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After the flood: transparent and hybrid entities in Australian tax treaties after the MLI

Mark Brabazon SC*

Abstract

This article analyses the treatment of fiscally transparent entities (partnerships, trusts, check-the-box entities, etc) and their income under Australian tax treaties after the commencement of the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (Multilateral Instrument, or MLI). It identifies the operation of article 3 of the MLI, its relationship with the OECD Model tax treaty and unresolved issues under the transparent entity clause of those instruments, and its impact on each of Australia’s tax treaties. It also analyses each treaty that already deals with transparent entities including its current operation, changes under the MLI, and particular provisions that address some otherwise unresolved issues.

Key words: Tax treaties, fiscally transparent entities, hybrid entities, base erosion and profit shifting (BEPS), multilateral instrument (MLI), partnerships, trusts

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1. **INTRODUCTION**

Any recent consideration of international tax is dominated by the Organisation for Economic Co-operation and Development (OECD)/G20 base erosion and profit shifting (BEPS) project, and any consideration of the tax treaty landscape by the consequent multilateral instrument on base erosion and profit shifting (MLI). The BEPS project is a vast endeavour, drawing together and coordinating previously disparate areas of work. Its initial report concluded that BEPS was a serious problem for tax revenue, sovereignty and fairness in all countries and should be addressed by holistic and coordinated international action. Key pressure areas included international hybrid mismatches and arbitrage and the effectiveness of anti-avoidance measures. The subsequent BEPS Action Plan proceeded to identify 15 ‘Actions’ to be taken. Action 2 was to neutralise the effects of hybrid mismatch arrangements. Action 6 was to prevent treaty abuse, and was to be coordinated with the work on hybrids. Action 15 was to develop a multilateral instrument to kick-start the incorporation of treaty measures recommended under other Actions into actual tax treaties.

Although most of the work on Action 2 is concerned with double non-taxation engineered by exploiting mismatches between different domestic tax systems in the attribution of entity-level income (due to different characterisation or perception of the entity) or in the tax treatment of particular income (due to different characterisation of the interest or instrument that produces it), there are also treaty issues in this area. If access to treaty benefits in a source country is determined by reference to that country’s domestic perception of fiscal attribution or the characterisation of an entity, but the other contracting state (in which the entity or a participant in it is resident) perceives those matters differently, the treaty may fail to avoid double taxation or may provide relief where there is no double taxation. These issues were previously addressed by the OECD Partnership Report, but only in relation to partnerships and without attracting the universal assent of OECD members. Other potentially hybrid entity types, such as trusts and check-the-box entities, were not covered. As discussed below, the treaty recommendations under Action 2 seek to generalise the principles of the Partnership Report to entities that are fiscally transparent in either contracting state (and hence potentially hybrid) and to embed those principles in substantive model treaty provisions. Unusually for the BEPS project, these recommendations address problems of double taxation as well as double non-taxation.

The MLI will modify a vast number of income tax treaties worldwide, including most Australian treaties. One of its subjects is the treatment of fiscally transparent entities and their income. The transparent entity clause, if implemented, prescribes the principles for determining whether income of such an entity – typically including a

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partnership, trust, estate or an entity that qualifies for US check-the-box transparency – is capable of attracting treaty benefits as the income of a resident of a contracting state.

The ultimate impact of the MLI in relation to fiscally transparent entities remains to be seen. Although a majority of MLI signatories have made or foreshadowed reservations against its provisions on that subject, a significant number of Australian treaties will still be affected. Five of Australia’s 44 general income tax treaties that were in force when the MLI was signed already deal with the subject in one way or another. Once the MLI is fully operative, that number will rise to 21. This article identifies how each of Australia’s existing treaties will be affected and considers the ground rules for dealing with income of fiscally transparent entities after the flood of MLI modifications.

Section 2 describes the historical background to the provisions of the MLI and the 2017 update to the OECD Model Tax Convention on Income and on Capital (OECD Model) with respect to the treatment of fiscally transparent entities and the potential impact of the MLI on Australian tax treaties. Section 3 outlines the relevant provisions of the OECD Model (2017) and the MLI and identifies corresponding choices available to MLI signatories. Section 4 notes some outstanding issues with respect to the application of the transparent entity clause and its interaction with other treaty provisions. Section 5 outlines the status of the relevant MLI provisions in the elections announced by signatories. Section 6 provides an overview of Australian treaties that already contain provisions dealing with transparent entities or that will acquire such provisions under the MLI. Section 7 considers in some detail each of the Australian treaties that already have such provisions, the manner in which they will be affected by the MLI, and particular provisions that differ from the basic OECD template and in some respects resolve outstanding issues concerning the application of the transparent entity clause and its interaction with other treaty provisions. Section 8 considers the impact of the MLI on those treaties which will acquire a transparent entity clause for the first time. Section 9 summarises the findings of the study.

2. BACKGROUND

The centrality of treaties to international income taxation is largely due to the work of the League of Nations and the OECD. The OECD Model now serves as a standard by

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7 Treaties with the United States, France, Japan, New Zealand and Germany (which already address the issue, discussed in sections 6 and 7) and with Argentina, Belgium, Chile, Fiji, Ireland, Mexico, the Netherlands, Norway, Poland, Romania, Russia, Slovakia, South Africa, Spain, Turkey and the United Kingdom (discussed in sections 6 and 8). The recently signed treaty with Israel, which is yet to come into force, also contains a transparent entity clause and will bring to 22 the number of Australian treaties affected by some form of transparent entity provision.

8 OECD, Model Tax Convention on Income and on Capital. Where a particular version is referred to, this is indicated by the relevant year of update. The present version dates from 21 November 2017 (OECD Model (2017)); the last preceding version dated from 26 July 2014 (OECD Model (2014)).

reference to which bilateral treaties are negotiated and understood. Without some such model, the present international network of over 3,000 treaties could not have come into existence.

The application of tax treaties to fiscally transparent entities is now within the mainstream of treaty analysis, but it was not always so. The OECD Model and its forebears focused historically on the income of individuals and corporations. Partnerships, trusts, deceased estates and other entities dwelt for many years on the fringes of tax treaties with little attention paid to them in the Model, although adaptations and ad hoc provisions may be identified in the treaties and treaty practice of particular countries. US treaty policy has expressly addressed partnerships, trusts and estates since the 1970s and fiscally transparent entities since 1996. The treaty problems of partnerships were also addressed by the OECD Partnership Report, which attempted to standardise the treatment of that class of entities by changing the interpretation of the OECD Model. That attempt did not prove entirely successful as several significant jurisdictions were unwilling to adopt the interpretation which it advocated, but it did succeed in drawing international attention to a particular set of principles, largely inspired by US treaty practice, by which issues of hybridity and similar problems might be addressed.

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13. Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 1.2; Richard O Loengard, Jr, ‘Tax Treaties, Partnerships and Partners: Exploration of a Relationship’ (1975) 29(1) Tax Lawyer 31. US treaty practice before 1976 was not entirely consistent, focusing sometimes on the residence of the entity and sometimes on the concept of an enterprise of one of the contracting states, and trying various formulae to deal with differences in the fiscal attribution by the contracting states of particular income of the entity. From 1976 to 1995, US treaties made use of a partial residence clause which sought to recognise fiscal attribution of income in the residence country of a partner or beneficiary in the treaty concept of residence of the entity. Some of the difficulties of this approach are considered in section 7.1 of this article. From 1996 onward, US treaty practice shifted to a transparent entity clause under which, if an entity was treated as fiscally resident in either contracting state, the status of its income as income of a resident depended on its fiscal attribution by the putative residence state to a resident of that state. The treatment of hybridity was thus generalised and linked to access to treaty benefits in respect of particular income. The fulcrum of its operation was fiscal attribution in a residence country. The post-1996 US transparent entity clause differs little from its OECD and MLI counterpart, discussed in section 3 of this article.
In the present decade, treaty issues relating to fiscal hybridity and transparency have been drawn into the work of the BEPS project. Implementing recommendations of the BEPS project under Action 2 on hybrids\textsuperscript{14} and Action 6 on treaty abuse,\textsuperscript{15} the 2017 update of the OECD Model has introduced a transparent entity clause as article 1(2), a saving clause as article 1(3), and a parenthetical qualification in article 23 A and B which excludes residence-country double tax relief to the extent that the other contracting state has purely residence-based taxing rights. Those changes each have counterparts in the MLI, which serves as a clearing house for the modification of existing treaties in order to implement treaty-related measures of the BEPS project and the 2017 update. The MLI was signed on 7 June 2017 and entered into force on 1 July 2018. It is in the process of taking effect for signatory jurisdictions and in relation to covered tax agreements between them as they deposit their instruments of ratification.\textsuperscript{16}

Whether through the MLI directly, through the 2017 update of the OECD Model, or through the indirect impact of those instruments, the transparent entity clause and associated reforms may be expected to have a significant impact on actual tax treaties in the near to mid term and will raise a number of policy and interpretive questions.\textsuperscript{17}

Apart from the MLI, five Australian tax treaties contain provisions which address the income of partnerships or transparent entities in one form or another. These are the treaties with the United States (1982, 2001), France (2006), Japan (2008), New Zealand (2009) and Germany (2015).\textsuperscript{18} Following ratification of the MLI by relevant counterparts, the number of treaties that contain or are subject to such provisions will rise to 21 (section 6 below).

Australia enacted the MLI as domestic law on 24 August 2018\textsuperscript{19} and deposited an instrument of ratification on 26 September 2018. It takes effect for Australia as a treaty from 1 January 2019. The commencement of its operation in relation to Australian tax


\textsuperscript{16} Information in this article with respect to signatures and ratifications of the MLI and the reservations, notifications and elections made or provisionally indicated by signatories is taken from OECD, ‘MLI Database - Matrix of options and reservations’ (update 29 May 2019), http://www.oecd.org/tax/treaties/mli-database-matrix-options-and-reservations.htm. Entry into force and entry into effect of provisions discussed in this article are governed by MLI arts 34, 35.


\textsuperscript{18} Subsequent citation of tax treaties in the text of this article follows the format: Party–Party Treaty (year of signature, year of amending protocol (if any)). In footnotes, the word ‘Treaty’ is omitted. For full citations of current Australian treaties, see International Tax Agreements Act 1953 (Cth) s 3AAA.

\textsuperscript{19} Treasury Laws Amendment (OECD Multilateral Instrument) Act 2018 (Cth).
as affected by a particular covered tax agreement depends on the date when the other party deposits its instrument of ratification. Where the treaty counterparty has deposited by 30 September 2018, MLI-based amendments become operative in relation to Australian withholding tax from 1 January 2019 and in relation to other covered Australian taxation from 1 July 2019. This first batch includes Australia’s treaties with Poland, Slovakia and the United Kingdom, which acquire a transparent entity clause under the MLI for the first time, and with France, Japan and New Zealand, which already deal with the topic in one way or another.

3. **OECD MODEL AND MLI PROVISIONS**

The 2017 update promotes the principles of the OECD Partnership Report into the text of the OECD Model and broadens them from partnerships to fiscally transparent entities generally. The first principle of the Partnership Report is that the initial nexus between particular income and a resident of a contracting state that is required for access to treaty benefits is determined from the perspective of the residence country. This is so, whether the resident is the entity or a participant in the entity. The test is both enabling and limiting. The principle is given effect by the transparent entity clause itself. With minor changes, the drafting is based on a similar clause in the 1996 US Model and the 2006 US Model. The 2016 US Model has in turn adopted most of the OECD changes.

The second principle of the Partnership Report qualifies the first, and corresponds to the saving clause which has long been part of US treaty practice. In US treaty practice and in the OECD Model (2017), the saving clause is not limited to the context of partnerships or, for that matter, transparent entities. It qualifies the operation of the transparent entity clause by preserving the taxing rights of a residence country from abrogation under the treaty, other than by the double tax relief article and other provisions that clearly have residence-country taxation in mind.

The transparent entity clause in the OECD Model (2017) and its counterpart in article 3(1) of the MLI are indistinguishable in their material terms:

24 See also OECD, Explanatory Statement to the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (2016) [39], [40].
OECD Model Article 1(2)

For the purposes of this Convention, income derived by or through an entity or arrangement that is treated as wholly or partly fiscally transparent under the tax law of either Contracting State shall be considered to be income of a resident of a Contracting State but only to the extent that the income is treated, for purposes of taxation by that State, as the income of a resident of that State.

MLI Article 3(1)

For the purposes of a Covered Tax Agreement, income derived by or through an entity or arrangement that is treated as wholly or partly fiscally transparent under the tax law of either Contracting Jurisdiction shall be considered to be income of a resident of a Contracting Jurisdiction but only to the extent that the income is treated, for purposes of taxation by that Contracting Jurisdiction, as the income of a resident of that Contracting Jurisdiction.

The transparent entity clause is not an obligatory core provision of the MLI. A signatory country may reserve against article 3 generally, or against article 3(1) in respect of treaties that already contain provisions which in certain respects have an analogous operation and which the reserving country wishes to continue in operation.

The saving clause of the OECD Model has two counterparts in the MLI, a general saving clause in article 11(1) and a contextual saving clause in article 3(3) which only affects the operation of the transparent entity clause:

OECD Model Article 1(3)

This Convention shall not affect the taxation, by a Contracting State, of its residents except with respect to the benefits granted under paragraph 3 of Article 7, paragraph 2 of Article 9 and Articles 19, 20, 23 [A] [B], 24, 25 and 28.

MLI Article 11(1)

A Covered Tax Agreement shall not affect the taxation by a Contracting Jurisdiction of its residents, except with respect to the benefits granted under provisions of the Covered Tax Agreement:

[Sub-paragraphs (a) to (j) set out descriptively the kinds of residence-country taxation which are not saved by Art 11(1).]

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25 MLI art 3(5)(a).
26 MLI art 3(5)(b)-(e) (though no signatory has yet made use of para (c) or (e)).
MLI Article 3(3)

With respect to Covered Tax Agreements for which one or more Parties has made the reservation described in subparagraph a) of paragraph 3 of Article 11 (Application of Tax Agreements to Restrict a Party’s Right to Tax its Own Residents), the following sentence will be added at the end of paragraph 1: ‘In no case shall the provisions of this paragraph be construed to affect a Contracting Jurisdiction’s right to tax the residents of that Contracting Jurisdiction.’

The general saving clause follows the logic of the OECD Model, although the listed exclusions are somewhat wider. This difference reflects the fact that the MLI has to deal with actual treaties which may depart from the OECD Model, and the MLI exclusions accommodate some such departures. There is also a catch-all exclusion applicable to provisions ‘which otherwise expressly limit a Contracting Jurisdiction’s right to tax its own residents or provide expressly that the Contracting Jurisdiction in which an item of income arises has the exclusive right to tax that item of income’. This expresses an underlying policy common to the OECD Model and the MLI, that the saving clause is not intended to negate those treaty benefits which deliberately address residence-based taxation.

The general saving clause is not a core provision, and either country may reserve against it.

The contextual saving clause in MLI Article 3(3) is a fall-back provision. A covered tax agreement only acquires that provision if it acquires a transparent entity clause under MLI article 3(1), but not a general saving clause under MLI article 11. It does not possess a list of exclusions, presumably because its effect is only to limit the operation of the transparent entity clause. It cannot be imagined, for instance, that the residence country of a partner in a fiscally transparent partnership could rely on the contextual saving clause to refuse relief under a conventional double tax relief article.

If a signatory to the MLI accepts article 3(1) but rejects article 11, there is no further option to reserve against article 3(3).

The parenthetical amendment to the double tax relief article of the OECD Model and the corresponding MLI provision, article 3(2), are materially identical in their interaction with the transparent entity clause:

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27 MLI art 11(1)(j).
28 MLI art 11(3)(a).
29 See also OECD, *Explanatory Statement to the Multilateral Convention*, above n 24, [42], [154].
30 See also ibid [41].
OECD Model Article 23 A (1), (2), 23B (1)  

... (except to the extent that these provisions allow taxation by that other State solely because the income is also income derived by a resident of that State [or because the capital is also capital owned by a resident of that State]) ...

MLI Article 3(2)

2. Provisions of a Covered Tax Agreement that require a Contracting Jurisdiction to exempt from income tax or provide a deduction or credit equal to the income tax paid with respect to income derived by a resident of that Contracting Jurisdiction which may be taxed in the other Contracting Jurisdiction according to the provisions of the Covered Tax Agreement shall not apply to the extent that such provisions allow taxation by that other Contracting Jurisdiction solely because the income is also income derived by a resident of that other Contracting Jurisdiction.

The OECD parenthetical and MLI article 3(2) exclude residence-country relief under the double tax relief article only to the extent that the other country’s treaty taxing right depends on the residence of its own taxpayer. Although both countries may tax on a residence basis under their domestic law, the treaty may recognise one or even both of them as entitled to tax on a source basis to some extent and thus support corresponding residence-country relief. These provisions have been presented as a matter of clarification, and are not present in the US Model. UK case law had already reached a similar but not identical outcome in the absence of the parenthetical. In Bayfine, the Court of Appeal concluded that a taxing right as preserved under a conventional US saving clause, expressed not to affect the double tax relief article, did not count for the purposes of identifying taxation in accordance with the treaty for the purposes of the double tax relief article. The point is to avoid duplicated or circular relief causing less-than-single taxation.

A country that accepts the principle of article 3 by lodging no general reservation, including one that reserves specifically against article 3(1) on the basis that the treaty already contains analogous provisions, is not bound to accept article 3(2) but may reserve specifically against that provision.

4. AN ELEGANT SOLUTION

The transparent entity clause (together with the saving clause and the double tax relief parenthetical) is an elegant solution to the problems posed by hybrid and transparent

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31 See OECD Model, Commentary on Art 23 (2017) [11.1] – [11.2]; Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 4.6. Dual source and residence taxation may occur, for example, in some situations involving an entity-level permanent establishment (PE) in one country through which the entity derives dividend or interest income from payers resident in the other country.
34 MLI art 3(5)(f).
entities. There are nevertheless some loose ends that would do well to be resolved. This section briefly notes a number of them which have been discussed at length elsewhere and merit consideration in Australian treaties that already contain or will become subject to a transparent entity clause. These issues also appear at various points in the discussion of existing treaties in section 7.

Scope of operation: There is a question about the scope of operation of the transparent entity clause. Does it apply to controlled foreign company (CFC) rules? More generally, what outbound investment regimes might it apply to? It has been suggested that the issue should be addressed by treaty negotiators directly.

Indirect treaty benefits: The transparent entity clause is intended to confer treaty benefits in cases where one contracting state taxes the entity and the other taxes a participant. Contracting states need to provide or recognise a procedure for the assertion of treaty claims in such cases.

PE attribution: There is a question whether the permanent establishment of a fiscally transparent entity is attributed, along with its income, to a participant in the entity for the purpose of applying the distributive articles of a tax treaty. Australian treaty practice addresses this in part through a trust PE clause. This does not sit well with the transparent entity clause; it has been argued that the issue is better addressed (as in US treaty practice) through the definition of an enterprise of a contracting state.

Beneficial ownership: The interaction between the transparent entity clause and the treaty concept of beneficial ownership remains unclear, mainly because the meaning of beneficial ownership has not been resolved. It has been suggested that a special definition would be useful, relating beneficial ownership to fiscal attribution in the relevant residence country in the context of the transparent entity clause.

Intercorporate dividends: The interaction between the transparent entity clause and treaty rules for intercorporate dividends, particularly any requirement that the claimant hold directly a percentage of the equity in the dividend-paying company, would benefit from clarification.

Residence-residence issues: Residence-residence attribution conflicts can still cause anomalous double taxation. The transparent entity clause creates an opportunity to resolve the problem by including an additional clause in the double tax relief article.

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35 Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10; see also Jain, above n 17.
37 Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, sections 2.1.3, 2.2.4.
38 Ibid section 2.2.3; cf section 7.1 below.
39 Ibid section 4.3; cf section 7.4 below.
41 Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 4.5; cf section 7.5 below.
5. **STATUS OF THE MLI PROVISIONS**

The general status of the relevant MLI provisions as indicated by its signatory jurisdictions is summarised in Table 1.\(^{43}\)

<table>
<thead>
<tr>
<th>MLI</th>
<th>Status</th>
<th>OECD Model</th>
<th>US Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>3(1)</td>
<td>27 signatories accepted or made only specific reservations</td>
<td>1(2)</td>
<td>1(6)</td>
</tr>
<tr>
<td></td>
<td>61 reserved generally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11(1) alt. 3(3)</td>
<td>15 of the 27 accepted 11(1)</td>
<td>1(3)</td>
<td>1(4), (5)</td>
</tr>
<tr>
<td></td>
<td>12 default to 3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3(2)</td>
<td>21 accepted</td>
<td>23 A/B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 reserved</td>
<td>parenthetical</td>
<td></td>
</tr>
</tbody>
</table>

As of 29 May 2019, 88 jurisdictions had signed the MLI. Of these, 61 reserved or proposed to reserve against article 3 generally, including Canada, China, France, Germany, India and Italy. The remaining 27 signatories may be taken to accept its general principles, including Australia, the Netherlands, New Zealand, Russia and the United Kingdom. Of those jurisdictions, four (Chile, Ireland, Norway and Spain) have indicated a specific reservation against article 3(1) in respect of those (relatively few) treaties that already contain provisions which ‘address whether income derived by or through entities or arrangements that are treated as fiscally transparent under the tax law of either Contracting Jurisdiction’\(^{44}\) and two (Australia and the Netherlands) have indicated such reservation where a treaty contains such a provision which also ‘identifies in detail the treatment of specific types of entities or arrangements’.\(^{45}\) Broadly speaking, these countries accept the principle of article 3 and the implementation of an MLI transparent entity clause, except in identified cases where they prefer to persevere with existing provisions in certain identified treaties which, in their view, implement a more or less similar policy. Australia’s reservation preserves certain provisions of its treaties with France and Japan. None of the other specific reservations by any signatory affects an Australian treaty.

Sixty-five signatories indicated reservations against article 11 generally. Fifty-three indicated general reservations against both articles, 12 indicated general reservation against article 11 but not against article 3,\(^{46}\) and eight indicated general reservation against article 3 but not against article 11.\(^{47}\)

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\(^{43}\) The first column identifies the MLI provision. The second column summarises its overall acceptance or rejection by signatories as indicated by 29 May 2019 (see n 16) and explained after the Table. The third and fourth columns identify corresponding provisions of the OECD Model (2017) and the 2016 US Model.

\(^{44}\) MLI art 3(5)(b) (quotation from art 3(4)).

\(^{45}\) MLI art 3(5)(d).

\(^{46}\) Ireland, Israel, Japan, Luxembourg, Malaysia, the Netherlands, Nigeria, Papua New Guinea, South Africa, Spain, Turkey and Uruguay.

\(^{47}\) China, Colombia, Gabon, India, Indonesia, Jamaica, Portugal and Senegal.
Of the 27 jurisdictions that accept article 3 in whole or part, 12\(^{48}\) have indicated reservation against article 11 with the consequence that, if article 3(1) is engaged, it is qualified by article 3(3), and five (Japan, Luxembourg, Malaysia, Ireland and the United Kingdom) have indicated reservation against article 3(2).

6. **OVERVIEW OF AUSTRALIAN TREATIES**

The Australian treaties that already include provisions dealing with the income of partnerships or other transparent entities or will acquire a transparent entity clause under the MLI are summarised in Table 2.

Table 2: Overview of Australian Treaties

<table>
<thead>
<tr>
<th>Treaty</th>
<th>Transparent entity clause or similar</th>
<th>Saving clause</th>
<th>DTR parenthetical</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>France 2006</td>
<td>Arts 4(5), 29(1), (2), Protocol (2) (France rejects MLI 3; Australia reserves under MLI 3(5)(d)))</td>
<td>No (France rejects MLI 11)</td>
<td>No (France rejects MLI 3)</td>
<td></td>
</tr>
<tr>
<td>Japan 2008</td>
<td>Art 4(5) (Australia reserves under MLI 3(5)(d)))</td>
<td>No (see section 7.3 below)</td>
<td>No (Japan rejects MLI 3(2))</td>
<td></td>
</tr>
<tr>
<td>New Zealand 2009</td>
<td>MLI 3(1) (replaces Art 1(2))</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Germany 2015 (not covered)</td>
<td>Art 1(2), Protocol (2), (3)</td>
<td>No, but see EM</td>
<td>No</td>
<td>Special saving clause for anti-avoidance rules, with list (Art 23(3), Protocol (7)(1)(c))</td>
</tr>
<tr>
<td>Argentina 1999</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Belgium 1977, 1984, 2009</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Chile 2010</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Fiji 1990</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
</tbody>
</table>

\(^{48}\) Those mentioned in n 46.
<table>
<thead>
<tr>
<th>Treaty</th>
<th>Transparent entity clause or similar</th>
<th>Saving clause</th>
<th>DTR parenthetical</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland 1983</td>
<td>MLI 3(1)</td>
<td>MLI 3(3)</td>
<td>No</td>
<td>(Ireland rejects MLI 3(2))</td>
</tr>
<tr>
<td>Mexico 2002</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Netherlands 1976, 1986</td>
<td>MLI 3(1)</td>
<td>MLI 3(3)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Norway 2006</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Poland 1991</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
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</tr>
<tr>
<td>Romania 2000</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
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</tr>
<tr>
<td>Russia 2000</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
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<tr>
<td>Slovakia 1999</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>South Africa 1999, 2008</td>
<td>MLI 3(1)</td>
<td>MLI 3(3)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>Spain 1992</td>
<td>MLI 3(1)</td>
<td>MLI 3(3)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
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<td>Turkey 2010</td>
<td>MLI 3(1)</td>
<td>MLI 3(3)</td>
<td>MLI 3(2)</td>
<td></td>
</tr>
<tr>
<td>UK 2003</td>
<td>MLI 3(1)</td>
<td>MLI 11(1)</td>
<td>No</td>
<td>(UK rejects MLI 3(2))</td>
</tr>
</tbody>
</table>

The first column of Table 2 identifies each treaty by counterparty and the year of signature of the treaty and any later amending protocol. Unless otherwise noted in the first column, each has been nominated by both parties as a covered tax agreement under the MLI. The second column identifies the relevant partnership or transparent entity provision in or to be acquired by the treaty and notes relevant MLI reservations. References to provisions of the MLI are cited in the form ‘MLI [article and paragraph number]’; existing treaty provisions are cited as ‘Art [article and paragraph number]’. The third column similarly identifies the general saving clause in or to be acquired by the treaty. The fourth column identifies whether the double tax relief provision of the treaty is qualified by provisions along the lines of the parenthetical qualification in OECD Model (2017) article 23. The fifth column notes selected special measures relevant to the scope of a transparent entity provision.

The first five entries relate to treaties that already have a provision dealing with income of partnerships or other transparent entities, and are listed chronologically. The remaining entries relate to other treaties which will acquire a transparent entity clause under the MLI, and are listed alphabetically. The Australia–United Kingdom Treaty (2003) could arguably have been included in either category. Its particular provisions are discussed briefly in section 8.
Australia’s tax treaty with Israel was signed on 27 March 2019 and has yet to be legislated or to enter into force. It contains a transparent entity clause, a saving clause and a double tax relief parenthetical based on the OECD Model (2017).

7. **TREATIES WITH TRANSPARENT ENTITY PROVISIONS**

This section considers the five Australian tax treaties that made provision for the income of partnerships or fiscally transparent entities before the MLI. It addresses the impact of the MLI, the effect of relevant treaty provisions and their relationship with the provisions of the OECD Model 2017.

7.1 **Australia – United States**

The Australia–United States Treaty (1982, 2001) is not affected by the MLI because the United States has not signed that instrument. The key provisions are the saving clause in article 1(3), (4), provisions of article 4(1) referring to partnerships, estates and trusts, and article 22 with respect to double tax relief.

7.1.1 **Partial residence provisions and treaty history**

The provisions that most directly address transparent entities are located in the residence article. Having defined the term ‘person’ to include a partnership, trust or estate, the treaty defines a person other than an individual, a corporation or a corporate-taxed entity as a resident of Australia or the United States if it is so treated by the tax law of that country, but then carves out an exception by stipulating that, with the exception of certain Australian trusts that attract special Australian tax treatment, a partnership, trust or estate is not treated as resident save to the extent that its income is ‘subject to [Australian / United States] tax as the income of a resident, either in [the hands of that person / its hands] or in the hands of a partner or beneficiary’ or is exempt from tax in the residence country (in the case of Australia) solely because it is subject to tax in the United States or (in the case of the United States) other than because ‘such person, partner or beneficiary’ is not a US person for tax purposes. The meaning and effect of these partial residence provisions are ultimately rather unclear.

The wording of the treaty resembles but is not identical to that of the 1981 US Model, which defined a treaty resident as a person who, under the laws of the relevant contracting state, was liable to tax therein by reason of citizenship, residence etc, other than only on a source basis, but in the case of income derived or paid by a partnership, estate or trust, this term applies only to the extent that the income derived by such partnership, estate, or trust is subject to tax in that State as the income of a resident, either in its hands or in the hands of its partners or beneficiaries.

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49 The text of Australia–Israel (2019) first became available after this article had been submitted for publication. It is not separately analysed here, although selected aspects are referred to.


The Australian extrinsic material is uninformative on how partial residence was supposed to work in the treaty. The US view seems to be that it was intended generally to deliver treaty benefits to Australian or US resident partners in respect of their shares of partnership income. The US Technical Explanation of the treaty says that a partnership, estate or trust is a resident of Australia for purposes of the Convention only to the extent that the income it derives is subject to Australian tax as the income of a resident either at the level of the partnership, estate or trust or in the hands of a partner or beneficiary, or, if that income is exempt from Australian tax under the Treaty, it is exempt solely because it is subject to US tax.

The partial residence approach was part of US treaty practice from the 1970s until 1995. Publication of the 1996 US Model marked the abandonment of that approach in favour of the transparent entity clause. In 1999 the OECD Partnership Report substantially adopted the logic of the transparent entity clause in the context of partnership income and recommended its application in the interpretation of the OECD Model. That recommendation was carried into the Commentaries in 2000. The following year, the Australia–United States Protocol (2001) was signed. Treaty amendments included some minor changes to the residence article, replacement of the dividends article provision for source-country taxation of PE-related capital gains, and the addition of a clause reflecting Australia’s desire to make sure it could tax business income derived through a local trust PE. This last provision was not expressed with reference to a trust as in the usual Australian trust PE clause, but with reference to a ‘fiscally transparent entity’. That term was not defined or otherwise mentioned in the protocol, and the

53 The Explanatory Memorandum to the Income Tax (International Agreements) Amendment Bill 1983 (Cth) contains two brief paragraphs on art 4, neither of which mentions partial residence.

54 United States Treasury Department Technical Explanation of the Convention between the Government of the United States of America and the Government of Australia for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income (1983) art 4. Similarly, the Technical Explanation says that ‘a partnership, estate or trust is a resident of the United States for purposes of the Convention only to the extent that the income it derives either is subject to US tax as the income of a resident (either at the level of the entity or in the hands of a partner or beneficiary), or is exempt from US tax for reasons other than the recipient's not being a US person. Thus, a US person that qualifies as a tax-exempt organization under US law qualifies as a resident, and a recipient of tax-exempt income does not lose its status as a resident with respect to that income’.


57 Australia–US Protocol (2001) art 9, amending art 13. According to US Technical Explanation, Australia–US Protocol 2001, above n 56, ad art 9 with respect to substituted art 13(3), ‘A resident of Australia that is a partner in a partnership doing business in the United States will have a permanent establishment in the United States as a result of the activities of the partnership, assuming that the activities of the partnership rise to the level of a permanent establishment’.


59 According to Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 1) 2002 (Cth) [2.11], ‘[t]he term “fiscally transparent entity” has been used to cover any entity, not just trusts,
parties did not take the opportunity to replace the partial residence provisions of the treaty with a transparent entity clause. The overall flavour of the protocol and of the corresponding US Technical Explanation nevertheless seems consistent with the world view of the OECD Partnership Report and post-1996 US treaty policy.

This history also raises the question whether the principles of the Partnership Report are material to the interpretation of the treaty.\(^{60}\)

### 7.1.2 Interpretation of the partial residence provisions

A number of general interpretive questions arise from the partial residence provisions:

1. In order for a partnership, trust or estate to be recognised to any extent as treaty-resident in Australia or the United States, must the entity itself be ‘a resident of Australia’ or ‘resident in the United States’ for purposes of that country’s tax law, or is it sufficient that its income is, to the relevant extent, attributed to a resident partner or beneficiary?

2. Where a partner or beneficiary is treaty-resident in Australia or the United States and is treated by the tax law of that country as deriving entity-level income, is the partner or beneficiary or, derivatively, the relevant entity entitled to treaty benefits in the other country to the extent of such residence-country attribution on the basis that the partner or beneficiary is the resident referred to in applicable distributive rules of the treaty?

These should be considered against the background that US tax law has a concept of a domestic partnership,\(^ {61}\) trust or estate\(^ {62}\) and regards such an entity as a US person,\(^ {63}\) notwithstanding that it may be fiscally transparent in respect of some or all of its income.

Australia, by contrast, has a concept of a resident trust estate,\(^ {64}\) but no general concept of fiscal residence for a conventional (and fiscally transparent) general partnership. Australia generally classifies limited partnerships as corporate limited partnerships and

\(^{60}\) The issue is more complex than determining whether and how that extrinsic material can be used in interpreting a pre- or post-Partnership Report treaty that follows the OECD Model; see John F Avery Jones, ‘Treaty Interpretation’ in Richard Vann (ed), Global Tax Treaty Commentaries IBFD (Global Topics IBFD online) sections 3.10-3.12; Klaus Vogel, ‘The Influence of the OECD Commentaries on Treaty Interpretation’ (2000) 54(12) Bulletin for International Taxation 612; John F Avery Jones, ‘The Effect of Changes in the OECD Commentaries after a Tax Treaty is Concluded’ (2002) 56(3) Bulletin for International Taxation 102; Monica Erasmus-Koen and Sjoerd Douma, ‘Legal Status of the OECD Commentaries – In Search of the Holy Grail of International Tax Law’ (2007) 61(8) Bulletin for International Taxation 339. This is because the text of the treaty deals with fiscal transparency in a way that differs from the OECD Model and because the Partnership Report eschewed consideration of partial residence clauses as unpromising (above n 5, [45]-[46]).

\(^{61}\) Internal Revenue Code (IRC) s 7701(a)(4).

\(^{62}\) The corollary of IRC s 7701(a)(31), defining a foreign trust or estate. Cf 26 Code of Federal Regulations (CFR) s 301.7701-7(a)(2), defining a domestic trust.

\(^{63}\) IRC s 7701(a)(30).

\(^{64}\) Income Tax Assessment Act 1936 (Cth) s 95(2). Deceased estates are treated as a species of trust for tax purposes, although they are generally non-transparent because the beneficiaries lack present entitlement to estate income until the estate is fully administered.
taxes them as companies, although a foreign hybrid limited partnership is transparent.

Some aspects of these interpretive issues have arisen quite sharply in recent litigation concerning limited partnerships in the Resource Capital Fund stable, formed in the Cayman Islands with partners mostly resident in the United States. The partnership entities were non-resident corporate limited partnerships from the viewpoint of Australian tax law, and hence taxable as companies, but they were transparent foreign partnerships from the viewpoint of US tax law. The cases concerned Australian taxation of the partnerships on profits derived from the sale of shares in Australian mining companies and taxation appeals by the partnerships claiming relief under the treaty by reference to the residence of most of their partners. The cases are only discussed here for what they say about the interpretation of the partial residence provisions.

