Loss compensation, concessionary interest rates</i>
Hybrid subsidies	Instruments utilizing the tax system to lower the costs of private investment <i>Example: Tax-free bonds, tax increment financing</i>
Derivative subsidies	Subsidies to counter the distortions caused by other subsidies upstream, such as higher input prices for downstream manufacturers or consumers <i>Example: Compensatory or countervailing support, subsidy clusters</i>
Procurement	Preferential public purchasing, special financing arrangements <i>Example: Public procurement commitments seeking to support domestic producers</i>
Market price support (in the producer country)	Deficiency payments or artificial price support to cover the gap between target price for a good and actual market price <i>Example: Fuel blending mandates</i>

Source: Adapted by the author based on IISD: <http://www.iisd.org/gsi/subsidy-types>

Fiscal incentives occur at different stages in commodity supply chains, ranging from land access to production, downstream processing and manufacturing, and domestic and international demand-side measures such as market-price support or fuel blending mandates. At the production sale, land access fiscal incentives often come in the form of in-kind subsidies to producers, which allow for access rights, relaxed permitting, or reclassification of lands to enable commodity production. Land access incentives can also include grants and direct payments. In Indonesia, decentralization policies and intergovernmental fiscal

transfers function as a pass-through, giving district governments the means to distribute incentives to the private sector, rather than central government. Fiscal incentives that support the financing of investments in production come in the form of credit subsidies, government guarantees and tax concessions. As shown below in the case studies, most production incentives come in the form of grants, direct payments, credit subsidies and government guarantees. In Ecuador, though most fiscal incentives were developed with the intention to increase productivity and yields, the opposite has occurred. Increases in production

have come from expansion, while overall productivity generally declined. Similarly in Indonesia, it appears that while accounting for a significant portion of public spending on agricultural production, fertilizer subsidies have had a negative effect on agriculture sector growth. Downstream sector development largely takes the form of tax concessions, often to support investments in production facilities and to ease foreign investment rules.

B. Why REDD+ is an entry point to rethink fiscal incentives for agricultural commodities

The Warsaw Framework for REDD+ encourages governments and others to take action to reduce the drivers of deforestation and forest degradation, and reaffirms the importance of addressing these pressures in the context of the development and implementation of REDD+ national strategies and action plans by REDD+ countries, depending on their national circumstances.¹³

Based on an initial review of subsidies to beef and soy in Brazil, and timber and palm oil in Indonesia, it is clear that domestic subsidies causing deforestation vastly outweighs the international aid seeking to prevent it. Brazil and Indonesia combined provided over US\$40 billion in subsidies to the palm oil, timber, soy, beef and biofuels sectors between 2009 and 2012, which is 126 times more than the US\$346 million they have received through REDD+.¹⁴ While it is difficult to quantify the impact of these subsidies as a percentage of forest cover change, the findings help illustrate that REDD+ readiness payments will not deliver the intended outcomes unless parallel efforts focus on bringing coherence to fiscal incentive frameworks.

The review of 43 country REDD+ readiness plans finds that very few countries, if any, call out the need to review and reform existing fiscal incentives as part of their REDD+ readiness activities.^{15,16} The provision of REDD+ finance has also not been explicitly linked to addressing perverse fiscal incentives.

While the political economy of reversing perverse incentives for unsustainable land use requires careful consideration of how to minimize impacts on rural economies and communities, countries can increasingly find willing private sector partners interested in finding solutions to more sustainable land use. Growing pressure from brand manufacturers and consumers is putting pressure on producers of agricultural raw materials to demonstrate sustainability through standards compliance, adherence to national regulations, and reduced greenhouse gas emissions. The Consumer Goods Forum, comprised of more than

400 retail and brand manufacturers globally with total combined sales of €2.5 trillion, seeks to achieve its goal of zero net deforestation by 2020 by working in partnership with governments and NGOs to address challenges in the sourcing of such commodities as palm oil, soya, beef, and paper and board.¹⁷ Catalyzed by this private sector commitment, the Tropical Forest Alliance 2020 formed as a public-private partnership with the governments of Indonesia, Liberia, the Netherlands, Norway, United Kingdom and United States and numerous NGOs seeking to work with private sector actors to address deforestation pressures in four key commodity value chains of palm oil, soy, pulp and paper and beef. These platforms are emblematic of the public-private partnerships that are possible to address the interface between agriculture and forests.

