Unclassified **DAFFE/MAI/EG3(96)14**

Organisation for Economic Co-operation and Development
Organisation de Coopération et de Développement Economiques

6 September 1996

Negotiating Group on the Multilateral Agreement on Investment (MAI)

Expert Group No.3 on “Special Topics”

INVESTMENT INCENTIVES IN EXISTING INTERNATIONAL AGREEMENTS

(Note by the Secretariat)

This document was issued during the MAI negotiations which took place between 1995 and 1998.
All available documentation can be found on the OECD website: www.oecd.org/daf/investment

INVESTMENT INCENTIVES IN EXISTING INTERNATIONAL AGREEMENTS

I. INTRODUCTION

1. The May 1996 meeting of Expert Group 3 discussed the applicability of National Treatment/MFN and transparency obligations of the MAI in the area of investment incentives (IIs). A large majority of delegations felt that IIs, should, in principle, be subject to these obligations. The question also arose as to whether any additional disciplines on incentives could be contemplated, given those already found in other international agreements, notably the Uruguay Round agreements and the Treaty of Rome as well as in other OECD arrangements.

2. In order to ascertain the extent to which additional disciplines on investment incentives might be developed under MAI, with a view to building it into future work to be undertaken after the agreement's implementation, it was felt that a clear understanding of the nature and scope of existing international agreements is required. Accordingly, the Secretariat was asked to provide an overview of the disciplines on incentives contained in these agreements for reference purposes. The remainder of this note contains such an overview.

II. EXISTING DISCIPLINES ON INCENTIVES

3. Although investment *per se* was not included specifically in the Uruguay Round (UR) agreements, those agreements do have important investment dimensions, some of which relate to incentives or subsidies. Some of those agreements also discipline the use of subsidies, including those pertaining to investment. This is true in the cases of the GATT 1994, the WTO Agreement on Subsidies and Countervailing Measures, the Agreement on Agriculture, the Agreement on Trade-Related Investment Measures (TRIMs) and the General Agreement on Trade in Services (GATS). It is noteworthy that the Treaty of Rome also generally deals with subsidies.

Uruguay Round Agreements[1]

GATT 1994

4. Article I of GATT 1994 requires that any advantage relating to "customs duties and charges of any kind imposed on or in connection with importation or exportation" from or to a WTO Member be accorded on an unconditional MFN basis to like goods imported from or exported to other Members. It follows that the MFN obligation covers subsidies in the form of exemptions from or remissions of such

[1] There is also a considerable amount of jurisprudence associated with these Agreements, especially the GATT, which is not discussed in this note.

duties and charges. The MFN obligation also applies to all domestic (as distinct from border) measures referred to in paragraphs 2 and 4 of Article III (namely internal taxes and other charges, as well as laws, regulations and requirements affecting the internal sale, purchase, transportation, distribution or use of goods from a WTO Member), subject to the "carve-out" specified in Article III.8 for certain measures, including the payment of subsidies exclusively to domestic producers. Thus, the scope of the MFN obligation as far as subsidies are concerned depends on the nature of the subsidy in question.

5. Article III of GATT 1994 requires that all goods imported from another Member be accorded 0national treatment with respect to internal taxes and charges, and laws, regulations and requirements affecting the internal sale, purchase, transportation, distribution or use of such goods. On the other hand, Article III.8(b) of GATT 1994 provides that this national treatment requirement does not prevent the payment of subsidies exclusively to national producers. The scope of this carve-out is limited, however, in that a Member may not make the receipt of a subsidy contingent upon the purchase by the recipient of domestic over imported goods. The concept of national treatment in Article III thus involves non-discrimination on the basis of the origin of goods (rather than the nationality of investors).

6. Article XVI of GATT 1994 requires notification to the WTO of subsidies that operate directly or indirectly to increase exports or decrease imports of goods. This notification is made in conjunction with the notification to be made pursuant to Article 25 of the WTO Agreement on Subsidies and Countervailing Measures. Article XVI also contains provisions disciplining the use of export subsidies for goods. The continued significance of these disciplines in light of the more detailed rules in the Subsidies Agreement is not entirely clear.

GATT/WTO Agreement on Subsidies and Countervailing Measures

7. The WTO Subsidies Agreement regulates the provision by WTO Members of subsidies with respect to goods and the actions that can be taken against such subsidies by a WTO Member.