Treaty residence of the entity

The first question was resolved by Edmonds J at first instance in Resource Capital Fund III LP v FCT and by a Full Court of the Federal Court in FCT v Resource Capital Fund IV LP, in favour of a dual requirement for treaty residence, that the entity be resident in the relevant contracting state for the purposes of its domestic tax law and that its income be subject to tax in that country or exempt only on the basis described in the treaty. It followed that the limited partnerships in those cases were not US treaty residents. The contrary view, that the partial residence provisions create an independent basis for treaty residence of the entity, was the Commissioner’s ‘preferred position’ in Resource Capital Fund III and was supported by Davies J (dissenting on this point) in Resource Capital Fund IV. Her Honour considered that,

65 Income Tax Assessment Act 1936 (Cth) Part III Div 5A.
66 Income Tax Assessment Act 1997 (Cth) s 830-10 stipulates criteria by which an entity that would otherwise be a corporate limited partnership is redesignated as a foreign hybrid limited partnership. Broadly speaking, the limited partnership must be established abroad and fiscally transparent in other relevant countries. It is automatically redesignated if it would otherwise attract Australian CFC tax treatment, i.e. if it would have been an ‘attributable taxpayer’ with an ‘attribution percentage’ greater than zero. It may also be redesignated in respect of a partner’s interest at the partner’s irrevocable election if certain other criteria are satisfied.
67 Resource Capital Fund III LP v FCT (2013) 95 ATR 504, 15 ITLR 814 [55]-[60]. His Honour consequently found that the partnership was not a US resident for treaty purposes, but also held that Australia was not authorised by the Australia–US treaty to tax the partnership as distinct from the partners and (implicitly) that it forbade taxation of the partnership. The judgment was reversed by a Full Court in FCT v Resource Capital Fund III LP (2014) 225 FCR 290; 16 ITLR 876 on the basis that the treaty did not implicitly limit Australia to taxing the partners; the finding that the partnership was not a US treaty resident was not challenged on appeal.
68 FCT v Resource Capital Fund IV LP [2019] FCAFC 51, [71]-[73] (Besanko, Middleton, Steward and Thawley JJ). At the time of writing, it is too early to know whether the case will go on to the High Court.
69 Resource Capital Fund III LP v FCT (2013) 95 ATR 504, 15 ITLR 814 [56].
70 FCT v Resource Capital Fund IV LP [2019] FCAFC 51, [232]-[242]. This does not imply that bare fiscal residence of the US partners was enough to produce corresponding partial residence of the entity: they still had to be subject to US tax on the relevant income, or the income had to be exempt on a basis other than that they were not US persons. The absence of evidence of these matters collaterally meant that the partnership was not proven to be a US treaty resident: see the majority judgment at [70]. The partners would also have had to satisfy the requirements of the limitation on benefits article. (As it happened, the Commissioner did not take the point at trial and was therefore precluded from running it on appeal: see the majority judgment at [70] and [78]-[80].)
although the proviso [in the treaty definition of a resident of the United States] is expressed negatively — ‘shall not be treated as a resident of the United States’ — when read as a whole, the proviso makes sense if it is directed at identifying when a partnership, estate of a deceased individual or trust is to be treated as a resident for the purposes of the DTA.\(^{71}\)

Such an interpretation has some intuitive attractiveness. It facilitates entity-level claims for treaty benefits without having to involve the partners (or beneficiaries) and without being concerned about the fiscal residence or status of the entity, which may be based in a third country or may fail the general test of treaty residence on the basis (as would be true of a general partnership established in Australia and viewed from the perspective of Australian tax law) that an entity of the relevant kind is not capable of residence. It also more closely resembles the approach in post-1996 US treaties, the OECD Partnership Report and corresponding OECD Commentaries, and the OECD Model itself as amended in 2017, although it differs from those later instruments by using treaty residence as the fulcrum for its operation.

Be that as it may, the majority judgment in Resource Capital Fund IV is authoritative in Australia, subject to any further appeal to the High Court. It recognises a dual requirement in the partial residence provisions: the entity must be resident in the relevant contracting state for the purposes of its tax law, and its income must also be subject to tax in that country or exempt in that country only on the basis described in the treaty. And this, with respect, must be right. The wording of the treaty is intractable. This is particularly evident in the definition of Australian treaty residence, where the requirement of general tax-law residence is obviously separate from and antecedent to the proviso\(^{72}\) and certain classes of trust are excluded from the proviso, but not from the requirement of residence.\(^{73}\)

*Treaty rights of the partners or beneficiaries*

The second question initially requires consideration of whether the partial residence provisions constitute a code in relation to the capacity of partnership, trust or estate income to attract treaty benefits. The issue is whether the references to such income in art 4(1) carry a negative implication that such income can only attract treaty benefits with reference to the entity, and therefore only if and to the extent that the entity qualifies as a treaty resident. If the partial residence provisions are such a code, they exclude the possibility of treaty benefits for a US partner in a non-US partnership in respect of partnership income, regardless of whether the partnership is based (to use a neutral term) in Australia or in a third country. They also seem to exclude the possibility of such benefits for an Australian partner in a general partnership because Australian tax law does not regard the entity as resident or non-resident. It is inconceivable that the latter outcome was intended. Both outcomes are also contrary to the principles of the OECD Partnership Report and post-1996 US treaty policy.

An interpretation of the partial residence provisions as a code could avoid the inconvenient outcomes noted above if the condition relating to residence-country taxation were treated as an independent basis for residence of the entity instead of the

\(^{71}\) *FCT v Resource Capital Fund IV LP* [2019] FCAFC 51, [237].


outer limits of residence otherwise established. For reasons noted earlier, however, the independent basis theory is not tenable.

The better view is that the partial residence provisions are not a code. If that is right, further questions arise. Can a partner or beneficiary participant in a partnership, trust or estate rely on his, her or its own treaty residence to claim benefits in relation to particular entity-level income? In principle the answer should be ‘yes’, but that leads to further difficulties.

- How is the treaty right of a partner or beneficiary to be exercised if the source country attributes the relevant income to the entity and the entity does not qualify as a treaty resident of the partner’s or beneficiary’s country?

When the Resource Capital Fund III case was before the High Court on the taxpayer’s unsuccessful special leave application, it was suggested that the problem could be resolved by the mutual agreement procedure – hardly a satisfactory solution, as any remedy would require the cooperation of the revenue authorities. The majority in Resource Capital Fund IV considered that each US resident partner was capable of invoking the treaty (assuming that other relevant requirements for treaty protection were made out), but not for the purposes of the entity’s taxation appeal: this, it was said, could be done in recovery proceedings or ‘probably’ in proceedings for declaratory relief. These suggestions are procedurally awkward and, more fundamentally, fail to address the conclusiveness of a notice of assessment outside the context of a taxation appeal. It is no answer to say that the Commissioner could refrain from engaging the conclusiveness provision by not tendering the notice of assessment, because the partner has no way to compel the Commissioner to take that course. How US partners in such a situation may legally and practicably vindicate their rights under the treaty, adopted as it is into Australian statute law, remains something of a mystery.

- Is it necessary for the source country, or the residence country, or both contracting states to attribute the income in question to the treaty-resident partner or beneficiary?

Which country’s tax law determines the income attribution nexus for treaty purposes is problematic if Australia and the United States disagree about the attribution of particular income. In the case of partnership income under the principles of the OECD Partnership Report or income of a fiscally transparent entity under the transparent entity clause, where treaty benefits are claimed on the basis that the income is attributable to a treaty-resident participant, that nexus is determined by reference to the tax law of the participant’s residence country. The judgment of Edmonds J in Resource Capital Fund III, which

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76 Such as the requirements of the subject to tax condition and the limitation on benefits article.
77 FCT v Resource Capital Fund IV LP [2019] FCAFC 51, [73].
78 Taxation Administration Act 1953 (Cth) Sch 1 s 350-10(1) item 2; cf extensive case law on a predecessor provision. Income Tax Assessment Act 1936 (Cth) s 177.
concerned events in the 2007 income year, proceeded on the basis that Partnership Report principles embedded in OECD Commentary are material to the interpretation of the treaty. The Full Court allowed the Commissioner’s appeal without casting doubt on the propriety of reference to that material,80 which appears to have been accepted by the parties. Reference to Partnership Report principles may be justified on the basis that they entered the Commentary in 2000, before the last agreed revision of the treaty in 2001.

Alternatively, it may be justified if one takes the view that Australia and the United States are both parties to an imputed international agreement that the Commentaries apply on an ambulatory basis as updated from time to time.81

The question of beneficial ownership which affects some classes of income is separate from the attribution nexus mentioned above. The US view is that, when a source country is considering beneficial ownership, it applies the principles of its own domestic tax law relating to income attribution. This is by no means a universally held view.82

- In the case of dividend income derived through the entity by a corporate participant, is the requirement of direct holding in art 10(2)(a) or ownership of shares in art 10(3) inconsistent with holding and derivation through the entity?

The treaty stipulates lower (art 10(2)(a)) or zero (art 10(3)) source-country taxation of dividends if the person beneficially entitled is another company which inter alia ‘holds directly’ at least 10 per cent (art 10(2)(a)) or, for twelve months ending on the day of declaration of the dividend, ‘has owned shares’ representing at least 80 per cent (art 10(3)) of the voting power in the paying company. If a restrictive view is taken of partial residence, a US corporate partner may be locked out of enhanced treaty benefits. It will be recalled that the present article 10 dates from the 2001 protocol. The US Technical Interpretation of the protocol takes the view that direct holding can be traced through a fiscally transparent shareholder entity, which seems to imply that treaty benefits can be granted by reference directly to the participant, but it is not clear that a US partner would receive similar treatment in Australia.83

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82 See n 40 and corresponding text.
83 The US Technical Explanation of the 2001 protocol does not directly refer to the OECD Partnership Report, above n 5, but supports the implicit recognition of transparency in relation to the look-through of a transparent shareholder entity: US Technical Explanation, Australia–US Protocol 2001, above n 56, ad art 6. The published ATO opinions on similar questions under other treaties are not readily reconciled. Contrast ATO ID 2011/14 (regarding shareholdings traced through a New Zealand limited partnership — that the shares are neither held nor held directly) with TD 2014/13 (regarding nominee shareholders) and ATO ID 2004/863 (regarding the tracing of a shareholding through a trust). Australia–Germany 2015 (section 7.5 below) confronts the issue more directly.
The result is unclear

The meaning and effect of the partial residence provisions cannot be stated with certainty. Even if, in many or most partnership cases, the principles of the OECD Partnership Report are treated as applicable as a matter of practical administration so that income attribution for purposes of access to treaty benefits is determined with reference to the tax law of the relevant residence country, the Resource Capital Fund cases show how unclear the rights of partnerships and their members presently are. There is no guidance on whether a similar principle would be applied to the income of trusts and estates, although the issue may be less pressing where the trust or estate is fiscally resident in the same country as the relevant beneficiary because the conditions for partial residence will likely be satisfied by the entity.

7.1.3 Other provisions

The treaty contains a saving clause such as the United States consistently requires. Its double tax relief article differs from the OECD Model.

The concerns that motivated the parenthetical qualification of the double tax relief article in the OECD Model are addressed by the treaty, but not in exactly the same way. In the United States, the foreign tax credit is limited by reference to foreign income. This principle is recognised by the treaty, which gives US double tax relief subject to the limitations of US tax law. In the case of Australia, credit under the treaty only arises for US tax on US-sourced income and excludes tax on the basis of US citizenship or elective residence. There is a special provision for US citizens who are residents of Australia.

7.1.4 The treaty and the OECD Model

It is unfortunate that the partial residence provisions were not replaced at the time of the 2001 protocol. Owing to the difficulties that have been exposed with respect to partnerships, it has now become somewhat urgent that the partial residence provisions of the treaty be updated. The most obvious solution is to adopt the transparent entity clause which both countries apply in their contemporary treaties.

7.2 Australia – France

The Australia–France Treaty (2006) is not affected by MLI article 3 because France has reserved against that article generally. Had that not been the case, Australia’s specific reservation would have prevented article 3(1) from taking effect or superseding articles 4(5), 29(1), (2) and protocol (2) of the treaty, which address certain cases relating to transparent or translucent partnerships. As France has also reserved against article 11, the treaty does not acquire an MLI saving clause either.

85 See IRC s 904.
7.2.1 Treaty provisions

The treaty provisions applicable to partnerships are influenced by the particular French tax treatment of partnership income, which differs from the transparent or opaque tax treatments that apply in most other countries. Several classes of French partnerships and similar entities are considered to be fiscally translucent: entity-level income gives rise to tax liability on the part of the entity’s members at the members’ personal or corporate rates, but the liability is incurred on behalf of the entity.\(^{90}\) The separate legal personality of the entity in French law is considered sufficient to make its income taxable in France and fiscally attributable to the entity, though not to subject the entity to French corporation tax, yet the fiscal characteristics of the partners affect the rate and calculation of tax. In terms of the transparent entity clause of the OECD Model (2017), it has been argued that the entity would not be ‘fiscally transparent’ in France.\(^{91}\)

The treaty does not deal exhaustively with the income of partnerships. It only deals with those particular permutations which the contracting states decided to cover.

The treaty initially distinguishes between entities by reference to their place of effective management. A ‘partnership or group of persons’ that has its place of effective management in France is addressed in articles 4(5) and 29(4) and paragraph (2) of the protocol. A ‘partnership or similar entity’ that has its place of effective management in Australia is addressed in article 29(1). A ‘partnership’ that has its place of effective management in a third country is addressed in article 29(2).

Article 4(5) qualifies a partnership or group as a treaty resident of France provided that all its members are personally liable to tax in France on their part of its profits. Australia accepts that such an entity is entitled to treaty benefits as a French resident, notwithstanding that Australia may regard it as transparent\(^{92}\) and attribute its income to its members. That is not the end of the matter, however. While all members must be personally liable to tax in France on their shares of partnership profits, they need not all be resident there. Australia protects its treaty position in respect of non-French members by special saving clauses. Article 29(4) preserves Australia’s right to tax its own residents who are members of such an entity on their shares of entity-level profits, subject to treating those profits as sourced in France for the purposes of the double tax relief article.\(^{93}\) Paragraph (2) of the contemporaneous protocol preserves Australia’s right to tax ‘a resident of a third State’ who is such a member, provided that the entity is not subject to corporation tax in France,\(^{94}\) and subject to Australia complying with the terms of any tax treaty with the member’s residence country, ‘it being understood that such partnership or group shall be treated as fiscally transparent for the purposes of entitlement to Australian tax benefits’ under that other treaty.\(^{95}\)

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\(^{90}\) For greater detail, see Philippe Derouin, ‘France’ in Florian Haase (ed), Taxation of International Partnerships (IBFD Publications, 2014) 217.

\(^{91}\) Braabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 2.1.9.

\(^{92}\) Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 1) 2007 (Cth) [1.38].

\(^{93}\) This responds to the risk to Australian taxation posed by the reasoning in Padmore v IRC (1989) 62 TC 352; see Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 1) 2007 (Cth) [1.284].

\(^{94}\) An entity that is subject to corporation tax in France would be outside the scope of this article.

\(^{95}\) The Explanatory Memorandum presents this ‘fiscally transparent’ qualification as a reservation of rights by Australia: Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 1) 2007 (Cth) [1.39]. It is difficult to see how recognition of the entity as a treaty resident with entitlement to
Australia exercises source taxing rights in respect of the income of a French translucent entity which Australia attributes to a non-French participant. Australia’s taxing rights are generally saved from such diminution as might otherwise follow from recognising the entity as a French treaty resident.

Article 29(1) and (2) respond to France’s observations on the Commentary on Article 1 of the OECD Model (2000) to the effect that, in the absence of special provisions, France would not recognise the members of a partnership that is not itself entitled to treaty benefits — such as a typical, fiscally transparent Australian partnership — as entitled to treaty benefits in respect of their participation in the partnership.⁹⁶

Article 29(1) only addresses the case of an Australian or French resident partner in a partnership or similar entity which, in addition to having its place of effective management in Australia, is ‘treated in Australia as fiscally transparent’ and is limited to the treatment of (entity-level) income, profits or gains which arise in Australia or France — a concept which, by special deeming,⁹⁷ includes those which are attributable to an entity-level permanent establishment in the country concerned. Further conditions attach in some permutations but, subject to those conditions, the outcome is essentially the same: the partner is entitled to treaty benefits in respect of his or her share of partnership income etc ‘as though the partner had derived such amounts directly’.

For an Australian resident partner, the special condition is that his or her share of entity-level income etc ‘is taxed in Australia in all respects as though such amounts had been derived by the partner directly’.⁹⁸ The expression ‘taxed … in all respects’ is apt to create difficulties of interpretation and application, particularly where a partner’s entitlement to flow-through losses, if incurred, is limited by reference to the level of his or her risk or contribution to the partnership.⁹⁹

For a French resident partner in the Australian-managed partnership, a special condition applies in respect of entity-level income etc arising in France: any such amounts as are taxed in Australia are treated for the purposes of double tax relief under the treaty in France as arising from sources in Australia.¹⁰⁰ This addresses the possibility that a French resident may participate in an Australian partnership through the partner’s own Australian permanent establishment.¹⁰¹

Article 29(2) applies to Australian or French resident partners in a ‘partnership’ (there is no reference to a group of persons or a similar entity) that has its place of management in a third country, in which the entity is treated as fiscally transparent, in respect of their shares of partnership income etc arising in Australia or France. Article 29(2) replicates the basic structure of article 29(1), discussed above, delivering entitlement to treaty benefits under the treaty with France could support an argument against fiscal transparency under a separate Australian treaty with a third country.

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⁹⁶ OECD Model, Commentary on Art 1 (2000) [27.2]; Explanatory Memorandum to the, International Tax Agreements Amendment Bill (No. 1) 2007 (Cth) [1.274].
⁹⁸ Australia–France (2006) art 29(1)(a). This provision only addresses income etc arising in France – there would be no point in addressing income arising in Australia.
⁹⁹ See Nikolakakis et al, above n 10, 322.
¹⁰¹ Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 1) 2007 (Cth) [1.280].
benefits ‘as though the partner had derived such amounts directly’, but is subject to a different set of conditions.

The first condition is that the tax system of the partner’s residence country treat the partner’s share of entity-level income etc ‘in all respects as though those amounts had been derived directly’ — this is similar to the special condition that applies to Australian partners in an Australian partnership, but here it also applies to French partners. The second is the absence of ‘contrary provisions’ in a tax treaty of Australia or France with the third country. The third is that the partner’s share of partnership income etc be ‘taxed in the same manner’, including as to its nature, source and timing, as if derived by the partner directly. The treaty does not say which country’s taxation it is referring to here, though one might guess that it has the residence country in mind. The fourth condition is that the relevant information exchange must be possible between the relevant contracting state (Australia or France) and the third country.

The treaty also contains a trust PE clause in its business profits article.\(^\text{102}\)

### 7.2.2 Comparison with the OECD Model

Within the scope of their operation and subject to stipulated conditions, the effects of the treaty provisions have significant similarities to those of the transparent entity clause and related provisions of the OECD Model (2017).

Although a French translucent entity would be non-transparent and taxable from a French viewpoint, it would be within the operation of the transparent entity clause if Australia treats it as transparent for the purpose of taxing an Australian resident participant. The entity itself, however, would be expected to qualify as a treaty resident of France, and French taxing rights would be preserved by the general saving clause. Australian taxing rights over its resident would be similarly preserved. From a practical viewpoint, France would be expected to have source taxing rights under the treaty with respect to most or all of the entity income that Australia attributes to its resident, even if France (as a matter of its domestic law) taxes on a residence basis. The double tax relief article would oblige Australia to give double tax relief commensurate with French source-taxing rights under the treaty.

The treatment under a notional treaty following the OECD Model (2017) of Australian source taxation of a third-country participant in a French entity is perhaps less obvious. The income in question would be recognised as income of a resident of France. It might be argued that (as under the actual treaty) Australia is not obliged to limit its taxation of the participant, since the participant is not a resident of either contracting state. This, however, is contrary to the approach taken under the transparent entity clause and (in a partnership context) under the OECD Partnership Report in circumstances where a source country attributes income to a third-country participant in an entity, which the source country regards as transparent in respect of that income, and the entity’s residence country attributes the same income to the entity itself, which it regards as non-transparent. In that case, a treaty following the OECD Model (2017) between the source country and the entity’s residence country recognises income of a resident of the entity’s

\(^{102}\) Australia–France (2006) art 7(8). Such clauses are discussed below in the context of the treaty with New Zealand: see text corresponding to n 112.
Does it make any difference, then, that the person on whom France imposes tax liability, albeit on behalf of the entity, is the third-country participant? If not, the notional OECD-based treaty and the actual treaty diverge. This is a point which needs to be considered and addressed in negotiating future treaties with a country that employs a theory of translucency in its domestic tax law.

Within the scope of its operation, article 29(1) of the treaty with respect to Australian partnerships produces a result for treaty purposes — entitlement to treaty benefits ‘as though the partner had derived such amounts [i.e. his or her share of entity-level income etc] directly’ — that largely resembles the operation of the transparent entity clause. Limitation to partnerships and similar entities avoids the need to consider issues that are peculiar to trusts and estates. Differential transparency is unlikely to be a problem unless Australia and France disagree about whether particular entity-level income forms part of a particular partner’s share. In relation to an Australian partner, the requirement of Australian transparency of the entity is equivalent to the residence-country attribution requirement of the transparent entity clause, although it is not expressly tailored to the extent of residence-country attribution. Assuming that a French partner will be taxable in France on any income derived through an Australian-transparent partnership or similar entity, a similar result is achieved in relation to that partner. The treatment of income as if ‘derived … directly’ may overcome one of the problems encountered under the transparent entity clause in relation to intercorporate dividends derived through a transparent entity. In the case of a partnership, the imputation of an entity-level permanent establishment and the conduct of a business to the several partners and the recognition of beneficial ownership of partnership income are unlikely to be problematic, particularly with the direction to treat such income for treaty purposes in relation to a treaty resident partner as if ‘derived … directly’.

Within the scope of its operation, article 29(2) with respect to third-country partnerships with French or Australian members is similar to article 29(1). The requirement for third-country transparency has no counterpart in the transparent entity clause. The conditions relating to residence-country taxation of the partner are somewhat stricter than those which apply under the transparent entity clause, particularly the requirement for similar tax treatment ‘in all respects’ as if the income in question had been derived directly.

7.3 Australia – Japan

The Australia–Japan Treaty (2008) is not affected by MLI article 3(1) or (3) because Australia has reserved specifically against article 3(1) on the basis of preserving article 4(5) of the treaty, although Japan would have accepted the replacement of that provision by MLI art 3(1) and (3). It is not affected by MLI art 11 because Japan has reserved

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103 Further, if there is a similar treaty between the source country and the participant’s residence country, and if that country attributes the income to the participant, treating the entity as relevantly transparent, the income is recognised under that treaty as income of a resident of the participant’s country. This requires the source country to provide treaty benefits to the extent stipulated by whichever treaty is more restrictive of its taxing rights. See Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, sections 1.2.6, 4.4.4.

104 See below, discussion of Australia–Germany (2015) protocol (3) at nn 128 and 129 and corresponding text.

105 Regarding the similarity of nature, source and timing, see Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 2.1 and Nikolakakis et al, above n 10.
against that article. It is not affected by MLI article 3(2) because Japan has reserved against that paragraph.

Article 4(5) of the treaty is similar in effect to the OECD transparent entity clause combined with a contextual saving clause, but is expressed at much greater length. Similar provisions are found in a number of other Japanese treaties, although Japan has not sought to preserve these from replacement by MLI article 3(1). This suggests that Japan may be content to follow the wording of OECD Model article 1(2) in future treaties. It is something of an oddity that the wording in the treaty with Australia is preserved only by Australia’s reservation. Be that as it may, there is little difference to pick between the two outcomes. The present provision represents a logical expression of the principles of the OECD Partnership Report in which the permutations of residence and fiscal attribution to which those principles may apply are addressed seriatim. It is reasonable to expect the future interpretation and application of article 4(5) of the treaty to be very similar or identical to those of MLI article 3(1) and (3).

The treaty also contains a trust PE clause in its business profits article.

7.4 Australia – New Zealand

The Australia–New Zealand Treaty (2009) is affected by MLI article 3(1), (2) and 11. The treaty already contains a transparent entity clause as article 1(2). That clause reflects the influence of US treaty practice and the transparent entity clause in the 2006 US Model, although the wording is slightly different. There is probably no difference of meaning between article 1(2) of the treaty and MLI article 3(1), which will replace it. There are also several treaty provisions that interact with article 1(2), and the question arises whether they will continue to interact in the same way with the new transparent entity clause. The governing principle is that the new clause applies in place of article 1(2) to the extent that the latter determines whether relevant income ‘shall be treated as income of a resident of a Contracting Jurisdiction’. Other provisions of the treaty are superseded only to the extent that they are incompatible with the new clause.

Article 3(4) of the treaty deems dividend, interest or royalty income arising in one contracting state to be ‘beneficially owned’ by a resident of the other for purposes of the relevant distributive articles where it is derived by or through a trust and is subject to tax in that other state in the hands of a trustee. Beneficial ownership may be related to fiscal attribution, but it is consistently recognised as a separate question. Article 3(4) of the treaty will stand because it is not incompatible with MLI art 3(1). It has been argued elsewhere that this provision, which is distinctive of New Zealand treaty

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107 Australia–Japan (2008) art 7(9). Such clauses are discussed below in the context of the treaty with New Zealand: see text corresponding to n 112.
108 ‘In the case of an item of income (including profits or gains) derived by or through a person that is fiscally transparent with respect to that item of income under the laws of either State, such item shall be considered to be derived by a resident of a State to the extent that the item is treated for the purposes of the taxation law of such State as the income of a resident.’
109 Under MLI art 3(6), both Australia and New Zealand have notified art 1(2) as the only provision of their mutual treaty falling within MLI art 3(4).
110 MLI art 3(6).
practice, could usefully be extended to define beneficial ownership by a wider class of entities and by their participants.\textsuperscript{111}

Article 7(7) of the treaty is a trust PE clause.\textsuperscript{112} Such clauses are a distinctive feature of Australian and New Zealand treaty practice.\textsuperscript{113} Conditional on beneficial ownership by a resident of one contracting state of a share of trust-level business profits and a relevant trust-level PE in the other contracting state, the trust-level business and PE are \textit{pro tanto} attributed to the beneficiary so as to permit taxation in the host country. These things go to the allocative criteria in the business profits article and are separate from the identification of income as that of a resident of a contracting state. The trust PE clause, which only applies to trusts and depends on the notoriously difficult concept of beneficial ownership, was originally designed as an aspect of Australian treaty practice in 1984; it was not designed with a transparent entity clause in mind and is not particularly well integrated with that clause.\textsuperscript{114} Nevertheless, it cannot be said to be incompatible with a transparent entity clause, either in the form of article 1(2) of the treaty or MLI article 3(1). This analysis is confirmed by the Explanatory Statement to the MLI.\textsuperscript{115} It follows that article 7(7) of the treaty also survives. Similar results may be expected in other Australian treaties that acquire a transparent entity clause under the MLI.

Article 23(3) of the treaty\textsuperscript{116} provides targeted relief against residence-residence double taxation in a way that is not attempted by the OECD Model. It operates expressly in conjunction with article 1(2) and addresses the case of a hybrid entity. In the context of residence-country taxation, where one contracting state taxes the entity and the other taxes a participant on the same item of income in accordance with article 1(2), it requires

\textsuperscript{111} Brabazon, ‘The Application of Tax Treaties to Fiscally Transparent Entities’, above n 10, section 4.4.5. The wording suggested there is: ‘For the purposes of Articles 10, 11 and 12, income that is considered to be income of a resident of a Contracting State under paragraph 2 of Article 1 shall be considered to be beneficially owned by a resident of that State to the extent that it is liable to taxation as such income in that State [and is not derived as agent or nominee for a non-resident].’

\textsuperscript{112} The wording is as follows: ‘Where:
(a) a resident of a Contracting State beneficially owns (whether as a direct beneficiary of a trust or through one or more interposed trusts) a share of the profits of a business of an enterprise carried on in the other Contracting State by the trustee of a trust other than a trust which is treated as a company for tax purposes; and
(b) in relation to that enterprise, that trustee has or would have, if it were a resident of the first-mentioned State, a permanent establishment in the other State,
then the business of the enterprise carried on by the trustee through such permanent establishment shall be deemed to be a business carried on in the other State by that resident through a permanent establishment situated in that other State and the resident’s share of profits may be taxed in the other State but only so much of them as is attributable to that permanent establishment’. Corresponding provisions in other Australian treaties usually refer to beneficial entitlement rather than beneficial ownership, but no difference of meaning is suggested.


\textsuperscript{114} A more promising approach is to deal with the attribution of entity-level business structures in the definition of an enterprise of a contracting state. The trust PE clause is considered in greater detail in Brabazon, \textit{International Taxation of Trust Income}, above n 113, section 8.3.10.

\textsuperscript{115} OECD, \textit{Explanatory Statement to the Multilateral Convention}, above n 24, [45].

\textsuperscript{116} ‘Where, in accordance with paragraph 2 of Article 1, an item of income is taxed in a Contracting State in the hands of a person that is fiscally transparent under the laws of the other State, and is also taxed in the hands of a resident of that other State as a participant in such person, that other State shall provide relief in respect of taxes imposed in the first-mentioned State on that item of income in accordance with the provisions of this Article.’
the participant’s country to allow a tax credit. The logic and operation of article 23(3) can be transposed from the old to the new transparent entity clause without incompatibility because the two have the same logical structure and are practically indistinguishable. The only remaining question is whether, as a matter of interpretation, the express reference to article 1(2) should properly be read as a reference to its replacement. The MLI stipulates that the new provision is to ‘apply in place of’ and ‘replace’ the old one\textsuperscript{117} — in light of these words and the similarity between the old and new provisions, a conventional interpretation in good faith\textsuperscript{118} of both the original treaty and the MLI supports an inclusive reading of the reference in article 23(3) to article 1(2).

Australia has long taken the view that its tax treaties should not be interpreted as restricting the taxation of a country’s own residents, leaving aside those provisions which clearly target residence-country taxation such as a double tax relief article. This reflects the essence of the second principle of the OECD Partnership Report, but is not limited to partnerships. Australian treaty practice has historically resisted the inclusion of a general saving clause for fear of an implication that its addition to new treaties might support an argument that older ones have a different meaning. Thus, in the Explanatory Memorandum to the Bill that carried the treaty into domestic law, Parliament was told:

Where the two countries allocate the income to different resident persons (for example, where one country considers that the income is derived by a resident entity, while the other country considers that the same income is derived by a resident who is a participant in that entity), both countries may tax the income in accordance with [article 1(2)]. Income derived from a country through an entity organised in that country will not be eligible for treaty benefits if the income is treated as derived by a resident entity under the tax laws of that country. In such case, the income would be regarded as domestic source income of a resident which, in accordance with normal treaty principles, would not be limited by the Convention. During negotiations, the two delegations noted that:

‘It is understood that (this) paragraph shall not affect the taxation by a Contracting State of its residents.’\textsuperscript{119}

Paradoxically, the treaty will acquire a fully-fledged saving clause under MLI article 11(1). This, together with the addition of article 1(3) to the OECD Model (2017), provides a convenient opportunity for Australia to jettison its former reluctance to express the principle of the saving clause in the text of its tax treaties. There is no difficulty in saying that the new clause makes express that which was formerly implied, but there will be a difficulty if Australia has to explain the absence of a general saving clause from future treaties negotiated at a time when the OECD Model includes such a clause. That confusion will be avoided by adopting the saving clause in new treaties. The terms of the 2019 treaty with Israel suggest that such a policy change may be happening.

\textsuperscript{117} MLI art 3(4), (6).
\textsuperscript{118} Vienna Convention art 31(1).
\textsuperscript{119} Explanatory Memorandum to the International Tax Agreements Amendment Bill (No. 2) 2009 (Cth) [2.25].
For completeness, it may be observed that the treaty will acquire a double tax relief parenthetical in the terms of MLI article 3(2). The similarity between that provision and the parenthetical in the OECD Model (2017) is such that the corresponding Commentary on Article 23 should provide guidance, subject to resolving any difficulty arising from the fact that the 2017 update to the model and commentary were published in November 2017, after the signature of the MLI by most countries (including Australia and New Zealand), although before the deposit of any instruments of ratification and before its enactment in Australian domestic law.\textsuperscript{120}

7.5 Australia – Germany

The Australia–Germany Treaty (2015) is not affected by the MLI because neither party has nominated it as a covered tax agreement. The recommendations of the BEPS project were known or anticipated during the negotiation process and have been taken into account in the terms of the treaty.\textsuperscript{121} The treaty and its contemporaneous protocol also recognise and seek to resolve a number of outstanding problems with the BEPS project recommendations and the post-BEPS OECD Model.

Article 1(2) of the treaty is materially indistinguishable from the transparent entity clause of the OECD Model (2017). The potential for uncertainty in the scope of its operation is reduced by article 23(3) and paragraph 7 of the protocol. Article 23(3) is a super-saving clause: it saves the operation of domestic anti-avoidance rules without providing (as the general saving clause does) for exclusions.\textsuperscript{122} Paragraph 7 of the protocol deems a list of rules to have the requisite anti-avoidance character, including Australia’s controlled foreign company and transferor trust rules.\textsuperscript{123} Article 23(3) requires the competent authorities to consult for the elimination of any resulting double taxation, but not so as to give the taxpayer a right to initiate a mutual agreement process.\textsuperscript{124} The rule is modelled on similar provisions in the Australia–United Kingdom Treaty (2003),\textsuperscript{125} to which the consultation requirement has been added as a safeguard. It may be that a super-saving clause is becoming part of Australia’s treaty policy: a similar provision is included in the treaty with Israel, though without a special consultation requirement.\textsuperscript{126}

\textsuperscript{120} See Katja Cejie, ‘The Commentaries on the OECD Model as a Mechanism for Interpretation with Reference to the Swedish Perspective’ (2017) 71(12) \textit{Bulletin for International Taxation} 663, particularly the author’s summation of competing theories and discussion of HFD 2016 ref. 23 (12 April 2016); Daniel W Blum, ‘The Relationship between the OECD Multilateral Instrument and Covered Tax Agreements: Multilateralism and the Interpretation of the MLI’ (2018) 72(3) \textit{Bulletin for International Taxation} 131, 139. It seems unlikely that the particular sequence of events noted above will impede reference to the OECD Model, Commentary on Art 23 (2017); Cf nn 32-33 and corresponding text above.


\textsuperscript{122} ‘Nothing in this Agreement shall prevent the application of any provision of the laws of a Contracting State which is designed to prevent the evasion or avoidance of taxes. Where double taxation arises as a result of the application of any such provision, the competent authorities shall consult for the elimination of such double taxation in accordance with paragraph 3 of Article 25.’

\textsuperscript{123} Cf Australia–UK (2003) Exchange of Notes (1)(d), (e) (nn 137, 138 below and corresponding text).

\textsuperscript{124} The required consultation is under Australia–Germany (2015) art 25(3); contrast the taxpayer-initiated process under art 25(1). See also art 25(5).

\textsuperscript{125} See nn 137 and 138 and corresponding text.

