Accommodating Public Interest Considerations in Domestic Merger Control: Empirical Insights

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In the wake of recent convergence initiatives, many countries now adopt a competition-based approach to merger control assessment. Given the emphasis that is placed on competition criteria in these assessments, the influence of wider 'public interest' criteria has become increasingly marginalised. Yet despite this marginalisation, many merger regimes continue to afford scope to public interest criteria – which poses a number of questions regarding the feasibility of further convergence internationally. This paper conducts an empirical study of 75 domestic merger regimes to draw two sets of insights. Firstly, the paper identifies the different means by which states have chosen to accommodate public interest criteria within their domestic merger laws. It finds that most states will: (i) treat the public interest as an 'exception' to a competition-based test or frame it within sector-specific policy, and (ii) assign decision-making powers to either a national competition authority or a politician. Secondly, the paper explores the socio-economic factors that may influence how a state choses to accommodate public interest criteria. Statistical analysis suggests that factors traditionally thought of as influential (such as economic development) have only a negligible correlation with the chosen method of accommodation. In contrast, the 'effectiveness' of domestic governance within a state appears to demonstrate a significant correlation with how states choose to frame public interest criteria within legislation.

Keywords: merger control, public interest, competition law, non-competition interests, convergence, institutions.

JEL Classifications: G34, K21, K40.

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1. INTRODUCTION

In the wake of advances in economic theory and global initiatives such as the International Competition Network's (ICN) Recommended Practices for Merger Analysis,[1] many jurisdictions have converged towards a competition-based approach to merger assessment.[2] This means, as a default position, most states will assess the majority of mergers according to their potential impact on competition within the relevant market. Given the emphasis that is now afforded to competition criteria, the influence of wider public interest considerations has become increasingly marginalised.[3] However, despite this marginalisation, most domestic merger regimes continue to reserve a role for the public interest, albeit to a very limited degree in most cases.[4] This raises a number of interesting questions regarding the wider role of the public interest in domestic states and the feasibility of further convergence internationally.

So how can domestic states seek to accommodate public interest criteria in an environment that is now largely driven by competition ideologies? In practice, states face a number of decisions regarding the framework of their substantive merger law and their institutional arrangement. In terms of substantive law, countries must decide how much influence to afford to the public interest during the assessment proceedings. For example, should public interest criteria be afforded extensive influence by considering it as part of the substantive test for assessment? Should it be considered in only limited circumstances as an exception to the test? Or perhaps it should be assessed as part of a sector-specific policy that runs parallel to merger control. With regards to institutional arrangement, countries face a potential dilemma when identifying who should decide on mergers affecting the public interest. Should this decision-making role be assigned to NCAs, politicians, sector regulators or a combination of these? The decisions a state makes in relation to these substantive and institutional issues can significantly dictate the level of influence afforded to the public interest in its domestic merger assessments. By considering the choices that states have made in practice, this paper identifies the prevailing methods of accommodating the public interest

[1] International Competition Network, 'ICN Recommended Practices for Merger Analysis' (2009) <http://www.internationalcompetitionnetwork.org/uploads/library/doc316.pdf> accessed 15 July 2015.
[2] Frédéric Jenny, 'Substantive convergence in merger control: An assessment' (2015) 1 Concurrences 21, 31-33.
[3] ICN Advocacy Working Group, 'Competition Culture Project Report' (14th ICN Annual Conference, Sydney, April 2015) 10.
[4] See Section 3.3, below. Of the countries observed in this paper, 62.7% directly afford scope to the consideration of public interest criteria in their merger control legislation.

and asks whether this supports the suggestion that the public interest now exists only on the periphery of international merger control.

It is also worth considering whether socio-economic factors have had an influence on the way in which states have chosen to accommodate the public interest in practice. Do domestic variables – such as economic development – have a significant bearing on the importance a state attributes to the public interest and, in turn, how it chooses to accommodate it? It is certainly true that different states will have their own interpretations of how the public interest should be defined and the role it should play in the merger control context. By considering the influence of socio-economic variables, the paper seeks to establish why there has not been universal harmonisation between states with regard to approaching merger control and the public interest.

In seeking to address these research questions, the paper proceeds as follows. Section 2 examines the different approaches that states can use to accommodate the public interest under domestic merger control. It shows that states will typically: (a) adopt one (or a combination) of four core options for framing public interest criteria within legislation, and (b) appoint one (or a combination) of three types of public interest decision-maker. Section 3 seeks to identify how states have accommodated the public interest in practice by conducting an empirical study of 75 domestic merger regimes. It finds that most states will: (i) either treat the public interest as an 'exception' to a competition-based test or frame it within parallel sector-specific policy, and (ii) assign decision-making powers to either a national competition authority or a politician. Section 4 extends the empirical analysis to analyse the potential influence that key socio-economic factors may have on how a state chooses to accommodate the public interest. The analysis suggests that factors traditionally thought of as influential (such as geographic locality, economic development and the type of legal regime in place) have only a negligible influence on the chosen method of accommodation. In contrast, the effectiveness of governance within a state appears to correspond with how that state chooses to frame public interest criteria within legislation. Section 5 offers concluding remarks.

2. APPROACHES TO ACCOMMODATING THE PUBLIC INTEREST

2.1. The decisions facing countries when accommodating the public interest

There are numerous approaches a state can take when seeking to accommodate public interest considerations within their merger control regimes. States will usually adopt formal statutory provisions which specify how public interest criteria is to be accommodated and who will be assigned the relevant decision-making powers. In addition, states may also seek to give effect to the public interest via less formal means that are not specified in legislation.[5] Given that these informal methods are not readily observable for the purposes of empirical analysis, this paper is primarily concerned with the formal means by which states have sought to accommodate the public interest. As such, this section focusses on the formal decisions countries must take with regards to (i) framing public interest criteria in their domestic legislation ("legislative framing options"), and (ii) appointing a 'public interest decision-maker'.