8. Article 1 of the Agreement defines a subsidy as a financial contribution by a Member of the WTO or by any public body within the territory of a Member which confers a benefit. Such contributions involve direct transfers of funds, actual (e.g., grants, loans, equity) or potential (e.g., loan guarantees), revenue otherwise due but which is forgone (e.g., tax incentives), provision of goods or services other than general infrastructure, purchases of goods and price support.

9. Those subsidies contingent upon export performance or local content are prohibited (except where they are covered by the Agreement on Agriculture); that is, they are "red light" subsidies.

10. Subsidies which are aimed at specific firms, industries or regions in the territory of the granting authority may be "actionable" ("yellow light") if they have "adverse effects" on the interests of another WTO Member relating to production or trade in goods. (There is no need to prove that prohibited subsidies have any such adverse effects.) As specified in Article 5 of the Agreement, adverse effects may involve injury to the domestic industry of another Member; nullification or impairment of benefits under GATT 1994; or "serious prejudice" to the interests of another Member.

11. Given the difficulty in proving adverse trade effects, under Article 6 of the Agreement certain subsidies are presumed to result in serious prejudice. In accordance with Article 6.1, serious prejudice is deemed to exist where subsidisation (measured in this context in terms of the cost to the government) exceeds 5 per cent of the value of the recipient firm's product in the most recent 12-month period for which sales data are available. In start-up situations, serious prejudice is also deemed to exist if the

overall rate of subsidisation exceeds 15 per cent of the total funds invested. Subsidies which involve direct forgiveness of debt or covers operating losses other than certain one-time measures also give rise to a presumption of serious prejudice. Under Article 6.2, however, the presumption of serious prejudice can be rebutted if the subsidising Member demonstrates that the subsidy in question has not resulted in any of the effects enumerated in 6.3. These effects involve the displacement or impediment of imports of a like product of another Member into the market of the subsidising Member, displacement or impediment of exports of a like product of another Member from a third country market, significant price undercutting by the subsidised product and an increase in the subsidised product's share of the world market.

12. Non-actionable ("green light") subsidies are those which either do not involve elements of specificity (as defined in Article 2) or, even if they do involve specificity, are (a) directed at research an pre-competitive product development; (b) for disadvantaged regions; or (c) to promote the adaptation of existing facilities to new environmental requirements[2]. Even a non-actionable subsidy may be challenged, however, if a Member has grounds for believing that the measure has had serious adverse effects on its domestic industry and is such as to cause damage that would be difficult to repair.

13. It is noteworthy that the assessment of whether or not a subsidy has adverse effects on the interests of another Member is on an *ex post facto* basis.

14. Another noteworthy feature of the WTO Subsidies Agreement is its notification (or transparency) mechanism. Member countries are obliged to notify the WTO of all existing subsidies as defined in Article 1, which is specific within the meaning of Article 2, whether prohibited, actionable or non-actionable. (Members were also required to notify the WTO of any prohibited subsidies in existence when the Agreement was signed.) In accordance with Article 25, this notification must be sufficient to enable other Members to understand how the subsidy operates and to evaluate its effects on international trade in goods. It should include budgetary information, but not confidential business information.

15. As regards remedial action against prohibited and actionable subsidies, the Agreement provides for consultations initially between the subsidising country and countries affected and, in the event of no mutually agreed solution between the parties, reference of the matter to the Dispute Settlement Body (DSB). If the subsidy is found to be prohibited or to be causing adverse effects to the interests of another Member, and the subsidy is not withdrawn or modified in order to remove its adverse effects, complaining countries are then authorised to implement appropriate countermeasures, presumably in the form of the suspension of WTO concessions. Such countermeasures must not be disproportionate, or, in the case of an actionable subsidy, must be commensurate with the degree and nature of its adverse effects.

16. In the alternative, where subsidies are causing or threatening to cause material injury to a domestic industry, the importing Member may impose a countervailing duty on imports of that product not in excess of the amount of subsidisation. In contrast to the approach taken when determining whether there is a presumption of serious prejudice due to *ad valorem* subsidisation in excess of 5 per cent, the magnitude of any countervailing measure may be related to the benefit of the subsidy to the recipient rather than the cost to the government providing the subsidy. Guidelines for the calculation of benefits to the recipient are found in Article 14 of the Agreement. Countervailing action can only be taken if injury to domestic industry is caused by subsidised imports. It cannot be taken against subsidies causing injury

[2] Subsidies for R&D are "non-actionable" provided, *inter alia*, that the amount of assistance actually granted does not exceed 75 per cent of the costs of industrial research or 50 per cent of the costs of pre-competitive development activity.

with respect to sales in the export market of the complainant (in either the subsidising country or a third country), rather than to sales in its own market.