\textsuperscript{126} Australia–Israel (2019) protocol (1).
Article 1(2) leaves residence-residence double taxation unaddressed in a hybrid situation where the entity is non-transparent in its residence country and transparent in the residence country of a participant. Where double taxation results, paragraph 2 of the protocol requires that ‘the competent authorities of the Contracting States shall consult each other pursuant to Article 25 to find an appropriate solution’. This does not give the taxpayer a right to initiate the mutual agreement process under article 25(1) but, being expressed in mandatory terms, goes further than the provision for discretionary consultation under article 25(3).127

Paragraph 3 of the protocol seeks to clarify the interaction between the transparent entity clause and article 10(2)(a) and (3) of the treaty with respect to intercorporate dividends by stipulating that, where a contracting state fiscally attributes dividends ‘derived by or through a fiscally transparent entity or arrangement’ to its own resident, ‘Article 10 shall apply as if that resident had derived the dividends directly’. The apparent purpose of this is to ensure that, where the shareholder entity is not resident in the source country, the corporate status and percentage shareholding requirements of article 10(2)(a) for access to the lower dividend withholding rate or of article 10(3) for source-country exemption are determined by reference to the attributable taxpayer (entity or participant) in the residence country and that the interposition of an entity which the participant’s country treats as transparent does not fail the ‘holds directly’ requirement of those provisions.128 Thus, the corporate status of the shareholder entity is immaterial if the residence country treats it as transparent in respect of the dividend,129 but the non-corporate status of the shareholder entity from the perspective of the source country does not preclude the lower rate if the residence country perceives it as non-transparent and corporate in respect of the dividend. Although article 10(2)(a) of the treaty is not identical to the corresponding provision of the OECD Model (2014) or (2017) and article 10(3) has no Model counterpart, each of the three elements discussed above — corporate status, holding of shares and directness of holding — replicates an element of article 10(2)(a) of the Model. Paragraph 3 of the protocol may be considered as a template to clarify the interaction between the transparent entity clause and intercorporate dividend provisions of other treaties that acquire a transparent entity clause under the MLI or that are based on the OECD Model (2017).

The treaty also contains a trust PE clause in its business profits article.130

The treaty does not contain a general saving clause, but the Explanatory Memorandum to the enacting Bill in Australia recites an understanding between the treaty negotiators similar to that referred to above between Australia and New Zealand.131

The treaty does not include a double tax relief parenthetical. No implication should be drawn from the omission. As the parenthetical was only proposed at a late stage of the work on BEPS Action 6, one cannot assume that the treaty negotiators considered it. It

127 Australia–Germany (2015) art 25(1), (3) are materially similar to OECD Model (2017) art 25(1), (3).
128 See Explanatory Memorandum to the International Tax Agreements Amendment Bill 2016 (Cth) [1.46] – [1.49], [2.211].
129 Contrast Re US S Corporation’s German Withholding Tax Status I R 48/12; (2013) 16 ITLR 428, which allowed a US S corporation to claim the lower intercorporate rate on German dividend income under Germany–US (1989) art 10(2)(a) notwithstanding that US tax law attributed that income to its shareholders, who were individuals. The result was undesirable from a policy viewpoint.
130 Australia–Germany (2015) art 7(7).
131 Explanatory Memorandum to the International Tax Agreements Amendment Bill 2016 (Cth) [1.50].
was also regarded as a matter of clarification rather than substantive change to the Model, although the new text does appear to have made some changes to the way in which a double tax relief article would be interpreted in some countries without it.\footnote{See nn 32-33 and corresponding text above.}

8. \textbf{TREATIES ACQUIRING TRANSPARENT ENTITY PROVISIONS}

Of the 25 MLI signatories which, in addition to Australia, have not reserved generally against article 3, 19 have treaties with Australia which both parties have nominated as covered tax agreements. Three of those 19 covered tax agreements — the treaties with France, Japan and New Zealand, discussed in the previous section — already have provisions dealing with partnerships or transparent entities. Only one, the treaty with New Zealand, will have the existing provision replaced, and that change will make little or no practical difference. The remaining 16 treaties will all acquire a transparent entity clause for the first time under the MLI.

The 16 treaties fall into four groups:

- Those which acquire a general saving clause under MLI article 11(1) and a double tax relief parenthetical under article 3(2) — treaties with Argentina, Belgium, Chile, Fiji, Mexico, Norway, Poland, Romania, Russia and Slovakia.

- Those which acquire a contextual saving clause under MLI article 3(3) and a double tax relief parenthetical under article 3(2) — treaties with the Netherlands, South Africa, Spain and Turkey.

- One treaty which acquires a general saving clause under MLI article 11(1) but no double tax relief parenthetical — the treaty with the United Kingdom.

- One treaty which acquires a contextual saving clause under MLI article 3(3) but no double tax relief parenthetical — the treaty with Ireland.

The only notable point of difference between the general and contextual saving clauses in their impact on the income of transparent entities is the absence of a list of exclusions from the contextual clause. If the reasoning above is correct (section 3), this should make no practical difference. A potential difference has also been identified between the effect of a double tax relief article with and without the new parenthetical text or its MLI equivalent, but the difference is not a large one in policy terms.\footnote{For a different view see Azzi, above n 17, 576, suggesting that double taxation would arise if a third-country limited partnership with UK partners and capital gains taxable in Australia (as in the Resource Capital Funds cases discussed in section 7.1.2, but substituting UK for US investors), but only because the United Kingdom reserved against MLI article 3(2). This argument encounters the objection that MLI article 3(2) has no effect but to remove an obligation to grant double tax relief. It may also be observed that tax imposed on a third-country entity by Australia as a source country and in accordance with the applicable treaty would ordinarily be creditable to its participants in the United Kingdom as their residence country, particularly given that Australia–UK (2003) art 22(2) allows credit against UK tax ‘computed by reference to the same income or chargeable gains’ as attracted the Australian tax and without requiring an identical taxpayer. Of greater significance may be the Taxation (International and Other Provisions) Act 2010 (UK) s 33, which requires the UK taxpayer to have taken ‘all reasonable steps’ under the foreign law to minimise.}

The UK reservation against MLI article 3(2) makes little if any practical difference.\footnote{See nn 32-33 and corresponding text above.}
The original Australia–United Kingdom Treaty (2003) contained an anti-Padmore provision dealing with partnerships that are opaque in one contracting state and transparent in the other. Where the entity was entitled to treaty benefits, article 24 saved the right of the partners’ country to tax its own residents on the partnership’s income, but required that country to allow credit for tax in the partnership’s residence country on the basis that such income was treated as having a source there. As neither country has opted to preserve article 24, it is replaced by the corresponding but wider provisions of the MLI.  

The Australia–United Kingdom Treaty (2003) also contains a super-saving clause for anti-avoidance provisions, expressly including transferor trust rules and either country’s controlled foreign company rules. If this provision were included in a treaty that also contained a transparent entity clause, it would govern the scope of operation of that clause by stipulating that the treaty, including the transparent entity clause, does not abrogate the protected rules. A transparent entity clause under MLI article 3(1) supersedes the provisions of a covered tax agreement such as the Australia–United Kingdom Treaty ‘only to the extent that those provisions are incompatible with’ the transparent entity clause. If the addition of a transparent entity clause to an existing treaty would be interpreted, leaving aside the super-saving rule, as applying to income that is taxed under such a rule, there is a sense in which the super-saving clause prevents the transparent entity clause from being fully effective in accordance with its terms and is arguably incompatible with it. The better view, however, is that the super-saving clause addresses a more fundamental question concerning the scope of the whole treaty, and that MLI article 3 is not intended to address or overcome limitations of that kind. On this view, the provisions are not relevantly incompatible.

the amount of foreign tax payable. Would this require the UK investors to solve the procedural conundrum of how to get their treaty rights recognised in Australia? Padmore v IRC [1989] STC 493, in which a UK partner in a Jersey partnership with no UK PE successfully resisted UK taxation on his share of the partnership’s profit on the basis that the applicable treaty allocated exclusive taxing rights to Jersey. Unless counteracted, similar reasoning could have been applied to a UK partner in an Australian limited partnership. See Richard J Vann and J D B Oliver, ‘The New Australia–UK Tax Treaty’ [2004] British Tax Review 194, 199-200.

136 The post-MLI synthesised text of Australia–UK (2003) (available at https://www.ato.gov.au/law/view/document?DocID=MLI/MLI-UK-agreement&PIT=99991231235958 and https://www.gov.uk/government/publications/australia-tax-treaties) attributes this outcome to the operation of MLI art 11(4). MLI art 3(4) may also have a role to play, but nothing turns on this. It had previously been suggested that Australia–UK (2003) art 24 would survive the MLI but that art 3(2) (which confers the treaty status of a person on an Australian limited partnership that is fiscally opaque in Australia) would not (Azzi, above n 17, 567–568), however neither proposition appears sustainable.

137 Vann and Oliver, above n 135; 216, 232 point to potential confusion arising from this provision, and suggest that its introduction may be related to the enhanced recognition of domestic anti-avoidance rules in the 2003 update of the Commentaries on the OECD Model – although the exchange of notes goes a good distance further than preserving the general anti-avoidance rules that were (and still are) recognised in the Commentaries as immune to abrogation by ordinary treaty provisions (cf OECD Model, Commentary on Article 1 (2017) [66]-[81]). It may also be significant that this was the first Australian treaty to include a fully operative non-discrimination article and that the treaty contained a similar reservation of anti-avoidance rules from the effect of that article.

138 Australia–UK (2003) Exchange of Notes (1)(d), (e). Also in this category are thin capitalisation, dividend stripping, transfer pricing and conservatism rules. Compare Australia–Germany (2015) art 23(3) and protocol (7), discussed in section 7.5 above. The provisions of the latter treaty requiring the competent authorities to consult to find an appropriate solution if application of the super-saving clause results in double taxation have no counterpart in Australia–UK (2003). See also Australia–Israel (2019) protocol (1).

139 MLI art 3(6).
In summary, the effect of importing a transparent entity clause into the 16 treaties discussed above should be to assimilate their treatment of transparent entities to that which applies under the OECD Model (2017), subject to the UK super-saving clause discussed above, the probably immaterial absence of explicit exclusions from the contextual saving clause in four treaties, and the marginally significant absence of the double tax relief parenthetical from two treaties. Subject to those qualifications, the practical outcome should be similar to that under Australia’s treaties with New Zealand and Germany, leaving aside refinements which presently remain peculiar to those treaties and address some of the loose ends identified in section 4.

9. **CONCLUSION**

The landscape of the treatment of transparent and hybrid entities under Australia’s tax treaties will remain diverse after the MLI becomes fully operational. Twenty-three of the 44 general income tax treaties—just over half—will still not address the subject. They will continue as before. To the extent that the principles of the OECD Partnership Report have been adopted as a matter of interpretation by the parties to those treaties, those principles will provide guidance to the treatment of partnership income under those treaties.

Sixteen Australian treaties will acquire a transparent entity clause for the first time under the MLI. While there are some variations between them, the general effect will reflect the implementation of a transparent entity clause as in the OECD Model (2017) and a general or contextual saving clause. The principles of the Partnership Report will thus be elevated to the text of the treaty and broadened from partnerships to transparent entities generally. Tax administrators and taxpayers seeking to achieve a practical implementation of the transparent entity clause will need to consider a number of issues that remain unresolved in the application of that clause.

The treatment of transparent and hybrid entities under the five Australian treaties that already address such entities will be unaffected or very little affected by the MLI. Each has its own peculiarities. The Australia–United States Treaty (1982, 2001) addresses partnerships, trusts and estates in a partial residence provision, the effect of which is not entirely clear; it also addresses the broader class of fiscally transparent entities in the context of business profits associated with an entity-level PE. The Australia–France Treaty (2006) reaches an outcome which largely resembles that of the transparent entity clause within the sphere of its partnership-focused operation and subject to a number of explicit limitations. It deals with third-country participants in a translucent French partnership expressly, and in a way that may well not be achieved by the transparent entity clause without special modification. The Australia–Japan Treaty (2008) uses a different method of rule design and drafting to express what are essentially the same ideas as the transparent entity clause. The Australia–New Zealand Treaty (2009) already has a modern transparent entity clause, which will be notionally updated by the MLI. It includes a number of refinements, which will still apply post-MLI, and which go some way to address unresolved issues under the OECD Model (2017). The Australia–Germany Treaty (2015) is already a post-BEPS treaty. It includes a modern transparent entity clause and a number of refinements which differ from those in the Australia–New

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140 Those with the Netherlands, South Africa, Spain and Turkey.
141 Those with Ireland and the United Kingdom.
142 The number will rise to 45 when Australia–Israel (2019) enters into force.
Zealand treaty but which also address particular unresolved issues under the OECD Model (2017). Taken together, these provide some measure of useful guidance for the development of future treaty policy.

Based on the analysis in this article, it is suggested that future treaty negotiations may benefit from consideration of a number of adaptations. In short, from an Australian perspective, it would be appropriate:

- to embrace the saving clause (as in the new treaty with Israel);
- to address the intended scope of the treaty and the transparent entity clause directly (whether or not in the form of a super-saving clause, as has been done in slightly different ways in the treaties with the United Kingdom, Germany and Israel);
- to ensure that the contracting states provide a workable procedure to assert indirect treaty rights arising through the transparent entity clause;
- instead of using a trust PE clause, to define an enterprise of a contracting state in such a way as to recognise an entity-level PE of a fiscally transparent entity as belonging pro tanto to a participant within the scope of the transparent entity clause (following or adapting US treaty practice);
- to resolve the meaning of beneficial entitlement, at least in the context of the transparent entity clause (adapting New Zealand treaty practice);
- to resolve the ‘holds directly’ requirement in OECD Model article 10(2)(a) in the context of the transparent entity clause to follow the policy of that clause (as in the treaty with Germany); and
- to provide relief from anomalous residence-residence double taxation in the context of the transparent entity clause by special provision in the double tax relief article.

As the MLI does not constrain later amendments of covered tax agreements, these suggestions may be applied to the amendment of existing treaties as well as the negotiation of new ones.
The differential impact of CO₂ penalties, CO₂ incentives and information policies on consumer behaviour when purchasing a new motor vehicle

Marize de Villiers* and Sarel Gerhardus Nienaber**

Abstract

The main purpose of this experimental study was to determine the differential impact that a CO₂ penalty, a CO₂ incentive and information regarding the future fuel costs of a motor vehicle will have on South African consumers’ behaviour when they choose new motor vehicles. The results of the experiment did not find any statistically significant proof that either a CO₂ penalty or a CO₂ incentive is likely to influence consumers to purchase more fuel-efficient motor vehicles. An information policy that provides consumers with the estimated future fuel costs of motor vehicles also has no meaningful influence. The combination of the information policy with either a CO₂ penalty or CO₂ incentive also has no meaningful influence. Finally, this study provides statistical evidence that the importance of the fuel economy of a motor vehicle and the consumer’s attitude regarding the protection of the environment can both have a meaningful influence on a consumer’s choice of motor vehicle.

Key words: CO₂ penalty, CO₂ incentive, consumer behaviour, future fuel costs, motor vehicle

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1. INTRODUCTION

‘If you think the economy is more important than the environment, try holding your breath while counting your money’ (McPherson, 2009).

South Africa is a carbon-intensive economy that generates the majority of its electricity with coal-fired power plants. A number of studies have been carried out to measure the effect of carbon taxes and emissions trading on the South African economy and the environment. Devarajan et al. (2009, p. 2) explored the potential impact of a carbon tax on South Africa’s economy. Due to the complexity of South Africa’s developing economy, Devarajan et al. (2011, p. 1) conducted a further study in 2011 using a disaggregated computable general equilibrium model of the South African economy to simulate a range of tax policies to reduce CO₂ emissions by 15%. Devarajan et al. (2011, p. 4) concluded that the welfare costs of a carbon tax in a developing country such as South Africa depend more on other distortions such as the labour market than on South Africa’s own carbon emissions.

A study evaluating the socioeconomic consequences of introducing carbon taxes in South Africa found that, ignoring all benefits, the tax will reduce national welfare (Alton et al., 2014, pp. 351-352). Despite this, South Africa enacted its Carbon Tax Act on 1 June 2019 which will assist the country in meeting its commitments to reduce carbon emissions.

Apart from a carbon tax, many countries levy a CO₂ emissions tax on motor vehicles as a measure to reduce the CO₂ emissions of new motor vehicles sold. Alternatively, some countries have recently commenced using rebates or incentives to promote the sale of low-emission motor vehicles (Verboven, 2014, p. 389). A combination of a CO₂ penalty and a CO₂ incentive, referred to as a feebate policy, is also used to promote the sales of low emission vehicles (Verboven, 2014, p. 390). The feebate policy introduced in France in 2008 resulted in a substantial shift towards the sale of low CO₂ emission motor vehicles (D’Haultfoeuille, Givord & Boutin, 2014, p. 473).

The impact of CO₂ emissions tax on consumer behaviour when a new motor vehicle is purchased has been widely researched in many of the major economies of the world. Klein (2014, p. 38) argues that a CO₂ emissions tax is a very important measure to reduce the CO₂ intensity of a country’s motor vehicle fleet. Gerlagh et al. (2018, p. 115) confirmed that an acquisition tax, such as a CO₂ emission tax, has in fact solicited the purchase of new vehicles that emit lower CO₂ emissions. The majority of research on CO₂ emissions tax, CO₂ incentives and feebate policies found that these interventions were effective in promoting the sale of low CO₂ emission motor vehicles.

Even though CO₂ emissions on motor vehicles are not the largest contributor of the greenhouse gas emissions in South Africa, emissions tax is one of the policies used with the aim of reducing greenhouse gas emissions. In September 2010, South Africa joined the effort to reduce CO₂ emissions on new motor vehicles sold by introducing a CO₂ tax (hereinafter referred to as a CO₂ levy). According to the South African Revenue Service (SARS), the objective of the CO₂ levy ‘is to influence the composition of South Africa’s vehicle fleet to become more energy efficient and environmentally friendly’. ¹ South

Africa has not introduced CO₂ incentives for the purchase of new motor vehicles emitting lower CO₂ emissions.

The purpose of this study was, first, to measure whether a consumer’s choice of motor vehicle in South Africa is more likely to be influenced by a CO₂ incentive or by a CO₂ levy and, second, to measure the impact of an information policy by focusing on the level of transparency that exists regarding future fuel costs when a motor vehicle is chosen, and how this affected the prospective buyers’ behaviour. Finally, the effect of a CO₂ incentive or a CO₂ penalty combined with an information policy on consumer behaviour was measured. The purpose of this study leads to the formulation of the following two research objectives that guided this study:

- to determine the differential impact of a CO₂ penalty or a CO₂ incentive on consumers’ behaviour in South Africa when a new motor vehicle is chosen.
- to determine the differential impact of an information policy manipulating the transparency in respect of future fuel costs on South African consumers’ behaviour when a new motor vehicle is chosen.

To meet these research objectives, this behaviour study has an experimental design. CO₂ incentives, CO₂ levies and information policies were manipulated as treatment conditions and gave rise to six experiments to determine the respective differential impact on consumers’ behaviour when purchasing a new motor vehicle. A quantitative research methodology was applied to design this experiment.

Section 2 presents the literature review that formed the basis for four theoretical frameworks which were used to formulate six hypotheses. Section 3 describes the design of the experiment to test the six hypotheses. A brief discussion of the research methodology and the assumptions and limitations used is followed by the data analysis and results of the experiment in section 4. The conclusion and recommendations for future research are discussed in section 5.

2. RELATED PRIOR LITERATURE AND DEVELOPMENT OF HYPOTHESES

Research analysing the effectiveness of the South African CO₂ levy concluded that there is no clear evidence that the introduction of the CO₂ levy has led to consumers purchasing motor vehicles emitting lower CO₂ emissions (Barnard, 2014, p. 54; Ackerman, 2014, p. 91; Nienaber & Barnard, 2018, p. 151). In fact, the sale of certain high-emission vehicles continued to rise after September 2010 and outperformed the sales of vehicles with lower emissions (Carrim, 2014, p. 58). The study by Barnard (2014, p. 54) concluded that consumers were not even aware of the CO₂ levy or of the CO₂ emissions emitted by their new motor vehicles and that the introduction of the CO₂ levy in South Africa did not change or influence the behaviour of consumers who purchase new motor vehicles. The findings of these studies indicate that the current CO₂ levy is not meeting its objective of rendering South Africa’s vehicle fleet more efficient and environmentally friendly. It is possible that the current CO₂ levy is too low in

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2 This study is a laboratory-designed experiment that exposes participants to a contrived (artificial) environment where they need to choose a motor vehicle (Model A or Model B). Due to the study being a laboratory-designed experiment, it is regarded as a quantitative study. The experiment is further a causal study that measured whether the CO₂ penalty or CO₂ incentive had an effect on the choice of motor vehicle, i.e. how many participants chose Model A and how many participants chose Model B.
relation to the cost of the new motor vehicles purchased by consumers to have a material impact on the total price. South Africa should also consider whether a CO\(_2\) incentive would be more effective than a CO\(_2\) levy in changing consumers’ behaviour when choosing a new motor vehicle. In particular, countries such as Sweden and the Netherlands have successfully used rebates (incentives) to reduce the purchase price and promote the ownership of low-emission vehicles (Huse & Lucinda, 2014, p. F417; Peters et al., 2008, p. 1355). To date, no studies have been conducted in South Africa to determine whether a CO\(_2\) incentive is more likely to change consumers’ choice of motor vehicle than a CO\(_2\) levy.

A CO\(_2\) incentive received can be regarded as a gain and CO\(_2\) penalty or levy paid can be regarded as a loss. Nosenzo et al. (2014, p. 636) studied the effect of bonuses (gains) versus fines (losses) in inspection games and found that bonuses are less effective in encouraging compliance. The effectiveness of fines can be explained by loss aversion, as individuals want to avoid the emotion of loss. If these findings by Nosenzo et al. are also true for CO\(_2\) penalties and CO\(_2\) incentives, it is expected that a CO\(_2\) penalty (loss) will have a stronger effect on consumers’ behaviour than a CO\(_2\) incentive (gain).

The prospect theory explains that people are loss averse and that losses appear larger than gains (Kahneman, 2011, p. 284). Loss aversion is based on the concept that the fear of losing, for example, ZAR 1,000 is more intense than the hope of gaining ZAR 1,000. The loss aversion ratio has been estimated in several experiments to be in the range of 1.5 to 2.5 (Kahneman, 2011, p. 284). Based on this loss aversion ratio, a loss of ZAR 1,000 would be balanced out by a gain of ZAR 1,500 to 2,500. It is therefore expected that consumers will be loss averse and would want to avoid paying a CO\(_2\) levy. The literature review on CO\(_2\) levies, CO\(_2\) incentives and the prospect theory were used to develop the first theoretical framework:

Theoretical framework 1: The dependent variable, i.e. the consumer’s choice of motor vehicle, is influenced by the following independent variable: whether a CO\(_2\) penalty is imposed or a CO\(_2\) incentive granted.

The literature review indicated that a CO\(_2\) incentive and a CO\(_2\) penalty both have the potential to change consumer behaviour when choosing a new motor vehicle (Huse & Lucinda, 2014, p. F417, Gerlagh et al., 2018, p. 122). Consumers are expected to be drawn towards motor vehicles for which a CO\(_2\) incentive is granted because they will feel that they are being rewarded for their decisions. Consumers are also expected to avoid purchasing motor vehicles that are subject to a CO\(_2\) penalty as they want to avoid the emotion of loss and being punished for their decisions. However, the expectation is that a CO\(_2\) penalty will have a stronger influence on consumer behaviour than a CO\(_2\) incentive. The following three directional hypotheses were derived from theoretical framework 1:

\(H1\): The granting of a CO\(_2\) incentive will influence a consumer to choose a more fuel-efficient new motor vehicle.

\(H2\): Charging a CO\(_2\) penalty will influence a consumer to choose a more fuel-efficient new motor vehicle.

\(H3\): Charging a CO\(_2\) penalty will have a stronger influence than a CO\(_2\) incentive on a consumer’s decision to choose a more fuel-efficient new motor vehicle.
Another reason why the CO₂ levy is not effective in changing South African consumers’ behaviour is the information considered by the consumer. Gerlagh et al. (2018, p. 122) suggest that consumers suffer from near-sightedness when they purchase new motor vehicles and tend to underestimate or ignore the future costs of driving those vehicles. Gerlagh et al. (2018, p. 123) maintain that the adoption of a subtle fiscal policy that prompts consumers to consider information detailing the future cost of driving a particular motor vehicle can be successful in reducing their near-sightedness. Limited research has been conducted to determine the extent to which South African consumers’ behaviour is influenced by an information policy that prompts them to consider the future fuel costs of the motor vehicles they wish to purchase. The question regarding the possible effect of such a policy still has to be answered. In addition, the question on whether an information policy will increase the effectiveness of either a CO₂ penalty or a CO₂ incentive in changing consumer behaviour when choosing a new motor vehicle must be answered.

As discussed, Gerlagh et al. (2018, p. 122) considered near-sightedness as one of the main reasons why a CO₂ levy is more effective than future usage taxes and fuel costs in influencing consumers’ behaviour. It is also possible that consumers give little weight to the actual future fuel costs because of limited information or the complexity of the available information which requires the consumers to do further calculations (Greene, 2010, p. 608). Rational decision making of consumers is often replaced by bounded rationality which is generally accepted to apply when a consumer purchases a motor vehicle (Coad, de Haan & Woersdorfer 2009, p. 2079). Bounded rationality suggests that consumers’ rational behaviour is compromised by time limitations, the type of information available and their cognitive abilities (Greene, 2010, p. 608).

Barnard (2014, p. 54) found that South African consumers are neither aware of the CO₂ tax currently levied, nor of the CO₂ emissions emitted by their new motor vehicles. Gerlagh et al. (2018, p. 106) argue that the effectiveness of car taxes can depend on the adoption of subtle policy features. If subtle information policies require consumers to consider certain information before the final purchase decision is made, such as comparing the future fuel costs of the different engine capacity of the preferred motor vehicle model, they might change their behaviour when choosing a model. This change in consumer behaviour could then be ascribed to the subtle information policy that reduced the bounded rationality of consumers, as the policy enables them to make a fair assessment of all the relevant information and make a more rational decision. The mentioned studies on consumer near-sightedness, bounded rationality and information policies were used to develop the second theoretical framework for this study:

Theoretical framework 2: The dependent variable, i.e. the consumers’ behaviour when choosing a new motor vehicle, will be affected by the independent variable, which is the provision of an information policy that provides a high level of transparency regarding the future fuel cost of driving a particular motor vehicle.

It is expected that the provision of information regarding the future fuel cost of driving a motor vehicle will influence the behaviour of near-sighted consumers and those that suffer from bounded rationality when choosing a new motor vehicle. The second theoretical framework was used to formulate the fourth hypothesis, which is directional in nature:
H4: An information policy that provides a high level of transparency regarding the future fuel cost of driving a particular motor vehicle will influence a consumer to choose a more fuel-efficient new motor vehicle.

According to Stern (1999, p. 461), when information policies and financial incentives (such as a CO₂ incentive) are combined, the effect on consumer behaviour may be stronger than when each policy is applied in isolation. It is therefore expected that the combination of these two policies will have a stronger effect on consumer behaviour than when each policy is applied on its own.

When H1 and H4 are tested together, the effect of providing information about future fuel costs in terms of an information policy will be tested in conjunction with the effect of a financial policy that offers a CO₂ incentive (the ‘carrot’). Based on Stern’s (1999, p. 461) findings, it is expected that when consumers are provided with more information regarding the future fuel costs of driving a motor vehicle, the CO₂ incentive and the information policy will have a synergistic effect on consumer behaviour and that consumers will show a stronger preference for fuel-efficient motor vehicles. As a result, a third theoretical framework is derived from testing H1 and H4 in combination:

Theoretical framework 3: Consumers’ behaviour when choosing a new motor vehicle (dependent variable) is impacted by two independent variables: a financial policy (a CO₂ incentive) and an information policy (more information on the future fuel costs of driving a motor vehicle).

The fifth hypothesis is a directional hypothesis as the third theoretical framework supports a positive relationship between the two independent variables, being an information policy and a financial policy (a CO₂ incentive), and the dependent variable, being consumers’ behaviour when choosing a new motor vehicle. The fifth hypothesis is as follows:

H5: The combination of a CO₂ incentive with an information policy (a high level of transparency regarding the future fuel costs of driving the motor vehicle) is more likely to result in an increase in the consumer’s preference for a fuel-efficient new motor vehicle than would a CO₂ incentive without an information policy (a low level of transparency regarding future fuel costs).

When H2 and H4 are tested in combination, the effect of providing information on the future fuel costs by way of an information policy, will be tested in conjunction with a financial policy that charges a CO₂ penalty (the ‘stick’). Stern (1999, p.461) did not attempt to determine whether the combination of an information policy with a financial policy that charges a penalty will also have a synergistic effect on consumer behaviour. As argued above, due to bounded rationality, consumers might not take the time to carefully consider all the available information on the motor vehicle they plan to purchase, which could include estimating the future fuel costs. Greene (2010, p. 613) suggests that the provision of accurate additional information about the actual future fuel savings that consumers are likely to realise can increase the importance of those future fuel savings in the case of consumers who are loss averse. In addition, the loss aversion theory normally makes the CO₂ penalty appear larger than it actually is. If the consumers are given more information regarding the actual total cost of a motor vehicle, including the future fuel costs, the CO₂ penalty will be seen in perspective with the other costs of the vehicle, which will reduce the loss aversion ratio applied to the CO₂ penalty. As a result, the CO₂ penalty will no longer appear to be larger than it really is and should
become less effective. These studies on loss aversion, consumer near-sightedness and bounded rationality are now used to develop the fourth theoretical framework for this study, which is derived from testing H2 and H4 in combination:

Theoretical framework 4: Consumers’ behaviour when choosing a new motor vehicle (dependent variable) is impacted by two independent variables: financial policies (a CO2 penalty) and information policies (more information regarding the future fuel costs of driving a particular motor vehicle).

The sixth hypothesis is a directional hypothesis as the fourth theoretical framework supports an inverse relationship between the two independent variables, being an information policy and a financial policy, and the dependent variable, being consumers’ behaviour when choosing a new motor vehicle. The sixth hypothesis is as follows:

H6: The combination of a CO2 penalty and an information policy (a high level of transparency regarding the future fuel costs of driving the motor vehicle) is more likely to result in a decrease in consumer preference for a fuel-efficient new motor vehicle than a CO2 penalty without an information policy (a low level of transparency regarding future fuel costs).

The six hypotheses formulated above were tested by means of an experiment that will be discussed in section 3.

3. RESEARCH METHODOLOGY

To test the six hypotheses, an experiment was designed with a basic scenario that required participants to choose between two motor vehicles of the same make, namely Model A and Model B. This basic scenario of choosing between Model A and Model B was also employed in an experiment conducted by Morrow and Rupert (2015, pp. 47-54) in the United States. The experiment of Morrow and Rupert measured the effect of the conformity of federal tax incentives and state tax incentives on the decision of a consumer when choosing between a traditional or hybrid motor vehicle.

The six hypotheses were used to design treatment conditions which are summarised in Table 1. The treatment conditions include either a CO2 penalty or a CO2 incentive and either a higher or a lower level of transparency regarding the future fuel costs of the two motor vehicles. These two options for each of the two research objectives led to a ‘two-by-two’ experimental design, which resulted in the creation of four different treatment groups to test the two research objectives. An additional treatment group and a control group then increased the treatment groups from four to six as set out in Table 1 below.

<table>
<thead>
<tr>
<th>Treatment conditions</th>
<th>CO2 incentive is granted</th>
<th>CO2 penalty is imposed</th>
<th>No CO2 penalty and no CO2 incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1, H2 and H3</td>
<td>Treatment Group 1</td>
<td>Treatment Group 2</td>
<td>Treatment Group 3 (control group)</td>
</tr>
<tr>
<td>H4, H5, H6</td>
<td>Treatment Group 4</td>
<td>Treatment Group 5</td>
<td>Treatment Group 6</td>
</tr>
</tbody>
</table>

*A low level of transparency regarding future fuel costs*  
*A high level of transparency regarding future fuel costs*
3.1 Independent variables

The six treatment groups gave rise to six experiments. The treatment conditions in each treatment group were the independent variables of each experiment and are summarised in Table 2 below.

Table 2: The Six Experiments

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Treatment group</th>
<th>Independent variables</th>
</tr>
</thead>
</table>
| Experiment 1 | Treatment Group 1 | CO₂ incentive  
Low level of transparency regarding future fuel costs |
| Experiment 2 | Treatment Group 2 | CO₂ penalty 
Low level of transparency regarding future fuel costs |
| Experiment 3 | Treatment Group 3 (control group) | No CO₂ incentive and no CO₂ penalty  
Low level of transparency regarding future fuel costs |
| Experiment 4 | Treatment Group 4 | CO₂ incentive  
High level of transparency regarding future fuel costs |
| Experiment 5 | Treatment Group 5 | CO₂ penalty  
High level of transparency regarding future fuel costs |
| Experiment 6 | Treatment Group 6 | No CO₂ incentive and no CO₂ penalty  
High level of transparency regarding future fuel costs |

3.2 Basic scenario

Participants were randomly allocated to participate in only one of the six experiments. Participants in all six experiments were presented with the basic scenario of purchasing a new motor vehicle. They were informed that they had already decided to purchase a new motor vehicle and had also decided on the make and model of the new motor vehicle they wanted to purchase. The only decision that remained was to choose between two engine versions of this motor vehicle, being Model A and Model B. Lane and Potter (2007, p. 1085) argued that fuel consumption provides a useful marketing tool for promoting low-emission motor vehicles and is a more effective marketing tool than a motor vehicle’s ‘green’ credentials. The study conducted by Coad et al. (2009, p. 2079) found that consumers did not fully understand the meaning of the energy label or ‘green’ credentials, which suggests that consumers are not well informed about environmental issues. Based on the findings of the two studies, the participants were not provided with information on either the CO₂ emissions of these two models, or their ‘green’ credentials. The only information given to the participants related to the fuel consumption of the two models.

The basic scenario was designed to ensure that all the characteristics of the two motor vehicles, such as power, style and handling, reliability, safety, insurance premiums, financing options and motor plans were identical. The participants were informed that they would drive 20,000 kilometres per year for five years and that the two models would be equal in value at the end of five years. Model A had a fuel consumption of 6.5 litres per 100 kilometres and the fuel consumption of Model B was 4.7 litres per 100 kilometres. The total cost of the two models was made up of the purchase price, the CO₂ penalty or CO₂ incentive and the future fuel costs for a period of five years. The total costs of Model A and Model B were designed to be exactly the same. It could therefore be expected that the choice of model would not depend on total costs, but rather on how the total costs were made up.
For purposes of calculating the CO₂ penalty and CO₂ incentive, it was assumed that Model A emits 157 grams of CO₂ per kilometre and Model B emits 119 grams of CO₂ per kilometre. Based on the legislation on CO₂ levies imposed on motor vehicles in South Africa applicable at the time of the study, the CO₂ levy that was payable on Model A, amounted to ZAR 3,700 (at time of writing, increased to ZAR 4,070 which is still approximately 1% of the value of the Model A vehicle as referred to below; South African Revenue Service, 2019). Since Model B’s CO₂ emissions were below the approved emissions level of 120 grams per kilometre, it was not subject to a CO₂ levy. Carrim (2014, p. 58), Barnard (2014, p. 54) and Ackerman (2014, p. 91) found that the then CO₂ levy in South Africa had not changed consumer behaviour, and it can be argued that the reason for this is that levy is too low to make an impact. In this experiment, the CO₂ penalty was therefore increased from ZAR 3,700 to ZAR 10,500, which meant that the CO₂ penalty or CO₂ incentive used in the experiment represented approximately 3% instead of approximately 1% of the purchase price of the motor vehicle. The CO₂ penalty and CO₂ incentive used in the six different experiments were both set at ZAR 10,500. Even though the theory of loss aversion argues that a loss of ZAR 10,500 is more painful than a gain of ZAR 10,500 is favourable, the penalty and incentive were both tested at ZAR 10,500 to ensure that any differences in the responses to the penalty and incentive would not be influenced by the difference between the amounts.

The basic scenario for Experiments 1, 2 and 3, presented a lower level of transparency regarding the future fuel costs of Model A and Model B. The participants were provided with the average fuel consumption per 100 kilometres for both models and the total kilometres that would be travelled each year for a period of five years. The participants were also given the projected cost of fuel per litre for the next five years to enable them to calculate the future fuel costs per model.