2.2. Options for framing public interest criteria in domestic legislation

When seeking to accommodate public interest criteria in merger law, the national legislature must be mindful of a number of intricate drafting details regarding how the public interest should be defined and when it should be considered. It is difficult to compare the different types of public interest criteria that states adopt, not least due to the boundless definitions that countries can attribute to these interests. Having said this, there are only a limited number of options available to states when it comes to deciding *when* the public interest should be invoked in merger assessments. Depending on how the public interest criteria is 'framed' in the merger legislation, public interest considerations may play a prominent role in every merger assessment, a restricted role in some pre-determined assessments, or no role at all. A preliminary examination of the 75 states considered in this paper reveals that there are four main options for framing the public interest within merger control legislation:

[5] Consider, for example, the negotiations that took place between the South African Government and Wal-mart in *Wal-mart/Massmart*, and the UK Government and Pfizer in *Pfizer/AstraZeneca*. In both cases, there was no statutory requirement for the negotiations to take place but both governments sought commitments from the bidding parties in an effort to alleviate public interest concerns.

Option 1 *– Afford no scope to considering public interest criteria*.

Although not strictly to be classed as an option for 'accommodating' the public interest – in fact, quite the opposite is true – this approach still represents an instance where the state has made a conscious choice regarding the role of public interest criteria.[6] Under this approach, the state adheres strictly to competition-based criteria and affords no scope for considering wider public interest factors at any stage in the merger assessment process.

Option 2 *– Consider public interest criteria as part of the substantive test*.

Under this option, the public interest is considered directly alongside competition-based criteria in every merger assessment. This will sometimes involve 'balancing' the public interest criteria against competition findings to determine whether or not a merger should be allowed to proceed. Alternatively, the substantive test may be split into two phases: where the merger is assessed against competition-based criteria in the first phase, and against public interest criteria in the second phase. If the merger is deemed to satisfy both sets of criteria, the merger will be permitted. If the merger raises concerns with regard to one set of criteria, the merger will be blocked or remedies will be sought to address the concerns.

Option 3 *– Reserve public interest 'exceptions' to the substantive test*.

Here, the decision-maker will apply competition-based criteria during the merger assessment process but may, in exceptional circumstances, apply public interest criteria if the merger is suspected to raise public interest concerns. These exceptional circumstances may arise in mergers that have a direct impact on specific interests such as national security, media plurality or financial stability. Alternatively, the public interest exception can be defined broadly to include any merger that impacts upon the 'national interest'.

Option 4 *– Enforce sector-specific policies that run parallel to merger control*.

As with Option 1, this approach does not allow for public interest criteria to be considered within the merger control assessment itself, but there is a key difference. Even after the transaction has been assessed on competition grounds in accordance with the merger control

[6] For the purposes of this empirical assessment, Option 1 is to be treated as a decision – on the part of the state – to 'not accommodate the public interest' within its domestic merger legislation.

procedure, the outcome of the transaction may still be subject to a sector-specific policy, prompting a parallel sectoral assessment. This parallel assessment can then afford consideration to a number of sector-specific public interest issues. The sector-specific assessment has the potential to usurp the findings of the merger control assessment and thereby block, permit or seek remedies to address public interest concerns.

Although a state's merger legislation will tend to resemble one of the four options described above, it is also possible for a state to adopt a mixed-options approach which combines two of these options. In this respect, states are limited in the types of combination they can pursue,[7] but two combinations are possible:

A combination of Options 2 and 4 *– Consider the public interest as part of the substantive test and, in addition, enforce sector-specific policies*.

This first mixed-options approach involves assessing the merger on both competition and public interest grounds (Option 2), while simultaneously assessing whether the merger is compatible with sector-specific policy (Option 4). Although there may be some overlap between the public interest criteria considered in each parallel assessment, there is an observable difference between the two. Generally speaking, the public interest criteria considered under Option 2 will relate to issues that are capable of applying to all sectors (e.g. promoting a domestic firm's competitiveness internationally). In contrast, the public interest criteria considered under Option 4 will be sector-specific (e.g. ensuring the continuation of regional water supply in a merger between two water companies). As such, an approach that combines Options 2 and 4 has the potential to give effect to a wide range of possible public interest considerations.

[7] For example, Option 1 (which avoids considering public interest criteria) will not be compatible with any of the other options. Equally, Option 2 (which considers the public interest within the substantive test for assessment) will not be procedurally compatible with Option 3 (where the public interest is treated as an 'exception' to the substantive test).

A combination of Options 3 and 4 *– Reserve public interest 'exceptions' to the substantive test and, in addition, enforce sector-specific policies*.

As with the abovementioned combination of Options 2 and 4, this approach is capable of allowing public interest criteria to be considered at two stages of the assessment process. However, although Option 4 guarantees that public interest criteria will be considered in the parallel assessment, Option 3 only allows for such criteria to be considered in 'exceptional' circumstances. As such, any state that adopts this mixed-options approach will only exceptionally consider the public interest in both the merger and sector-specific assessments. It is also worth noting that, in contrast to Option 2, it is not uncommon for the types of public interest criteria considered under Option 3 to be sector-specific (e.g. maintaining a sufficient plurality of the media). This means that there can be an overlap between the markets-based public interest objectives considered under Option 3 and the sector-specific policies considered under Option 4. The range of potential public interest criteria is therefore unlikely to be as vast as that witnessed under the combined Options 2 and 4 approach. That said, certain broader public interest exceptions (e.g. 'national interest' or 'domestic economic interest') can allow a wider range of interests to be considered.

Accordingly, it is clear that a state must choose between six possible options when framing the public interest in legislation (inc. four core options and a further two mixed-options). For the purpose of the empirical analysis that follows, it is important to consider the potential influence that each option affords to the public interest in merger assessments. This is not altogether straightforward. The means by which public interest criteria is framed in legislation cannot, in itself, offer a definitive indication of how influential public interest considerations will be in practice in any given country. For example, let us assume that the merger laws in Country A and Country B each frame the public interest as an 'exception' to the substantive test (Option 3). Country A specifies a single public interest exception whereas Country B lists four exceptions. One interpretation that could be taken from this is that the influence of the public interest in Country A is only one-quarter of the influence observed in Country B. But what if Country A enforces a broad public interest exception (e.g. 'national interest') and Country B adopts four narrowly-drafted exceptions (e.g. 'media plurality', 'financial stability', 'energy security' and 'protection of R&D in the domestic science base')? If this is the case, more mergers may fall under

the single broad exception in Country A than under all four narrow exceptions in Country B. Consequently, the relationship between legislative framing options and the influence of the public interest should not be taken at face value.