17. In the case of subsidised imports, it is noteworthy that the procedures related to the imposition of countermeasures and countervailing duties can be followed in parallel. Only one form of remedy can ultimately be imposed, however.

The Agreement on Agriculture

18. The disciplines on subsidies agreed for the agriculture sector are worth mentioning because they are quite different from those found in the Subsidies Agreement in two important respects. First, while it has established rules concerning the acceptability of various subsidisation practices -- "green box" measures are acceptable, "blue box" measures are not -- it also involves commitments to reduce aggregate levels of support. Second, restraints on the use of remedies against subsidies formed part of the overall package of reduced support. Hence, subsidy disciplines are designed in accordance with commitments to a progressive reduction in levels of subsidisation. The question arises as to whether a similar step-by-step approach might be appropriate in the case of investment subsidies.

Agreement on Trade-Related Investment Measures (TRIMs)

19. Like the GATT, the TRIMs Agreement applies only to investment measures related to <u>trade in goods</u>. It prohibits contracting parties from applying any TRIM that is inconsistent with Articles III (National Treatment) and XI (General Elimination of Quantitative Restrictions) of the GATT.

20. The illustrative list of prohibited TRIMs contains three categories of measures: i) subsidies/incentives that are conditional upon local content requirements; ii) the conditioning of a firm's ability to import on its export performance; and iii) export restrictions. Prohibited TRIMs thus include not only mandatory measures but also those "with which compliance is necessary to obtain an advantage". Although the term "advantage" is not defined explicitly in the Agreement, it is understood to encompass all types of advantages (including those involving tax measures) not just public financial contributions. Therefore, it would appear that the definition of subsidy/incentive is potentially broader than the one used in the Subsidies Agreement.

21. The TRIMs Agreement has several limitations in addition to the fact that it applies only to measures affecting trade in goods[3]. The illustrative list of prohibited measures contains only a subset of TRIMs. Unlike the NAFTA (Article 1106), it falls far short of a comprehensive ban on performance requirements[4]. Nor does it impose any discipline on investment incentives to which performance requirements are often closely related.

General Agreement on Trade in Services (GATS)

22. In contrast to the GATT and TRIMs Agreement, both of which deal with trade in goods, the GATS applies to <u>trade in services</u>. The concept of national treatment in the GATS is of particular

---

[3] See OECD (1996a) and OECD (1996d).

[4] The NAFTA is not entirely comprehensive.

relevance because it involves non-discrimination on the basis of the origin not only of the services but of the service suppliers. Hence, FDI is covered by the GATS insofar as it involves a commercial presence for the delivery of services.

23. While subsidies are not explicitly excluded from the GATS, the Agreement does not contain any particular substantive disciplines in this regard. Article XV of the Agreement merely called for "negotiations with a view to developing the necessary multilateral disciplines to avoid trade-distortive effects." For the purpose of such negotiations, which are currently under way, Article XV also envisages that Members exchange information concerning all subsidies related to trade in services that they provide to their domestic service suppliers. This approach was adopted partly as a consequence of the existence of such disciplines already arising naturally from the conceptual structure and other aspects of the Agreement. More specifically, these disciplines arose as a result of the MFN obligation (Article II) and national treatment undertaking in the schedules of specific commitments (Article XVII) as well as the provisions dealing with monopolies and exclusive service providers (Article VII).

24. While the general MFN obligation exerts less discipline on subsidies than the NT obligation, it can be important in a number of respects. It ensures non-discrimination in the absence of a national producer. Furthermore, where there are national producers, and no reservation has been taken concerning NT, the MFN obligation discourages subsidies favouring any particular foreign service supplier(s) as under certain investment regimes because a subsidy accorded to one such supplier must be extended to all. The budgetary cost of doing so would tend to inhibit the use of subsidies.

25. Insofar as Members make specific commitments regarding the NT obligation for certain sectors as prescribed in Article XVII without reservation, they must grant national treatment with regard to all measures, including subsidies. A certain measure, such as a subsidy, can be exempted from national treatment through the inscription of a reservation in the country's schedule.