- In Experiment 1, the participants were informed that although Model B cost more than Model A, it was more fuel efficient and therefore qualified for a CO₂ incentive or discount of ZAR 10,500 for which Model A did not qualify. The total cost of each of the two models, including the purchase price, the CO₂ incentive and the correctly calculated future fuel cost, was exactly the same and amounted to ZAR 350,497.

- In Experiment 2, the participants were informed that only Model A, which cost less and was less fuel efficient than Model B, was subject to a CO₂ penalty of ZAR 10,500. The total cost of each of the two models included the purchase price, the CO₂ penalty and the correctly calculated future fuel cost, and was exactly the same at ZAR 350,497.

- In Experiment 3, the two models were subject to neither a CO₂ incentive nor a CO₂ penalty. The total cost of each model included only the purchase price and the correctly calculated future fuel cost and amounted to ZAR 350,497. Once again, the costs of Model A and Model B were exactly the same.

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The basic scenario for Experiments 4, 5 and 6 presented a higher level of transparency regarding the future fuel costs of Model A and Model B. The participants were again provided with the average fuel consumption of both models per 100 kilometres and the total distance in kilometres travelled each year. Instead of providing participants with the fuel cost per litre for the next five years as had been done in Experiments 1, 2 and 3, the participants were given the estimated future fuel costs for five years for both models and were advised that the estimated future fuel costs were based on the assumption that a distance of 100,000 kilometres would be travelled in the next five years and that the costs had been calculated correctly.

• In Experiment 4, as in Experiment 1, the participants were informed that Model B, which was more expensive but also more fuel efficient than Model A, qualified for a CO₂ incentive of ZAR 10,500, for which Model A did not qualify. The total cost of each model, which included the purchase price, the CO₂ incentive and the future fuel cost, amounted to ZAR 350,497. The participants were also provided with an additional table summarising the total cost of each of the two models. The purpose of this additional table was to highlight each cost element and the fact that the total cost for each of the two models was exactly the same.

• In Experiment 5, which was similar to Experiment 2, the participants were informed that only Model A, which cost less but was less fuel efficient than Model B, was subject to a CO₂ penalty of ZAR 10,500. The total cost of each model, which included the purchase price, the CO₂ penalty and the future fuel cost, amounted to ZAR 350,497. The participants were again given an additional table summarising the total cost of each of the two models with the purpose of highlighting each cost element and the fact that the total cost of each of the two models was exactly the same.

• In Experiment 6, as in Experiment 3, the two models were not subject to either a CO₂ incentive or a CO₂ penalty. The total cost of each model included only the purchase price and the future fuel cost and amounted to ZAR 350,497. The participants were again given an additional table containing summaries of the total cost of each car in order to highlight each cost element and the fact that vehicles cost exactly the same.

As stated above, the participants in Experiments 1, 2 and 3 were given the total number of kilometres driven over a period of five years, the average fuel consumption and the cost of fuel per litre for the next five years. They therefore had the information, but could decide for themselves whether they wanted to calculate the future fuel costs and consider it when choosing a vehicle. The participants in Experiments 4, 5 and 6 were given the future fuel costs for Model A and Model B, which were ZAR 70,497 and ZAR 50,975 respectively. The calculation of the fuel costs ignored the time value of money and is set out in Table 3 below.
The differential impact of CO₂ penalties, CO₂ incentives and information policies

Table 3: Calculation of the Future Fuel Costs for Five Years for Model A and Model B

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total kilometres driven in five years</td>
<td>100,000 km</td>
<td>100,000 km</td>
</tr>
<tr>
<td>Average fuel consumption</td>
<td>6.5 litres/100 km</td>
<td>4.7 litres/100 km</td>
</tr>
<tr>
<td>Litres required for 100 000 km</td>
<td>6,500 litres</td>
<td>4,700 litres</td>
</tr>
<tr>
<td>Cost of fuel per litre</td>
<td>ZAR 10.85</td>
<td>ZAR 10.85</td>
</tr>
<tr>
<td>Future fuel cost over five years</td>
<td>ZAR 70,497</td>
<td>ZAR 50,975</td>
</tr>
</tbody>
</table>

Table 4 shows the composition of the total cost of ZAR 350,497 for Model A and Model B for all six experiments. The composition of the total cost for Experiments 1 and 4 was the same as both experiments included a CO₂ incentive. For Experiments 2 and 5 the composition was also the same as both experiments included a CO₂ penalty. The composition of the total cost for Experiments 3 and 6 is also the same as both experiments include neither a CO₂ incentive nor a CO₂ penalty.

Table 4: The Total Cost for Model A and Model B for the Six Experiments

<table>
<thead>
<tr>
<th></th>
<th>Experiments 1 and 4</th>
<th>Experiments 2 and 5</th>
<th>Experiments 3 and 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase price (including VAT)</td>
<td>Model A</td>
<td>Model B</td>
<td>Model A</td>
</tr>
<tr>
<td>CO₂ incentive on Model B</td>
<td>ZAR 280,000</td>
<td>ZAR 310,022</td>
<td>ZAR 269,500</td>
</tr>
<tr>
<td>Future fuel costs over five years</td>
<td>ZAR 70,497</td>
<td>ZAR 50,975</td>
<td>ZAR 70,497</td>
</tr>
<tr>
<td>Total cost</td>
<td>ZAR 350,497</td>
<td>ZAR 350,497</td>
<td>ZAR 350,497</td>
</tr>
</tbody>
</table>

3.3 Dependent Variables

The participants in all six experiments were required to choose between Model A and Model B after reading the information provided on these two models. The choice between Model A and Model B was the primary dependent variable, which was similar to the primary dependent variable in the experiment conducted by Morrow and Rupert (2014, p. 52). The scale used by Morrow and Rupert to measure a participant’s preference for Model A or Model B was adjusted to be an unbalanced six-point itemised semantic differential scale and ranged from (1) ‘I will definitely choose Model A’ to (6) ‘I will definitely choose Model B’. An unbalanced scale was used to ensure that the participant chose between Model A and Model B and did not remain undecided.
After choosing between Model A and Model B, the participants were also required to respond to questions that measured the impact of the CO₂ incentive or the CO₂ penalty on their choice of model.

- In Experiments 1 and 4, the participants were asked four additional questions, which were the secondary dependent variables. These four questions were similar to the questions asked by Morrow and Rupert in their experiment (Morrow & Rupert, 2015, p. 52). The first three questions related to the CO₂ incentive that had been granted on Model B. The participants were first asked how important the CO₂ incentive of ZAR 10,500 on Model B was considered to be when a choice had to be made between the two models. The Likert scale used by Morrow and Rupert was adjusted to obtain an unbalanced five-point differential semantic rating scale that ranged from (1) ‘Not important at all’ to (5) ‘Of extreme importance’. The midpoint of the scale read ‘Of moderate importance’ and not ‘Neither important nor unimportant’. The second and third questions were of a general nature. The second question required the participants to indicate how likely they thought it was that a CO₂ incentive of ZAR 10,500 offered on Model B would change a consumer’s behaviour when choosing a new motor vehicle. An unbalanced five-point differential semantic rating scale was used that ranged from (1) ‘Unlikely’ to (5) ‘Definitely’. Third, the participants were asked how fair they thought it was to grant a CO₂ incentive of ZAR 10,500 on Model B to influence a consumer’s choice of motor vehicle. An unbalanced six-point differential semantic rating scale was used that ranged from (1) ‘Very unfair’ to (6) ‘Very fair’. The final question focused on the model chosen by the participant. It required participants to quantify what the difference in total price in ZAR between Model A and Model B would have to be to convince consumers to change their minds and choose the other model.

- The four questions and scales used in Experiments 2 and 5 were similar to the questions in Experiments 1 and 4, except that they related to a CO₂ penalty and not to a CO₂ incentive. First, the participants were asked how important the CO₂ penalty of ZAR 10,500 on Model A was when choosing between the two models; second, how likely the participants thought it was that the CO₂ penalty of ZAR 10,500 charged on Model A would change a consumer’s behaviour when choosing a new motor vehicle; and third, how fair they thought it was to impose a CO₂ penalty of ZAR 10,500 on Model B in order to influence a consumer’s choice of motor vehicle. The final question again focused on the models chosen by the participants and required them to quantify the difference in total price between Model A and Model B that would convince them to choose the other model.

- In Experiments 3 and 6, the participants had to choose between Model A and Model B when neither a CO₂ incentive nor CO₂ penalty was applicable to either model. Even though neither of the models was subject to a CO₂ incentive or a CO₂ penalty, participant were asked four general questions about a CO₂ incentive and a CO₂ penalty. The questions were similar to the second and third questions asked in Experiments 1, 2, 4 and 5. The participants were asked how likely they thought it was that a CO₂ penalty of ZAR 10,500 charged on Model A only would change a consumer’s choice of motor vehicle; second, how likely they thought it was that a CO₂ incentive or discount of ZAR 10,500 granted on Model B only would change a consumer’s choice of motor vehicle; third, how fair they thought
it was to impose a CO\textsubscript{2} penalty of ZAR 10,500 on Model B in order to influence a consumer’s choice of motor vehicle, and fourth, how fair the participants thought it was to grant a CO\textsubscript{2} incentive of ZAR 10,500 on Model B in order to influence a consumer’s choice of motor vehicle. For the first and third questions, an unbalanced five-point differential semantic rating scale ranging from (1) ‘Unlikely’ to (5) ‘Definitely’ was used. For the second and fourth questions, an unbalanced six-point differential semantic rating scale ranging from (1) ‘Very unfair’ to (6) ‘Very fair’ was used. The amount of ZAR 10,500 used for the CO\textsubscript{2} incentive and the CO\textsubscript{2} penalty in Experiments 1, 2, 4 and 5 was also used in the four questions in Experiments 3 and 6 to ensure that the results obtained from these questions would be comparable for all six experiments.

3.4  Manipulation check questions and background questions

After the participants had completed the experiment, they were requested to answer 18 short questions. These questions were included to measure and control other factors that might influence a consumer’s choice of motor vehicle. For example, a consumer’s age, gender, income and opinion about protecting the environment may influence their choice of motor vehicle.

Questions 1, 2 and 3 were the manipulation check questions and Questions 4 to 18 were the background questions. Questions 4 to 18 were the same for all six experiments.

The answers to Question 1 and Question 2 had to be correct in order for the questionnaire to be valid.

3.4.1  Question 1: manipulation check question for the CO\textsubscript{2} incentive and the CO\textsubscript{2} penalty

For Experiments 1 and 4, the manipulation check question was a statement and participants had to indicate whether it was true or false. The statement read as follows: ‘In this experiment in which I took part, I was granted a CO\textsubscript{2} incentive on one of the two models’. The objective of this question was to determine whether the participants realised that one of the two models had been granted a CO\textsubscript{2} incentive. For Experiments 2 and 5, the manipulation check question was the same as for Experiments 1 and 4 above, except that the statement referred to a CO\textsubscript{2} penalty and not to a CO\textsubscript{2} incentive. The objective of this question was to determine whether the participant realised that a CO\textsubscript{2} penalty was being charged on one of the two models. For Experiments 3 and 6, no CO\textsubscript{2} penalty or CO\textsubscript{2} incentive applied. The manipulation check question required the participants to respond ‘true’ or ‘false’ to the statement that Model A and Model B were both not subject to CO\textsubscript{2} penalties or CO\textsubscript{2} incentives or discounts. The objective of this question was to determine whether the participants were aware of the fact that neither one of the two models was subject to CO\textsubscript{2} penalties or CO\textsubscript{2} incentives.

3.4.2  Question 2: manipulation check question for the level of transparency regarding the future fuel costs of Model A and Model B

For Experiments 1, 2 and 3, the manipulation check question was a statement and participants had to indicate whether it was true or false. The statement read as follows: ‘In this experiment in which I took part, I was given sufficient information to calculate the future fuel costs of Model A and Model B’. The objective of this question was to determine whether the participants were aware that they had been given sufficient information to calculate the future fuel costs of Model A and Model B. For Experiments 4, 5 and 6, the manipulation check question was also a statement to which participants
had to respond by indicating whether they considered it to be true or false. The statement read as follows: ‘In this experiment in which I took part, I was given the future fuel costs of Model A and Model B’. The objective of this question was to determine whether the participants were aware that they had been given the future fuel costs of Model A and Model B.

As Question 3, the participants in all six experiments were also asked whether or not they took the future fuel costs into account when choosing between the two models by choosing either ‘Yes’ or ‘No’. This question was not a pure manipulation check question, but was included to determine whether the manipulation of the level of transparency regarding the future fuel costs was influencing a participant to consider the future fuel costs when choosing between Model A and Model B. The objective of this question was to measure whether the participants in Experiments 4, 5 and 6 had given more consideration to the fuel costs than those who participated in Experiments 1, 2 and 3.

### 3.4.3 Questions 4 to 18: background questions

Questions 4 to 18 were the background questions of which questions 4, 5 and 6 were control variables. The personal information gathered in questions 4, 5 and 6 related to the participant’s age, gender and income and was used to describe the sample characteristics. The background questions also included questions designed to measure the environmental morale and tax morale of the participants. For ease of reference, the results of the background questions are given below as the background questions are discussed.

Question 4, an open question, asked participants to state their age by writing it down in years. Question 5 asked the participants to indicate their gender by selecting ‘male’ or ‘female’. The third control variable was income and in Question 6 they had to indicate whether their annual incomes before deductions were less than ZAR 670,000, between ZAR 670,001 and 1.3 million or more than ZAR 1.3 million.

As indicated in Table 5, 73.04% of the participants were between 25 and 44 years of age as 44.78% of the participants were aged between 25 and 34 years and 28.26% between 35 and 44 years. With regard to gender, males (48.70%) and females (51.30%) were evenly balanced. The annual income before deductions of 69.13% of the participants was less than ZAR 670,000 and 26.52% earned more than ZAR 670,000 and up to ZAR 1.3 million per year. Only 3.05% of the participants were in the top income group and earned more than ZAR 1.3 million per year.

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4 The potential impact of socioeconomic factors on the consumers’ choice of motor vehicle was controlled in this experiment with the inclusion of background questions. As a result, the socioeconomic factors were treated as control variables and randomised out to ensure the choice of motor vehicle was not influenced by these factors.
Table 5: Frequency of Demographic Information

<table>
<thead>
<tr>
<th>Demographic information</th>
<th>N</th>
<th>% of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 – 24 years</td>
<td>20</td>
<td>8.70%</td>
</tr>
<tr>
<td>25 – 34 years</td>
<td>103</td>
<td>44.78%</td>
</tr>
<tr>
<td>35 – 44 years</td>
<td>65</td>
<td>28.26%</td>
</tr>
<tr>
<td>45 – 54 years</td>
<td>21</td>
<td>9.13%</td>
</tr>
<tr>
<td>Older than 55 years</td>
<td>21</td>
<td>9.13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>230</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>112</td>
<td>48.70%</td>
</tr>
<tr>
<td>Female</td>
<td>118</td>
<td>51.30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>230</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>Annual income before deductions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZAR 0 – ZAR 670,000</td>
<td>159</td>
<td>69.13%</td>
</tr>
<tr>
<td>ZAR 670,001 – ZAR 1,300 000</td>
<td>61</td>
<td>26.52%</td>
</tr>
<tr>
<td>More than ZAR 1,300 000</td>
<td>7</td>
<td>3.05%</td>
</tr>
<tr>
<td>No answer</td>
<td>3</td>
<td>1.30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>230</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Question 7 asked the participants to indicate whether they drove company vehicles or their own motor vehicles. The assumption was that participants who drove company-owned motor vehicles would be less concerned about the purchase price and the CO2 penalty or CO2 incentive as such costs would be borne by their employers. For this reason participants who drove their own motor vehicles were preferred. 95.22% of the participants drove privately-owned motor vehicles.

Question 8 asked the participants to indicate which of the following two statements applied to them: ‘I pay my own fuel cost’ or ‘I can claim my fuel cost for business travel back from my employer’. The objective of this question was to determine whether the participants were fully liable for their own fuel costs or not. This information was important as it was assumed that participants whose fuel costs were paid by their employers would be less concerned about the fuel consumption of their motor vehicles as the cost would not directly impact their personal finances. For this reason participants who paid their own fuel costs were preferred for this study. 77.40% of the participants paid their own fuel costs.

In response to Question 9, the participants had to indicate how likely it was that they would purchase new motor vehicles in the next five years using an unbalanced five-point semantic differential scale from (1) ‘Unlikely’ to (5) ‘Definitely’. This question was also included in Morrow and Rupert’s questionnaire (Rupert, 2016). The objective of this question was to give the researchers an indication of how regularly the participants replaced their motor vehicles. Altogether 73.48% of the participants
selected (3), (4) or (5) on the scale, which indicated that it was likely that they would purchase a new motor vehicle in the next five years.

The participants had to respond to Question 10 by indicating the importance of six vehicle characteristics when purchasing a new motor vehicle, namely the status value of the vehicle, safety, fuel economy, the provision of a comprehensive motor plan, functionality (for example boot space and off-road capability) and engine size. The objective of this question was to determine what the participants regarded as important characteristics when choosing a new motor vehicle as their responses could potentially explain their choice of motor vehicle. The importance attached to fuel economy could explain why a participant would choose either Model A or Model B. The environmental impact of the new motor vehicle did not seem to rank high on the agendas of consumers and they appeared to regard fuel efficiency as a bonus (Coad et al., 2009, p. 2079). It was therefore expected that consumers who indicated that fuel economy was not important would have shown a stronger preference for Model A, which was less fuel efficient. In other words, it was expected that consumers who indicated that fuel economy was important when choosing a new motor vehicle would prefer the more fuel-efficient Model B. The safety of the motor vehicle was indicated as the most important factor with a mean score of 4.47, followed by fuel economy (4.20) and the availability of a comprehensive motor plan (4.00).

Questions 11 and 12, which were also asked in Morrow and Rupert’s questionnaire (Rupert, 2016), were included to measure the environmental morale of the participants. A scale ranging from (1) ‘Strongly agree’ to (6) ‘Strongly disagree’ was used for both questions. Environmental morale is the willingness of people to care for the environment by making decisions that are favourable to the environment. A study conducted by Lane and Potter (2017, p. 1085) in the United Kingdom found that both private and fleet consumers place a low priority on environmental issues when purchasing new vehicles. They also found that consumers use fuel consumption as a proxy for both the environmental impact and the motor vehicle costs. It was therefore expected that consumers with a high environmental morale would be more willing to choose the more fuel-efficient Model B.

Question 11 required the participants to indicate, on a six-point unbalanced Likert scale, how strongly they agreed or disagreed with the following statement: ‘I would donate part of my income if I was certain that my money would be used to prevent environmental pollution’. The objective of Question 11 was to measure whether the participants were willing to donate money to help prevent environmental pollution. An empirical study undertaken by Torgler, García-Valiñas and Macintyre (2008, p. 1) in 33 Western and Eastern European countries revealed that women were more inclined than men to want to protect the environment and were more willing to contribute financially to assist efforts in this regard. The gender and age of participants were therefore also taken into account in the analysis of the answers to Question 11. The participants who agreed with the statement represented 63.91% of the participants and 35.65% disagreed. When the opinions of men and women were analysed, 69.49% of women agreed compared to only 58.04% of men.

Question 12 measured the tax morale of the participants combined with their environmental morale and asked participants to indicate, on a six-point unbalanced Likert scale, how strongly they agreed or disagreed with the following statement: ‘I would agree to an increase in taxes if the extra tax revenue would be used to repair and prevent environmental pollution’. Tax morale is a taxpayer’s intrinsic willingness to pay
The differential impact of CO2 penalties, CO2 incentives and information policies

The objective of this question was to measure whether the participants would be willing to pay more tax if the tax revenue were earmarked for the repair and prevention of environmental pollution. Individuals respond positively when tax proceeds are directed toward programmes of which they approve (Alm, Jackson & McKee, 1993, p. 285). Daude, Gutiérrez and Melguizo (2013, p. 9) explored the drivers of tax morale worldwide with the emphasis on developing countries and concluded that socioeconomic factors such as age, religion, gender, employment status and level of education have a significant impact on people’s levels of tax morale. As the background questions had already asked the participants’ age, gender and income, it was possible to analyse their answers to Questions 11 and 12 in relation to their age, gender and income. The responses for Question 12 were similar to those of Question 11 since 63.91% of the participants agreed and 36.09% disagreed. When the opinions of men and women were analysed, both had similar opinions regarding an increase in tax to prevent environmental pollution.

The participants were asked to respond to Question 13 by indicating, on a six-point unbalanced Likert scale, how strongly they agreed or disagreed with the following statement: ‘It is the government’s responsibility to reduce environmental pollution and it should not cost me any additional money’. This question was included specifically as it was significant in the preliminary analysis of the study conducted by Morrow and Rupert (2015, p. 53). The objective of Question 13 was to determine whether the participants were willing to take responsibility for environmental pollution, or whether they preferred to shift the responsibility and cost of environmental pollution on to the government. 69.57% of the participants agreed with this statement.

The objective of Question 14 was to determine whether participants were willing to shift the blame for environmental pollution onto the motor vehicle manufacturers. They were asked to indicate how strongly they agreed or disagreed with the following statement: ‘It is the motor vehicle manufacturer’s responsibility to reduce the CO2 emissions of new motor vehicles’. A six-point unbalanced Likert scale ranging from (1) ‘Strongly agree’ to (6) ‘Strongly disagree’ was used. Coad et al. (2009, p. 2083) found that consumers do not feel entirely liable for the environmental damage caused by their high-emission motor vehicles. Consumers generally feel that the responsibility for reducing emissions should fall on the shoulders of the manufacturers, who should improve the fuel efficiency of the motor vehicles they manufacture. Even consumers who care about the environment might therefore continue to purchase high-emissions vehicles as they feel that they are not to blame for driving vehicles that are not environment friendly. The vast majority (96.09%) of the participants agreed with this statement. It is clear from this result that the participants were of the opinion that motor vehicle manufacturers should take responsibility for the reduction of the CO2 emissions of new motor vehicles.

Questions 15 and 16 were designed to determine how the participants felt about the use of tax incentives and tax penalties outside the motor vehicle industry to encourage or discourage certain activities. A six-point unbalanced Likert scale ranging from (1) ‘Strongly agree’ to (6) ‘Strongly disagree’ was used in both questions. Question 15 was based on a question asked by Morrow and Rupert (2014, p. 53), but was adapted to include an example from the South African context. The participants were asked how they felt about the statement: ‘Do you agree that the tax system should be used to encourage certain activities, for example to encouraging the installation of solar geysers
by granting tax incentives?’. 92.61% of the participants agreed that tax incentives should be used.

Question 16 asked how the participants felt about the statement: ‘Do you agree that the tax system should be used to discourage certain activities, for example the smoking of cigarettes, by charging tax penalties on cigarette sales?’. Only 76.96% of the participants agreed with this statement. When the results for Questions 15 and 16 are compared, more participants agree that tax incentives should be used which was expected as people want to avoid the emotion of loss or being penalised.

Question 17 was also based on a question used by Morrow and Rupert (2014, p. 53), but was adapted to measure the effectiveness of tax incentives and tax penalties in influencing taxpayer behaviour. A six-point itemised semantic differential scale ranging from (1) ‘Tax incentives are much more effective’ to (6) ‘Tax penalties are much more effective’ was used. The objective of this question was to measure the participants’ opinion regarding the effectiveness of tax incentives and tax penalties in general. 75.65% considered tax incentives to be more effective, compared to only 24.35% who felt that tax penalties were more effective.

The last question, Question 18, was asked to determine whether the participants preferred to have to pay a penalty, or to be rewarded with an incentive for their behaviour. A six-point itemised semantic differential scale ranging from (1) ‘I strongly prefer tax penalties’ to (6) ‘I strongly prefer tax incentives’ was used. This was a general question and no reference was made specifically to CO₂ incentives or CO₂ penalties. 82.61% of the participants preferred tax incentives, compared to only 17.39% who preferred tax penalties.

3.5 Design of the experiments and questionnaires

In order to ensure that the experiments and questionnaires adequately tested the hypotheses, Professors Elmar Venter of the University of Pretoria and Timothy Rupert of the Northeastern University’s Boston Campus made valuable comments during the design of the different treatment conditions and manipulation check questions. The six questionnaires were also reviewed by Professor Timothy Rupert and Dr. Marthi Pohl, an independent research consultant employed by the Faculty of Economic and Management Sciences at the University of Pretoria.

Even though the experiment was designed to have high internal and external validity, it was a laboratory-designed experiment that was conducted in an artificial setting. The inherent risk of a laboratory-designed experiment is that the participants’ responses might differ from what they would have been in a real-life scenario.

3.6 Data collection and sampling

Prior to commencement of the study, the questionnaires were approved by the Research Ethics Committee of the Faculty of Economic and Management Sciences at the University of Pretoria. The unit of analysis was an individual consumer who drives a motor vehicle and the population consisted of motor vehicle drivers living in the city of Pretoria, Gauteng province. We were granted permission by the management of Hi-Q Autowel (a motor vehicle wheel and tyre fitment centre) in the suburb Menlyn to invite their clients in the waiting area to complete the questionnaire during August 2016 and September 2016. Participation was voluntary without monetary or other rewards. The composition of the sample was determined by the individuals who entered the waiting
area and were willing to complete the questionnaire. In addition to the Hi-Q Autowiel clients, the researcher also approached 10 acquaintances in Pretoria and asked them and nine of their colleagues who drove motor vehicles to complete the questionnaires. The six paper-and-pen-based questionnaires, one for each of the six experiments, were randomly distributed among the participants for completion. As mentioned above, each participant completed only one of the six questionnaires. The questionnaires were completed anonymously and sealed by the participant in an envelope to ensure that sensitive information, such as a person’s income, could not be linked to a particular participant. The data obtained was manually captured and analysed as presented in section 4.

4. DATA ANALYSIS

A quantitative data analysis was performed on the data collected from the six experiments. Descriptive statistics were calculated after which the six hypotheses were tested using statistical techniques. A total of 247 questionnaires were received of which 17 were discarded as invalid or incomplete. The remaining 230 valid questionnaires were used to create the primary data set. The primary data set was then reviewed to ensure that all the data inputs were valid, logical and suitable for further analysis.

First, the data obtained from the background questions (Questions 4-18) were analysed to obtain classification data of the participants of this study. The results of the background questions were provided above under point 3.4. Second, descriptive statistics for the dependent variables were performed where after the six hypotheses were tested using the independent samples t-test.

4.1 Descriptive statistics for the dependent variables

The primary dependent variable in all six experiments was the choice of motor vehicle and the first question on the first form asked participants to choose either one of two models. The scale ranged from (1) ‘I will definitely choose Model A’ to (6) ‘I will definitely choose Model B’. The number of participants in each experiment and the average interval chosen by the participants on this six-point scale are given in Table 6.

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5 The data analysis is similar to the data analysis performed in the experiment performed by Morrow and Rupert (2014, pp. 54-66).
Table 6: Analysis of Participants’ Choice of Model

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Independent variables</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment 1</td>
<td>CO₂ incentive</td>
<td>37</td>
<td>4.27</td>
<td>1.503</td>
</tr>
<tr>
<td></td>
<td>Low level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment 2</td>
<td>CO₂ penalty</td>
<td>38</td>
<td>4.39</td>
<td>1.306</td>
</tr>
<tr>
<td></td>
<td>Low level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment 3</td>
<td>No CO₂ incentive and no CO₂ penalty</td>
<td>38</td>
<td>4.18</td>
<td>1.768</td>
</tr>
<tr>
<td></td>
<td>Low level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment 4</td>
<td>CO₂ incentive</td>
<td>38</td>
<td>4.37</td>
<td>1.567</td>
</tr>
<tr>
<td></td>
<td>High level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment 5</td>
<td>CO₂ penalty</td>
<td>42</td>
<td>4.21</td>
<td>1.828</td>
</tr>
<tr>
<td></td>
<td>High level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment 6</td>
<td>No CO₂ incentive and no CO₂ penalty</td>
<td>37</td>
<td>4.57</td>
<td>1.501</td>
</tr>
<tr>
<td></td>
<td>High level of transparency regarding future fuel costs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For all six experiments, the mean was greater than 4.00, which indicates that the average choice of model in all six experiments was Model B, which cost more than Model A but was more fuel efficient. A comparison between the means and standard deviations of all six experiments in Table 6 revealed that Experiment 6 resulted in the highest average preference for Model B (4.57) and the intervals chosen by the participants in Experiment 6 showed the second lowest variability in the data (1.501).

The frequency of the participants’ choices of Model A or Model B for each experiment is given in Table 7. Intervals (1), (2) and (3) on the six-point scale indicate that a participant chose Model A, while intervals (4), (5) and (6) indicate that Model B was chosen. The frequencies of (1) to (3), as well as those of (4) to (6) were added together to calculate the choice of model. When the frequencies of all six experiments were compared, Experiment 2 showed the highest frequency of participants who selected Model B when all six experiments were compared: 32 of the 38 participants in Experiment 2 chose Model B.
Two general observations are made with reference to Tables 6 and 7:

- a comparison of Experiments 1, 2 and 3 in Table 6 shows that the mean of 4.18 calculated for Experiment 3 was lower than the means for the other two experiments, which indicates that the inclusion of both the CO₂ penalty and the CO₂ incentive heightened the participants’ preference for the more fuel-efficient Model B. Of the three experiments, Experiment 2 had highest mean (4.39) and the lowest standard deviation (1.306).

- when Experiments 4, 5 and 6 are compared (see Table 6), it can be seen that the mean of 4.59 for Experiment 6 is the highest. This indicates that the participants in Experiment 6, in which no CO₂ penalty or the CO₂ incentive applied, showed the highest average preference for Model B. When the frequency of participants who chose Model B (see Table 7) is compared for Experiments 4, 5 and 6, it can be seen that Experiment 4 had the highest frequency for Model B as 30 (79%) of the 38 participants in this experiment chose Model B.

The participants in Experiments 1 and 4 were asked three questions relating to the CO₂ incentive that was granted on Model B. The average intervals chosen indicated that the CO₂ incentive:

- became more important once the future fuel costs were known;
- the participants thought it was more likely that the CO₂ incentive would change consumers’ choice of motor vehicle once they had been informed of the future fuel costs; and
- the participants thought that the CO₂ incentive was more fair once they had been informed of the future fuel costs.

The participants in Experiments 2 and 5 were asked three questions regarding the CO₂ penalty that applied to Model A. The average interval chosen by the participants can be explained as follows:

- the CO₂ penalty became less important once the future fuel costs were known;
• the participants thought that it was slightly more likely that the CO₂ penalty would change a consumer’s behaviour once the future fuel costs were known;
• the participants considered the CO₂ penalty to be more fair once they had been informed of the future fuel costs.

A comparison of the means of these three questions of Experiments 1, 2, 4 and 5 indicated that the participants were of the opinion that the CO₂ incentive granted on Model B was fairer than the CO₂ penalty charged on Model A.

4.2 Hypotheses testing

The acceptable level of statistical significance for testing the six hypotheses was set at 95% (p = 0.05). The independent samples t-test was used to test the six hypotheses and to measure whether the mean differences in two populations on one metric variable were equal. The independent samples t-test was performed using the Statistical Package for the Social Sciences (SPSS) software and the results are summarised in Table 8.

Table 8: Results of Independent Samples t-Tests

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Comparison</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Equal variances assumed</th>
<th>Results of independent samples t-test</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Experiment 1</td>
<td>4.27</td>
<td>1.503</td>
<td>p = 0.156</td>
<td>t(73) = 0.227, p = 0.821</td>
<td>H₁₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 3 (control group)</td>
<td>4.18</td>
<td>1.768</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Experiment 2</td>
<td>4.39</td>
<td>1.306</td>
<td>p = 0.191</td>
<td>t(73) = -0.383, p = 0.703</td>
<td>H₂₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 3 (control group)</td>
<td>4.18</td>
<td>1.768</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Experiment 1</td>
<td>4.27</td>
<td>1.503</td>
<td>p = 0.114</td>
<td>t(73) = -1.011, p = 0.315</td>
<td>H₃₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 2</td>
<td>4.39</td>
<td>1.306</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Experiment 3</td>
<td>4.18</td>
<td>1.501</td>
<td>p = 0.969</td>
<td>t(73) = 0.277, p = 0.783</td>
<td>H₄₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 6</td>
<td>4.57</td>
<td>1.567</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Experiment 1</td>
<td>4.27</td>
<td>1.306</td>
<td>p = 0.002</td>
<td>t(73) = -0.511, p = 0.611 (t-test for equal variances not assumed)</td>
<td>H₅₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 4</td>
<td>4.37</td>
<td>1.828</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Experiment 2</td>
<td>4.39</td>
<td>1.306</td>
<td>p = 0.002</td>
<td>t(73) = 0.277, p = 0.783</td>
<td>H₆₀ cannot be rejected</td>
</tr>
<tr>
<td></td>
<td>Experiment 5</td>
<td>4.21</td>
<td>1.828</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypotheses H1, H2 and H3 were tested under the low level of transparency regarding the future fuel costs where the participants were given sufficient information to calculate the future fuel costs of Model A and Model B.

To test hypothesis H1, Experiment 1 (a CO₂ incentive was granted) was compared with the control group, Experiment 3 (no CO₂ incentive or CO₂ penalty applied). When the means for Experiments 1 and 3 in Table 8 are compared, the mean for Experiment 1 of 4.27 is slightly higher than the 4.18 mean for Experiment 3, which indicates that the average preference for the more fuel-efficient Model B increased when the CO₂ incentive was granted on Model B. The results of the independent t-test indicate that there is no statistically significant difference between the choice of model in Experiments 1 and 3.

To test hypothesis H2, Experiment 2 (a CO₂ penalty was imposed) was compared with the control group, Experiment 3 (no CO₂ incentive or CO₂ penalty applied.) When the means for Experiments 2 and 3 are compared, the mean of 4.39 for Experiment 2 is
slightly higher than the 4.18 for Experiment 3, which indicates that the average preference for the more fuel-efficient Model B increased when the CO₂ penalty was charged on Model A. The results of the independent *t*-test indicate that there is no statistically significant difference between the choice of model in Experiments 2 and 3.

To test hypothesis H3, Experiment 1 (a CO₂ incentive was granted) was compared with Experiment 2 (a CO₂ penalty was charged). When the 4.27 mean for Experiment 1 is compared to the 4.39 mean for Experiment 2, the average interval selected by the participants can be seen to have increased slightly in Experiment 2, which indicates an increase in the preference for Model B. This increase indicates that the CO₂ penalty was slightly more effective than the CO₂ incentive in influencing the participants to choose Model B. The results of the independent *t*-test indicate that there is no statistically significant difference between the choice of model in Experiments 1 and 2.

Hypothesis H4 was tested by comparing Experiments 3 (where sufficient information was given to calculate the future fuel costs) and 6 (where the future fuel costs were given). The average interval chosen increased slightly from 4.18 in Experiment 3 to 4.57 in Experiment 6, which indicates an increase in the preference for Model B. As the future fuel costs were given in Experiment 6, the increase in the mean and the decrease in the standard deviation from 1.768 in Experiment 3 to 1.501 in Experiment 6 indicate that the preference for Model B increased slightly when the future fuel costs were given and the preference was also slightly more concentrated. The results of the independent *t*-test indicate that there is no statistically significant difference between the choice of model in Experiments 3 and 6.

In order to test hypothesis H5, the results of Experiments 1 and 4 were compared to measure the effect of the information policy on the CO₂ incentive. The average interval chosen increased from 4.27 in Experiment 1 to 4.37 in Experiment 4, which indicates a slight increase in preference for Model B. In Experiment 1, the standard deviation increased from 1.503 to 1.567, which indicates that the variability in the data for the choice of model was slightly higher in Experiment 4. The results of the independent *t*-test indicate that there is no statistically significant difference between the choice of model in Experiments 1 and 4.