Supply chain sustainability and zero net deforestation commitment success depend on getting the enabling environment right - and this is the crucial domain of REDD+ governments. REDD+ countries will need to define, based on their own national circumstances, how domestic policies and financial incentives can guide and promote private sector investment in land use and production. Public policy and related fiscal policy and incentives must seek coherence across sectors, in order to overcome inherent conflicts between sectors and competing land uses, and to send the right signals.

Importantly, fiscal incentives supporting agricultural production can be important levers to promote sustainable land use, if they are conceptualized and designed to do so. **This brief explores opportunities for REDD+ countries to do this, and provides a starting point for considering how to reform perverse incentives to safeguard forests.** While fiscal incentives are only one part REDD+ implementation, they have not received enough attention given their impact on decisions to unsustainably use forests. Two case studies of fiscal incentives promoting palm oil production in Ecuador and Indonesia, which were completed in the first phase of this research, are explored. This is followed by exploration of success stories in Brazil and India, along with other examples of fiscal policy reform and reversal of perverse incentives in the land use sector. These examples form the basis for a discussion of key lessons learned and knowledge gaps, and recommendations for pathways forward for countries to create stronger coherence in their fiscal policies and incentives across multiple government objectives. Lastly, a decision tree for finding complementarity between fiscal incentives for agricultural commodity production and REDD+ is provided, to help guide countries in their assessment of options to redesign or revise fiscal incentives. While the focus is on fiscal incentives for agri-

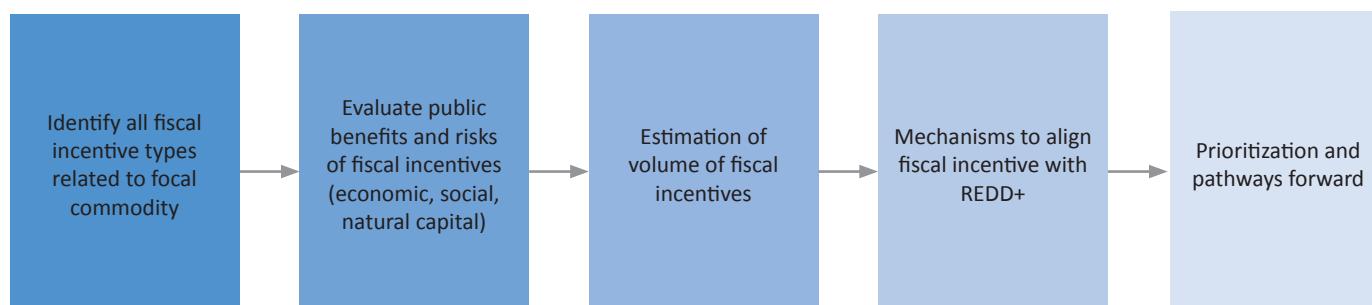
cultural commodities, the decision tree can also be applied to other drivers of deforestation and forest degradation.

II. Case studies

Two case studies were completed as the first phase of this research to explore fiscal incentives promoting palm oil

production in Ecuador¹⁸ and Indonesia¹⁹ in order to better understand what current fiscal policies and instruments exist that influence oil palm production in these two countries, the impacts of these incentives on forests, and what the options the governments have to create better compatibility between oil palm production and REDD+. Figure 1 provides the analytical framework that both country assessments followed to complete the analyses.

Figure 1: Analytical framework: Bringing fiscal incentives for agricultural commodities into compatibility with REDD+



Below are condensed summaries of these two stand-alone reports.