26. Under Article VII, Members are also required to ensure that public and private monopoly service suppliers do not vitiate the MFN obligation or undermine any specific commitments, not only in the sectors within their monopoly powers, but also outside. The purpose of this provision is to prevent cross-subsidisation and possibly dumping across activities and sectors within a country.

27. The absence of any specific disciplines on subsidies in the GATS is also partly explained by the difficulties encountered in defining, identifying and measuring subsidies as well as in evaluating their effects[5]. These difficulties are especially acute because regulatory forms of subsidisation tend to be more pervasive in the provision of services than goods, the lack of adequate statistics, including an agreed and sufficiently detailed nomenclature of services, as well as problems in defining unit prices for output of comparable quality for certain services and the elusiveness of a workable concept of "likeness" among services.

Energy Charter Treaty (ECT)

28. According to paragraph (7) of Article 10 (Promotion, Protection and Treatment of Investments) of the ECT, measures related to established investment, including incentives, would appear to be subject to the obligation of national treatment. In accordance with 10(8), however, this obligation does not currently cover grants or other financial assistance for energy technology research and development. It is

[5] Some of the main difficulties are discussed in Annexes 1 and 2.

also noteworthy that Article 10(3) imposes a best-efforts obligation to apply national treatment to the establishment of investment, which is the subject of an ongoing second-phase treaty negotiation. In addition, under Article 22, the national treatment obligation implicitly applies to those activities of state and privileged enterprises that may be tantamount to subsidisation.

Treaty of Rome

29. The Treaty of Rome is the main regional integration agreement that imposes disciplines on state aids to service-related activities as well as goods-related activities[6]. While the Treaty does not deal with investment incentives *per se*, it covers all incentives insofar as they constitute an actual or potential distortion to competition among domestically- and foreign-owned firms operating within the European Union[7]. Subsidies are thus regulated within the broad context of competition policy. For this reason, and because of the extensive powers given to the Commission in controlling the use of such subsidies, the Treaty of Rome is the most comprehensive of existing international agreements.

30. The main disciplines on subsidies are found in Articles 92 and 93 of the Treaty[8]. Article 92 defines in broad terms those subsidies that are prohibited. According to paragraph 1, "Save as otherwise provided in this Treaty, any state aid granted by a Member State or through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, insofar as it affects trade between Member States, be incompatible with the common market." The Treaty of Rome thus provides for an assessment of the admissibility of subsidies not just on an *ex post facto* basis, but also on an *ex ante* basis.

31. Article 93 provides for the <u>advance</u> notification by member states of all types of subsidy and for review by the Commission of these subsidies in order to determine whether they are incompatible with the common market. In cases where subsidies are found to contravene Article 92, the Commission can require their abolition, modification, and even repayment. The combination of advance notification of subsidies by member states and the assessment by the Commission of their likely effects on competition facilitates early action to ensure that subsidies contravening Article 92 are not actually implemented.

OECD Agreements

Export Credit Arrangement

32. The Arrangement on Guidelines for Officially Supported Export Credits (the Arrangement) is a "gentlemen's agreement", which provides the institutional framework for an orderly export credit market

---

6 Among the other regional integration agreements providing for control of state aids are the treaties establishing the European Community Coal and Steel Community and the European Atomic Energy Community, various Europe Agreements, Association Protocols and the EU-Turkey Customs Agreement.

7 These disciplines also apply to firms operating outside the Union.

8 The EEA Agreement is also noteworthy, particularly Articles 61-64 and Annex XV, because it extends Article 92 to EFTA countries other than Switzerland.

involving official intervention[9]. Although not explicitly mentioned in the Arrangement, national treatment as far as exporting firms are concerned is a feature of those guidelines. The Arrangement therefore seeks to prevent an export credit race in which countries compete on the basis of who grants the most favourable financing terms or "subsidy" rather than on the basis of who provides the highest quality and the best service at a competitive price.

33. For the purpose of applying the Arrangement, the term "official support" means any support provided by or on behalf of governments in the field of export credits. Official support can take the form of direct financing from government institutions and financing bodies, refinancing, interest rate support, aid financing (credits and grants), export credit insurance provided directly or on behalf of governments, and guarantees issued by or on behalf of governments.

34. The Arrangement applies to all official support for exports of goods and/or services, or to financial leases, which have repayment terms of two years or more. This is regardless of whether the official support for export credits is given by means of direct credit, refinancing, interest rate support, guarantee or insurance. The Arrangement also applies to official support in the form of tied aid. Special Guidelines apply to certain sectors, e.g. ships, nuclear power plants and aircraft, while military equipment and agriculture products are currently excluded.