To test hypothesis H6, the results of Experiments 2 and 5 were compared to measure the effect of the information policy on the CO₂ penalty. The average preference for Model B decreased slightly from 4.39 in Experiment 2 to 4.21 in Experiment 5. The standard deviation increased slightly from 1.306 in Experiment 2 to 1.828 in Experiment 5, which indicates that the variability in the data for the choice of model was slightly higher in Experiment 5. Compared to the low level of transparency in Experiment 2, the high level of transparency of the future fuel costs in Experiment 5 resulted in a lower preference for Model B. As expected, the CO₂ penalty no longer appeared larger than what it actually was, as the costs were clearly set out. The results of the independent *t*-test indicate that there is no statistically significant difference between the choice of model in Experiments 2 and 5.

For all six hypotheses, the results of the independent samples *t*-tests were that the differences in the choice of motor vehicle were not statistically significant and the null hypotheses could thus not be rejected. As a result it appears that neither a CO₂ penalty nor a CO₂ incentive has a meaningful influence on a consumer’s decision to choose a more fuel-efficient motor vehicle. Providing a consumer with the estimated future fuel costs of the motor vehicles also does not lead to a meaningful increase in consumers’
preference for a more fuel-efficient motor vehicle. Finally, the combination of an information policy that gives the estimated future fuel costs of motor vehicles with either a CO\(_2\) penalty or a CO\(_2\) incentive also does not result in a meaningful increase in consumers’ preference of more fuel-efficient motor vehicles.

4.3 Relationships between variables

A meaningful positive correlation was found between the choice of motor vehicle and the importance of fuel economy for the consumer when purchasing a new motor vehicle (\(r = 0.184, \ p = 0.005\)). The positive relationship indicates that an increase in the importance of the fuel economy explains an increase in the consumer’s preference for a more fuel-efficient motor vehicle. However, the correlation is weak as the increase in the importance of fuel economy explains the increase in the choice of a more fuel-efficient motor vehicle to the extent of only 3.39%.

A meaningful negative correlation was found between the choice of motor vehicle and a consumer’s environmental morale (\(r = 0.183, \ p = 0.005\)). The lower a consumer’s interest is in protecting the environment (i.e., the more a consumer disagrees with donating his or her income to prevent environmental pollution), the higher his or her preference will be for a motor vehicle that is not fuel efficient. However, this correlation is also weak as the low environmental morale of the consumer explains the consumer’s choice of a motor vehicle that is not fuel efficient to the extent of only 3.35%.

The multivariate analysis of variance (MANOVA) found a small but meaningful interaction between the gender and environmental morale of the consumers. The result indicates that 2.5% of the mean difference in gender can be explained by the mean difference in environmental morale which confirms that women are more concerned about the environment than men (\(F(2.202) = 2.586, p < 0.1, \text{Wilk's } \Lambda = 0.975, \text{partial } \eta^2 = 0.025\)).

5. Conclusion

This experiment was conducted to achieve two research objectives. The first objective was to determine the differential impact of a CO\(_2\) penalty or a CO\(_2\) incentive on consumers’ behaviour in South Africa when a new motor vehicle is chosen. The results indicate that neither a CO\(_2\) penalty nor a CO\(_2\) incentive play a meaningful role in a consumer’s decision to choose a more fuel-efficient motor vehicle. The second objective was to determine the differential impact of the transparency in respect of future fuel costs on South African consumers’ behaviour when a new motor vehicle is chosen. The results found that providing consumers with the estimated future fuel costs of different motor vehicles does not result in any meaningful increase in their preference for more fuel-efficient motor vehicles. The combination of an information policy that gives the estimated future fuel costs of motor vehicles with either a CO\(_2\) penalty or a CO\(_2\) incentive also does not result in a meaningful increase in consumers’ preference of more fuel-efficient motor vehicles.

The inferences of this study should be interpreted within the context of a laboratory-designed experiment that was conducted in an artificial setting. A well-designed laboratory experiment will have high internal validity but may lack external validity. The external validity and generalisability of the findings of a laboratory experiment are limited as the real world is more complex than an artificial setting. As a result, the cause-and-effect relationships found in this study may not extend to other more complex...
settings (Sekaran & Bougie, 2013, p. 175). Nevertheless, the findings of this study add to the findings of recent studies which concluded that the current CO2 levy in South Africa is not changing consumers’ behaviour when choosing a new motor vehicle (Barnard, 2014, p. 54; Ackerman, 2014, p. 91; Nienaber & Barnard, 2018, p. 151; Carrim, 2014, p. 58).

The contributions of this study are as follows:

- this study is the first to measure the potential impact of a CO2 incentive on South African consumers when choosing a new motor vehicle;
- in view of the research conducted to measure the impact of an information policy on consumers’ choice of motor vehicle, the findings of this study contribute to the existing body of literature in this regard;
- by measuring the extent to which an information policy might impact the effectiveness of the CO2 penalty or CO2 incentive, it makes a contribution to the current literature on methods to enhance fiscal tax policies; and
- this study also contributes to the broader literature on behavioural studies that examine how individual behaviour is influenced by a penalty (loss) or reward (gain).

Finally, this study provides statistical evidence of two factors that have a meaningful influence on a consumer’s choice of motor vehicle: (1) the importance of the fuel economy of a motor vehicle, and (2) the consumer’s environmental morale. Research in this field needs to be continued in order to find an effective way to convince consumers to seriously consider purchasing more fuel-efficient motor vehicles. Otherwise, referring to the quote of McPherson (2011) at the outset of this study, we will have no choice but to hold our collective breath while we count our money.

5.1 Future research

The CO2 penalty and CO2 incentive used in this study were both calculated as 283% of the CO2 levy currently charged in South Africa. The experimental design of this study exposed the participants to only a CO2 penalty or a CO2 incentive of ZAR 10,500, and the effect of a CO2 penalty or CO2 incentive of lesser or greater value was not measured. ZAR 10,500 is approximately 3% of the purchase price of the motor vehicles used in this study. Future research could focus on determining the amount at which a CO2 penalty or a CO2 incentive becomes effective in influencing consumers to change their behaviour by choosing a more fuel-efficient motor vehicle.

This experiment required participants to choose between two models of a middle-of-the-range sedan selling at a price of approximately ZAR 300,000, inclusive of value-added tax (VAT). Future research could be undertaken to measure consumers’ behaviour when they have to choose between an entry-level motor vehicle and a more expensive motor vehicle.

The experiment conducted in this study exposed the participants to either a CO2 penalty or a CO2 incentive, and not to a combination of a CO2 penalty and a CO2 incentive in one fiscal policy, charging a CO2 levy for the higher-emissions motor vehicle and granting a CO2 incentive for the lower-emissions vehicles. Future research should
explore the potential impact of a so-called ‘feebate’ policy on the behaviour of South African consumers when they choose new motor vehicles.

This study did not consider the role that socioeconomic factors such as culture, tradition and education can have on a consumer’s choice of motor vehicle. In this context, the main goal of a recent study conducted in Slovenia was to determine what kind of motivation consumers needed to consider buying low-emission vehicles. Three different groups of motor vehicle purchasers with different opinions about low-emission vehicles were identified. The first group, which made up 20% of the sample population, were not motivated to purchase low-emission vehicles. The second group (which included 40% of the population sample) showed positive attitudes towards low-emission vehicles, but were not sure about whether they would actually purchase a low-emission vehicle in the future, and the third group (38% of the sample) were planning to buy low-emission vehicles in the near future. The majority (60%) of the population sample was indifferent or neutral towards low-emission vehicles (Zupan et al., 2013, p. 2). This study by Zupan et al. provides evidence that, even though the participants had a positive perception of low-emission vehicles and thus acknowledged the environmental impact of motor vehicles, this would not necessarily influence their choice of motor vehicle. Zupan et al. found that the culture, tradition and education of consumers can also influence their choice of motor vehicle and this may potentially explain why the CO₂ levy currently charged in South Africa is not changing consumer behaviour. Future research is needed to identify the socioeconomic factors that might have the potential to influence consumers to choose fuel-efficient motor vehicles.

6. REFERENCES


Assessing the importance of taxation on foreign direct investment: evidence from Southeast Asian developing countries

Athiphat Muthitacharoen*

Abstract

This study examines the influence of taxation on foreign direct investment (FDI) using data from Southeast Asia. It employs the quantile regression approach with fixed effects that provides a comprehensive view of the tax sensitivity across the FDI distribution. Estimates confirm the significantly negative impact of the bilateral effective average tax rate and indicate the marked difference in the tax sensitivity levels at the two ends of the distribution. This stresses the importance of understanding the effect of taxation across the distribution rather than only at the mean. The economic significance of the tax is also relatively smaller than that of other fundamental factors such as labour quality and governance.

Key words: Tax incentives, international tax, corporate income tax, FDI, Southeast Asia

* Faculty of Economics, Chulalongkorn University (athiphat.m@chula.ac.th). I would like to thank the participants at the National Tax Association’s 109th Annual Conference on Taxation (November 2016) and the Osaka University Research Workshop (December 2016) for their helpful comments and suggestions. Nanthawat Ouyisinprasert provides excellent research assistance. This project receives financial support from Chulalongkorn Economic Research Centre.
1. INTRODUCTION

The effect of taxation on foreign direct investment (FDI) has been well documented in the economic literature. It has also been widely accepted in public economics that, in order to analyse how tax affects investment incentives, the study should take into account not only statutory tax rates but also related components of tax provisions in both host and home countries (see Devereux & Griffith, 1998). While there are many studies on this issue for developed countries, the empirical evidence that incorporates international taxation aspects for developing countries is relatively limited. This represents an important gap in the literature since the effect of taxes on FDI in the advanced economies may not carry over in a straightforward way for developing economies. A number of studies have shown that the tax sensitivity varies with the income level of host countries (see, for example, Mutti & Grubert, 2004; Blonigen & Wang, 2005; Azémar & Delios, 2008; Goodspeed, Martinez-Vazquez & Zhang, 2011). Moreover, developing countries are especially reliant on corporate income tax revenue for revenues and many of them use tax incentives to attract foreign investors.

This article pays primary attention to developing countries and examines the extent to which tax influences foreign direct investment (FDI) using empirical evidence from Southeast Asia. The region’s development over the past two decades concerning FDI and tax policy provides a good opportunity to study the role of taxes. Southeast Asia has been one of the largest recipients of FDI in the developing world. More importantly, the tax development in the region is characterised by rounds of cuts to headline corporate income tax rates. Examples include Thailand’s aggressive cuts in the statutory tax rate from 30% to 20% over 2011-2013 and Indonesia’s tax rate cuts from 30% to 25% over 2008-2010. In addition to those tax rate cuts, all Southeast Asian economies have also offered tax holiday incentives (exemption from taxes for a given period) in order to attract FDI. In addition, some home countries have switched from worldwide to territorial taxation during the past decade. Those developments have provided important variations in the tax costs facing foreign investors.

An important challenge to understanding the effects of taxes on FDI is the fact that, from a firm’s perspective, the tax costs associated with the decision to choose an investment location depend on domestic as well as international tax law. In order to capture those costs, this study computes the bilateral effective average tax rate (EATR) using the methodology proposed by Devereux and Griffith (2003). Also, as emphasised by Azémar and Delios (2008), the analysis of taxes on FDI in developing countries should take into account bilateral tax agreements since the embedded tax relief provisions could play an important role in the attractiveness of host countries. Consequently, I take into account both domestic taxation (e.g., depreciation deduction and tax holidays) and international taxation (that is, measures to relieve double taxation as specified in bilateral tax agreements such as underlying tax credit and tax sparing provisions).

Furthermore, the effect of taxation could be heterogeneous across the distribution of FDI. The FDI flows are highly skewed – the effects of taxes at the upper tails of the distribution could be different from those at the mean or at the lower tails. Focusing on only the average effect could therefore obscure important effects at various points in the distribution. Studies that use subsector data for developed countries tend to find that investment geared toward different purposes is subject to different levels of tax sensitivity (see, for example, Mutti & Grubert, 2004). Given the limited availability of
such micro data for developing countries, it is critical for researchers and policy-makers who rely on aggregate FDI data to have a comprehensive view of the relationship between tax and FDI across the distribution.

Methodologically, this study analyses the role of taxation as a determinant of net FDI inflows using a pooled-quantile regression model with fixed effects as proposed by Canay (2011). This approach allows the study to address an issue of negative FDI flows as well as to take a comprehensive look at the tax sensitivity across the FDI distribution. The study focuses on bilateral net FDI flows into the middle-income countries of the Association of Southeast Asian Nations (ASEAN) (Indonesia, Malaysia, the Philippines, Thailand and Vietnam) from 16 developed countries over the period 2002-2013.

The findings indicate that taxation plays an important role in attracting FDI into the region. The effect of taxes is negative and statistically significant across the distribution of FDI flows. The results also suggest that the importance of taxation for the pairs of countries at the upper end of the distribution is much smaller than the importance for those at the lower end. Ranking the data reveals that the impact of the tax would be much smaller to country pairs such as Indonesia-Singapore and Thailand-Japan than country pairs such as Indonesia-Germany and Thailand-Spain. This finding underlines the importance of understanding the effect of taxation across the distribution rather than only at the mean.

The importance of taxes, however, should not be overemphasised as they are not the only factor influencing FDI. The findings indicate that the fundamental factors of host countries such as labour productivity and rule of law are also important and their economic significance is greater than that of the bilateral EATR. These findings are generally robust across alternative specifications.

This article is closely related to the empirical literature that studies the impact of taxation on FDI. Most studies in this literature have focused on Organisation for Economic Co-operation and Development (OECD) or European countries and have computed the forward-looking effective tax rates using the framework provided by Devereux and Griffith (2003). Examples include Devereux and Griffith (1998), Buettner and Ruf (2007), Bellak and Leibrecht (2009) and Egger et al. (2009). The general conclusion is that tax produces a negative and statistically significant influence on FDI.

Studies that focus on non-European developing countries typically use statutory tax rates or indicator variables for tax incentives as measures of taxation. Examples include Van Parys and James (2010) and Klemm and Van Parys (2012). In particular, the findings of Klemm and Van Parys (2012) suggest that the effects of taxation could be different even within developing countries. It finds that cutting statutory tax rates and extending tax holidays are effective in attracting FDI in Latin America and the Caribbean but not in Africa.

This study contributes to the literature in two important ways. First, it constructs the bilateral EATR and analyses how it affects the FDI flows into middle-income Southeast Asian countries. To my knowledge, no existing empirical research specifically investigates this issue for developing Asian countries using a forward-looking effective tax measure. Second, it employs an estimation approach that accommodates the skewed distribution of FDI and provides the effect of taxation across the FDI distribution rather than only at the mean.
The remainder of this article is organised as follows. The next section illustrates how the study addresses the empirical challenges associated with estimating the effects of taxation on FDI flows. Section 3 describes the dataset used here. The results and their policy implications are discussed in Section 4. The final section concludes the study.

2. **Empirical Strategy**

This study specifically estimates the impact of bilateral effective average tax rate (EATR) on the bilateral net FDI inflows. Typically, studies that estimate the determinants of FDI employ the gravity model. An important challenge, however, is that the FDI flows can take negative values. This potentially creates important complications for the gravity model which employs log transformation of the dependent variable. To address this problem, I follow Daniels, O’Brien and von der Ruhr (2015) by using a pooled-quantile regression model with fixed effects proposed by Canay (2011) to analyse the effects of taxes on FDI levels rather than logs. More importantly, this approach enables this study to take a comprehensive look at the tax sensitivity across the distribution of FDI flows.

I apply the quantile regression approach using the two-step estimator proposed by Canay (2011). This approach models fixed effects as pure location shifts. It consists of two steps. In the first step, I estimate the unobserved fixed effects and transform the dependent variable. The second step then involves using standard quantile regressions with the new transformed dependent variable. The resulting estimator is consistent and asymptotically normal under certain regularity conditions. I also include year dummies to control for time-specific events and country-pair fixed effects to capture unobserved time-invariant characteristics across country pairs. The standard errors are computed using bootstrapping, clustered at the country-pair level. As a comparison, I also show the conditional mean estimate using the fixed-effect panel model.

The dependent variable used is the real bilateral net FDI flows. The key independent variable in this study is the bilateral effective average tax rate (EATR). As discussed by Devereux and Maffini (2007), the forward-looking effective tax measures, such as the bilateral EATR, take into account all present and future values of cash flows associated with the decision to invest in an investment project and, therefore, are generally preferred measures when studying the impact of taxation on investment incentives. The computation of the bilateral EATR here is based on the methodology proposed by Devereux and Griffith (2003) and later modified by Klemm (2012) to incorporate incentives that are typically used in developing countries such as tax holidays.

The tax computation in this study takes into account both domestic and international tax provisions. For host-country taxation, it incorporates standard and preferential tax treatments. Examples are standard depreciation deduction, withholding taxes on repatriated profits, tax holidays and post-holiday tax reduction. Also it takes into account the treatment of repatriated foreign-earned profits in the home countries and the bilateral measures to relief double taxation as specified in the bilateral tax treaties. This

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1 Other methods proposed in the literature to deal with this problem include: (1) dropping negative observations (see, for example, Bellak & Leibrecht, 2009); (2) setting negative values to some small positive values before taking the log transformation (see, for example, Blonigen & Davies, 2004); (3) adopting a selection model by setting negative observations to missing and using a Tobit model (see, for example, Razin & Sadka, 2007), and (4) using stocks instead of flows but stocks will likely take a much longer time to respond than flows (see, for example, Egger et al., 2009).
includes, for example, underlying tax credit, territorial exemption and tax sparing provisions.

The computation of the bilateral EATR is necessarily based on a few parameter assumptions. For consistency with previous studies that compute the EATR for the region, e.g. Botman, Klemm and Baqir (2010) and Suzuki (2014), I assume that the profit rate is 20% and the economic depreciation rates for machinery and buildings are 12.25% and 3.6%, respectively. I also assume the real interest rate of 5% and headline inflation of 2%. These assumptions are in line with the region’s historical data. Using the macroeconomic assumptions in this fashion is consistent with the literature and allows the bilateral EATR measure to reflect the tax system associated with each country pair and abstracts from the effect of macroeconomic policy.

The shares of investment assets are chosen to represent an average investment project and are based on the Office of National Economic and Social Development Council’s Input-Output Table of Thailand (2010).2 Those shares are 59% for machinery and 41% for buildings. Also, consistent with Suzuki (2014), I assume that all investment is financed with retained earnings and there is no dividend taxation at the personal income tax level.3 By design, the EATR computation here does not take into account personal income taxation and tax planning.

In the baseline analysis, the bilateral EATR computation is based on the maximum tax incentives available in each country pair.4 As discussed by Suzuki (2014), not all firms will be able to receive the maximum tax incentive. Consequently, in one of the robustness tests, I show the results where I replaced the bilateral EATR under the maximum incentives with the bilateral EATR under standard tax treatment.

3. DATA DESCRIPTION

This study focuses on net FDI inflows from developed countries into ASEAN’s middle-income host countries: Indonesia, Malaysia, the Philippines, Thailand and Vietnam. The information on bilateral net FDI inflows is obtained from UNCTAD.5 The sample covers the 2002-2013 period. The home countries include Australia, Canada, China, France, Germany, Hong Kong, Italy, Japan, Netherlands, Portugal, Singapore, South Korea, Spain, Switzerland, the UK and the US.

As discussed in section 1, Southeast Asia provides a good case study because there are significant variations in the tax policy. Those variations come from three sources. The first source is change in the taxes imposed by the host country. For example, all five host countries have cut their statutory corporate income tax rates, with an average cut

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3 Specifically, the computation assumes that a parent company in the home country undertakes investment through a fully owned foreign subsidiary in the source country. That subsidiary finances its investment using its retained earnings so it cuts its dividend to the parent company by the same amount. Finally, the subsidiary’s corresponding profits are immediately and fully repatriated to the parent company. This consequently causes potential double taxation of profits.
4 See Suzuki (2014) for the details of the tax incentives associated with the host countries.
of 7 percentage points. The second source is change in the taxes imposed by the home country. Examples include the switches by Japan and the United Kingdom from worldwide to territorial taxation in 2009.

The third source of variation is difference in the effective tax rates across country pairs. Such variation can result from differences in the statutory tax rates and the tax incentives across countries as well as differences in the double taxation relief methods across country pairs. One example of the latter case is the tax sparing credit which is allowed in the treaties between Thailand and Japan but is forbidden between Thailand and the US.

Those three sources of variations are illustrated in Figure 1 which shows the Box Plot of the bilateral EATR over the 2002-2013 period. There is a general downward trend in the distribution of the effective tax rates. The median tax rate, for example, falls from 16.5% in 2002 to 11.6% in 2013.

**Fig. 1: Box Plot of the Bilateral EATR (2002-2013)**

Source: Author’s estimate

Table 1 describes the distribution of real net FDI flows, which is strongly skewed. Its mean is approximately USD 939 million and falls between the 70th and 90th percentiles. I include control variables that are drawn from existing literature and are available for the studied time period. This includes core gravity variables (lagged real GDP of host-and home-countries), host-country economic fundamentals (lagged GDP per capita, labour productivity, air transport infrastructure, cellular subscription), openness of host-and home-countries (trade and financial openness). I also include six host-country governance measures (regulation quality, corruption control, rule of law, political stability, voice and accountability and government effectiveness).
Table 1: Distribution of Real Net FDI Flows (Unit: million USD)

<table>
<thead>
<tr>
<th>Percentiles</th>
<th>10</th>
<th>30</th>
<th>50</th>
<th>70</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-9.54</td>
<td>19.86</td>
<td>166.80</td>
<td>498.95</td>
<td>2843.87</td>
</tr>
</tbody>
</table>

**Other Statistics**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>938.60</td>
</tr>
<tr>
<td>S.D.</td>
<td>2,748.98</td>
</tr>
<tr>
<td>Skewness</td>
<td>4.03</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>36.90</td>
</tr>
</tbody>
</table>

Source: Author’s estimate

The macroeconomic and infrastructure variables are taken from the World Bank’s World Development Indicator (WDI) database. Trade openness is defined as the share of exports and imports to GDP. Financial openness is defined as the share of net inflows of portfolio equity to GDP. The ratio of registered air carrier departures to country size is used as a proxy for air transport infrastructure. Information and communication infrastructure is represented by the ratio of mobile cellular subscription per 100 people. Labour productivity is based on hours worked and is taken from the Asian Productivity Organization (APO) Productivity Database. The variables on the governance measures are taken from the World Bank’s Worldwide Governance Indicators (WGI) database. Table 2 lists the summary statistics of the variables used in the regression analysis. Table A1 in the Appendix provides the variance decomposition of those variables.

It is important to note the limited variation among these control variables. All of the host countries are middle-income developing countries so their GDP per capita are in a certain range. Further, several variables are constructed as functions of GDP. Nevertheless, the important developments concerning the tax policies in the region help add variation to the effective tax rate and allow the identification of its relationship with the FDI flows. As illustrated in Table A1, there are appreciable amounts of both within and between variation in the effective tax rate variables.
Table 2: Summary Statistics for the Variables Used in the Empirical Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real net FDI flow (millions)</td>
<td>641</td>
<td>938.60</td>
<td>166.80</td>
<td>2,748.98</td>
</tr>
<tr>
<td>Bilateral EATR (Max incentives)</td>
<td>641</td>
<td>16.11</td>
<td>14.83</td>
<td>6.54</td>
</tr>
<tr>
<td>Bilateral EATR (Standard treatment)</td>
<td>641</td>
<td>32.63</td>
<td>32.11</td>
<td>6.15</td>
</tr>
<tr>
<td>Host real GDP (log)</td>
<td>641</td>
<td>26.21</td>
<td>26.14</td>
<td>0.64</td>
</tr>
<tr>
<td>Home real GDP (log)</td>
<td>641</td>
<td>28.06</td>
<td>28.11</td>
<td>1.20</td>
</tr>
<tr>
<td>Host GDP per capita (log)</td>
<td>641</td>
<td>7.97</td>
<td>7.97</td>
<td>0.61</td>
</tr>
<tr>
<td>Labor productivity</td>
<td>641</td>
<td>1.28</td>
<td>1.24</td>
<td>0.18</td>
</tr>
<tr>
<td>Host trade openness</td>
<td>641</td>
<td>117.37</td>
<td>127.41</td>
<td>47.92</td>
</tr>
<tr>
<td>Home trade openness</td>
<td>641</td>
<td>114.61</td>
<td>60.15</td>
<td>123.77</td>
</tr>
<tr>
<td>Host financial openness</td>
<td>641</td>
<td>0.69</td>
<td>0.46</td>
<td>1.73</td>
</tr>
<tr>
<td>Home financial openness</td>
<td>641</td>
<td>1.24</td>
<td>0.82</td>
<td>3.22</td>
</tr>
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<td>Air transport ratio</td>
<td>641</td>
<td>0.35</td>
<td>0.27</td>
<td>0.17</td>
</tr>
<tr>
<td>Cellular subscription ratio</td>
<td>641</td>
<td>76.22</td>
<td>75.63</td>
<td>37.83</td>
</tr>
<tr>
<td>Regulation quality</td>
<td>641</td>
<td>48.61</td>
<td>51.46</td>
<td>13.18</td>
</tr>
<tr>
<td>Corruption control</td>
<td>641</td>
<td>38.89</td>
<td>35.41</td>
<td>14.20</td>
</tr>
<tr>
<td>Rule of law</td>
<td>641</td>
<td>44.77</td>
<td>42.11</td>
<td>11.96</td>
</tr>
<tr>
<td>Political stability</td>
<td>641</td>
<td>28.56</td>
<td>20.75</td>
<td>20.63</td>
</tr>
<tr>
<td>Voice and accountability</td>
<td>641</td>
<td>36.26</td>
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</tr>
<tr>
<td>Government effectiveness</td>
<td>641</td>
<td>57.97</td>
<td>56.10</td>
<td>12.86</td>
</tr>
</tbody>
</table>

Source: Author’s estimate
4. **EMPIRICAL RESULTS**

4.1 **Baseline estimates**

I begin the analysis using Canay (2011)’s pooled-quantile regression model with fixed effects. The baseline model describes the net FDI flows as a function of the bilateral EATR under maximum tax incentives and other control variables. It also includes country-pair and as well as year-fixed effects. The results for the 10th, 30th, 50th, 70th and 90th percentiles are provided in Columns 1-5 of Table 3.

The bilateral EATR variable constitutes the main focus point of the analysis. Its coefficient is negative and statistically significant across the distribution of FDI flows. At the median, a one percentage point cut in the bilateral EATR increases net FDI by USD 103.9 million holding other variables constant. The effects of the tax, however, are not homogeneous across the entire distribution. The coefficient at the 90th percentile is -87.9, while it is larger in absolute value by about 34% at the 10th percentile (-118.0). This indicates that the importance of taxation for the pairs of countries at the upper end of the distribution is much smaller than the importance for those at the lower end. Sorting the data shows that the impact of the tax would be much smaller to country pairs such as Indonesia-Singapore and Thailand-Japan than country pairs such as Indonesia-Germany and Thailand-Spain.

In addition to the tax, the coefficient on host-country rule of law is positive and statistically significant for the median and upper quantiles. Also, labour productivity is positive and significant in the middle of the distribution. The coefficients of other control variables are imprecisely estimated. This is likely due to multicollinearity among those control variables. It is important to note that the main findings in the baseline model are robust to the inclusion of these control variables and the multicollinearity concern (shown in one of the robustness tests below).

The findings so far suggest that taxation is an important factor attracting FDI into the region. To get a sense of the economic significance of its impact, consider the beta coefficients associated with the baseline model in Table 4. A beta coefficient is defined as the product of the estimated coefficients and the standard deviation of its corresponding regressor, divided by the standard deviation of the dependent variable. This essentially converts the estimated coefficients into units of sample standard deviations.

Column 3 of Table 4 indicates that a one standard deviation cut in the bilateral EATR raises the median FDI by about 25% of a standard deviation. Such impact is smaller than the impacts of labour productivity and rule of law at the median (56% and 29%, respectively). This thus suggests that the tax plays an important role in attracting the FDI but its role should not be overemphasised. The fundamental factors such as labour productivity and rule of law are also critical.

---

6 Using all variables specified in the baseline model, a Hausman test on fixed vs. random effects models rejects a random effects model.
### Table 3: Baseline Quantile Regression Estimates (Dependent Variable: Real Net FDI Flows)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral EATR</td>
<td>-118.0**</td>
<td>-104.5**</td>
<td>-103.9**</td>
<td>-104.8**</td>
<td>-87.9*</td>
</tr>
<tr>
<td></td>
<td>(50.94)</td>
<td>(50.42)</td>
<td>(51.43)</td>
<td>(51.74)</td>
<td>(51.90)</td>
</tr>
<tr>
<td>Lagged host GDP</td>
<td>-14,570.9</td>
<td>-15,518.9</td>
<td>-14,999.5</td>
<td>-15,282.7</td>
<td>-13,601.8</td>
</tr>
<tr>
<td></td>
<td>(28,284.18)</td>
<td>(28,299.39)</td>
<td>(28,539.67)</td>
<td>(28,716.30)</td>
<td>(28,802.99)</td>
</tr>
<tr>
<td>Lagged home GDP</td>
<td>2,358.2</td>
<td>2,300.4</td>
<td>2,334.0</td>
<td>2,424.2</td>
<td>2,420.3</td>
</tr>
<tr>
<td></td>
<td>(2,601.53)</td>
<td>(2,607.18)</td>
<td>(2,621.14)</td>
<td>(2,639.64)</td>
<td>(2,600.17)</td>
</tr>
<tr>
<td>Lagged host GDP per capita</td>
<td>14,492.0</td>
<td>15,964.1</td>
<td>15,308.7</td>
<td>15,677.9</td>
<td>14,700.3</td>
</tr>
<tr>
<td></td>
<td>(36,554.35)</td>
<td>(36,698.23)</td>
<td>(37,003.58)</td>
<td>(37,308.75)</td>
<td>(36,359.06)</td>
</tr>
<tr>
<td>Labor productivity</td>
<td>-3,543.4</td>
<td>7,228.9**</td>
<td>8,580.9**</td>
<td>7,732.6**</td>
<td>8,645.5</td>
</tr>
<tr>
<td></td>
<td>(5,270.98)</td>
<td>(3,190.08)</td>
<td>(3,620.48)</td>
<td>(3,927.83)</td>
<td>(6,010.16)</td>
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<td>Host trade openness</td>
<td>36.2</td>
<td>1.4</td>
<td>0.7</td>
<td>-0.2</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>(45.43)</td>
<td>(40.72)</td>
<td>(40.62)</td>
<td>(42.06)</td>
<td>(60.67)</td>
</tr>
<tr>
<td>Home trade openness</td>
<td>4.0</td>
<td>6.5</td>
<td>7.2</td>
<td>8.7</td>
<td>10.9</td>
</tr>
<tr>
<td>Host financial openness</td>
<td>-37.8</td>
<td>65.3</td>
<td>31.8</td>
<td>11.2</td>
<td>-93.9</td>
</tr>
<tr>
<td></td>
<td>(116.70)</td>
<td>(78.91)</td>
<td>(84.82)</td>
<td>(110.93)</td>
<td>(226.91)</td>
</tr>
<tr>
<td>Home financial openness</td>
<td>-25.9</td>
<td>22.7</td>
<td>13.9</td>
<td>-0.5</td>
<td>-38.5</td>
</tr>
<tr>
<td></td>
<td>(38.53)</td>
<td>(24.78)</td>
<td>(24.78)</td>
<td>(24.86)</td>
<td>(30.70)</td>
</tr>
<tr>
<td>Air transport</td>
<td>275.2</td>
<td>2,401.6</td>
<td>3,302.5</td>
<td>2,648.6</td>
<td>-1,517.3</td>
</tr>
<tr>
<td></td>
<td>(3,401.16)</td>
<td>(2,838.12)</td>
<td>(2,837.99)</td>
<td>(2,884.28)</td>
<td>(3,260.37)</td>
</tr>
<tr>
<td>Cellular subscription</td>
<td>-16.8</td>
<td>-6.9</td>
<td>-6.1</td>
<td>-10.2</td>
<td>-12.3</td>
</tr>
<tr>
<td></td>
<td>(19.30)</td>
<td>(20.13)</td>
<td>(18.95)</td>
<td>(20.34)</td>
<td>(32.10)</td>
</tr>
<tr>
<td>Regulation quality</td>
<td>37.6</td>
<td>16.2</td>
<td>15.5</td>
<td>9.6</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>(40.15)</td>
<td>(34.57)</td>
<td>(31.88)</td>
<td>(35.49)</td>
<td>(68.76)</td>
</tr>
<tr>
<td>Corruption control</td>
<td>-6.4</td>
<td>16.8</td>
<td>22.7</td>
<td>29.1*</td>
<td>-44.7</td>
</tr>
<tr>
<td></td>
<td>(23.99)</td>
<td>(17.26)</td>
<td>(16.22)</td>
<td>(17.43)</td>
<td>(46.60)</td>
</tr>
<tr>
<td>Rule of law</td>
<td>-85.1</td>
<td>26.2</td>
<td>65.9**</td>
<td>92.1***</td>
<td>162.1**</td>
</tr>
<tr>
<td></td>
<td>(70.07)</td>
<td>(43.11)</td>
<td>(31.63)</td>
<td>(31.74)</td>
<td>(81.67)</td>
</tr>
<tr>
<td>Political stability</td>
<td>68.4*</td>
<td>33.5</td>
<td>16.8</td>
<td>14.2</td>
<td>-22.0</td>
</tr>
<tr>
<td></td>
<td>(38.97)</td>
<td>(36.30)</td>
<td>(35.77)</td>
<td>(34.06)</td>
<td>(32.00)</td>
</tr>
<tr>
<td>Voice and accountability</td>
<td>-70.9</td>
<td>-58.8</td>
<td>-65.8</td>
<td>-67.7</td>
<td>-85.9</td>
</tr>
<tr>
<td></td>
<td>(61.31)</td>
<td>(56.73)</td>
<td>(61.10)</td>
<td>(61.09)</td>
<td>(86.60)</td>
</tr>
<tr>
<td>Government effectiveness</td>
<td>13.8</td>
<td>-45.5</td>
<td>-54.0</td>
<td>-82.7</td>
<td>-8.3</td>
</tr>
<tr>
<td></td>
<td>(66.18)</td>
<td>(61.71)</td>
<td>(61.60)</td>
<td>(68.45)</td>
<td>(146.44)</td>
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<td>201,474.7</td>
<td>208,035.3</td>
<td>196,795.3</td>
<td>201,023.6</td>
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<tr>
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<td>(476,152.93)</td>
<td>(474,497.11)</td>
<td>(477,657.50)</td>
<td>(480,612.38)</td>
<td>(487,522.07)</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.876</td>
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<td>0.899</td>
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<tr>
<td>Observations</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
</tr>
</tbody>
</table>

Source: Author’s estimate
Note: Each regression includes both country pair- and year-fixed effects. Numbers in parentheses indicate bootstrapped standard error with 100 replications. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.

### Table 4: Selected Beta Coefficients Associated with the Baseline Estimate

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral EATR</td>
<td>-0.28</td>
<td>-0.25</td>
<td>-0.25</td>
<td>-0.25</td>
<td>-0.21</td>
</tr>
<tr>
<td>Labor productivity</td>
<td>-0.23</td>
<td>0.48</td>
<td>0.56</td>
<td>0.51</td>
<td>0.57</td>
</tr>
<tr>
<td>Rule of law</td>
<td>-0.37</td>
<td>0.11</td>
<td>0.29</td>
<td>0.40</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Source: Author’s estimate

### 4.2 Robustness tests

I perform and discuss a series of tests to study the robustness of our results. For brevity, I report only the coefficient on the tax variable (Table 5). The full tables are provided in the Appendix.