However, this is not to say that legislative framing does not offer any insights into the influence of public interest criteria in practice. Clearly, some of the six options for framing public interest criteria have the potential to afford more influence to the public interest than others. Imagine a scale from 0-100, where '0' represents a merger regime that affords no influence to the public interest, and '100' is a merger regime that treats the public interest as fundamental in every case. At the lower end of the scale, Option 1 (*No public interest*) would feature at point '0', given that it affords zero scope to the consideration of public interest criteria. Option 4 (*Sector-specific policy*) is the next to appear on the scale as it enables the public interest to be considered in limited circumstances involving mergers in certain sectors. This is followed by Option 3 (*Public interest exception*) which can give effect to both broad and narrowly-defined public interest considerations in all sectors. Next to feature is a combination of Options 3 & 4 (*Public interest exception and Sector-specific policy*), which essentially combines the potential influence that each of these standalone options affords to the public interest. Option 2 (*Public interest as part of the substantive test*) would be ranked towards the upper end of the scale, as it allows the public interest to be considered in every merger evaluation. Finally, a combination of Options 2 & 4 (*Public interest as part of the substantive test and Sector-specific policy*) will rank at the top of the scale on account of the fact that it not only enables the public interest to be considered in every merger evaluation, but it also requires some mergers to be subjected to further sector-specific public interest assessments. These rankings are illustrated in *Figure 1*, below.

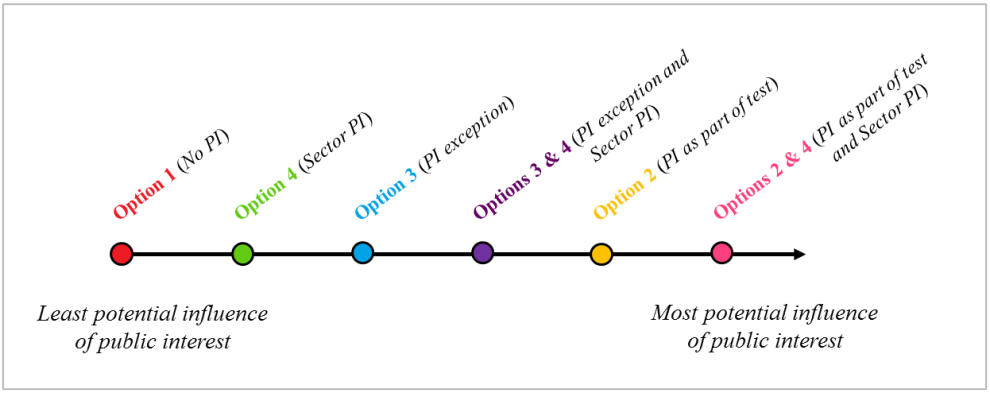

Figure 1. Ordinal scale ranking the legislative framing options according to the potential degree of influence they afford to the public interest in merger assessments.

Ranking the legislative framing options in this way lays the foundations for the empirical analysis that follows in Sections 3 and 4 of this paper.[8] By using each option as a proxy for the degree of influence afforded to the public interest in any given state, it is possible to draw preliminary conclusions on the role of the public interest in modern-day merger control (Section 3) and, moreover, the effect that socio-economic factors have had on this role (Section 4).

2.3. Options for appointing a 'public interest decision-maker'

The second fundamental choice that states must make when seeking to accommodate the public interest is to appoint a decision-maker to rule on mergers that raise public interest concerns. In a similar vein to the legislative framing options discussed above, states will need to consider certain intricacies before appointing a public interest decision-maker. For example, if there is a main body that oversees merger control in a given state, should this body also decide on mergers affecting the public interest or should the role be assigned to a separate body? States must also consider the expertise, resources and overall competence of a body before it is assigned the decision-making role. Among the 75 states considered in this paper, there have been three main types of public interest decision-maker appointed:

[8] The ordinal scale in *Figure 1* has its limitations; namely, that it is not possible to specify the exact size of the interval between any two categories. For example, in terms of the potential influence each option affords to the public interest, the interval between Option 1 and Option 4 may be larger than the interval between Option 4 and Option 3. Nevertheless, these ordinal measurements can still be relied upon to draw tangible statistical insights, see Sections 3 and 4 below.

National competition authorities

By their very definition, national competition authorities (NCAs) tend to operate under a consumer mandate by seeking to maintain and promote competition in markets. Some states, however, have chosen to extend the mandate of NCAs to consider the welfare of the public at large. NCAs will typically seek to employ individuals with expertise in competition law and economics, although the resources available to NCAs can vary considerably between states.[9] The political independence of NCAs also varies drastically. Some have overt political links, either operating as part of a government department or being overseen by a government minister. Other NCAs may appear independent but governments may retain certain powers to e.g. appoint and discharge the CEO or to overturn the decisions of the NCA. Of course, there are also truly independent NCAs that operate at arm's length from government and are not subjected to political pressure in the decision-making process.

Politicians

For the purposes of this paper, the term 'politician' is taken to include a collective group of politicians (i.e. a government or a ministerial cabinet), as well as an individual politician (e.g. a minister). These are, in the most part, elected officials belonging to a particular political party who have a broad mandate to serve the economic and social interests of the state. In the context of public interest mergers, politicians may request advice from NCAs and regulators when seeking to establish the effect that a merger is likely to have on competition and specific public interest issues. Depending on the level of political stability in a given country, the politician(s) appointed to make decisions may change at regular intervals, usually after a cabinet reshuffle or where a new government has been elected.

Sector Regulators

The role of sector regulators is generally to monitor and administer policy in specific industries that exhibit unique characteristics and, as such, warrant closer regulatory scrutiny. Regulators can operate under various mandates (e.g. citizen and consumer mandates) and will

[9] Khelma P. Armoogum and Bruce Lyons, 'What Determines the Reputation of a Competition Agency?' (12th Annual International Industrial Organization Conference, Chicago, April 2014) <https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIOC2014&paper_id=470> accessed 14 May 2014.

sometimes have dual mandates which require them to consider the effects a merger is likely to have on two sets of stakeholders. On account of these wide-ranging mandates, regulators may also be required to consider the levels of competition in the relevant sector and, as such, may also work closely with NCAs. Employees will typically have sector-specific expertise and, in some cases, past experience of working in the industry. In much the same way as NCAs, the political independence of sector regulators varies state-by-state and sector-by-sector.