Agreement Respecting Normal Competitive Conditions in the Commercial Shipbuilding and Repair Industry

35. This agreement is intended to establish, in a legally binding manner, a 'level playing field' for competition in the shipbuilding industry of the OECD countries and Korea. It does so through three basic elements:

- a subsidies discipline, barring direct and indirect subsidies as well as official regulations and practices in favour of the shipbuilding industry; specific provisions exist for research and development assistance, assistance to workers who lose their employment, and for non-concessional publicly supported credits to foreign and domestic buyers of ships (i.e. export credits and home credits);

- an injurious pricing instrument making anti-dumping applicable to shipbuilding for the first time; since ships are not imported for sale, the GATT 1994 Anti-Dumping Code, which relies on anti-dumping duties at the border, has not been applicable to trade in ships; and

- binding dispute settlement before an international Panel (except for export credits), in case of violation of the subsidy discipline and/or the injurious pricing instrument, backed up by remedies and sanctions.

[9] The Arrangement is not formally an OECD Act in the legal sense. It is a "Gentlemen's Agreement". Additionall "Participants to the Arrangement" is not an OECD body, although it does operate within the framework of the Organisation a Participants use the OECD facilities and have the OECD Secretariat.

OECD Instrument on Investment Incentives and Disincentives

36. Unlike the Uruguay Round Agreements, which encompass investment incentives only insofar as they affect international trade in goods and services, the OECD instrument is aimed specifically at incentives that affect FDI flows. However, the instrument is designed merely to enhance transparency and consultations concerning Member countries' use of incentives. While increased transparency and consultations may contribute to "peer pressure" on Member countries to abolish or modify incentives, no attempt is made to exert any discipline on countries' use of incentives by means of countermeasures. One outcome has been the inclusion of the subject of investment incentives in the OECD country FDI reviews and occasional periodic publications on horizontal investment incentive policies in OECD Member countries. It is not clear whether these endeavours reveal all FDI incentives.

Other OECD Arrangements

37. In a similar fashion, other OECD Committees also attempt to enhance the transparency of government assistance without necessarily imposing any binding discipline.

38. More specifically, the Industry Committee has been attempting to shed light on the nature and magnitudes of subsidies provided by national and some sub-national governments to the manufacturing sector. The latest report on this work is found in OECD (1996b).

39. Furthermore, the Committee on Fiscal Affairs has prepared periodic summary reports of country practices concerning the reporting of information on tax expenditures. The most recent report is OECD (1996c).

40. Information on agricultural subsidies are collected by the Agriculture Directorate for purposes of aggregation with other measures in order to compute overall indicators of producer and consumer subsidy equivalents (PSEs and CSEs). Estimates of these indicators are published periodically.

41. Finally, the Economics Department also has a project, namely Indicators of Government Assistance (IGAs), which entails the construction of summary and comparable indicators for five categories of government assistance, namely tariffs, non-tariff border measures, subsidies, tax incentives and the subsidy element of government procurement practices.

ANNEX 1

DEFINITION AND MEASUREMENT OF INVESTMENT INCENTIVES

1. It is useful at the outset to consider definitions and classifications of investment subsidies, which vary across agreements, as well as the main problems encountered in measuring such subsidies. Problems concerning the definition and measurement of subsidies shed light on the extent to which incentives might be subjected to MAI disciplines, especially transparency. This and Annex 2 highlight some technical issues encountered in the context of OECD analytical work on incentives/subsidies.

A. Definition of Investment Incentives/Subsidies

2. In general, subsidies can be classified according to whether they are i) direct or indirect, ii) financial or implicit, iii) general or sector/industry/firm-specific, iv) unconditional or contingent, v) incremental or non-incremental.

i) Direct vs. indirect

3. A direct investment subsidy is one which is received directly by the firm undertaking the investment. It may be specific (that is, a fixed amount per unit of investment) or *ad valorem* (that is, a fixed amount per unit of value of the investment).

4. By contrast, an indirect subsidy is one received indirectly by the firm undertaking the investment. It may be in the form of a higher market price for its output or a lower market price for inputs, including capital, which in turn result from subsidies given to other firms and persons in the economy. Measuring the value of such indirect subsidies to the firm or industry in question is usually very difficult because it requires the determination of the changes in output and input prices attributable to subsidies elsewhere in the economy.

ii) Financial vs. implicit

5. A financial (or explicit) subsidy is one which is paid as a transfer to an investor in the form of a budgetary expenditure. The payment may be actual, as in the case of grants, soft loans, or equity infusion, or potential as in the case of loan guarantees.