#### 4.2.1 Inclusion of the control variables

In order to show the sensitivity of the main findings to the choice of control variables, I add the control variables to the model incrementally. I estimate two specifications: (1) including only GDP of host and home countries (core gravity variables), and (2) including core gravity, economic and infrastructure variables. The coefficients of the bilateral EATR are negative and statistically significant in both specifications (Panel A of Table 5). The findings on the heterogeneous effects of the tax across the distribution of the FDI flows are also generally consistent with the baseline estimate. This suggests that the other control variables are not closely correlated with taxation and, therefore, do not alter the findings regarding taxation when those variables were omitted. The full results are shown in Tables A2 and A3.

#### 4.2.2 Standard tax treatment

The computation of the bilateral EATR in the baseline specification is based on the maximum tax incentives. However, as discussed earlier, not all firms will qualify for the host-country maximum tax incentives. Here I perform the robustness test where I use instead the bilateral EATR under the standard tax treatment (removing the host-country preferential tax treatment such as tax holidays).

As illustrated in Panel B of Table 5, the effects of taxation are negative and statistically significant across the distribution except only at the 90th percentile. The findings about
the heterogeneous effects of the tax across the FDI flow distribution are also consistent with that in the base specification. The full results are shown in Table A4.

### Table 5: Robustness Tests

<table>
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<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
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<td><strong>VARIABLES</strong></td>
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<td>0.5</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>A) Inclusion of the control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Including only core gravity variables</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral EATR</td>
<td>-113.6**</td>
<td>-99.3*</td>
<td>-100.0*</td>
<td>-98.4*</td>
<td>-87.1</td>
</tr>
<tr>
<td></td>
<td>(56.64)</td>
<td>(57.65)</td>
<td>(57.17)</td>
<td>(56.84)</td>
<td>(59.64)</td>
</tr>
<tr>
<td>Including core gravity, economic and infrastructure variables</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral EATR</td>
<td>-128.3**</td>
<td>-102.6**</td>
<td>-101.4**</td>
<td>-102.4**</td>
<td>-94.3*</td>
</tr>
<tr>
<td></td>
<td>(53.20)</td>
<td>(48.21)</td>
<td>(49.97)</td>
<td>(50.64)</td>
<td>(51.02)</td>
</tr>
<tr>
<td><strong>B) Standard tax treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(60.20)</td>
<td>(59.24)</td>
<td>(57.85)</td>
<td>(59.29)</td>
<td>(61.57)</td>
</tr>
<tr>
<td><strong>C) Conditional mean estimate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral EATR</td>
<td>-108.7**</td>
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<td></td>
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<tr>
<td></td>
<td>(46.45)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s estimate

Note: Numbers in parentheses indicate bootstrapped standard error with 100 replications for quantile regression estimates and robust standard error for mean regression estimate. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.

### 4.2.3 Conditional mean estimate

Panel C of Table 5 shows the results for the mean panel regression. The coefficient on the bilateral EATR is negative and statistically significant. Its magnitude is roughly comparable with that associated with the median estimate but is appreciably different from those at the tails of the distribution. This underlines the importance of having a comprehensive view of the effect of the tax across the FDI distribution. The coefficients on host country’s labour productivity and rule of law are positive and significant – consistent with the baseline estimate. The full results are shown in Table A5.

### 5. Conclusion

The primary objective of this article is to assess the importance of taxation on foreign direct investment in the context of developing Asian countries. Understanding this cross-border impact of tax policies is crucial for developing countries since their uses of tax incentives may erode a source of revenue that they are especially reliant on. This study computes the bilateral effective average tax rate which incorporates relevant domestic and international tax law and employs the quantile regression approach with fixed effects that accommodates the skewed distribution of FDI flows. Estimates
confirm the negative and significant impact of taxation and illustrate that investment associated with country pairs at the tails of the distribution is subject to noticeably different levels of tax-sensitivity. This underlines the importance of equipping policymakers with a comprehensive understanding of the effects of taxation rather than focusing only on the effect at the mean. Another important finding is that the economic significance of the tax is relatively smaller than that of labour productivity and rule of law. This suggests that policy-makers should not overemphasise the role of taxes since other economic and governance factors are also important determinants of FDI. Finally, it is important to note that, while this study takes into account both domestic and international tax aspects of host countries, it does not take into account important tax issues such as tax certainty, tax compliance burden and international tax avoidance opportunities. I leave these issues as avenues for future research.

6. REFERENCES


APPENDIX

Table A1: Variance Decomposition of the Variables Used in the Empirical Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Overall SD</th>
<th>Between SD</th>
<th>Within SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real net FDI flow (millions)</td>
<td>2,748.98</td>
<td>1,696.12</td>
<td>2,110.69</td>
</tr>
<tr>
<td>Bilateral EATR (Max incentives)</td>
<td>6.54</td>
<td>6.31</td>
<td>2.20</td>
</tr>
<tr>
<td>Bilateral EATR (Standard treatment)</td>
<td>6.15</td>
<td>6.01</td>
<td>2.28</td>
</tr>
<tr>
<td>Host real GDP (log)</td>
<td>0.64</td>
<td>0.61</td>
<td>0.15</td>
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Source: Author’s estimate
### Table A2: Robustness Test – Including Only Core Gravity Variables

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Source: Author’s estimate

Note: Each regression includes both country pair- and year-fixed effects. Numbers in parentheses indicate bootstrapped standard error with 100 replications. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Table A3: Robustness Test – Including Core Gravity, Economic and Infrastructure Variables

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<td>-102.4**</td>
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<td>(2,571.00)</td>
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<td>(2,510.66)</td>
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Source: Author’s estimate

Note: Each regression includes both country pair- and year-fixed effects. Numbers in parentheses indicate bootstrapped standard error with 100 replications. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
### Table A4: Robustness Test – Standard Tax Treatment

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Pseudo $R^2$: 0.832 0.878 0.880 0.866 0.823
Observations: 641 641 641 641 641

Source: Author’s estimate

Note: Each regression includes both country pair- and year-fixed effects. Numbers in parentheses indicate bootstrapped standard error with 100 replications. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Table A5: Robustness Test – Conditional Mean Estimate

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<td>(46.45)</td>
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<td>Lagged host GDP</td>
<td>-14,587.5</td>
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<tr>
<td></td>
<td>(27,536.44)</td>
</tr>
<tr>
<td>Lagged home GDP</td>
<td>2,384.8</td>
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<td>(2,119.61)</td>
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<td>Lagged host GDP per capita</td>
<td>15,108.6</td>
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<td>(36,160.81)</td>
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<td>Labor productivity</td>
<td>5,909.2*</td>
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<td>(3,431.51)</td>
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<td>11.4</td>
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<td>(49.58)</td>
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<td>(13.84)</td>
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<td>-37.7</td>
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<td>(136.44)</td>
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<td>Corruption control</td>
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<td>Rule of law</td>
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<td>(32.14)</td>
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<td>Voice and accountability</td>
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<td>(470,380.78)</td>
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\[ \text{R}^2 = 0.889 \]

Source: Author’s estimate
Note: The regression includes both country pair- and year-fixed effects. Numbers in parentheses indicate robust standard error. ***, **, * denotes significance at the 1%, 5%, and 10% levels, respectively.
Curtailing aggressive tax planning: the case for introducing mandatory disclosure rules in Australia (part 1)

Annet Wanyana Oguttu* and Ann Kayis-Kumar**

Abstract

Globalisation has increased opportunities for aggressive tax planning (ATP) schemes by multinational enterprises. However, tax administrations may not always have timely, targeted and comprehensive information about these schemes. This presents a struggle from a policy perspective, since most anti-avoidance laws are reactive – rather than proactive – in nature.

One exception is the use of mandatory disclosure rules (MDRs), which require the upfront disclosure of tax information. These rules can provide governments with the transparency needed to respond more quickly to tax risks.

This article explores the general case for introducing MDRs by (in part 1) presenting a case study of Australia’s experience in considering whether to adopt such a regime. This will be followed (in part 2) by a comparative legal analysis of how these rules apply in the UK and South African contexts, the experiences of which are informative in framing a regime suitable for adoption in other Commonwealth law jurisdictions such as Australia.

Key words: mandatory disclosure rules, aggressive tax planning, multinationals, international tax law

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1. **Introduction**

Globalisation has increased opportunities for aggressive tax planning (ATP) by multinational enterprises, which often adopt tax planning strategies by utilising loopholes in tax laws within legal parameters.\(^1\) However, these schemes may also go well beyond what is legally acceptable, by using artificial transactions that have little or no actual economic impact and which are in turn at odds with the intention of countries’ tax legislation.\(^2\)

Over the past three decades, countries have seen a proliferation of ATP schemes and have developed responses that include general and specific anti-avoidance rules, penalty regimes, tax rulings, disclosure regimes, exchange of tax information agreements and cooperative corporate governance practices.\(^3\)

In general, most of these measures are reactive – rather than proactive – in nature. As such, the problem is that most tax administrations do not have timely, targeted and comprehensive information, which is essential to enable governments to quickly identify and respond to risk areas.\(^4\) Tax administrations usually detect these schemes by auditing taxpayers’ returns, which is followed by enactment of anti-avoidance rules. While audits remain a key source of relevant information, the inevitable delays in the rule-making process mean that years may pass before the schemes are curtailed.\(^5\) This renders audits ineffective for early detection of ATP schemes.\(^6\)

Accordingly, one measure that is increasingly being adopted by countries is enacting mandatory disclosure rules (MDRs) to help governments respond more quickly – and proactively – to tax risks. The rules operate as a self-assessment system by requiring scheme promoters and/or their clients to make early disclosure of their ATP arrangements so that they can be curtailed, if necessary, before they are put in place.\(^7\) Despite the increasing number of countries that have introduced MDRs, Australia does not yet have them. One of the main arguments made is that Australia already has a number of anti-avoidance and disclosure rules which serve to deter ATP, thus obviating the need for MDRs.\(^8\) However, like Australia, other countries also have anti-avoidance and other disclosure rules, but they have also enacted MDRs, due to differences in the objectives of MDRs and the other rules (as explained in section 3 below). Nevertheless, after the OECD issued its 2015 report on curtailing base erosion and profit shifting

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The case for introducing mandatory disclosure rules in Australia (part 1)

(BEPS),\(^9\) which recommended using MDRs to curtail ATP, the Australian Treasury issued a Discussion Paper\(^{10}\) that sought community views on how MDRs should be framed in the Australian context having regard to the disclosure rules already in place. Although the closing date for submissions was 15 July 2016, the government anticipates further consultations on implementation design issues.\(^{11}\)

This two-part study explores the case for introducing MDRs, presenting (in part 1) a case study of the Australian experience in considering whether to adopt such a regime, to be followed (in part 2) by a comparative legal analysis of how these rules apply in the UK and South Africa, whose experiences may be informative in framing a regime suitable for adoption in a Commonwealth law jurisdiction.

Specifically, the Australian Treasury’s Discussion Paper serves as a framework for the analysis in this article, which will provide resourceful and comprehensive responses to the matters raised in the context of a jurisdiction contemplating whether to introduce MDRs. It highlights the objectives and advantages of MDRs; and, in response to the concerns in the Discussion Paper, it argues that MDRs will enhance the information available to the Australian Taxation Office (ATO) to crack down on ATP. It provides recommendations to ensure that the rules do not unnecessarily overlap with existing disclosure rules, do not impose unnecessary compliance burdens on taxpayers, and ensure an appropriate balance of competing policy priorities.\(^{12}\) In Part 2, the study will make recommendations with respect to the government’s anticipated further consultations on implementation design issues.\(^{13}\) In this regard, it will draw on the OECD recommendations for the design features of effective MDRs. Acknowledging the OECD recommendation that countries that wish to adopt MDRs should draw on the experiences of other countries that have such rules,\(^{14}\) Part 2 will provide a comparative study of how the rules apply in two Commonwealth countries – the UK and South Africa – the experiences of which may be informative in framing a regime suitable for a Commonwealth law jurisdiction. This study overall contributes to the body of knowledge and resources that the Australian Government, and other Commonwealth countries, may refer to if they wish to introduce MDRs.

2. **BACKGROUND**

To meet the challenge faced by most tax administrations in responding quickly and adequately to prevent ATP schemes from exploiting tax systems, one measure that is increasingly being adopted worldwide is to enact MDRs. These rules require scheme promoters and/or their clients to report their ATP arrangements in advance, enabling tax administrations to curtail them, if necessary, before they are put into use. The timely and targeted detection of such schemes enables countries to quickly adopt risk management strategies as well as legislative and administrative measures to counteract tax risk.\(^{15}\) The United States was the first country to introduce these rules in 1984 (which

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\(^{11}\) Ibid para 7.

\(^{12}\) Ibid para 9.

\(^{13}\) Ibid para 7.


\(^{15}\) OECD, ‘OECD’s Work on Aggressive Tax Planning’, above n 7.
have since undergone many changes), with a focus on the use of abusive tax shelters. It was followed by Canada, which in 1989 enacted a tax shelter regime for specific tax planning arrangements involving gifting arrangements and the acquisition of property; and which also in June 2013 enacted reportable tax avoidance transactions legislation, with much broader reporting requirements. South Africa introduced reportable arrangements legislation in 2003; the legislation came into force in 2005 and was subsequently revised in 2008. The UK enacted MDRs in 2004 and revised them substantially in 2006; they entered into force on 1 January 2011. Ireland introduced MDRs in 2011, and since then Korea, Portugal and Israel have also introduced these rules.

With the increasing number of countries introducing MDRs, the OECD has over the years issued a number of reports that validate the importance of these rules in curtailing ATP. In 2011, the OECD issued a report on transparency and disclosure initiatives. It evaluated the effectiveness of various disclosure initiatives in OECD countries in the early detection of ATP and recommended that OECD member countries should adopt MDRs, taking into consideration their particular needs and circumstances. In 2013, the OECD issued a further report on cooperative compliance programmes, which encouraged taxpayers to make full disclosure of material tax issues and transactions they have undertaken so as to enable tax authorities to understand their tax impact. In addition to these reports, the OECD has an ATP Directory, which is a confidential database of ATP schemes maintained by certain OECD and G20 countries. The directory is populated with ATP schemes submitted by countries that have access to it and it covers over 400 ATP schemes.

When the OECD issued its 2013 Action Plan and its 2015 package of 15 measures to curtail BEPS, it reiterated the usefulness of MDRs in providing tax authorities with comprehensive and relevant information for the early detection of ATP strategies. After reviewing the operation of MDRs in various countries, in Action 12 of the BEPS reports, the OECD recommended best practices for the design of effective MDRs to effectively target aggressive tax planning by multinational enterprises. These recommendations aim to ensure international consistency in how the rules are applied, and

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19 See the Reportable Arrangements Rules in Part B of the Tax Administration Act 28 of 2011.
20 Finance Act 2004 (UK).
21 OECD, Public Discussion Draft, above n 18, para 37.
22 OECD, Tackling Aggressive Tax Planning, above n 3.
23 OECD, Tackling Aggressive Tax Planning, above n 3, 6.
27 OECD, Action Plan on Base Erosion and Profit Shifting, above n 4, 22.
28 OECD, Public Discussion Draft, above n 18, 1.
taking into consideration the needs and risks in specific countries as well as the administrative costs for tax administrations and businesses. For completeness, the term ‘aggressive tax planning’ (ATP) appears to have been coined by the OECD Forum on Tax Administration. The Forum was established in July 2002 to bring together the heads of tax authorities in OECD member countries and some non-OECD countries to develop effective responses to current tax administration issues in a collaborative way. In 2006, the Forum held a meeting in South Korea, which identified ATP as one the issues they would focus on so as to identify its trends and to come up with measures to counter the same. Members of the Forum expressed the concern that:

Enforcement of our respective tax laws has become more difficult as trade and capital liberalisation and advances in communications technologies have opened the global marketplace to a wider spectrum of taxpayers. While this more open economic environment is good for business and global growth, it can lead to structures which challenge tax rules, and schemes and arrangements by both domestic and foreign taxpayers to facilitate non-compliance with our national tax laws.

The concept of ATP was, however, only defined by the OECD in 2008, when it conducted a study of the role of tax intermediaries in enhancing relationships between tax authorities and large business taxpayers. The glossary in that study defines ATP with respect to two areas of concern for revenue bodies:

**Planning involving a tax position that is tenable but has unintended and unexpected tax revenue consequences.** Revenue bodies’ concerns relate to the risk that tax legislation can be misused to achieve results which were not foreseen by the legislators. This is exacerbated by the often lengthy period between the time schemes are created and sold and the time revenue bodies discover them and remedial legislation is enacted.

**Taking a tax position that is favourable to the taxpayer without openly disclosing that there is uncertainty whether significant matters in the tax return accord with the law.** Revenue bodies’ concerns relate to the risk that taxpayers will not disclose their view on the uncertainty or risk taken in relation to grey areas of law (sometimes, revenue bodies would not even agree that the law is in doubt).

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33 Ibid 3.
This definition suggests that the focus of the OECD’s concern with regard to aggressive tax planning relates either to schemes or arrangements that achieve a result not foreseen by the legislators, or that rely upon an uncertain tax position.\(^{36}\)

Baker\(^{37}\) rightly asserts that this definition is vague and difficult to apply in practice as it provides very little real guidance on the arrangements that are the target of the disclosure rules. Baker\(^{38}\) is of the view that the real target of concern for most revenue authorities involves two types of arrangements. First are:

- mass-marketed arrangements which may or may not achieve a result that may have been foreseen by the legislators, and may or may not involve an element of uncertainty in tax law, but which cumulatively have a significant impact on tax revenue.\(^{39}\)

Second are arrangements that are ‘not mass-marketed, and may only be available to one taxpayer or a small number of taxpayers, but which result in a massive reduction in the tax liability of that … taxpayer’.\(^{40}\)

A clearer definition of ATP is provided by the European Commission, which defines ATP as ‘taking advantage of the technicalities of a tax system or of mismatches between two or more tax systems for the purpose of reducing tax liability’\(^{41}\) and that its consequences include ‘double deductions (e.g. the same loss is deducted both in the state of source and residence) and double non-taxation (e.g. the income is not taxed in the source state and yet is exempt from tax in the state of residence)’.\(^{42}\)

In Canada, the Quebec Ministry of Finance\(^{43}\) explains that ATP can take a multitude of forms and that it often includes a number of steps that make use of complex mechanisms which may comply with the letter, but abuse the intention, of the law. ATP frequently involves circular movements of funds, shell companies or the use of financial instruments or entities that are treated differently for tax purposes in different jurisdictions.\(^{44}\)

The ATO refers to ATP as ‘planning that goes beyond the policy intent of the law and involves purposeful and deliberate approaches to avoid any type of tax’.\(^{45}\) It encompasses schemes that try to get around the tax system and push the boundaries of what is considered to be acceptable. The schemes are promoted to taxpayers with incentives like reducing taxable income, increasing tax deductions and rebates and sometimes even avoiding tax completely.\(^{46}\) Most schemes that the ATO has confronted

\(^{36}\) Ibid.
\(^{37}\) Baker, above n 31, 85.
\(^{38}\) Ibid.
\(^{39}\) Ibid.
\(^{40}\) Ibid.
\(^{42}\) Ibid.
\(^{44}\) Ibid.
\(^{46}\) ATO, ‘Aggressive Tax Planning’ (ATO Tax Talk, March 2017),
generally involve claiming excessive deductions, such as interest related to debt loading, or complex financing arrangements. Often these schemes involve ‘boutique’ or once-off arrangements tailored for high income individuals and large corporate entities as well as arrangements that are mass marketed widely to all taxpayers. The Australian Taxation Ombudsman has, for instance, investigated and issued reports about the Budplan scheme and the Main Camp mass marketed scheme, which involved claims for tax deductions by investors. Details of the Main Camp investigation are reflected in the Senate Economic References Committee inquiry into Mass Marketed Tax Effective Schemes and Investor Protection. The Australian Taxation Ombudsman also investigated a complaint about the ATO by a promoter of film schemes. The ATO considers ATP a priority tax risk as an increasing number of schemes are being targeted at Australians. As is the case with other tax authorities, one of the ways that the ATO uses to detect ATP arrangements is by auditing taxpayers’ returns, which usually results in the enactment of anti-avoidance rules to block a given scheme. Since there are inevitable delays between the conclusion of taxpayers’ transactions, submission of annual returns and the audits, years may pass before ATP arrangements are detected, analysed and challenged. In the meantime, aggressive taxpayers and their advisers would have devised other schemes outside the scope of the enacted anti-avoidance rule, and so the cycle goes on. Hence, the Australian Government is concerned that ATP impacts on the integrity, efficiency and effectiveness of the operations of the tax system. It poses a risk to revenue collection and it affects community confidence in the tax system.

As such, the proactive approach adopted by mandatory disclosure regimes (MDRs) has considerable appeal over the otherwise reactive legislative tools available as part of the anti-avoidance framework.

3. Objectives of MDRs

The objectives of MDRs are threefold. First, they ensure early detection of ATP schemes that exploit vulnerabilities in the tax system, allowing tax administrations to respond more quickly to tax policy and revenue risks through operational, legislative or regulatory changes. Secondly, they are instrumental in identifying schemes and their


48 Ibid.


51 ANAO, above n 47.


53 ANAO, above n 47.

54 Larin, Duong and Latulippe, above n 5.

55 ANAO, above n 47.

promoters and users.\textsuperscript{57} Thirdly, they act as a deterrent to the promotion and use of ATP schemes.

These three objectives differentiate MDRs from other disclosure rules, which have varied objectives. For example, countries usually require taxpayers to disclose particular transactions and investments as part of the return filing process; some countries have voluntary disclosure regimes that incentivise taxpayers to disclose offshore investments so that they can qualify for reduced tax penalties; some tax administrations use surveys and questionnaires to gather information from certain groups of taxpayers, with a view to undertaking risk assessments; and some countries have cooperative compliance programmes where participating taxpayers agree to make full and true disclosure of material tax issues and transactions and provide sufficient information to understand the transaction and its tax impact.\textsuperscript{58} In general, most of these initiatives are voluntary and reactive in nature. The 2011 OECD report on transparency and disclosure initiatives\textsuperscript{59} evaluated these disclosure initiatives, including MDRs, and specifically concluded that MDRs ‘can substantially reduce the time-lag between the creation and promotion of ATP schemes and their identification by authorities, thus enabling governments to more quickly develop a targeted response’.\textsuperscript{60} Unlike other disclosure initiatives, MDRs focus exclusively on the timely or early detection of revenue risks raised by ATP schemes; they seek to identify such schemes and their promoters and users so as to deter the promotion of such schemes before they are put into use. In addition, unlike other disclosure initiatives, MDRs are broad in scope. They can capture any type of tax or taxpayer – and not only taxpayers who voluntary choose to disclose.\textsuperscript{61} Countries that have introduced MDRs indicate that the rules have improved the quality, timeliness and efficiency of information-gathering on ATP schemes, resulting in far more effective compliance, legislative and regulatory responses.\textsuperscript{62} From the deterrence perspective, a taxpayer is less likely to enter into a tax planning scheme knowing that the tax outcomes will need to be disclosed and may subsequently be challenged by the tax administration. In addition, pressure is placed on the ATP market, as promoters and users only have a limited opportunity to implement schemes before they are closed down.\textsuperscript{63} Although MDRs are intended to assist tax administrations, they are also provide certainty to taxpayers in that they would have knowledge in advance about the likely views of tax administrations in respect of an arrangement so that they can avoid any potential dispute that could arise from any differing positions taken in respect to the arrangement.\textsuperscript{64}

The OECD notes that the decision whether to introduce a mandatory disclosure regime and the structure and content of such a regime depend on a number of factors; these include an assessment of the tax policy and revenue risks posed by tax planning within the jurisdiction, and the availability and effectiveness of other disclosure and compliance tools.\textsuperscript{65} It should also be noted that the OECD recommendation to introduce MDRs under Action 12 of its BEPS Project is not a ‘minimum standard’ that was agreed

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{57} Ibid para 29.
\item \textsuperscript{58} Ibid para 24.
\item \textsuperscript{59} OECD, \textit{Tackling Aggressive Tax Planning}, above n 3.
\item \textsuperscript{60} Ibid 6.
\item \textsuperscript{62} Ibid para 32.
\item \textsuperscript{63} Ibid para 15.
\item \textsuperscript{64} Karen Payne, ‘Mandatory Disclosure Rules and Reporting’ (Paper Presented at the 2018 Financial Services Taxation Conference, Gold Coast, 7-9 February 2018) 4.
\item \textsuperscript{65} OECD, \textit{Mandatory Disclosure Rules: Action 12 – 2015 Final Report}, above n 9, para 32.
\end{itemize}
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upon (whereby no action by some countries would create negative spillovers on other countries). Rather, it falls into the category of common approaches based on best practices that have been agreed upon to facilitate convergence of national practices, and which could in future become minimum standards. Thus, countries are free to choose whether or not to introduce MDRs.

4. **IS A MANDATORY DISCLOSURE REGIME NECESSARY IN AUSTRALIA?**

Following the OECD’s recommendation in Action 12 of its BEPS Project calling on countries to enact MDRs, the Australian Government announced as part of its 2016-17 Federal Budget that it would introduce MDRs to ‘uncover aggressive tax planning schemes’. At the same time, the Australian Treasury released a Discussion Paper entitled ‘OECD Proposals for Mandatory Disclosure of Tax Information’, seeking the community’s views on how a mandatory disclosure regime should be framed in the Australian context, taking into account the disclosure rules already in the tax system. Section 4.1 below explores the current disclosure regimes in Australia and how they differ from MDRs.

In its Discussion Paper, the Australian Treasury focused on:

- ensuring that there is no unnecessary overlap with existing disclosure rules;
- enhancing information available to the ATO to crack down on tax avoidance;
- avoiding the imposition of unnecessary compliance burdens on taxpayers; and
- appropriately balancing competing policy priorities.

These concerns are addressed in section 4.2 below (in no particular order as some of them are interrelated). Since submissions to the Treasury’s Discussion Paper are not yet publicly available, a detailed analysis of community views presented through the consultation process is not possible at present. Nonetheless, section 4.2 includes an analysis of the four submissions that are currently within the public domain.

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66 Ibid para 11.
69 Ibid para 9.
4.1 Current disclosure regimes in Australia and how they differ from MDRs

One of the key arguments against the adoption of a mandatory disclosure regime in Australia is that the country already has various disclosure rules which serve to deter ATP.\textsuperscript{71} As noted earlier, other countries also have various disclosure rules, which the OECD reviewed,\textsuperscript{72} but they also have MDRs.

The Treasury’s Discussion Paper lists the categories and examples set out below of disclosure rules that are currently in place in Australia.\textsuperscript{73} It is not the intention of this article to provide a detailed analysis of how all the rules work. Rather, it is to briefly highlight the purpose of the relevant rules and provide an explanation for why those rules fall short of the objectives of MDRs.

Specifically, this article highlights the limitations of two particular rules: the Reportable Tax Position Schedule and the Promoter Penalty Regime, in sections 4.1.3 and 4.1.5, respectively. These have mandatory provisions that mimic MDRs, but an explanation is provided as to why these rules still fall short of the objectives of MDRs, and recommendations are provided as to how any overlaps could be prevented.

4.1.1 Disclosures recommended by the OECD

OECD Common Reporting Standard. This is a framework for exchange of financial account information between governments. Financial institutions are required to undertake due diligence to identify ‘reportable accounts’ (accounts held or controlled by foreigners) and to report them to the ATO. The ATO can then exchange this information with international tax authorities.

Country-by-country reports. In light of Action 13 of the OECD BEPS Project, multinational enterprises with annual global income exceeding AUD 1 billion are required to provide detailed information in relation to their transfer pricing policies and methodologies.\textsuperscript{74}

Unlike the above disclosure rules, which are limited to financial institutions (Common Reporting Standard) and large multilateral enterprises (country-by-country reports), MDRs are broad in scope – they can capture any type of tax or taxpayer.

4.1.2 Disclosure before lodgement of tax returns

Tax rulings. A taxpayer can voluntarily apply to the ATO for its view on how the law applies to a specific tax arrangement.\textsuperscript{75} Greenwoods & Herbert Smith Freehills, Australia’s largest specialist tax advisory firm, is of the view that the ruling system has exposed most schemes and that there may not be a sizeable market for mass marketed

\textsuperscript{71} Greenwoods & Herbert Smith Freehills, above n 70, para 2.
\textsuperscript{72} Examples of other disclosure rules in countries the OECD surveyed include disclosure when filing tax returns, voluntary disclosure regimes, surveys and questionnaires and cooperative compliance programmes; see OECD, Mandatory Disclosure Rules: Action 12 – 2015 Final Report, above n 9, para 24.
\textsuperscript{73} Australian Treasury, OECD Proposals for Mandatory Disclosure of Tax Information, above n 10, Table 1.
\textsuperscript{74} Ibid.
\textsuperscript{75} Ibid.
arrangements that have not already come to the attention of the ATO through the ruling applications.76

**Annual compliance arrangements.** These are voluntary administrative arrangements which set out a framework for managing the compliance relationship between the ATO and a taxpayer. An example is the Voluntary Tax Transparency Code developed by the Board of Taxation in 201677 at the Treasurer’s request to encourage disclosure of tax avoidance information by corporations.78

**Pre-lodgement compliance review.** This is an administrative process primarily used by the ATO for some large public companies not covered by an annual compliance arrangement. It is aimed at identifying and managing material tax risks through early, tailored and transparent engagement with taxpayers.79

**Advance pricing agreements.** These are voluntary arrangements entered into between the ATO and taxpayers, whereby an appropriate set of criteria is used to determine, in advance, the transfer pricing outcomes of controlled transactions over a fixed period of time.80

Clearly, the above disclosures before lodgement of a tax return are largely voluntary in nature. This implies that certain information may not be disclosed – unlike the MDRs, where disclosure of the relevant information is mandatory.

### 4.1.3 Disclosure as part of tax returns

**Tax returns and schedules.** Tax returns provide a summary of the calculation of a taxpayer’s tax payable; schedules to the tax returns provide additional information.81 The information required can, for example, cover details regarding rental income, capital gains, losses and trust distributions. An example of this information is given in the ATO’s annual ‘Report of Entity Tax Information’ which is taken from tax return data.82

**International Dealings Schedule.** This schedule requires taxpayers with international dealings exceeding AUD 2 million (or other certain cross-border transactions) to provide high-level details of those transactions.83

**Reportable Tax Position Schedule.** This schedule to the company income tax return has mandatory provisions that mimic MDRs and deserve more discussion. The schedule,

76 Greenswoods & Herbert Smith Freehills, above n 70, para 2.
78 Australian Treasury, *OECD Proposals for Mandatory Disclosure of Tax Information*, above n 10, Table 1.
79 Ibid.
80 Ibid.
81 Ibid.
83 Australian Treasury, *OECD Proposals for Mandatory Disclosure of Tax Information*, above n 10, Table 1.
which was issued on 1 April 2011, requires some large corporations to make early disclosure of contestable and material tax positions which may not be sustained when analysed by the ATO. The schedule was extended in two tranches over the 2017 and 2018 income years.\(^{84}\) It is considered a powerful weapon in the ATO’s arsenal of information-gathering procedures.\(^{85}\) For the purposes of the schedule, a ‘reportable tax position’ is one that falls under the following three categories: (a) a material position that is about as likely to be correct as incorrect or less likely to be correct than incorrect; (b) a material position in respect of which uncertainty about tax payable is recognised and/or disclosed in the taxpayer’s or related party’s financial statements; or (c) a position in respect of a reportable transaction.\(^{86}\) These three categories are not homogenous, but represent broad descriptions of transactions and arrangements that are not precisely defined.\(^{87}\) If a taxpayer is required by the ATO to file a reportable tax position, the taxpayer must disclose a concise description of the facts, the position taken and its tax treatment (with reference to case law and legislative provisions) and the related parties involved. If the ATO requests a report, it expects a response from the taxpayer even if the taxpayer has no position to disclose.\(^{88}\) The disclosure requirement does not, however, require taxpayers to disclose any advice or opinions about the income tax treatment of the reportable tax position.\(^{89}\)

In general, disclosures as part of tax returns fall short of the timeliness objective of MDRs. Although some aspects of the Reportable Tax Position Schedule mimic some aspects of MDRs, the disclosure obligation only falls on a taxpayer, and the obligations do not require the taxpayer to disclose any advice or opinions about the income tax treatment of the reportable tax position. This falls short of requirements under MDRs (as discussed in section 3 above), where the reporting obligation falls primarily on the promoter (who designs the scheme and has a better understanding of the tax benefit arising under the scheme), and the duty shifts to the taxpayer if the promoter is not able to disclose by reason of being offshore or due to legal professional privilege. The fact that disclosure under the Reportable Tax Position Schedule does not extend to all taxpayers, but only large corporations, means that this measure falls short of MDRs, which apply to all taxpayers. This presents an issue of taxpayer neutrality, which may be particularly problematic given that the rise in e-commerce now provides all taxpayers with greater access to other tax systems and tax structuring devices. A comprehensive, mandatory disclosure regime would ensure that the rules apply equitably across all taxes and to all taxpayers.\(^{90}\)


\(^{85}\) Christopher Branson QC, ‘Reportable Tax Positions: A Recent Innovation by the ATO’ (2012) 46(7) Taxation in Australia 296.


\(^{88}\) Ibid.

\(^{89}\) Ibid.

4.1.4 Disclosure after lodgment of tax returns

*Exchange of information.* Australia has double taxation agreements\(^91\) and tax information exchange agreements\(^92\) with other tax jurisdictions, which ensure exchange of taxpayer information.

*Questionnaires sent by the ATO to selected taxpayers.* An example of a questionnaire sent to taxpayers is the Private Group Structure Questionnaire, which is an information-gathering method to obtain a better understanding of how wealthy individuals conduct their business and tax affairs.\(^93\)

*Formal powers that enable the ATO to gather information.* Australia’s tax framework makes strong legislative information-gathering powers available to the ATO.\(^94\) The ATO can require a person or entity to provide information to the ATO, to attend and give evidence or to produce documents. Penalties apply for non-compliance.\(^95\)

In general, disclosures after lodgment of returns fall short of the timeliness objective of MDRs, as the information is only received after the ATP scheme has been implemented.

4.1.5 Penalty regimes to encourage compliance

*Promoter penalty regime.* In 2006, Australia introduced a promoter penalty regime, in Divisions 290 and 298B of Schedule 1 to the *Taxation Administration Act 1953*. Prior to the introduction of this regime, there were no civil or administrative penalties for the promotion of ATP schemes. This meant that promoters could obtain substantial profits from the sales of these schemes whereas the users could be subject to penalties under the tax laws.

Section 290-50(1) of Schedule 1 requires that an entity must not engage in conduct that results in that entity or another entity being a promoter of a tax exploitation scheme. A scheme is considered to be a ‘tax exploitation scheme’ if, at the time of promotion, it would be reasonable to conclude that an entity that entered into or carried out the scheme has a sole or dominant purpose of that or another entity getting a scheme benefit, if it is not reasonably arguable that the scheme benefit sought is, or would be, available at law.\(^96\) An entity is considered a promoter if it markets or encourages the growth of the scheme, the entity or its associate directly or indirectly receives consideration in respect of marketing or encouragement, it has a substantial role in the marketing or encouragement of the scheme or it causes another entity to be a promoter. If an entity is found to be a promoter of a tax exploitation scheme, the ATO can request the Federal

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\(^91\) Article 25 of treaties based on the OECD Model Tax Convention on Income and on Capital.