A. Ecuador

Country and commodity context:

Deforestation and changes in land use as part of Ecuador's expanding agricultural frontier has led to a 47 per cent increase of GHG emissions from the agriculture and forest sector between 1990 and 2010.²⁰ During roughly the same period, 99.4 per cent of the deforested areas were transformed into agricultural areas, consisting mostly of industrial monocultures and livestock, and less than 0.6 per cent for infrastructure and other uses.²¹ Palm oil is a primary contributor to deforestation, often occurring in territories with previously existing primary tropical forests. Almost half of all plantations are concentrated in the provinces of Esmeraldas, with smaller amounts in Santo Domingo, and Los Ríos and other provinces. The amount of land area under palm cultivation has increased by 77.7 per cent between 2000 and 2013, and with the majority of palm trees being so young, only 14 per cent of plantations are in full production. Exports of palm oil increased by 30 per cent between 2008 and 2013.

Types of fiscal incentives and where in the supply chain:

- The analysis identified that Ecuador has implemented 27 tax and financial incentives (grants, subsidies, tax concessions, preferential lending rates, among others)

directly or indirectly related to palm oil production in the agriculture sector, without considering the effects they can have on deforestation, degradation or conservation of carbon stocks.

- Most of the incentives are weighted toward to the supply side (producer) rather than demand-side. The incentives are focused on reducing production costs and few are geared towards crop intensification and improving productivity, and none set as a condition best practices in production in order to access incentives.
- While most fiscal incentives developed so far been created with the objective of increasing productivity and yields, increases in production came from expansion, while overall productivity generally declined.
- Subsidized credit is the primary form of fiscal incentives to palm oil production, and is estimated to be 0.034% per cent of Ecuador's GDP in 2013.
- In 2013, the allocation of expenditures on palm oil by the Instituto Nacional Autónomo de Investigaciones Agropecuarias was 0.12 per cent of expenditure in the agricultural sector, primarily for improving palm seed genetics for productivity and disease resistance, plus controlling the 'bud rot,' which has recently afflicted palm trees. Incentives are concentrated on palm cultivation and marginally supports value-added processing such as extraction or processing of products derived from the palm. Urea subsidies can be

accessed by small- and medium-sized producers.

- Financing for palm oil production is primarily from private sources, and the public Banco Nacional de Fomento and Corporación Financiera Nacional only supplied 8.9 per cent of the financing needs of the industry in 2012.

Prioritization of incentives to focus on:

Of the 27 identified economic and fiscal incentives, seven have a high probability of having a high negative impact on deforestation and are related to subsidies or tax exemptions for fertilizers/pesticides and lines of public financing supporting access to or acquisition of rural land. However, nine incentives could support REDD+, including the ones targeting research on genetic improvements of seeds (if it is coupled with measures to reduce expansion into forests), tax expenditures to promote the improvement of productivity and use of cleaner technologies or disincentives for owners of large tracts of rural land, and public credit supporting agro-forestry. The remaining 40 per cent of incentives have medium- or low-impact in relation to the objectives of REDD+. Prioritization of fiscal incentives to target for reform was based on identifying those that could be easily modified through ministerial agreements or resolutions.

Recommendations for complementary with REDD+ actions and measures:

- Link fiscal incentives such as subsidized credit, tax concessions and credit guarantees to certification and standards such as RSPO to promote the adoption of best production practices.
- Fund technological innovation in the agricultural sector and especially in the oil palm sector to contribute to improving the productivity of small and medium farmers.
- Create differentiated rural property tax exemption for conversion of crops to agroforestry, to occur at municipal levels.
- Prioritize, allocate and guarantee finance to support objectives aligned with REDD+ in the budget guidelines for state budget programmes, through a ministerial agreement.
- Establish a differentiated tariff in the Comunidad Andina de Naciones to import palm oil certified as sustainable.
- Include an indicator related to REDD+ (specifically for deforestation and associated emissions) in the Territorial Equity Model within the Index of Goal Compliance under the National and sub-national Development

Plans, so that transfers from the central government increase if territorial projects are aligned with REDD+ objectives.