6. Financial subsidies include relief from taxes in the form of tax expenditures, which in some countries are reported in a similar fashion to budgetary expenditures. Among the main tax expenditures pertaining to investment are reduced tax rates on income from certain investments, accelerated depreciation, and investment tax credits.

7. Information on the amounts of budgetary expenditures is in most instances more readily available than information on the amounts of tax expenditures because of methodological difficulties associated with measuring, if not defining, tax expenditures.

8. An implicit subsidy is one which is given in-kind without a user charge sufficient to recover its true value, or the result of regulatory actions that alter market prices or access. The value of such in-kind and regulatory subsidies must be imputed. The reporting of this category of subsidies is problematic because, the

amounts are not routinely reported in government documents. This absence of reporting of such subsidies is not surprising given the serious problems encountered in attaching a value to them.

iii) General vs. sector/industry/firm-specific

9. Investment subsidies may be generally available to all firms or apply only to a particular sector, industry, group of firms, or firm, in which case they are classified as sector-specific, industry-specific or firm-specific. The latter tend to distort economic behaviour more than do general investment subsidies[10]. It is noteworthy that such "specificity" is one of the main criteria for determining whether a subsidy is actionable under the WTO Subsidies Agreement. However, an investment incentive that is nominally general may in fact have industry-specific impacts because it favours disproportionately capital-intensive firms and industries.

iv) Unconditional vs. contingent

10. Investment subsidies may be unconditional or contingent. An unconditional investment subsidy does not involve any requirements other than the undertaking of the specified type of investment. A contingent subsidy involves additional unrelated requirements such as local content or employment rules or performance requirements regarding exports, for example. Indeed, such rules and requirements may be a *quid pro quo* for extending the subsidies to FDI.

v) Incremental vs. non-incremental

12. The total amount of the subsidy may be capped at some level, in which case it is "non-incremental". The incentive effects of incremental subsidies tend to be much greater than those of non-incremental subsidies.

B. Measurement of Investment Incentives/Subsidies

13. Effective disciplines on those measures defined as investment subsidies requires reasonably accurate estimation of their values. The total value of a subsidy can be measured either as the cost of the subsidy to the government or its total benefit to the recipient. The value of a subsidy can also be expressed in average or marginal terms. The magnitudes of these different measures can differ widely. The measurement of subsidies poses serious problems, particularly where subsidies other than cash grants are involved[11].

---

[10] A truly general "subsidy" has no effect whatsoever on economic behaviour within a country because there is no meaningful way in which all sectors of the economy can be subsidised. Hence, for subsidisation to exist, some sectors, industries or firms must be treated differently from others.

[11] Some of the main problems encountered in measuring some of the most common subsidies are outlined in Annex 2.

Cost to the government vs. benefit to the recipient

14. The cost of a subsidy to the government can be expressed in gross or net terms. The net cost to the government (NCG) is defined as the difference between the gross cost to the government of funds committed in a given year and the revenue (in the form of interest, dividends, guarantee fees and recoveries, etc. as well as any increase in the recipient's tax liabilities resulting from the subsidy) earned by the government in the same year. The net cost of a subsidy is obviously a more appropriate measure than its gross cost.

15. However, neither the net nor the gross cost to the government necessarily reflects the value of the subsidy to the recipient, and may not therefore constitute accurate indicators of the potential impact of the subsidy on the recipient's behaviour. This situation arises primarily in connection with financial subsidies in the form of soft loans and equity participation, which yield benefits in the future. The present value of these benefits to the recipient differ from the present value of the costs to the government, if the recipient's discount rate is not the same as the government's discount rate. (A discrepancy between the NCG of a subsidy and its value to recipients may also arise if the subsidies are channelled through intermediaries, which receive some of the benefit.)

16. Unfortunately, accurate measurement of the value of subsidies to recipients would require large amounts of additional information, including not only firms' and governments' discount rates but also on prevailing market conditions (e.g., private credit and loan rates, private insurance fees, private cost of equity capital and risk premia) to be used for reference purposes. It would also require methodologies that inevitably embody contentious assumptions and would thus produce controversial estimates. While the latest phase of the DSTI exercise has involved the collection of some data on prevailing market conditions, the detailed information necessary to measure the value of subsidies to recipients' is not readily available.