\(^92\) Tax information exchange agreements are usually signed with low tax jurisdictions that do not have double tax treaties. These are based on the OECD Model Agreement on the Exchange of Information in Tax Matters, developed in 2002.

\(^93\) Australian Treasury, *OECD Proposals for Mandatory Disclosure of Tax Information*, above n 10, Table 1.

\(^94\) Other information-gathering powers include cross-checks with third-party data, such as the Australian Transaction Reports and Analysis Centre data; referrals from other government departments; formal information seeking powers in ss 353-10 and 353-15 in Sch 1 of the *Taxation Administration Act 1953* (Cth); and information-seeking powers through the *Anti-Money Laundering and Counter Terrorism Financing Act 2006* (Cth). See Wilson-Rogers and Pinto, above n 90, 40.

\(^95\) Australian Treasury, *OECD Proposals for Mandatory Disclosure of Tax Information*, above n 10, Table 1.

\(^96\) *Taxation Administration Act 1953*, Sch 1, s 290-65.
Court of Australia to impose a civil penalty. The maximum penalty the Federal Court can impose is the greater of:

- 5,000 penalty units (currently equal to AUD 1.05 million) for an individual; and
- 25,000 penalty units (currently equal to AUD 5.25 million) for a body corporate,

or twice the consideration received or receivable, directly or indirectly, by the entity or its associates in respect of the scheme.

Since the rules were introduced, the ATO has litigated three cases in which civil penalties were levied against the promoters. Tax practitioners at PricewaterhouseCoopers suggest that the promoter penalty regime seems to have been deliberately put in place in preference to a mandatory disclosure regime recommended by the OECD. Tax practitioners assert that even though the envisaged MDRs:

- could co-exist with the promoter penalty rules, it is questionable whether the ATO will learn more than it already does by existing methods. This is because the promoter penalty rules provide a strong incentive to either seek ATO rulings or to not engage in schemes which could be penalised.

It is submitted, however, that even though the promoter penalty rules play a significant role in deterring ‘prohibited conduct’ due to the heavy penalties imposed on entity promoters, the penalties only apply after the scheme has been promoted. The ATO explains that:

The promoter penalty laws are not intended to obstruct tax advisers and intermediaries from giving typical advice to their clients. For example, there are exceptions for advisers who rely on the Commissioners advice, or who make reasonable mistakes, or are subject to events beyond reasonable control. But for advisers who are more closely involved in the design, marketing and implementation of schemes that claim to provide taxation benefits, you should consider the promoter penalty laws as part of your own due diligence and good governance. In introducing the promoter penalty legislation, the government addressed the imbalance of the taxpayer bearing the risk while the scheme promoters avoided penalties. The objective of the promoter penalty law is to deter tax avoidance and tax evasion schemes. An additional objective is to enhance the integrity of the product ruling system by deterring implementation of prohibited conduct.

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97 Taxation Administration Act 1953, Sch 1, s 290-50(3).
98 Taxation Administration Act 1953, Sch 1, s 290-50(4).
101 Ibid.
of a scheme in a materially different manner to that described in its product ruling, where doing so may have potential tax consequences for investors.\textsuperscript{103}

The timing issue is an important matter that the promoter penalty laws do not address. MDRs will ensure early detection of ATPs before they are implemented. The promoter penalty rules are also limited to entity promoters, whereas MDRs are broad enough to apply to all taxpayers. Furthermore, unlike MDRs which impose disclosure obligations and penalties on promoters and their users, the promoter penalty laws only concentrate on promoters.

4.2 Addressing concerns raised in the Australian Treasury’s Discussion Paper

The fourfold concerns raised in the Australian Treasury’s Discussion Paper can be summarised as: first, unnecessary duplication; second, unnecessary compliance burden; third, information management issues; and, fourth, balancing competing policy priorities. Each is dealt with in turn below.

4.2.1 Will MDRs unnecessarily overlap with existing disclosure rules?

The Treasury’s Discussion Paper indicates that the envisaged MDRs should not unnecessarily overlap with existing disclosure rules.\textsuperscript{104} This sentiment is echoed as a key concern in three of the four submissions to the Treasury Discussion Paper currently in the public domain, constituting the most pressing issue raised.\textsuperscript{105} Based on the discussion above, it is submitted that the various existing disclosure rules are narrow in scope and largely voluntary, thus falling short of the objectives of the MDRs. It is, however, acknowledged that MDRs cannot replace or remove the need for voluntary disclosure rules; in agreement with Wilson-Rogers and Pinto,\textsuperscript{106} MDRs will reinforce the voluntary disclosure rules by ensuring a more level playing field between large corporations and other taxpayers that do not have the same kind of compliance relationship with the tax administration.\textsuperscript{107}

To prevent overlaps with some disclosure rules, such as the promoter penalty regime and the Reportable Tax Position Schedule\textsuperscript{108} which have mandatory provisions that mimic MDRs, we recommend that the legislators should consider repealing these rules and replacing them with MDRs, which will ensure parity with international practices as recommended by the OECD.\textsuperscript{109} Some provisions in the promoter penalty regime – such as those relating to the definition of a promoter, meaning of prohibited conduct and the structure of penalties – could be expanded and redrafted to form certain sections of the envisaged MDRs. Similarly, some provisions in the Reportable Tax Position Schedule, such as those relating to reportable tax positions, could be redrafted to form certain sections of the envisaged MDRs that are suitable for Australia’s circumstances.

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\textsuperscript{104} Australian Treasury, OECD Proposals for Mandatory Disclosure of Tax Information, above n 10, para 9.

\textsuperscript{105} Specifically, Greenwoods & Herbert Smith Freehills, above n 70; Law Council of Australia, above n 70, The Tax Institute, above n 70, and Chartered Accountants Australia and New Zealand, above n 70.

\textsuperscript{106} OECD, Mandatory Disclosure Rules: Action 12 – 2015 Final Report, above n 9, para 34.

\textsuperscript{107} Ibid.

\textsuperscript{108} ATO, ‘Guide to Reportable Tax Positions’, above n 84.

\textsuperscript{109} OECD, Action Plan on Base Erosion and Profit Shifting, above n 4, 22.
Wilson-Rogers and Pinto further suggest that any overlaps resulting from adopting MDRs could be ameliorated by appropriate legislative drafting. Former Commissioner of Taxation Michael D’Ascenzo has noted that ‘there is always the problem of definition, and also the preparedness to make corrective legislative change and timeliness of that change’. It is acknowledged that countries have very different practices with respect to the legislative design of their tax laws. Some countries apply very detailed rules and other countries make use of broad principles and illustrative examples. While a principles-based approach is desirable in Australia, this approach also raises a number of interpretive challenges surrounding giving effect to the legislative intention as it is expressed.

**Issues pertaining to overlaps with anti-avoidance rules.** The OECD clarifies that MDRs cannot replace anti-avoidance rules that also serve to deter ATP. The OECD notes that there are some inevitable (and desirable) overlaps between the operation and effects of MDRs and general anti-avoidance rules (GAARs). GAARs can, for instance, provide tax administrations with an ability to respond directly to instances of tax avoidance that have been disclosed under MDRs. Thus MDRs and GAARs are mutually complementary from a compliance perspective. Academics such as Wilson-Rogers and Pinto assert that, rather than conflicting with Australia’s existing regulatory framework, MDRs would complement Australia’s existing armoury of tax avoidance rules. It should, however, be noted that in addition to this complementarity, MDRs provide a tax administration with information on a wider range of tax policy and revenue risks than those raised by transactions that would be classified as avoidance under a GAAR. Accordingly, the definition of a ‘reportable scheme’ for mandatory disclosure purposes will generally be broader than the definition of tax avoidance schemes covered by a GAAR, as it covers transactions that are perceived to be aggressive or high-risk from a tax planning perspective.

### 4.2.2 Avoiding unnecessary compliance burdens on taxpayers

Related to the issue of preventing unnecessary overlaps with other disclosure rules and anti-avoidance rules, the other key concern raised by the Discussion Paper is avoiding the imposition of unnecessary compliance burdens on taxpayers. This sentiment is similarly highlighted as a top concern in two of the four submissions to the Treasury’s Discussion Paper currently in the public domain, constituting the second most prevalent issue raised. For example, the Law Council of Australia is concerned about the impact

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110 Wilson-Rogers and Pinto, above n 90, 41.
114 Ibid.
115 Wilson-Rogers and Pinto, above n 90, 40-41.
116 Divs 290 and 298B of Schedule 1 to the *Taxation Administration Act 1953*.
119 Specifically, Law Council of Australia, above n 70; The Tax Institute, above n 70 and Chartered Accountants Australia and New Zealand, above n 70.
of MDRs ‘especially on the vast majority of taxpayers who voluntarily comply with their taxation obligations’. The Discussion Paper points out that:

legislation should make it clear those ATP arrangements which have already been comprehensively disclosed through other disclosure tools or through private rulings should not be subject to further disclosure under MDRs.

As we recommended in section 4.2.1 above, repealing the promoter penalty regime and the Reportable Tax Position Schedule, and replacing them with the envisaged MDRs, would go a long way in reducing compliance costs for taxpayers. It would also prevent valid arguments by taxpayers that the required information has already been disclosed under other rules. In Foster v Federal Commissioner of Taxation, the High Court (Latham CJ) ruled that:

Disclosure consists in the statement of a fact by way of disclosure so as to reveal or make apparent that which (so far as the ‘discloser’ knows) was previously unknown to the person to whom the statement was made. Thus the taxpayer could not add anything to the commissioner’s knowledge with respect to the appeal. In my opinion in these circumstances it should be held that the failure of the taxpayer to repeat to the commissioner what he already knew did not constitute a failure to disclose material facts.

Having one effective comprehensive mandatory regime would resolve concerns regarding repeated disclosure of similar information, and penalising taxpayers for information already obtained by the ATO under a different law. This would offer a more systematic way for the ATO to obtain information on ATP schemes.

4.2.3 Would MDRs enhance information available to the ATO?

The Australian National Audit Office (ANAO) notes that ‘accurate, comprehensive and current data is vital for the ATO to understand and manage aggressive tax planning issues properly’. Data quality depends on the ATO having an overall strategy for ATP data management. It also depends on the various ATP segments’ willingness to support the process and systems being used to manage ATP data in a holistic way. However, the ANAO notes that the ATO does not have an overall strategy for managing ATP data in a holistic way.

Therefore, and in line with the OECD recommendations, we submit that the introduction of MDRs will enhance management of the information available to the ATO to crack down on ATP (a key priority concern raised in the Discussion Paper). With MDRs,

120 Law Council of Australia, above n 70.
121 Australian Treasury, OECD Proposals for Mandatory Disclosure of Tax Information, above n 10, Table 2, Issue 2.
122 (1951) 82 CLR 606, 615.
124 Wilson-Rogers and Pinto, above n 90, 40-41.
125 ANAO, above n 47.
126 Ibid.
127 Ibid.
the ATO will have timely, targeted and comprehensive information which is essential to enable the government to quickly identify and respond to tax risk areas. The Law Council of Australia agrees that a mandatory disclosure regime would provide the ATO with more timely information on ATP – a key advantage of such a regime. A caveat to this is that the information gathered should not be an end goal in itself; rather, tax administrators would need to use this additional information effectively for the mandatory disclosure regime to be effective.

4.2.4 Ensuring MDRs are appropriately balanced with competing policy priorities

An important matter highlighted by Treasury is to find a way to appropriately balance competing policy priorities, with an emphasis on ensuring that there is no unnecessary overlap with existing disclosure rules. This section considers two layers of policy priorities that need to be balanced; first, balancing the trade-offs that emanate from the key policy objectives of MDRs; and second, balancing civil rights and privileges.

Balancing the trade-offs that emanate from the key policy objectives of MDRs

Effective MDRs require striking a balance between the competing policy imperatives obtaining relevant information in order to promote fiscal integrity on one hand, and minimising compliance costs on the other hand. In other words, as much as possible the process of redrafting and consolidating existing disclosure rules into a new MDR in Australia should avoid unnecessary additional compliance burdens on taxpayers (as will be discussed further in Part 2 of this study); it is also important that the MDRs ensure fiscal integrity and sustainability, by requiring taxpayers to disclose their ATPs. At present the lack of transparency makes it very difficult for tax administrators such as the ATO to observe whether and how a multinational enterprise is engaging in ATP. To balance these competing policy imperatives, the Board of Taxation has suggested that the MDRs should be designed with the twofold objectives of early detection and deterrence; specifically:

Detection of unknown schemes which are aimed at achieving outcomes inconsistent with, or that go beyond, the policy intent of the relevant tax law – that is, obtaining intelligence regarding vulnerabilities in the tax system at an earlier point in time than when the scheme is implemented (such as when it is made available or marketed).

129 OECD, Action Plan on Base Erosion and Profit Shifting, above n 4, 22.
130 Law Council of Australia, above n 70.
131 Australian Treasury, OECD Proposals for Mandatory Disclosure of Tax Information, above n 10, para 9: “Consistent with the OECD Final Report, the Government will be focused on finding a way to appropriately balance competing policy priorities, including enhancing information available to the ATO to crack down on tax avoidance and avoiding unnecessary compliance burdens on taxpayers. A key priority will be ensuring that there is no unnecessary overlap with existing disclosure rules.”
132 It is important to note that, given ‘the private nature of their professionals who uphold strict codes of confidentiality’, it is difficult to gather details on the specific cross-border intercompany tax planning structures utilised by multinational enterprises: ‘As several junior and senior expatriate professionals I interviewed in the financial industry informed me, “The brains are in London, Singapore, Hong Kong, and New York. The ideas are formed and constructed abroad and the paperwork is sent to the Cayman Islands to be signed”’. H May Hen, Sub-élites as Fiduciary Gatekeepers of Global Elites: A Fiscal Anthropology of the Cayman Islands and Offshore Financial Industry (Masters Thesis, Simon Fraser University, 25 November 2014) 93.
133 Payne, above n 64, 11-12.
Identification of intermediaries who are not acting in the public interest, which should also deter intermediaries from doing so and help level the playing field for legitimate professional advisers.

An MDR grounded in these policy objectives would promote fiscal integrity and, in turn, fiscal sustainability while also being adequately targeted such that ‘good’ advisers are not unduly burdened.

It is also important to note that balancing the competing policy imperatives of minimising compliance costs on one hand and promoting fiscal integrity and fiscal sustainability on the other hand requires a recognition that there are inevitable conflicts that may, for example, result in a trade-off between simplicity in the design of MDRs and ensuring efficiency of the same, which often poses challenges for policy-makers in designing MDRs for multinational enterprises. For completeness, the key trade-offs in the tax policy design context can be illustrated as shown in Figure 1 below.¹³⁴

**Fig. 1: Tax Design Principles**

![Tax Design Principles Diagram](image)


*Balancing civil rights and privileges.* In addition to balancing competing policy priorities when designing an MDR in the Australian context, it is important to remain cognisant of established civil rights and privileges. The Law Council of Australia has argued that the design of the envisaged MDRs should not infringe established civil rights, such as the right to privacy, legal professional privilege and the privilege against

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self-incrimination, any more than is necessary or appropriate.\textsuperscript{135} This proposition has also been put forward by legal\textsuperscript{136} and accounting advisory firms.\textsuperscript{137}

Right to privacy. Requiring a taxpayer to disclose tax advice is \textit{prima facie} a breach of the right to privacy.\textsuperscript{138} It should, however, be noted this civil right is not absolute. Disclosure of confidential information can be justified in accordance with laws in a democratic society that are necessary for the protection of certain interests, such as the tax base of a country; this would make the disclosure of ATP schemes justifiable on these grounds.\textsuperscript{139} However, there has to be a balance between the protection of the right to privacy and the public interest in the disclosure of the scheme. To achieve such a balance, we submit that care should be taken to ensure that MDRs target only mass marketed schemes that have a significant impact on the economy. If the regime casts the net too wide, there is a danger that the balance between the rights of the taxpayer and the protection of the public interest may be set at the wrong point.\textsuperscript{140}

Legal professional privilege. Inherent in legal professional privilege is the right to give and receive legal advice, as well as the taxpayer’s right to privacy and confidentiality. A mandatory disclosure regime, which requires compulsory disclosure of the details of a tax planning scheme, would interfere with these rights. MDRs may deter a taxpayer from taking legal advice about the tax consequences of their transactions or deter a tax professional from giving advice on a disclosable scheme. It is important to ensure that MDRs do not trample on the common law principle of legal professional privilege. In the Australian case of \textit{Baker v Campbell} the High Court held that:

\begin{quote}
The law came to recognize that for its better functioning it was necessary that there should be freedom of communication between a lawyer and his client for the purpose of giving and receiving legal advice and for the purpose of litigation and that this entailed immunity from disclosure of such communications between them.\textsuperscript{141}
\end{quote}

However, in \textit{Mann v Carnell}\textsuperscript{142} and in \textit{Osland v Secretary, Department of Justice},\textsuperscript{143} the High Court ruled that, at common law, the disclosure of the gist or substance of a legal opinion may amount to waiver of legal professional privilege as to the contents of it in terms of the principles of fairness governing implied waiver. But then, in \textit{British American Tobacco Australia Ltd v Secretary, Department of Health and Ageing},\textsuperscript{144} it was held that the disclosure of the gist of a privileged communication does not

\begin{thebibliography}{99}
\bibitem{135} Law Council of Australia, above n 70, para 4.
\bibitem{136} ‘The regime should respect the privilege attaching to legal advice (including the extension of that concept made in the ATO’s Accountants’ Concession)’: Greenwoods & Herbert Smith Freehills, ‘Tax Advisor or ATO Informer’, above n 121.
\bibitem{137} ‘Transactions that do not involve any significant tax planning that could raise concerns nevertheless often include confidentiality requirements for competitive or commercial reasons. Such confidentiality restrictions alone should not trigger a disclosure requirement’: EY, above n 112.
\bibitem{138} Article 17 of Schedule 2 (International Covenant on Civil and Political Rights) of the \textit{Australian Human Rights Commission Act 1986} (Cth).
\bibitem{139} Baker, above n 31, 89.
\bibitem{140} Baker, above n 31, 89.
\bibitem{141} [1983] HCA 39; 153 CLR 52, 127.
\bibitem{142} [1999] HCA 66; 201 CLR 1.
\bibitem{143} [2008] HCA 37; 234 CLR 275.
\bibitem{144} [2011] FCAFC 107; 195 FCR 123.
\end{thebibliography}
necessarily amount to a waiver of privilege, unless the conduct of the person seeking to rely on the privilege is inconsistent with the maintenance of the privilege.

In South Africa, the Reportable Arrangements Rules\textsuperscript{145} do not provide for the protection of legal professional privilege, even though this is a fundamental common law principle of South Africa’s judicial system.\textsuperscript{146} In the South African case of \textit{S v Safatsa and others},\textsuperscript{147} Botha AJ quoted with approval the common law recognition of legal professional privilege as expressed in the Australian case of \textit{Baker v Campbell}.\textsuperscript{148} South African author, Zeffertt\textsuperscript{149} notes that it is important that:

> the confidentiality of all documents that have been communicated to legal advisors for the purpose of obtaining legal advice is protected from seizure by the authorities … [It] is impossible for an advocate or attorney to advise a client properly unless he is confident that the client is holding nothing back, but such candour would be difficult to obtain if the client thought that his advisors could be compelled to reveal everything that he had told them.\textsuperscript{150}

Unlike South Africa, which does not preclude mandatory disclosure in case of legal professional privilege, the UK through its Disclosure of Tax Avoidance Schemes regime\textsuperscript{151} tried to resolve the conflict by ensuring that a promoter who is required to disclose a scheme but is subject to legal professional privilege does not bear the duty of disclosure; instead, the client is required to disclose the scheme. Australia may have to follow the UK’s approach in this regard. However, this approach merely prevents the promoter from disclosing privileged information; it does not protect the right to confidentiality, as the rules still require the client to disclose the information to the tax authorities. To create the relevant balance, the rules have to be crafted in such a way that they target only truly ATP schemes.\textsuperscript{152} In this regard, the Law Council of Australia states that the:

> mandatory disclosure regime should be limited to those who design aggressive tax arrangements that are clearly and precisely identified by the ATO to be marketed to taxpayers generally or those who are actively engaged in marketing them.\textsuperscript{153}

\textit{Self-incrimination.} Taxpayers may have concerns that disclosure amounts to self-incrimination. The OECD clarifies that the information that a taxpayer is required to provide under MDRs is generally no greater than the information that the tax administration could require under an investigation or audit into a tax return. Potential tax avoidance and ATP transactions reported under MDRs should not therefore give rise

\textsuperscript{145} In Part B of the \textit{Tax Administration Act 28 of 2011 (SA)}.
\textsuperscript{147} 1988 (1) SA 938 (A).
\textsuperscript{148} [1983] HCA 39.
\textsuperscript{150} Ibid 248.
\textsuperscript{151} \textit{Finance Act 2004}.
\textsuperscript{152} Baker, above n 31, 89.
\textsuperscript{153} Law Council of Australia, above n 70, para 4.
to concerns over self-incrimination other than those that would arise under the exercise of other information collection powers.\textsuperscript{154}

\textit{Legitimate expectations.} Where MDRs are introduced, taxpayers may assume a legitimate expectation that any disclosure to the tax authorities leads to an implicit agreement that the scheme is valid, if there is no response to the contrary from the tax authority. To avoid such legitimate expectations, it is important that the regime makes clear that the disclosure does not imply any acceptance of the scheme or the tax benefit obtained by any person.\textsuperscript{155} Similarly, disclosure does not necessarily mean that the transaction involves tax avoidance.\textsuperscript{156}

5. \textbf{CONCLUSION AND RECOMMENDATIONS}

This article has highlighted the advantages of mandatory disclosure rules to a country’s tax system using Australia as a case study. Australia does not currently have MDRs; however the 2016-17 Federal Budget announcement and the Australian Treasury’s 2016 Discussion Paper indicate that the Australian Government is considering the introduction of such rules.

This article has shown that the rules will not overlap with – but rather will complement – most of the current narrowly-focused voluntary disclosure rules. To prevent overlaps with the existing Reportable Tax Positions Schedule and the promoter penalty laws, which have mandatory provisions that mimic the MDRs, it has been recommended that these rules be repealed and relevant provisions in the same be built on as a basis for certain provisions of the envisaged mandatory disclosure regime. This would ensure parity with international best practices and prevent concerns about excessive compliance burdens and costs to taxpayers.

The article has also explained how competing priorities can be balanced when the MDRs are adopted. There is no doubt that MDRs will enhance the information available to the ATO to crack down on aggressive tax planning (a key priority concern raised in the Discussion Paper).\textsuperscript{157} Enacting MDRs will enable the ATO to have timely, targeted and comprehensive information which is essential to enable the government to quickly identify and respond to tax risk areas.\textsuperscript{158}

\textsuperscript{155} Ibid para 174.
\textsuperscript{156} Ibid paras 175-177.
\textsuperscript{157} Caredes, above n 8, 117.
The effect of family ownership on aggressive tax avoidance in Indonesia

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Abstract

The aim of this study is to analyse the effect of family ownership structure on aggressive tax avoidance in Indonesia. This research uses panel data from annual reports of listed manufacturing companies on the Indonesian Stock Exchange from 2011 to 2017. The model of aggressive tax avoidance measurement in this research uses the Effective Tax Rate (ETR). The results of this research indicate that the family ownership structure has a negative effect on (lowers) aggressive tax avoidance. Most Indonesian manufacturing companies have family ownership in their capital structure and this result shows that company owners use their power to manage tax planning activities.

Key words: family ownership, aggressive tax avoidance, Effective Tax Rate (ETR)

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1. INTRODUCTION

Aggressive tax avoidance involves management action to reduce income tax by tax planning activities (Richardson, Taylor & Lanis, 2013; Lanis & Richardson, 2011; Chen et al., 2010; Hanlon & Slomrod, 2009; Frank, Lynch & Rego, 2009). Aggressive tax avoidance covers legal tax planning activities, or legal tax planning that might be close to a ‘grey area’, and illegal tax planning activities (Richardson et al., 2013). Those tax planning activities which are close to a grey area present an attractive strategy for management and shareholders to boost their profit through decreasing their tax expenses, even though those actions might be harmful for the company’s viability.

Aggressive tax avoidance is risky activity, as shown by Boone, Khurana and Raman (2013), Rego and Wilson (2012), Chen et al. (2010), Hilary and Hui (2009), Gasper and Clore (1998), Miller and Hoffmann (1995), Malinowski (1925), and can be costly, as explained by McGuire, Wang and Wilson (2014). As a consequence, management may not take this risk in managing a company’s finance. Other reasons why some companies do not carry out aggressive tax avoidance include the risk in terms of sanction or significant cost, protection of the company’s image in practising appropriate business ethics and maintaining the good corporate governance, and assuming that aggressive tax avoidance is equivalent to tax evasion (Chen et al., 2010).

Those risks motivate concentrated ownership companies not to carry out aggressive tax avoidance. This in line with the findings of Badertscher, Katz and Rego (2013) that the marginal cost of tax avoidance and ownership separation affect tax avoidance action and managers who are less attracted to risky investment will avoid such activities (Fama & Jensen, 1983). Similarly, as stated by Chen et al. (2010), non-financial firms tend to be more aggressive towards tax avoidance than family firms.

Within family firms, a unique issue which has been found related to agency theory is that a greater conflict exists between majority stockholder and minority stockholders and, conversely, a smaller conflict exists between principal and manager. Moreover, Chen et al. (2010) document that the comparable level of tax avoidance tendency between family firms and non-family firms depends on benefits and the higher cost which may arise from aggressive tax action. Family firms prefer to pay higher tax (not carrying out tax avoidance) to paying fines and the possibility of ruining their family reputation.

The presence of a firm’s founder as majority stockholder affects a firm’s level of aggressive tax action. As noted, in terms of aggressive tax action, family firms bear higher potential benefits and higher costs than non-family firms (Chen et al., 2010). Dyreng, Hanlon and Maydew (2010) uncover that a firm’s individual executives have a significant role on the level of firm’s tax avoidance. A family firm’s majority votes give control to the family as a whole (spouse, parents, children or the heirs) and a least one of the family representatives will be involved in the firm’s management or administration (Chen et al., 2010).

This study has been motivated by the existence of the aggressive tax planning phenomenon in Indonesia. There are some tax aggressive cases that have been pursued by the Directorate General of Taxes in recent years, involving, for example, Asian Agri, Bumi Resources, Adaro, Indosat, Indofood and Kaltim Prima Coal (KPC) (Kuswandi, 2015; Panggabean, 2014). Those companies have concentrated ownership of their capital structure. The novel issue examined by the study is that most of the companies
which have been exposed in terms of the aggressive tax avoidance issue are manufacturing companies. As revealed by the Directorate General of Taxes there is a disparity between income and tax payments in manufacturing companies. This derives from low tax payment obedience, and the effects of the underground economy and tax avoidance tendency (Sudiarta, 2016).

The purpose of this research is to gain a holistic understanding on the effect of family ownership on tax avoidance aggressiveness of Indonesian manufacturing companies over the period 2011-2017. The contributions of this study are: (1) advancing tax literature, particularly for estimating the effect of family ownership towards tax aggressive action of listed manufacturing companies over the period 2011-2017, and (2) improving the understanding of the effects of family ownership on aggressive tax action necessary for the government to make policy on tax issues and providing suggestions for the Directorate General of Taxes in order to detect companies carrying out tax aggressive activity.

This research successfully reveals that family ownership affects tax avoidance aggressiveness. Arguably, most Indonesian manufacturing companies have family ownership in their capital structure and the owner has the full power to carry out tax planning activity. The remainder of this article is organised as follows: section 2 provides a literature review on theoretical issues and hypothesis development; section 3 sets out the research method; section 4 provides results and discussion, and finally section 5 sets out the conclusion and directions for future research.

2. PRIOR RESEARCH AND HYPOTHESIS DEVELOPMENT

2.1 Agency theory

The main theory used in this research is agency theory. Hendriksen and Van Breda (1992) define agency theory as directed to the contractual relationship between agent and principal. Where an agent works for a principal, then the principal should pay the agent in return. Jensen and Meckling (1976) document agency as a contract where one or more principals use another party or agent to manage the company. Within agency theory, a principal includes a stockholder or owner who provides facilities and capital to operate a firm.

Agency theory assumes every individual is motivated by their own prosperity and interest. Principals will be driven by the motives to enrich their own position through dividend payouts or an increase in the stock price, while agents are motivated by the effort to enrich their position through higher compensation. Conflict of interest arises where a principal has insufficient information regarding agent performance, which causes incapability of the principal in terms of controlling the agent’s activities. Meanwhile an agent will possess greater information related to self capacity, work environment, and the entire company.

That phenomenon leads to what is termed asymmetric information. Asymmetric information and conflict of interest encourage the agent to hide some unrevealed information from the principal and reveal untrue information to the principal, specifically the information related to agent’s performance measurement.

The level of agency issues varies from one firm to another. According to Chen et al. (2010), the comparison in the level of tax aggressiveness between family firm and non-family firm depends on the benefit effect or cost that may be apparent from those tax
aggressive activities to the firm owner in the case of family owners, or the effect received by managers in the case of non-family firms.

2.2 Aggressive tax action

Tax is a significant cost for the firm and diminishes cash flow for the firm and stockholder. This provides an incentive for the company to diminish the tax through tax aggressive activities (Chen et al., 2010). This study follows the definition of aggressive tax activity of Frank et al. (2009), as an action that aims to lower taxable profit through tax planning whether categorised as tax evasion or not. While not all activities contravene the law, the greater the chance taken by the firm of doing so the more aggressive the practice carried out by the form will be considered to be. Chen et al. (2010) and Desai and Dharmapala (2006) state there are both advantages and disadvantages of tax aggressive activity. According to Chen et al. (2010) the advantages are:

1. Efficiency in the amount of tax paid by the company to the government, so that the cash portion of earnings retained by the owner or manager is maximised.

2. The opportunity for a manager to conduct rent extraction, i.e., the condition where the manager carries out action which does not maximise the owner’s interest, in terms of arranging aggressive financial reports, taking over a company’s resources or assets for private interest, or engaging in such transactions with special relatives.

Conversely, Desai and Dharmapala (2006) stipulate some disadvantages of aggressive tax action as follows:

1. A possibility of the company to incur a financial sanction or penalty and a drop in its stock price.

2. A fall in the stock price as the result of a negative assumption on the part of stockholders, that aggressive tax action involves rent extraction that may disserve the stockholder.

This research uses Effective Tax Rate (ETR) as the proxy of aggressive tax measurement since this proxy is often used in various tax studies and it is consistent with Indonesian tax regulations (Astuti & Aryani, 2016). In Indonesia, only one tax burden is recognised, which is the income tax expense, as compared with the United States which has more types of applicable tax burden such as current federal tax expense and current foreign tax expense. The ETR is estimated by dividing income tax expense by earnings before tax, acquired from the income statement. Income tax expense is the sum of current tax expense and deferred tax (Chen et al., 2010).

Some previous studies on tax aggressiveness include: Chen et al., 2010; Hanlon & Heitzman, 2010; Dyreng et al., 2010; Lanis & Richardson, 2012; Frank et al., 2009; Rusydi & Martani, 2014; Hidayanti, 2013; Sari & Martani, 2010; Prasista & Setiawan, 2016; Rusydi, 2013; Tiaras & Wijaya, 2015; Utami & Setyawan, 2015; Hanna & Haryanto, 2016; Hadi & Mangoting, 2014; Adisamartha & Noviari, 2015.

2.3 Family ownership

As a developing country, a feature of Indonesia is that most companies have a family as the major stockholder in their capital structure. Stock ownership in developing countries
is mostly dominated by families, as in the case of Indonesia (Hidayanti, 2013). Family ownership is every firm where have major stockholder. Family stock ownership within a firm means that the stockholder has a particular incentive structure. A family stockholder bears strong influence within the company and has sound motives to manage the company itself (Anderson, Mansi & Reeb, 2003).

Chen et al. (2010) assert that a gap does exist between family firm owner and non-family firm manager. First, a family firm owner has higher ownership than a company executive (CEO) so that a family ownership bearer exerts higher thrift on tax payment. Moreover, a family firm has at least one family member on its board of directors. Sirait and Martani (2014) posit the presence of the gap between family stock bearer and common stock holder in term of the two characteristics of family attention on company viability and family reputation and the company.

2.4 The effect of family ownership on tax aggressive action

Prior research finds a correlation between ownership structure and aggressive tax avoidance (Badertscher et al. 2013; Desai & Dharmapala, 2006). Inconsistency in those prior research results has encouraged researchers to carry out research in related areas. Sari and Martani (2010) carry out research on firm ownership characteristics, corporate governance and aggressive tax action and argue that family firms tend to be positively correlated to aggressive tax planning. Whether a family firm is more active concerning aggressive tax planning compared to a non-family firm depends on the benefits or the cost that might be borne by the family owner in the case of a family firm or manager in the case of a non-family firm relating to aggressive tax planning.

Rego and Wilson (2012), Zhang (2012) and Chen et al. (2010) have found a negative effect of family ownership on aggressive tax avoidance. Chen et al. (2010) and Rego and Wilson (2012) document that family firms are less aggressive than non-family firms on tax avoidance issues. Compared to a non-family firm, a family firm is more willing to pay higher tax than to pay a sanction or fine and face the bad reputation as the result of a fiscal audit. Moreover, Chen et al. (2010) state that aggressive tax analysis indicates that family firms have a coefficient level and negative t score that indicate a negative effect (Chen et al., 2010). In accordance with Chen et al. (2010), the proposed hypothesis of this study is:

\[ H1: \text{family ownership negatively affects (lowers) firm aggressive tax activity.} \]

3. Research Method

3.1 Data and sample

The sample for this research is financial statements and annual reports of listed manufacturing firms during the period 2011-2017. Financial data is obtained from the Indonesian Stock Exchange website, www.idx.co.id. The sampling method is purposive sampling, where a sample is taken according to determined criteria. Those criteria are: (1) subjects are listed manufacturing firms over the period 2011 to 2017; (2) those firms consistently publish their complete financial data over the period 2011 to 2017; (3) the Indonesian Stock Exchange meets the complete related data needs for required variables over the period 2011-2017; (4) firms use Indonesian rupiah (IDR), in order to equalise the analysis; where a firm reports its data in foreign currency, there is a conversion of those amounts to rupiah; (5) firms have no losses, since a loss firm does not pay the tax;
(6) firms have an ETR score less than 1 (ETR < 1). By those criteria, we eliminate firms that do not fit the criteria. Then we have 194 observations of 31 firms.

3.2 Variable definition and measurement

Aggressive tax activity

The Effective Tax Rate (ETR) is calculated as income tax expense to earning before tax, obtained from the actual income statement. Income tax expense is the total current tax and deferred tax. A low ETR indicates income tax expense is less than earning before tax. The ETR formula of Lanis and Richardson (2012) is presented as follows:

$$ ETR = \frac{\text{Income tax expense}}{\text{Earnings before tax}} $$

Independent variables

For family ownership, this research follows Chen et al. (2010) to articulate the family ownership definition. Prakosa (2014) stipulates that, for all individuals and firms owned by individuals and firms that have ownership listed (ownership of more than 5% of ownership structure should be listed), family is the individuals connected as heirs or through marriage. This research articulates family ownership as the proportion of family ownership (Chen et al., 2010).

Control variables

Control variables aim to control the effect of profitability, firm’s leverage and firm size, and therefore this research takes into account return on assets (ROA), leverage (LEV) and firm size (SIZE) in the regression model.