It is also possible for states to assign the public interest decision-making role to more than one of the abovementioned institutions:

Dual decision-makers

In theory, a state could prescribe a joint decision-making role involving all three institutions: an NCA, a politician and a sector regulator. In practice, however, no state out of the 75 considered in this paper has opted for this triple decision-maker arrangement. That said, some states have appointed dual decision-makers in the form of either: (i) an NCA and a Politician, (ii) an NCA and a Regulator, or (iii) a Politician and a Regulator. It is difficult to summarise how these dual decision-making roles operate in practice, as the relationship between the two decision-makers can take a number of forms. For example, it might be that each institution has equal power in the decision-making process and, as such, both institutions must approve the merger before it is allowed to proceed. Alternatively, in the event of each institution reaching a different conclusion on the effect of the merger on the public interest, one of the institutions may be given the 'final say' on whether or not the merger is allowed to proceed.[10] Furthermore, in contrast to two decision-makers working together to reach a conclusion, states may merely appoint two decision-makers to 'share the workload', with each institution tasked with assessing mergers in specified industries.[11] Given that the dual decision-making

[10] Such a procedure has been proposed in the UK in the context of media mergers raising plurality concerns. For a discussion, see David Reader, 'Does Ofcom Offer a Credible Solution to Bias in Media Public Interest Mergers in the United Kingdom?' (2014) 4(1) CPI Antitrust Chronicle <http://www.competitionpolicyinternational.com/does-ofcom-offer-a-credible-solution-to-bias-in-media-public-interest-mergers-in-the-united-kingdom> accessed 14 April 2014.

[11] This is the case in the United States where the Department of Justice and the Federal Trade Commission are assigned competence over mergers in certain specified industries.

approach can take many forms (both with regards to the identity of the decision-makers and the relationship between them), performing an analysis of it poses numerous practical challenges. Therefore, so as not to unnecessarily complicate the empirical analysis, Sections 3 and 4 of this paper group the different types of dual decision-makers into a single category.

It is therefore clear that states can choose from among four possibilities for public interest decision-makers (including three standalone institutions and a dual decision-making approach).[12] The choice is made particularly interesting given that the state legislature (i.e. the government) is essentially faced with a choice between either: (i) assigning decision-maker powers to itself, or (ii) delegating power to a different institution to decide on mergers affecting the wider public interest. Have state governments shown a willingness to delegate these powers in practice? This is one of the questions explored in the next section.

In the same way as the legislative framing options, we can again consider the potential influence that each decision-maker option affords to the public interest. Unfortunately, whereas there are general rules of thumb that allow the legislative framing options to be ranked according to their potential influence,[13] the same cannot be said of decision-makers. Many factors can affect how frequently a decision-maker will give effect to the public interest. The most obvious is the merger legislation itself, which frames the public interest and specifies the powers of the decision-maker. However, we should also be mindful of the extra-legal factors that can influence decision-makers, such as their political independence and whether they are particularly prone to lobbying. These are not clear-cut categories that decision-makers can be grouped into, they are issues faced by every decision-maker regardless of their identity. If we were to rank the different types of decision-maker, it would require making a number of broad assumptions about the institutional make-up of NCAs, politicians and sector regulators in different states. To do so would be to oversimplify the research and, owing to this, the paper refrains from relying on decision-makers as a proxy for the influence afforded to the public interest. Rather, the analysis of decision-makers is conducted to

[12] Note that courts do not feature within the list of public interest decision-makers. Of the 75 states in the sample, many assign a role to the courts for reviewing the rulings of the decision-maker, but no states has chosen to appoint a court as a public interest decision-maker in its own right.
[13] The rule of thumb is that, broadly speaking, we can identify whether public interest criteria will be considered in (i) every case, (ii) some cases, or (iii) no cases, depending on how the criteria are framed in legislation.

offer important insights into (i) the extent to which governments have been willing to delegate decision-making powers to other bodies, and (ii) whether a certain type body is considered more appropriate for assessing the public interest. This can be achieved without having to rank the decision-makers.[14]

3. HOW HAVE STATES ACCOMMODATED THE PUBLIC INTEREST IN PRACTICE?

Section 2 has identified two fundamental choices that a state must make when seeking to accommodate the public interest in its domestic merger regimes. The first concerns how the state wishes to frame the public interest in merger legislation, where there are six possible options to choose from. The second involves appointing a decision-maker to rule on mergers that raise public interest concerns, of which there are four main decision-makers a state can recruit. Having identified the options available to states, the next stage is to observe how frequently these options have been adopted in practice. This section seeks to make these observations by adopting an empirical methodology which considers the merger regimes of 75 domestic states. The section proceeds by firstly providing an explanation of the empirical methodology, before presenting a description of the domestic data set and, finally, revealing the findings of the empirical analysis.

3.1. Research Methods

3.1.1. Advantages and limitations of the empirical approach

By utilising an empirical methodology, the analysis in this paper is able to draw insights that a traditional doctrinal approach would otherwise fail to deliver. This is achieved by identifying key features within each state in the sample, and thereby grouping the states according to the methods of accommodation outlined above. By segregating the data in this way, one can more readily

[14] In Carletti et al, the authors rank the different decision-makers by assigning an 'effectiveness' score between 0-1 to each body. This does not, however, overcome the need to make broad assumptions for an entire class of decision-maker. Elena Carletti, Philipp Hartmann and Steven Ongena, 'The economic impact of merger control legislation' (2015) 42 International Review of Law and Economics 88, 92.

observe the global norms by which states have accommodated the public interest in practice. In addition, the empirical approach has the effect of assigning quantitative values to qualitative data, meaning the data is more directly comparable with some of the quantitative data utilised in the study of socio-economic variables in Section 4.

Despite the notable benefits associated with empirical methodologies, it is worth noting the potential limitations of this approach. The main concern regards overlooking the important domestic variables that an empirical analysis of domestic legislation is unable to take account of. Legal academics have warned of the pitfalls of placing too much emphasis on legislation without consulting other important sources, such as case law, policy statements, news reports and academic commentary.[15] Indeed, although merger legislation can offer a useful proxy for the influence afforded to public interest criteria domestically, it might not offer an accurate representation of the circumstances where the public interest is considered in practice. For example, merger legislation cannot generally reveal whether decision-makers will attach a wide or narrow interpretation to the public interest criteria.[16] Nor will legislation reflect any guidelines or interim policy changes that have taken place in lieu of statutory reform.[17] The author acknowledges these limitations and notes the potential for future research projects that would seek to reinforce the empirical analysis in this paper, by undertaking additional domestic case studies.