Ex ante vs. ex post facto measurement

17. Where subsidies are granted on a conditional or contingency basis, as in the case of loan guarantees, for example, or the benefits of the subsidy are deferred into the future, as in the case of accelerated depreciation for tax purposes, it is very difficult to measure the amount of the subsidy when it is initially granted. The amount ultimately paid depends on unknown future circumstances. As a consequence, the *ex post facto* amount of the subsidy may turn out to be substantially different from the *ex ante* amount announced initially by the granting agency.

Average vs. marginal subsidies

18. The average and marginal value of a subsidy can be conveniently expressed as a percentage of the value of the subsidised activity. The average value of the subsidy is its total value divided by the total value of the subsidised activity, while the marginal value of the subsidy is the increase in the total subsidy divided by the value of an increment in subsidised activity.

19. Average and marginal values of a subsidy can differ considerably. For example, the marginal value of a subsidy to a firm is zero if the total value of the subsidy for which it is eligible has reached some upper limit at which the amount of the subsidy is capped. This will be the case even though the average subsidy may be substantial. On the other hand, where subsidies are provided on an incremental basis, as in the case of U.S. incremental R&D tax credit, the marginal rate of subsidy may be considerably greater than the average rate.

20. A distinction between the marginal and average values of subsidies is important because the marginal values are usually thought to be more relevant to firms' investment decisions than their average

values. Indeed, governments often attempt to design their subsidies, including tax incentives, in such a way as to ensure that they stimulate the greatest amount of investment as a proportion of the total subsidy or revenue forgone.

C. Identification of Investment Incentives/Subsidies

21. Whether or not a particular subsidy can be classified as an "investment subsidy" is closely related to the identification of the ultimate beneficiary of the measure. Any type of subsidy (including one directly related to production or labour) may be regarded as an investment subsidy insofar as it increases the profitability of the subsidised investment so that the ultimate beneficiaries are the investors. Unfortunately, it is often very difficult in practice to determine the extent to which investors do in fact benefit from a particular subsidy and the magnitude of that benefit. This depends largely on prevailing conditions in product and factor markets.

ANNEX 2

PROBLEMS CONCERNING THE MEASUREMENT OF SUBSIDIES

1. Certain subsidy programmes, notably financial assistance to businesses involving soft loans or equity participation, pose the greatest challenge to the accurate and consistent measurement of industrial subsidies. The problems that arise in measuring the subsidy element of such programmes are in addition to those concerning gross versus net costs and marginal versus average rates of subsidy. Not surprisingly, the amounts of such subsidies are, by and large, not reported in government budget documents. The main problem encountered in measuring such subsidies involves the difficulty of determining the appropriate market price or interest rate for reference purposes.

2. Once the amount of the implicit subsidy is calculated, there is also the question of the form in which it is reported. Either it can be expressed in a form comparable to an interest rate; that is, the annual subsidy as a percentage of capital qualifying for the subsidy. Or the subsidy can be capitalised; that is, expressed as a present value over the lifetime of the loan or the equity infusion. The capitalised value is equivalent to a capital grant. Some of the more specific problems entailed in measuring some of the most common implicit subsidies are described below.

Low-interest loans

3. Industrial subsidies in the form of low-interest loans can be measured as an annual cash subsidy equivalent by calculating the difference between the actual rate of interest charged on the soft loan and the rate that would have had to be paid to private lenders, and then multiplying the amount of the loan by that difference between the two interest rates. While it would appear to be a relatively straightforward matter for governments to report information both on the amounts of such loans provided and on borrowers, it is often difficult to ascertain the appropriate interest rate that would have been charged by private lenders. The latter could range anywhere between the rate on triple-A bonds and that on low-grade ("junk") bonds. (The appropriate interest rate might even be higher than the "junk" bond rate.) Accurate estimation of the alternative (or reference) rate of interest would require an assessment of the risk characteristics of each borrower, which is generally not available.

Loan guarantees

4. A similar measurement problem arises in the case where, for a nominal fee, the government or one of its agencies provides a guarantee to a private lender that the interest and principal on a private loan will be repaid. Since the government assumes liability to repay the loan in the event that the borrower defaults, the lender need not charge a risk premium to compensate for the costs of default, which enables it to provide the loan at the risk-free interest rate. Quantification of the subsidy element of the loan would again require an assessment of the appropriate risk premium, therefore, which when multiplied by the amount of the guaranteed loan would give the value of the subsidy[12].