B. Indonesia

Country and commodity context:

Indonesia accounts for 53 per cent of the global production of palm oil, and China and India buy 38.7 per cent of Indonesia's palm oil exports. Palm oil contributes 4.5 per cent to Indonesia's GDP. The recently unveiled National Medium Term Development Plan (RPJMN) of 2015-2019 seeks national economic growth acceleration through increased production of value added products, and competitiveness of agricultural commodities, including oil palm. The RPJMN also identifies forestry/peatlands and agriculture as two of the five key sectors that are key to meeting Indonesia's GHG emission reduction target of 26 per cent by 2020. These two sectors supply the majority of Indonesia's overall GHG emissions. Indonesia's REDD+ National Strategy of 2012 identifies the need to address perverse incentives and promote a shift in commodity production, including better alignment of incentive systems to support REDD+ outcomes. Meanwhile, domestic demand for palm oil for biofuel is expected to increase considerably, due to the recent decision to direct some of the savings from rescinded fossil fuel subsidies towards biofuels, and a fairly aggressive national biofuel plan.

Types of fiscal incentives and where in the supply chain:

- *Land access* fiscal incentives include grants, direct payments or in-kind subsidies to producers allowing for access rights, relaxed permitting, reclassification of lands to enable palm oil development. Land access incentives also include decentralisation policies and intergovernmental fiscal transfers.
- *Financing Investment in production* includes credit subsidies, government guarantees and tax concessions, such as debt restructuring, tax breaks, preferential lending rates, 'production forest for conversion' timber sales, and investments in biofuel production.
- *Crude palm oil production* incentives are mostly grants, direct payments, credit subsidies and government guarantees, comprised of the fertiliser subsidy, interest rate subsidies for developing palm oil seeds, and a range of incentives available to tied smallholder schemes.
- *Incentives specific to biofuels* include market price support, regulatory and tax concessions, and grants and direct support. These include a biofuel import tariff, Special Biofuel Zones, investment income tax

deductions, VAT exemption for domestic biofuel production, state oil company losses, biodiesel production subsidies, biofuel investment incentives, subsidized fuel policy and the biofuel blending mandate.

- *Downstream sector development* includes differential export taxes on crude and refined palm oil products, cooking oil subsidies, subsidized infrastructure for processing, storage and market access, and a tax holiday facility. These are more recent.
- *Domestic and international demand-side measures* also play a role, including the EU fuel-blending mandate for biofuels, EU restrictions on palm oil imports for food and biodiesel, and India's import duties on refined palm oil.

Prioritization of incentives to focus on:

The prioritization of which fiscal incentives to reform to create better compatibility between oil palm production and REDD+ hinges upon:

- Strategic assessment of points of leverage for the central government, how compliance and enforcement with existing and new laws can be enabled.
- Identifying how to base access to credit and tax incentives on improved oil palm production practices, spatially targeting fiscal incentives and identifying which incentives have greatest impacts on forests.
- Identifying those fiscal incentives that are easiest to reform and those that improve budget efficiency.

An initial framing of public benefits and risks identifies that:

- Given the high profitability of palm oil production, as compared to other segments of the value chain, fiscal incentives promoting production are unjustified. New land allocations for palm oil expansion may not be necessary.
- Government has not appropriately captured economic rents from oil palm plantations, and more analysis is needed to understand how timber and palm oil revenues can be redirected to support the

- There exists significant public risk through corruption and illegality.

Recommendations for complementary with REDD+ actions and measures:

- High-level political commitment is essential to more clearly define how to operationalize the REDD+ compatible elements within the 2015-2019 National Mid-Term Development Plan.
- The intergovernmental fiscal transfer system should be reviewed to identify the most efficient and equitable option to incentivize increased productivity and spare land. Options include determining allocations based on productivity, not land area, or retaining the land area basis, but amending it to better reflect levels of ecosystem service provision.
- Bring coherence to management of forest land outside the forest estate and high-carbon stock areas management, but consider using spatial planning and regulatory tools rather than new fiscal incentives for plantation estates.
- Raise smallholder yields and livelihoods by linking smallholder access to fiscal incentives and government-facilitated land tenure clarification, giving less emphasis on subsidized inputs and more support to smallholders to access global and domestic value chains. Consider concessional loans made available to certified producers. Identify options to better target independent smallholders, which often have unclear land tenure and exert pressures on the forest estate through forest clearance. Ensure that investments in yield increases are accompanied by spatial constraints on expansion, to increase production/yields and not increase crop expansion as farmers experience better performance.
- Improve land management performance in order to access government incentives by limiting access to credit subsidies and government guarantees through state banks, and tax concessions, on the basis of performance measures.

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