3.1.2. Methodology

Having decided to adopt an empirical approach, the next stage is to devise a methodology that makes effective use of empirical methods. A detailed explanation of the methodology used in this paper can be found in Appendix 1 but, broadly speaking, the methodology consists of four steps.

[15] Maher M Dabbah, *International and Comparative Competition Law* (CUP 2010) 38.
[16] For instance, 'national security' is a public interest criteria that is referenced in several regimes and attributed very different meanings.
[17] Consider, for example, the introduction of the Tebbit Doctrine in the UK. Although it had no impact on the wording of the merger provisions under the Fair Trading Act 1973, a policy speech by Norman Tebbit MP in 1984 prompted the UK authorities to depart from a public interest test in favour of a competition-based approach to merger control. *HC Deb 5 July 1984, vol 63, cols 213-14W.*

Firstly, as Section 2 has highlighted above, it has been necessary to identify the various methods by which states can accommodate the public interest in practice. This has been accomplished by conducting an initial doctrinal study of 20 states, to reveal the six options for framing the public interest in legislation and the four options for appointing a public interest decision-maker.[18]

Secondly, a data set has been compiled to consolidate the information relating to merger control in each state. Further information relating to socio-economic variables has also been incorporated into the data set in order to lay the foundations for the analysis that follows in Section 4. A detailed account of how the data has been collected and codified can be found in Section 3.2, below.

Thirdly, having compiled the data set, the states are then grouped according to how each has chosen to accommodate the public interest in practice. This involves interpreting the data entries of each state and recording which of the six framing options they have chosen to adopt and which of the four decision-makers they have appointed.[19]

The fourth and final step involves subjecting the grouped data to empirical analyses. A number of analyses are conducted throughout this paper. Section 3.3 undertakes a basic assessment of the frequency distribution of states adopting each legislative framing option and each decision-maker option. Section 4.3 examines whether socio-economic variables have influenced the way states have chosen to accommodate the public interest by making use of a range of statistical techniques (such as choropleth mapping and inferential tests, such as *t*-tests and ANOVA) [20] to interpret the data. With regards to the legislative framing options, the empirical analysis uses the ranking system illustrated in *Figure 1*, above, to identify whether there is a relationship between socio-economic variables and the level of influence states afford to public interest criteria in domestic merger legislation.[21]

[18] For details on the sources of data for this initial doctrinal study, see Section 3.2.1 for an overview of the data set.
[19] Tables that group the states according to their choice of legislative framing options and decision-makers can be found in Appendices 2B and 2C respectively.
[20] These techniques are used respectively in Section 4.3.1 (Geographic locality) and Sections 4.3.4 and 4.3.5 (Effectiveness of domestic governance and Openness to foreign investment).
[21] An interesting alternative to ranking the options would be to calculate a score for each state, based on the degree of influence it affords to the public interest. As noted above, a similar approach has been used to measure the 'effectiveness' of merger regimes and the impact this has on the stock prices and profitability of targets in bank mergers; Carletti (n 14) 92.

3.2. Data on domestic merger control

3.2.1. Overview of the domestic data set

The consolidated data set is comprised of information relating to the merger-specific, socio-economic and foreign investment variables of 75 domestic states. The merger-specific variables record various qualitative data, including: (i) the substantive test for merger assessment that the state has adopted, (ii) whether there is direct scope to consider public interest criteria in the merger regime,[22] (iii) whether the public interest is framed as part of the substantive test (Option 2); (iv) whether the public interest is framed as an exception to the substantive test (Option 3); (v) whether sector-specific policy gives effect to public interest criteria (Option 4); (vi) the identity of the public interest decision-maker; and (vii) whether the decision-maker is independent of government. The records for the socio-economic variables include: (i) whether the state in question is a developing economy;[23] (ii) the type of legal system the state has in place; and (iii) the effectiveness of governance in the country.[24] Finally, the records for the foreign investment variables consist of: (i) whether the state is an OECD member country;[25] and (ii) how 'open' the state is to foreign direct investment.[26]

3.2.2. Populating and codifying the domestic data set

The data for the analysis in this section is predominantly derived from two main sources: (i) the country overviews that appear in the 2014 edition of the Global Competition Review (GCR) Merger Control Handbook,[27] and (ii) the country profiles available from the George Washington University (GWU) Worldwide Competition Database.[28]

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[22] Direct scope is afforded if the public interest is either part of the substantive test or an exception to the test.
[23] Based on the development status attributed to the state by the IMF; International Monetary Fund, *World Economic Outlook: Uneven Growth – Short- and Long-Term Factors* (IMF 2015) 150-153 <http://www.imf.org/external/pubs/ft/weo/2015/01/> accessed 5 May 2015.
[24] According to the 2014 readings of the World Bank Governance Indicators; World Bank, 'Worldwide Governance Indicators (WGI) project' <http://info.worldbank.org/governance/wgi/index.aspx#home> accessed 23 March 2015.
[25] i.e. A recognised member of the Organisation for Economic Co-operation and Development.
[26] According to the 2014 ratings of the OECD FDI Index; OECD, 'FDI Regulatory Restrictiveness Index' (*OECD Investment*, June 2014) <www.oecd.org/investment/fdiindex.htm> accessed 8 January 2015.
[27] Global Competition Review, *Getting the Deal Through: Merger Control 2014* (Law Business Research 2013). Hereafter, 'the GCR Handbook'.
[28] Competition Law Center, 'Worldwide Competition Database' (*GWU Competition Law Center*) <http://www.gwclc.com/World-competition-database.html> accessed 3 June 2014. Hereafter, 'the GWU Database'.

The GCR Handbook is a reputable reference document that is updated annually and aims to provide legal and business practitioners with overviews of merger control procedures in a number of jurisdictions across the globe.[29] The country overviews have been written by preeminent merger control practitioners and each overview has also received factual verification from some of the world's leading competition authorities.[30] Each country overview also provides answers to 36 'key questions' relating to various substantive and procedural aspects of the domestic merger regime.[31]

The GWU Database is an online research resource hosted on the website of the George Washington Competition Law Center. At the time of writing, the database is populated with short country profiles for 120 competition regimes worldwide. In a similar fashion to the GCR Handbook, the country profiles in the GWU Database pose 38 questions regarding, inter alia, the obligations, independence and governance of competition authorities in each state. Many of these questions require binary 'Yes/No' answers, but the country profiles also provide additional elaboration where appropriate. For the purposes of the analysis in this paper, the GWU Database offers a reliable resource for cross-checking the information relating to decision-makers contained in the GCR Handbook, particularly with regards to their independence.[32]

In total, 75 domestic merger regimes are included in the data set and there are three main reasons for selecting this sample size: (i) to reduce the risk of data distortions, (ii) to ensure the data is sufficiently representative of global merger control, and (iii) to ensure the data is readily accessible from a reliable source.