---

[12] This and other methodological and measurement problems concerning the subsidy element of loan guarantees are addressed by Mintz et al. (1984) "Determining the Subsidy Involved with Government Credit Programmes," Economic Council of Canada Discussion paper No. 256 and OECD (1993).

Conditional loans

5. Conditional loans are loans made by government for which repayment is forgiven under certain circumstances. In the case where the loan is made on terms that ensure that it is virtually certain that the loan will never be repaid, then it is equivalent to a cash grant, although it is unlikely to be reported as such in government accounts. The implicit subsidy embodied in a conditional loan therefore consists of two components: the "grant component" and the "loan component". In order to quantify the grant component, it is necessary to estimate the probability that the loan will not be repaid. This probability times the amount of the loan gives the grant component of the subsidy. The remaining amount of the loan is the loan component, which when multiplied by the difference between the interest rate charged on the loan and the applicable market rate gives the annual subsidy attached to the loan component. The capitalised value of annual subsidy is the total implicit subsidy. The latter divided by the amount of the conditional loan gives the total implicit rate of subsidy associated with the conditional loan.

Equity participation

6. When a government or its agency contributes to the equity of a firm, it does so on terms that tend to be more favourable than those which the firm could secure in the stock market. Unlike in the case of low-interest loans, however, the firm may be under no obligation either to repay the government for the infusion of equity or to pay dividends. Equity participation in a firm that is not expected to pay any dividends in the foreseeable future is pretty much equivalent to a cash grant, since the present value of the dividends would be very small. In a situation where the recipient firm's shares are traded on the stock market, then the market value of the shares given to the government in return for its equity participation can be readily ascertained. The difference between the amount of the equity participation and the market value of those shares constitutes a cash grant. Where reference market values of the recipient firm's shares do not exist, some estimate of the capitalised value of the firm's future dividend payments per share is required in order to measure the subsidy component of the equity participation. It is unlikely that such estimates could be obtained very easily.

Export financing subsidies

7. Assistance to finance exports commonly involve low-interest loans or export credit insurance, whose specific purpose is the encouragement of exports. The problems involved in measuring the implicit subsidy embodied in a low-interest loan are similar to those outlined above. In the case of export credit insurance, the measurement problems resemble those encountered in estimating the subsidy element of guaranteed loans. The key difficulty is that it is often hard to ascertain the extent to which the fee charged by the government for such insurance is less than the actual cost of bearing the risk, because there are few private insurers providing such protection, and therefore the point of reference.

General problem: discount rate used to estimate GGBE and NCG

8. Another major problem concerns the fact that the methods used to derive estimates of the government's gross budgetary expenditure (GGBE) and NCG associated with some programmes entail a high degree of arbitrariness, especially in the case of subsidy programmes involving financial instruments, such as loan guarantees and equity participation, and the estimation methods vary across countries. As mentioned earlier, estimation of the present value of the cost to the government (GGBE or NCG) of a subsidy requires an appropriate government discount rate. The question arises as to what that discount rate should be.

9. There are a number of possible discount rates that might be appropriate, including the short- or the long-term government borrowing rate, or, the weighted average of the before- and after-tax rates of return on private investment[13]. Interestingly, the OECD Industry Committee adopted the long-term government bond rate for discounting purposes in the most recent phase of its work.

---

13 Such a weighted average was suggested by Glenn Jenkins, 1980, "Discount Rates for Economic Appraisal of Public Sector Expenditure," Canadian Public Policy 6, 549-555.

REFERENCES

BRUCE, Neil, 1990, "Measuring Industrial Subsidies: Some Conceptual Issues," OECD Department of Economics and Statistics Working Paper No. 75.

OECD, 1993, "Annex 2: Indicators of Government Assistance Pertaining to Industrial Subsidies" [ECO/DIV(93)3/ANN2].

OECD, 1996a, "Investment and the Final Act of the Uruguay Round: A Preliminary Stocktaking" [COM/TD/DAFFE/IME(94)56/REV2].

OECD, 1996b, Public Support to Industry: Report by the Industry Committee to the Council at Ministerial Level [OCDE/GD(96)82].

OECD, 1996c, Tax Expenditures: Recent Experiences, Paris.

OECD, 1996d, Trade and Investment Interface" [TD/TC/WP(96)32].

UNCTAD, 1996, Incentives and Foreign Direct Investment, Geneva.