Profitability describes financial performance of the firm in terms of gaining profit from their assets, known as return on assets (ROA). ROA is an indicator that describes financial performance of the firms, ROA defines the ability of the firms to gain profit through their assets. ROA is formulated by following Lanis and Richardson (2012):

$$ ROA = \frac{\text{Earnings before tax}}{\text{Total Assets}} $$

Leverage is level of liability to finance their operation. Leverage defines the level of risk measured by comparing the firm’s total expenses to total assets. Leverage is the ratio which estimates whether long term liability or short term liability is used to finance firm assets (Waluyo & Basri, 2015). Leverage is estimated as follows:

$$ LEV = \frac{\text{Total Liabilities}}{\text{Total Assets}} $$
Size is the proxy to measure the firm’s size by using algorithm of the firm’s total assets (Rusydi, 2013). The use of natural logarithm (\(Ln\)) aims to mitigate excessive data fluctuation without affecting the proportion of the actual real score (Waluyo & Basri, 2015).

\[ \text{SIZE} = \ln(\text{Total Assets}) \].

3.3 Data analysis technique

Collected data is analysed using Eviews 08 software. The regression model is presented as below:

\[ \text{Tax Agg}_{it} = \beta_0 + \beta_1 \text{FAMILY}_{it} + \beta_2 \text{ROA}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{SIZE}_{it} + \varepsilon_{it} \]

where:

- \( \text{Tax Agg} \) = Tax Avoidance (ETR)
- \( \text{FAMILY} \) = Family ownership
- \( \text{ROA} \) = Return on assets (profitability)
- \( \text{LEV} \) = Leverage
- \( \text{SIZE} \) = Firm size
- \( \varepsilon \) = Random error

We then conduct a two-test procedure for the regression analysis: F test for model testing and t test for hypothesis testing.

4. Result and discussion

4.1 Result

Model testing for dependent variable proxied by Effective Tax Rate (ETR), family ownership as independent variable, and three control variables (ROA, Leverage, Size) is presented as follows:

(a) Selecting estimation model

(1) Chow test

<table>
<thead>
<tr>
<th>Effect Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>2.926671</td>
<td>(30,119)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>85.104914</td>
<td>30</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: processed secondary data, 2018
The Chow test proposes to determine regression model by common effect method or fixed effect method. On Table 4.1 above, the score for the probability of cross section F is less than 5% is 0.0000, so the null hypothesis (H₀) is rejected. In other words the best model for this research based on the Chow test is fixed-effect.

(2) Hausman test

**Table 4.2 Hausman Test Result**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi.Sq.d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>2.535784</td>
<td>4</td>
<td>0.6382</td>
</tr>
</tbody>
</table>

Source: processed secondary data, 2018

The Hausman test proposes to determine the most appropriate model between fixed effect and random effect. Table 4.2 presents a probability score that is 0.6382 which is more than 5% so H₀ is accepted. It implies the fittest model for panel data analysis is a random effect model. Based on the Chow test and Hausman test, the fittest model for panel data analysis is random effect.
(b) Regression result of ETR model with random effect

Table 4.3. Regression result of ETR model

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent variable ETR</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.313202</td>
<td>8.153197</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>FAMILY</td>
<td>-0.026674</td>
<td>-1.712895</td>
<td>0.0450**</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-0.288582</td>
<td>-4.454517</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.017466</td>
<td>0.495533</td>
<td>0.6210</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-6.11E-05</td>
<td>-0.052376</td>
<td>0.9583</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td>0.139144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td></td>
<td>0.116034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Statistic</td>
<td></td>
<td>6.020875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td></td>
<td>0.000161</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**: level of significance at 5%

Source: processed secondary data, 2018

As presented in Table 4.3, the random effect analysis result of R² is 0.139144. This indicates that the dependent variable is explained by the independent variable to the extent of 13.91% and the other 86.09% is explained by the other untested variables. The F-statistic score analysis pre-determined as low the probability of the fit of the model used in this research, where the independent variables significantly affect dependent variable. Based on the regression analysis above, the F-statistic score is 0.020875 with a probability score of 0.000161. It indicates that family firm ownership and three control variables (profitability, leverage, and size) simultaneously affect aggressive tax activity.

The testing result on the effect of family ownership on ETR indicates a negative score, that is -0.026674 and the probability score of family ownership is 0.0450. It indicates the probability score of family firms is less than α (5%), which means that family ownership significantly affects ETR, so H₁ is supported. This research reveals that family ownership affects manager action on aggressive tax activity of the firms.

In terms of ETR testing by control variable, ROA denotes a negative coefficient score of -0.288582. Later on, the probability score implies 0.0000 which is less than α (1%), which means that ROA negatively affects aggressive tax activity. Moreover, the control variable of leverage indicates a positive coefficient score of 0.017466, while its probability is less than α (1%, 5%, and 10%) which means leverage significantly affects aggressive tax activity. The last control variable, size, shows a negative coefficient score of -6.11E-05, and its probability score is 0.9583. Those scores indicate that the probability score is higher than α (1%, 5%, 10%), which means size insignificantly affect aggressive tax activity.

4.2 Discussion

The result of this research is in line with the findings of Rego and Wilson (2012), Zhang (2012) and Chen et al. (2010), and contrary to those of Utami and Setyawan (2015), Hanna and Haryanto (2016) and Sari and Martani (2010) which indicate insignificant results. It derives from the theory that the owners of family firms can fully use their
power in relation to the firm’s tax planning activities (Fatharani, 2012). Another argument is based on reputation/image, in that the good reputation of the family and firms will be damaged if aggressive tax activities are revealed, and the fines that may come for aggressive tax action.

The result of this research is consistent with real conditions in Indonesia. Online media reports have documented that then Finance Minister Bambang Brodjonegoro gave as the reason for presenting awards to four cigarette companies, namely HM Sampoerna Tbk, PT Gudang Garam Tbk, PT Djarum Tbk and PT PDI Tresno, not their large excise tax payments but each company’s allegiance in term of tax payment (Wiyanti, 2016). Of those four, one is a member of the Djarum Group which is owned by the 2nd ranked richest family firm in Indonesia, the Hartono family firm, while Robert Budi Hartono and Michael Bambang Hartono, the children of the Djarum founder, at the same time are the largest stockholders of Bank Central Asia (BCA) (Gideon, 2015). This suggests that a family firm can be considered more obedient in terms of tax payment as part of their effort to protect their good reputation and family image from tax sanctions because of aggressive tax action.

5. CONCLUSION, LIMITATIONS, AND SUGGESTIONS FOR FUTURE RESEARCH

This study aims to test the effect of family ownership on aggressive tax action using profitability, leverage, and size as the control variables. According to the data analysis of 31 listed manufacturing firms, over the period 2011-2017 with 194 observations, this research approves that family ownership negatively affects (lowers) tax avoidance action as measured by the Effective Tax Rate (ETR).

The limits of this research are:

(1) a limited sample, involving only manufacturing firms meeting sample criteria, and thus the result could not be generalised for other sectors. It is proposed for future research to use a larger sample of all listed firms on the Indonesian Stock Exchange, by using a sampling technique based on the income tax tariff applied for all firms.

(2) this research solely analyses one variable, i.e. family ownership, affecting aggressive tax action. It is suggested for future research to take into account other independent variables to explore the significance of various factors affecting tax avoidance.

6. REFERENCES


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European VAT and the digital economy: recent developments

Cristina Trenta* 

Abstract

This article investigates the most recent developments in the field of European value added tax (VAT) law in relation to the digital economy and in particular to the treatment and fiscal consequences of peer-to-peer technologies, consumer-to-consumer models, and barter transactions. The article’s aim is to assess whether progress has been made in the field and to discuss the most recent legislative developments. The article examines practical and theoretical concerns in detail and assesses current regulations through the lens of the rule of law as a cornerstone of European law that must be respected.

Key words: European value added tax, digital economy, consumer-to-consumer models, barter transactions, rule of law

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1. INTRODUCTION

The creation of the European Digital Single Market is one of the European Union’s main priorities,¹ and the European Commission considers the value added tax (VAT) to be one of the core elements of the Digital Single Market to be addressed in the coming years.² The Organisation for Economic Co-operation and Development (OECD) has shared similar interests in its 2015 Final Report on Action 1 of the Base Erosion and Profit Shifting project, *Addressing the Tax Challenges of the Digital Economy.*³

This article examines in detail three main VAT-related, digital economy issues as mentioned in the OECD BEPS Action 1 documents, specifically peer-to-peer technologies,⁴ consumer-to-consumer models,⁵ and whether certain transactions can be characterised as barter transactions or free supplies.⁶

If it is true that from a business perspective the digital economy presents a potential for economic growth, it is also true that the legislative frameworks regulating it, when they even exist, often lack clarity and are a source of uncertainty. The fact cannot be underestimated that the introduction of inefficient legislation in the field could make compliance more difficult and hence more costly for economic operators conducting an economic activity over the internet, and produce social and economic damage in the long run. In this context, the article investigates in detail recent developments in relation to VAT law and design in the EU, and tests the current VAT legislation through the lens of the rule of law principle as a cornerstone of EU law that must be respected, with the goal of identifying areas for reform and improvement of these rules in order to further the European digital economy and taxation debate.

2. THE DEBATE ON THE DIGITAL ECONOMY

The issue of taxing e-commerce is certainly not new in the field of VAT.⁷ The European Commission first defined e-commerce more than 20 years ago, in a 1997 document titled *A European Initiative in Electronic Commerce.*⁸ Indirect taxation, and particularly VAT, was identified in that report as a relevant issue in the context of e-commerce.⁹ At the international level, the OECD’s own Committee for Fiscal Affairs approached the

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⁵ Ibid 56 [4.2.1.3].
⁶ Ibid 104 [7.4].
⁸ European Commission, *A European Initiative in Electronic Commerce*, communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, COM(97) 157 final, Brussels, 16 April 1997.
⁹ Ibid 19 [57].

More recently, in October 2013, the European Commission established the Commission High Level Expert Group on Taxation of the Digital Economy (Expert Group). The Expert Group was tasked with providing suggestions aimed at improving the tax framework for the digital sector in Europe through EU-level initiatives. A final report was published in May 2014. No significant changes to the VAT system were put forward for consideration in the document, but the Expert Group nonetheless remarked that the EU VAT system already in place needed to be reinforced, supporting VAT neutrality in the digital economy and the destination principle, not only within the EU but also at the international level. Additionally, the Expert Group encouraged a review of the VAT rate structure, something the EU Commission had already considered in its 2011 Communication on the future of VAT. That document maintained that similar goods and services should be subject to the same VAT rate. Furthermore, technological changes should be taken into account for that specific purpose.

At the international level, following the introduction by the OECD of its Base Erosion and Profit Shifting (BEPS) project, the Action Plan under that project identified 15 different areas of intervention. Action 1 of which relates to the digital economy, with the specific aim of understanding the tax challenges in this field.

The final report issued by the OECD stressed the importance of the destination principle in business-to-consumer (B2C) transactions for VAT purposes, especially in cross-border B2C supplies of services. This is consistent with the OECD’s own *International VAT/GST Guidelines*, which consider the destination principle ‘a global standard to address issues of double taxation and unintended non-taxation resulting from inconsistencies in the application of VAT to international trade’.

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13 Ibid 36.
14 Ibid 37.
16 Ibid 11 [5.2.2].
The OECD has more recently confirmed this view in its recent Interim Report 2018, *Tax Challenges Arising from Digitalisation*, which again references the *International VAT/GST Guidelines*.  

The OECD also suggests that a simplified registration and compliance regime should be considered to facilitate application and collection of VAT on imported services from non-resident suppliers.

### 3. Place of Supply

At the time of this writing, the place of supply for e-services is determined according to the destination principle, and services are taxed for VAT purposes in the place where they are consumed. In that respect, Directive 2008/8/EC on the place of supply of services has introduced changes in relation to cross-border services. With effect from 1 January 2015, a general regulation based on a new article 58 has been introduced for B2C e-services, broadcasting and telecommunication services that relies on a customer location criterion based on the full destination principle. This rule finds general application unless a Member State has adopted the effective-use-and-enjoyment principle. Thus, starting January 2015, telecommunications, broadcasting and electronic services are as a rule taxed in the customer’s state of location. This applies regardless of the status of the customer as a taxable or non-taxable person, and regardless of whether the supplier is an EU or a non-EU operator. A new VAT Directive, 2017/2455, was introduced, effective 5 December 2017, amending Directive 2006/112/EC and Directive 2009/132/EC in respect to the VAT obligations for supplies of services and distance sales of goods. More recent EU legislation contains a number of provisions regulating cross-border trade and specifically distance sales thresholds from 2021 onwards. The aim of the new rules is to facilitate the collection of VAT when consumers buy goods and services online.

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27 Ibid, new art 59a.


In relation to Directive 2017/2455, art 1 establishes that, with effect from 1 January 2019, the previous art. 58 is amended and the place of supply for telecommunications services, radio and television broadcasting services, and electronically supplied services provided to a non-taxable person will be the place where that person is established or usually resides.33 This new provision does not apply if a supplier established in a Member State provides services to non-taxable persons established in a different Member State, and the value of these supplies does not exceed EUR 10,000, or the equivalent in national currency, in both the current and preceding calendar year.34

The change in the rules concerning the place of supply has been assessed in different ways by various commentators. Some authors argue that the new EU VAT rules introduced with Directive 2008/8/EC may cause difficulties in the phase of implementation.35 Others maintain that business-to-business (B2B) and B2C transactions are now treated very similarly, as the destination principle applies to both, and that the competitive advantage of companies located in states with low VAT rates has been mitigated. EU commentators generally support this development, as the destination principle should effectively be applied to supplies to taxable as well as non-taxable persons since such treatment better follows the principle of VAT neutrality,37 but have also raised concerns about the implicit difficulties in thoroughly adopting the destination principle and the consequent application of the VAT rate of the state of consumption. This also both increases the burden of navigating the complexity of the European VAT system and shifts more of that burden to private enterprises, as suppliers are required to correctly apply the very different VAT rates of 28 Member States,38 from Luxembourg’s 17 per cent to Hungary’s 27 per cent.39

It has to be said that the current situation is still unsatisfactory when it comes to regulating new models such as peer-to-peer or barter-like transactions: the latest changes to EU VAT Directive 2017/2455 that consider the digital economy do not include any specific provisions for these matters.41 The VAT regulations need clarification, especially in respect to the specific rules of classification that make the taxable status of an individual peer relevant for VAT.42 This is a consequence of the VAT Directive’s own treatment of the place of supply as regulating only transactions among business operators (B2B) and between business operators and private consumers among business operators (B2B) and between business operators and private consumers.

(B2C). As the digital economy generally blurs the lines between producers and consumers and thrives on consumer-to-consumer transactions (C2C) such as those happening in peer-to-peer fashion, it is easy to see how this is of concern to both commentators and operators in the sector.

Similar concerns are expressed by the European Commission in its Communication entitled *A European Agenda for the Collaborative Economy*. The document touches upon several legal issues concerning what the Commission calls the ‘collaborative economy’, taxation and VAT among them. The collaborative economy refers to business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals[^44] on a peer-to-peer and occasional basis.[^45]

The European Data Protection Working Party considers social networks (SNs) such as Facebook or Snapchat to be collaboration platforms: the abovementioned Communication states that supplies provided by means of collaborative platforms are in principle VAT-taxable transactions, even though the practical application of VAT could prove to be difficult:

Supplies of goods and services provided by collaborative platforms and through the platforms by their users are in principle VAT taxable transactions. Problems may arise in respect of the qualification of participants as taxable persons, particularly regarding the assessment of economic activities carried out on these, or the existence of a direct link between the supplies and the remuneration in kind.[^47]

The EU Commission then not only maintains that these new supplies provided through or by means of collaborative platforms are in principle subject to VAT, but also that supplies that are provided through the platforms by their users are in principle VAT-taxable transactions, as the EU Commission has recently outlined.[^48] It must be stressed that social networks connect an unprecedented number of people in real-time: they not only provide a natural transactional platform, often across national borders, but some of them have established formally structured marketplaces. While eBay or Etsy are the examples that readily come to mind, it should be noted that Facebook manages its own

[^44]: Ibid 3 [1].
[^45]: Ibid 7 [2.1].
[^47]: Ibid.
[^48]: European Commission, *A European Agenda for the Collaborative Economy*, above n 43, 14 [2.5].
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When online platforms perform as marketplaces, not only is the provider of a social network such as Facebook a provider of the service and hence a taxable person for VAT purposes, but so are also the recipients of these services. For example, users registered on Facebook may in turn become providers through their use of the social network as a platform for the marketing and sale of products or services. In such situations, when the sale of products or services is involved, users also may become taxable persons for VAT purposes, as they normally would in a traditional marketplace. A street market or the Facebook market should be, from the perspective of VAT, just two markets. In this context social networks function only as the platform enabling the market to exist.

The European Commission also maintains that a characteristic of these new supplies is that they are often provided by private individuals offering assets or services on an occasional peer-to-peer basis, among consumers/users themselves. This is in line with the OECD’s BEPS report stating that the reliance on consumer-to-consumer or C2C transactions is a defining characteristic of the digital economy.

Nevertheless, EU legislation does not provide guidance as to how to draw a distinction between what could be termed peer or amateur providers and professional service providers. This is indeed a new scenario, which EU VAT legislators are not only unprepared for, but may also be unaware of entirely. While scholars argue that the current VAT framework does not regulate distribution based on user participation, traditional VAT rules are found to be inadequate to both describe and regulate phenomena such as co-production, barter-type transactions, and peer-to-peer dealings. Alternative approaches should be considered to fill the regulatory gap and capture, where appropriate, those peer modes of production forming part of the digital economy.

55 European Commission, A European Agenda for the Collaborative Economy, above n 43, 5 [2.1].
57 European Commission, A European Agenda for the Collaborative Economy, above n 43, 5 [2.1].
59 Trenta, Rethinking EU VAT, above n 40.
that currently escape taxation\(^6\) so that their economic value added is brought back into national tax revenue streams.

4. **The New Administrative VAT Burden for Facilitators**

Directive 2017/2455 introduces a further change also applicable to e-services in its article 242A, entering into effect from 1 January 2021. This provision prescribes additional administrative requirements for taxable persons who facilitate the supply of goods or services to a non-taxable person within the Community by means of a platform. The taxable persons are required to keep ‘sufficiently detailed’ records of these transactions, which will result in an increase of their administrative burden:

Where a taxable person facilitates, through the use of an electronic interface such as a market place, platform, portal or similar means, the supply of goods or services to a non-taxable person within the Community in accordance with the provisions of Title V, the taxable person who facilitates the supply shall be obliged to keep records of those supplies. Those records shall be sufficiently detailed to enable the tax authorities of the Member States where those supplies are taxable to verify that VAT has been accounted for correctly.

In 2018, the VAT Expert Group stated a need for the meaning of the expression ‘facilitate’ to be clarified\(^6\) and for a stricter definition of the terminology to be provided as part of the implementing measures within the Council Implementing Regulation (EU) No 282/2011.\(^6\) The VAT Expert Group maintains that issues may arise in respect to when a situation fulfils the conditions for a taxable person to be considered as facilitating sales through the use of an ‘electronic interface’. Very similar concerns have been shared by the Group on the Future of VAT\(^6\) and it must be said that these preoccupations are not without merit. Another problem lies in the intrinsic difficulty in defining the role of internet-based intermediaries using traditional categories. In its report entitled *The Economic and Social Role of Internet Intermediaries*,\(^6\) the OECD has stressed how different the profile of internet economic operators is from traditional


ones, and the problems faced in categorising them satisfactorily and unequivocally. While it is possible for an internet operator to act as an intermediary and facilitate transactions between third parties, even though the new paradigms are moving away from human intervention and towards algorithmic match-making and disintermediation,66 this very operator is potentially playing multiple and sometimes competing roles in the transaction.

Not only may providers give access to, host, broadcast, or index content originating from them or from known or unknown third parties, but distribution protocols such as peer-to-peer completely undermine the fundamental concepts on which taxation rests: that a transaction has a clearly traceable origin and destination, that the parties involved can be identified and play one, and only one, specific role, and that a clear geographical boundary can be established.67

The approach taken by the OECD is to focus more on the specific activities of intermediaries, and address those empirically, rather than on providing a systematic way to categorise them,68 a difficult and ultimately fruitless task as these continue evolving as part of the consolidation and maturation of the digital economy.69 The approach may nonetheless exacerbate the effects of the administrative burden introduced by article 242A: it remains unclear how to identify who falls inside and who outside the definition of a taxable person facilitating transactions by means of a platform, and who thus has to bear the VAT duties applicable to such taxable persons.

5. **A LACK OF COORDINATION WITH EU E-COMMERCE LEGISLATION**

The identification and categorisation of internet intermediaries (or ‘facilitators’) is not the only issue introduced with article 242A: its formulation opens up a potential lack of coordination between the general EU legislative framework on e-commerce and the EU VAT Directive regulating e-services.

In order to support the Digital Single Market and see it flourish, the EU has included in the Directive on Certain Legal Aspects of Information Society Services, the so-called ‘Directive on electronic commerce’,70 an exemption from liability for intermediaries as information society service providers.71 When these natural or legal persons play a technical role as a mere conduit for third party information,72 or for the intermediary activities of data caching,73 or for hosting information,74 a limitation of liability applies.

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66 Ibid 10.
68 Perset, above n 65, 11.
69 Ibid 14.
71 Ibid. See Recital 40: ‘[b]oth existing and emerging disparities in Member States’ legislation and case-law concerning liability of service providers acting as intermediaries prevent the smooth functioning of the internal market, in particular by impairing the development of cross-border services and producing distortions of competition’.
72 Ibid art 12.
73 Ibid art 13.
74 Ibid art 14.
Furthermore, the Directive on electronic commerce has clearly introduced for these intermediaries a general prohibition in respect to the obligation to monitor the data which they cache, store, or transmit. Article 15 maintains that Member States shall not impose a general obligation on providers, when providing the services covered by Articles 12, 13 and 14, to monitor the information which they transmit or store, nor a general obligation actively to seek facts or circumstances indicating illegal activity.

The provision has been examined in detail by the European Court of Justice in the Netlog case. The Court stated in that case that article 15 prohibits national authorities from adopting measures which would require a hosting service provider to carry out general monitoring of the information that it stores... In that regard, the Court has already ruled that that prohibition applies in particular to national measures which would require an intermediary provider, such as a hosting service provider, to actively monitor all the data of each of its customers... Furthermore, such a general monitoring obligation would be incompatible with Article 3 of Directive 2004/48, which states that the measures referred to by the directive must be fair and proportionate and must not be excessively costly.

It is especially important that the ECJ calls for monitoring obligation to be ‘fair and proportionate’ and ‘not be excessively costly’ for business operators. This seems to have escaped the EU legislator in the drafting of Directive 2017/2455 and especially in the laying down of the requirements contained in article 242A. It is also a most puzzling change of direction in EU policing: while the Directive on electronic commerce sets out to ease the burden laid on internet intermediaries to facilitate the economic development of the online market, the VAT Directive places additional administrative requests on them without providing enough clarity as to who or what a facilitator is, and apparently without even questioning whether the move may be in outright conflict with previous policies and jurisprudence or end up resulting in further complications in the VAT treatment of electronic commerce.

6. THE PROBLEM WITH CONSIDERATION

The European Commission has stated on more than one occasion that the ongoing digitalisation of the economy has created challenges for taxation policies. Tax legislation needs updating to keep abreast of the phenomenon and still ensure fairness and support economic growth.

Article 2 of the VAT Directive maintains that the supply of services for consideration will be subject to VAT. This fundamental VAT principle has been reinforced by the

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75 Belgische Vereniging van Auteurs, Componisten en Uitgevers CVBA (SABAM) v Netlog NV, Case C-360/10, ECLI:EU:C:2012:85 (16 February 2012).
76 Ibid [33]-[34].
78 European Commission, A Fair and Efficient Tax System, above n 2, 3.
ECJ in the *Hong Kong Trade Development Council* case.\textsuperscript{79} This highlights a problem in applying the VAT literature to this area as certain types of transactions carried out in the digital economy, for example those happening in peer-to-peer fashion, become irrelevant for consumption tax purposes since they lack the basic characteristic of being carried out for consideration, at least in the traditional form of payment of money.

In its response to a question relating to the VAT treatment of the sharing economy,\textsuperscript{80} the VAT Committee has suggested that services provided by individuals through sharing economy platforms may in principle constitute economic activities and hence cause such individuals to constitute taxable persons. A case-by-case assessment would be necessary to ascertain whether or not such transactions fall within or outside the scope of VAT, an inevitable additional step required by the wide difference in the nature of transactions whenever supplies of goods or services are exchanged against other goods or services, and where consideration in money is absent.\textsuperscript{81}

The latest changes to the EU VAT legislation leave the issue unresolved. The application of article 2 of the VAT Directive implies that free supplies do not fall within its scope, but this provision is very often at odds with the hybrid, ‘fuzzy’ nature of current digital services. Its strict interpretation ends up excluding a priori large parts of the digital economy from the scope of VAT. In this context, in the case of much of the digital economy, value is often generated through types of transactions\textsuperscript{82} that are not taxed, or are very difficult to tax, under existing VAT rules.\textsuperscript{83} For example, many of the services available on the internet are offered for free upon subscription: when dealing with such genuinely ‘free’ supplies (i.e., supplies in kind with no monetary consideration), taxation remains a problematic issue under the current VAT consumption system, even when the more recent changes introduced by Directive 2017/2455 are considered.

Nonetheless, it can be argued that the EU framework sees consideration in kind as a legitimate concept within its VAT perspective. This is clearly spelled out in the modified expression contained in article 2(a) of the Second Directive, which substituted ‘consideration’ for ‘payment’.\textsuperscript{84} The logical corollary of this assumption is that operations for which consideration is paid in kind are not different from those for which consideration is paid in money, if it is possible to determine a monetary value for what is expressed in kind.\textsuperscript{85} The ECJ has recently reiterated this principle in its ruling for the *Serebryannaya* case, discussing how barter contracts fall within the scope of VAT:

\textsuperscript{79} *Staatssecretaris van Financiën v Hong-Kong Trade Development Council*, Case 89/81, ECLI:EU:C:1982:121 (1 April 1982), [11].
\textsuperscript{81} Ibid 11 [3.3].
\textsuperscript{82} Trenta, *Rethinking EU VAT*, above n 40.
\textsuperscript{83} Bacache et al, above n 61, 30.
\textsuperscript{84} European Union, Directive 2006/112/EC, above n 26, art 2(1)(a) and (c).
\textsuperscript{85} *Staatssecretaris van Financiën v Association coopérative ‘Coöperatieve Aardappelenbewaarplaats GA’*, Case 154/80, ECLI:EU:C:1981:38, [13].
Barter contracts, under which the consideration is by definition in kind, and transactions for which the consideration is in money are, economically and commercially speaking, two identical situations.\(^{86}\)

The VAT Directive, not differently from the Sixth Directive, recognises that consideration can take many forms and not just a monetary one. This is seen, for example, in the case of a reciprocal supply of goods, a reciprocal performance, or the refraining from performing some acts. The ECJ maintains that the mere fact that consideration might be in kind does not change its legal status,\(^{87}\) as the VAT Directive does not differentiate between alternative forms of consideration:

No distinction between consideration in money and consideration in kind is drawn… for those provisions to apply it is sufficient if the consideration is capable of being expressed in money… Since the two situations are, economically and commercially speaking, identical, the Sixth Directive treats the two kinds of consideration in the same way.\(^{88}\)

As things stand today, this remains an interpretation that finds commentators divided.\(^{89}\) Observers are left with either the laborious case-by-case assessment work suggested by the VAT Committee, made worse by even more confusing recent legislation, or with considering the digital economy a treacherous and unfair playground that cannot or should not be regulated, two opposing views that do not help solving the practical problems of operators nor the policy preoccupations of the EU.

7. CONCLUSIONS

This article has surveyed the latest EU VAT legislation and current academic debate surrounding the digital economy with particular attention to peer-to-peer technologies, consumer-to-consumer models, and barter transactions, making an assessment on whether any progress have been made in the area from a taxation standpoint.

Further to this analysis, it can also briefly be noted that the European academic debate has so far manifestly missed a rather important point. The discussion on VAT has centred by and large on a narrowly-focused assessment or re-assessment of the role of the destination vs. origin principle of VAT. However, ‘[t]he tax challenges raised by the digital economy include, but are not limited to, base erosion and profit shifting’\(^{90}\), as digital technology becomes a commodity, phenomena such as peer-to-peer\(^{91}\) or co-creation\(^{92}\) activities are reshaping the traditional economic and social landscape. It is

\(^{86}\) Serebryannay vek EOOD v Direktor na Direktsia ‘Obzhalvane i upravlenie na izpalnenieto’ – Varna pri Tsentralno upravlenie na Natsionalna agentsia za prihodite, Case C-283/12, ECLI:EU:C:2013:599 (26 September 2013), [39].


\(^{88}\) Ibid [23].


\(^{90}\) Jinyan Li, ‘Protecting the Tax Base in the Digital Economy’, Papers on Selected Topics in Protecting the Tax Base of Developing Countries No. 9, United Nations (2014).

\(^{91}\) Trenta, Rethinking EU VAT, above n 40.

\(^{92}\) Don Tapscott and Anthony D Williams, Wikinomics: How Mass Collaboration Changes Everything (Portfolio, 2010).
then even more unfortunate that this broadening is seldom if at all ever considered either in national or European tax commentary when discussing VAT.

A worrying trend is emerging that simply treats the digital economy, and the role of VAT within it, as if it were a new, rebranded version of e-commerce, going through the same motions and reprising conversations from the late 1990s when mainstream commercial exploitation of the internet began and when the actors on the scene could be neatly and unequivocally identified in their roles of suppliers, distributors, and consumers. Recently, today’s digital economy presents a far more nuanced and complex landscape. Traditional staples of tax law, such as the destination vs. origin principle, or the place of supply, are severely challenged by what people can now do efficiently, anonymously, and at scale, through technology.

The European Economic and Social Committee (EESC) in 2017 released an opinion discussing the ‘Taxation of the Collaborative Economy – Analysis of Possible Tax Policies Faced with the Growth of the Collaborative Economy’. The document argues that fiscal systems and tax regimes should be adapted to the changes brought on by the digital economy, with existing rules and principles adjusted for fairness, efficiency, and the equitable tax treatment of all economic operators. Tax legislation should not allow any disparity to exist between conventional forms of commerce and digital-based ones.

Peer-to-peer transactions are usually non-monetary, but at least theoretically they should be subject to VAT and the destination principle should find application. In practice, many of these transactions present challenges to the concepts of territoriality or tax jurisdiction, as they see the participation in varying capacity of large numbers of anonymous individuals from many different parts of the world. Identifying individual responsibilities and contributions, which also vary through time and can be reconfigured easily and effortlessly via software, is a daunting enterprise. As the EESC correctly observes, ascertaining the basic requirements of VAT could potentially be impossible in certain cases.

Services in the digital economy that do not require monetary payment but rely on the exchange of other benefits, such as for example a person’s data and preferences, require a closer examination. The legal framework in this area is indeed presently unclear. The EESC maintains it would be important for the Commission to address and regulate these issues by introducing simplified rules so that VAT could present a more coherent application to the collaborative digital economy. That technology should be neutral in respect to taxation is a long-standing OECD principle, first established in 1988 and confirmed in 2011. Hence, it does not matter whether the business model relies on traditional organisational models or on newer constructs, since

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93 Bacache et al., above n 61, 34.
95 Ibid.
96 Trenta, Rethinking EU VAT, above n 40.
taxation should seek to be neutral and equitable between new forms of
electronic commerce and between conventional and electronic forms of
commerce. Business decisions should be motivated by economic rather than
tax considerations.  

In 1998, the EU Commission stated very similar principles in its preparatory work on
*Electronic Commerce and Indirect Taxation*: legal certainty, simplicity, and keeping the
burdens of compliance to a minimum were to be considered cornerstones in the field of
VAT and e-commerce:

in order to allow electronic commerce to develop, it is vital for tax systems to
provide legal certainty (so that tax obligations are clear, transparent and
predictable)... Legal certainty enables commerce to be conducted in an
environment where the rules are clear and consistent reducing the risks of
unforeseen tax liabilities and disputes... Simplicity is necessary to keep the
burdens of compliance to a minimum.

The more recent EU VAT legislation, as has been shown through the analysis conducted
for this article, seems to introduce even more discrepancies between what is now to be
considered traditional e-commerce, regulated and falling within the scope of VAT, and
the more disruptive models brought in by the digital economy such as peer-to-peer C2C
models, which are currently unregulated and fall outside the scope of VAT. The
legislation also fails to address long-standing issues in respect to the nature of those
digital economy transactions that can be characterised as supplies that are genuinely ‘for
free’.

Moreover, the EU VAT landscape does not ensure fiscal certainty for those economic
operators working within the digital economy when they facilitate transactions by
means of a platform: the text of article 242A unfortunately lacks the necessary clarity.
The present situation could even be represented as having a human rights profile: the
European Court of Human Rights has maintained that the law must be pronounced with
sufficient clarity to ‘permit a taxpayer to regulate his conduct so that he would be aware of
the consequences of the actions’. It is worth remembering that article 6 of the
Treaty on European Union maintains that:

**Fundamental rights, as guaranteed by the European Convention for the Protection of Human Rights and Fundamental Freedoms and as they result from the constitutional traditions common to the Member States, shall constitute general principles of the Union’s law.**

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99 Ottawa Framework, above n 10, 4.
102 Consolidated Version of the *Treaty on European Union* (TEU), 2010 OJ C 83/01, art 2: ‘The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail’.
Academic literature has defined ‘tax uncertainty’ as the uncertainty that arises because of new, unclear tax legislation coming into force, stating that taxable persons have not only the right to know fiscal norms exist, but also the right to understand how these govern their business operations. The increasing importance of the digital economy is clearly a factor impacting this clarity, as business models mutate and technology subverts long-standing assumptions, thus making the tax treatment of new economic transactions unexplored territory.

The European Commission has also reminded Member States that the rule of law is one of the common values of the Union, in accordance with article 2 of the TEU. The principle is also imbued in the Charter of the Fundamental Rights, the Preamble to which states that ‘the Union... is based on the principles of democracy and the rule of law’. Legal certainty and the predictability of EU legislation, hence including that of EU VAT law, are principles enshrined in the EU system by the rule of law: the ECJ’s own jurisprudence has repeatedly reaffirmed these fundamental criteria and the necessity for precisely and clearly formulated norms.

In the Amministrazione delle Finanze dello Stato v Srl Meridionale Industria case, the ECJ ruled that ‘the effect of community legislation must be clear and predictable for those who are subject to it’. This principle is necessary since ‘rules imposing charges on the taxpayer must be clear and precise so that he may know without ambiguity what are his rights and obligations and may take steps accordingly’.

In this light, the recent changes to the EU VAT legislative framework concerned with the digital economy seem to be problematic. First, the new administrative burden introduced by article 242A for facilitators of supplies runs contrary to the overall principles of legal certainty as stated by the EU and the ECJ: simplicity and the need to keep the burdens of compliance to a minimum are general principles that the European Commission initially stated for e-commerce back in 1998. Second, the principle of proportionality and of reasonable costs for economic operators, as stated by the ECJ in the Netlog case, have also not been taken into account.

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104 Ibid.
107 TEU, above n 102, art 2.
110 Raitio, above n 109, 59.
The current EU VAT system continues to struggle to keep up with the frantic pace of the digital economy,\(^{113}\) producing either weak, unnecessary, or harmful legislation, or no legislation at all, even in the presence of well-established phenomena such as co-production or peer-to-peer activities. It is probably time to extend the reach of the VAT and permit further investigations to consider new and possibly unprecedented approaches: in the words of the Commission, ‘the time to act has now come’\(^{114}\) for an efficient tax system in the EU Digital Single Market.

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\(^{114}\) European Commission, *A Fair and Efficient Tax System*, above n 2, 3.