[29] As an indication of its reputability, the GCR Handbook has been endorsed by both the International Bar Association and the American Bar Association.
[30] GCR Handbook (n 27) iii.
[31] The main questions the data collection considers are: (Q1) 'What is the relevant legislation and who enforces it?'; (Q8) 'Are there also rules on foreign investment, special sectors or other relevant approvals?'; (Q19) 'What is the substantive test for clearance?'; and (Q22) 'To what extent are non-competition issues (such as industrial policy or public interest issues) relevant in the review process?'.
[32] In terms of independence, the key questions posed in the country profiles are: 'Does the executive have powers to decide on specific cases based on public interest?' and 'Does the executive retain decision-making powers over the Competition Authority?'.

Firstly, on the point of avoiding potential data distortions, there are justifiable grounds for imposing certain criteria on the types of state that are to be included within the sample.[33] For example, as the purpose of the study is to identify trends in domestic merger control regimes, it follows that the states within the sample should be domestic rather than supranational.[34] Moreover, the state must have enacted formal merger control laws that explicitly refer to assessment criteria.[35] By restricting the sample to states that possess these characteristics, it ensures that the states are sufficiently similar to facilitate a robust empirical analysis of the effect of socio-economic variables.[36] An important question to bear in mind here is whether the sample should include states that have not made efforts to accommodate the public interest domestically. The decision has been made to retain these states in the sample because they potentially offer valuable insights into the effect that socio-economic variables have on the decision of whether or not to accommodate public interest criteria in the first place.

Secondly, the data set must be sufficiently representative of global merger control in order for the empirical analysis to obtain valid insights on the international norms for accommodating the public interest. As such, the sample states are selected from a broad geographic spectrum, thereby ensuring that the sample is more indicative of a range of socio-economic variables, many of which are significantly influenced by a country's geographic location. The 75 states in the sample are selected from six continents,[37] and also consist of a relatively even split between developed and developing economies,[38] one of the key socio-economic variables that will be analysed in Section 4. It is anticipated that this will be sufficiently expansive to identify the international trends relating

[33] By imposing qualifying conditions on the sample, this facilitates control variables that can be maintained throughout the sample to reduce the risk of data distortions.
[34] The 'domestic state' requirement precludes the consideration of supranational merger regimes, such as the European Union and the Common Market for Eastern and Southern Africa (COMESA), which both feature in the GCR Handbook.
[35] Uruguay enforces a procedural-based merger regime that lacks a substantive test for assessment. As such, the role afforded to competition and public interest criteria is not clear. Uruguay is therefore precluded from the sample. Luxembourg also fails to qualify by virtue of its lack of substantive merger assessment.
[36] Comparative scholars have noted that a meaningful comparative analysis requires states to be sufficiently comparable in terms of certain shared characteristics; see A. Esin Örücü, 'Methodology of comparative law' in Jan M. Smits (ed), *Elgar Encyclopedia of Comparative Law* (Edward Elgar 2006) 442.
[37] These include representatives from Africa (8 states), Asia (12), Europe (37), North America (7), South America (6) and Oceania (5).
[38] Of the 75 states in the sample, 38 are developed and 37 are developing.

to the accommodation of the public interest in domestic merger control and to the influence of key socio-economic variables.

Thirdly, the sample size will also be influenced by the availability of reliable data on the merger regime of any given state. Information and literature on certain merger regimes is scarce, particularly in countries that have only recently adopted merger control. This problem is aggravated by language barriers and the various statutes, institutions and reforms that need to be taken account of. Therefore, it is logical to select the sample states from amongst the countries featured in the GCR Handbook or the GWU Database, two reliable points of reference for information on domestic merger control and institutions.

3.3. Observations on how states have accommodated the public interest in practice

Before considering the potential influence of socio-economic variables, the data can first be assessed to identify the most common means by which the 75 states have accommodated the public interest, in terms of legislative framing and decision-makers.

3.3.1. Framing the public interest in merger legislation

Let us first consider the most popular options for framing the public interest in merger legislation. In light of the general rhetoric in academic and practitioner circles which advocates that states should adopt a competition-based approach to merger assessment,[39] one would expect to see most states either framing the public interest in a restrictive way or affording it no scope whatsoever. Indeed, the data appears to support this proposition. *Table 1*, below, specifies the number of states adopting each legislative framing option, with the options ranked according to the potential influence they afford to the public interest, as detailed above.

[39] See, for example, the ICN Recommended Practices for Merger Analysis (n 1) 1, Comment 1.

Table 1. Frequency distribution of states adopting each option of framing the public interest in legislation.

Option 1 (*No PI*)	Option 4 (*Sector PI*)	Option 3 (*PI Exception*)	Opts 3 & 4 (*PI Exceptions & Sector PI*)	Option 2 (*PI Test*)	Opts 2 & 4 (*PI Test & Sector PI*)
9 (12.0%)	19 (25.3%)	19 (25.3%)	14 (18.7%)	9 (12.0%)	5 (6.7%)

[Source: Appendix 2B].

Within the sample, 81.3% of states either avoid considering the public interest (Option 1) or frame public interest restrictively – either in sector-specific policy (Option 4), as an exception to the substantive test (Option 3) or a combination of both (Options 3 & 4).[40] In contrast, the options that afford a greater degree of potential influence to the public interest (Option 2 and Options 2 & 4) are adopted by only 19.7% of states. The most popular options for framing the public interest are Option 3, Option 4 and, to a lesser extent, a combination of the two; 69.3% of states adopt one of these three options.[41] This indicates that, while the vast majority of states have chosen to afford scope to the public interest,[42] there is a general preference for states to frame the public interest restrictively, meaning it will only be invoked in limited circumstances involving certain types of merger.

Moreover, the skewness of the data indicates a slight positive skew that tails towards the 'least common' options on the right-hand side of *Table 1*.[43] Again, this suggests that, as the degree of influence an option affords to the public interest increases, the probability of a state adopting that option decreases. These findings correspond to the initial proposition that international merger control has converged towards a predominantly competition-based approach.

Inference 1. *The vast majority of states continue to assign a restricted role to public interest criteria in their merger control regimes.*

[40] 61 out of 75 states frame the public interest restrictively or afford no scope to it.
[41] 52 out of 75 states adopt Option 3, Option 4 or a combination of both.
[42] 47 out of 75 states (62.6%) afford direct scope to the public interest in their merger legislation, and 66 out of 75 states (88.0%) afford direct scope to the public interest in merger legislation or sector-specific policy.
[43] The degree of skewness within the distribution is calculated at 0.3430, indicating a noticeable – but not significant – positive skew; see Appendix 2A. The distribution also has a kurtosis of 2.44, indicating the curve of the data is relatively flat compared to a normal distribution; Appendix 2A.

3.3.2. Appointing a public interest decision-maker

The next step is to consider who states have appointed to the public interest decision-making role in practice. Predicting the most popular decision-maker is not altogether straightforward. On the one hand, given that the ICN Recommended Practices for Merger Analysis suggest that NCAs should decide mergers, albeit on competition grounds,[44] it may be that states have chosen to extend the decision-making responsibilities of NCAs to also include public interest assessments. In particular, if the domestic law requires the decision-maker to balance competition and public interest considerations, states may feel that NCAs are best-suited to this task by virtue of their competition expertise. On the other hand, states may prefer to assign the decision-making role to politicians because of (i) a constitutional belief that mergers affecting the public interest should be decided by a public representative, or (ii) a reluctance to cede decision-making powers on matters of public or strategic significance. *Table 2*, below, indicates that NCAs and politicians are, in fact, equally common among the states in the sample when it comes to appointing decision-makers.

Table 2. Frequency distribution of states appointing each public interest decision-maker.

NCA	Politician	Regulator	Dual	N/A†
21 (31.8%)	21 (31.8%)	9 (13.6%)	15 (22.7%)	9 (N/A)

[Source: Appendix 2C]. † Denotes states that do not consider the public interest and, as such, do not appoint a public interest decision-maker.

Of the 66 states in the sample that have appointed public interest decision-makers,[45] 31.8% have opted for NCAs, a further 31.8% have appointed politicians, 13.6% assign the role to regulators, and 22.7% implement a dual decision-making procedure. Given that less than one-third of states have appointed politicians as decision-makers, this would appear to indicate that states have shown a strong willingness to cede public interest decision-making powers to other bodies. However, if we consider the political independence of the decision-makers in the sample, the influence of state governments may not be as restrained as *Table 2* implies. Only 37.9% of the decision-makers in

[44] ICN Recommended Practices (n 1) 1, Comment 3.
[45] These are the 66 states who afford scope to the public interest during the assessment process.

the sample (25 out of 66 states) take their decisions independently of government.[46] Hence, despite the majority of states opting against appointing politicians as direct decision-makers, the assessment of public interest mergers remains largely politicised in most states.

Inference 2. *NCAs and politicians have proved the most popular choices to fulfil the public interest decision-making role. However, despite showing a readiness to delegate decision-making powers, state governments retain a notable influence over the decision-making process.*

3.3.3. The most popular combinations for accommodating the public interest

We have so far established that states demonstrate a preference for: (a) prescribing a restricted role to public interest criteria in their merger regimes (Options 3, 4 or both), and (b) appointing NCAs or politicians as public interest decision-makers. In an effort to identify the dynamics between the two sets of choices, the legislative framing and decision-making variables can be considered together to reveal the most popular combinations for accommodating the public interest.

Overall, there are 21 possible combinations for states to choose from.[47] This is a broad range of possibilities but, nevertheless, there are some specific combinations that we would expect to observe more frequently in practice. For example, when a state frames the public interest in terms of sector-specific policy,[48] it might be more inclined to delegate the decision-making role to a sector regulator, in order to benefit from the regulator's industry expertise. Alternatively, if the public interest is framed as part of a substantive test that requires the public interest to be balanced with competition criteria,[49] the state may be more likely to appoint an NCA as decision-maker or, at least, implement a dual decision-making procedure that includes an NCA. *Figure 2*, below, illustrates the most popular accommodation combinations within the sample.

[46] See Appendix 2D. The politically independent decision-makers in the sample include: 13/21 NCAs (61.9%), 0/21 Politicians (0.0%), 6/9 Regulators (66.7%), and 6/15 Dual decision-makers (40.0%).
[47] This figure includes the option of not affording scope to the public interest. For a table of the possible combinations, see Appendix 2E.
[48] i.e. Option 4, Options 2 & 4 or Options 3 & 4.
[49] i.e. Option 2 or Options 2 & 4.

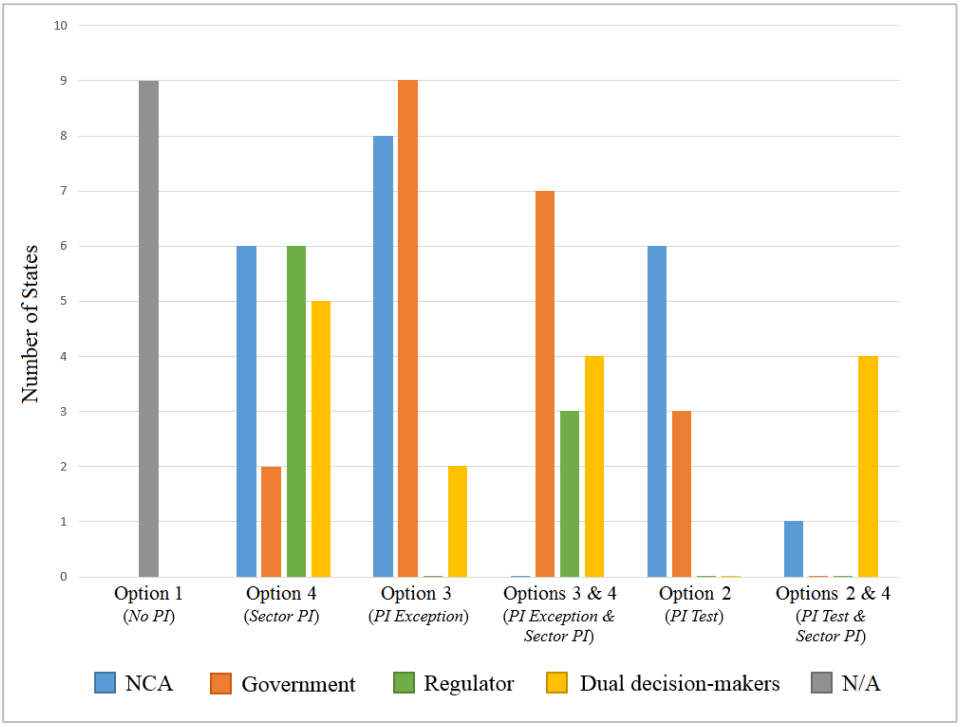

Figure 2. Distribution of different combinations of legislative framing and decision-maker options available to states. [Source: Appendix 2E].

A number of inferences can be drawn from the data. What is immediately observable is the wide variety of combinations that the states have adopted in practice. Of the 21 possible combinations available, 15 have been utilised by the 75 states in the sample. One explanation for this broad distribution is that, rather than simply transplanting the merger laws of another country, states have shown a willingness to tailor their approach in order to accommodate the public interest in a manner that suits their own domestic needs.[50] By a slight margin, the joint-most common approaches in the sample are (i) to avoid considering public interest criteria altogether (Option 1), and (ii) to frame the public interest as an exception to the substantive test (Option 3) and to appoint a politician as decision-maker – these approaches have each been adopted by 9 states.[51] The next-most popular combination is also Option 3 but with an NCA appointed as decision-maker (8 states).

Given that the sample includes an equal number of NCAs and politicians as decision-makers, it is possible to directly compare the distributions of both. A notable difference between the two can

[50] Section 4 of this paper will test this claim by considering socio-economic variables.
[51] The United Kingdom is one of the states to adopt the 'Option 3 with politician' approach.

be observed in instances where the public interest is framed as an exception (in Option 3 and Options 3 & 4). Although states adopting Option 3 have shown an eagerness to appoint both NCAs and politicians, not a single state that adopts a combination of Options 3 & 4 has chosen to appoint an NCA (compared with 7 states who have appointed a politician). In other words, where states have framed the public interest as an exception, the ratio of NCAs to politicians is 1:2.[52] One way to interpret this is that, although many states believe that politicians should rule on the public interest, these states have been reluctant to over-politicise their merger regimes and, as a consequence, have restricted political decision-making powers to maintain the objective credibility of the review process. This is in contrast to what is observed under the legislative framing options that afford a greater degree of potential influence to the public interest. If we consider Option 2 and Options 2 & 4 as a whole, the ratio of NCAs to politicians is 2.33:1.[53] The inference here is that, whenever public interest criteria is considered in every merger assessment, states are more than twice as likely to delegate this responsibility to NCAs. However, although NCAs are more likely to play a role when the legislation affords significant influence to public interest criteria, this is not to conclude that NCAs themselves have more influence over the public interest. On the contrary, 6 of the states in the data set have appointed NCAs to oversee Option 4 (one of the lowest ranked options in terms of potential public interest influence). Therefore, considering the distribution as a whole, there is no significant difference between NCAs and politicians in terms of the influence they have been able to derive from their domestic legislation.[54]

As anticipated, states have shown a greater willingness to assign the decision-making role to sector regulators when the public interest is framed in terms of sector-specific policy, either under Option 4 or under a combination of Options 3 & 4. Indeed, these are the only two groups in which states have assigned sole decision-making powers to regulators. This implies that states attach a great deal of importance to the sector-specific expertise of regulators, but have little desire for regulators to make decisions outside of their areas of expertise. Option 4 is also the most diverse group in terms of decision-makers, with all four types of decision-maker represented.

[52] Of the states adopting Option 3 or Options 3 & 4, 8 have appointed NCAs and 16 have appointed politicians.
[53] Of the states adopting Option 2 or Options 2 & 4, 7 have appointed NCAs and 3 have appointed NCAs.
[54] Appendix 2F calculates an estimate for the mean level of influence that each decision-maker has derived from legislation. The mean averages of NCAs (3.429) and politicians (3.524) are very similar.

States have also been prepared to implement a dual decision-making role in a variety of circumstances. The only instance where dual decision-makers have not been adopted by at least one state is where the public interest has been framed as part of the substantive test for assessment (Option 2). This is somewhat unexpected given that the multi-disciplinary skillset of dual decision-makers (e.g. an NCA and a politician) would appear well-suited to the task of balancing competition and public interest criteria, a common feature of Option 2. However, dual decision-making is more prominent where legislation is framed under a combination of Options 2 & 4.[55]

Inference 3. *States have been prepared to adopt various combinations of legislative framing and decision-makers to suit their own needs. Where states have framed the public interest as an 'exception' to the substantive test, politicians have been the preferred choice in terms of decision-maker. When the public interest is framed to play a role in every merger assessment, most states place their trust in NCAs to make the final decision. Sector regulators are considered desirable when ruling on sector-specific public interest issues because of their industry expertise. But few states have taken advantage of the multi-disciplinary insights of dual decision-makers when it comes to balancing competition and public interest criteria.*

Having identified the most common methods for accommodating the public interest in practice, the logical progression of the paper is to consider whether any socio-economic factors have influenced how states have chosen to make this accommodation.

4. WHAT IS THE POTENTIAL INFLUENCE OF SOCIO-ECONOMIC VARIABLES?

The extent to which socio-economic factors influence a state's adoption and enforcement of competition policy has become a prominent point of discussion for academics and policy makers alike. Comparative competition law researchers, in particular, have emphasised the importance of appreciating the potential influence of socio-economic variables when it comes to assessing why

[55] Four states have prescribed a dual decision-making role here, and all of them involve NCAs: Greece and Poland (NCA and regulator), and Israel and Taiwan (NCA and politician).

a country chooses to design its competition law and institutional framework in a certain way.[56] Fundamental design choices can be influenced by a country's legal, political and economic culture,[57] and merger control, in particular, can be immensely reflective of a country's legal traditions, historical context and its stage of economic development.[58] Moreover, as a competition regime begins to mature and its effectiveness becomes more observable, there is an increased likelihood that legislators will seek to adapt the law and, in doing so, take inspiration from the broader institutional arrangement of the state's legal system as a whole.[59]

By virtue of these socio-economic discrepancies between states, it is widely accepted that the goal of a single universal formula for global competition law is, for the time being at least, incomprehensible.[60] However, as has been noted above, efforts have been made at an international level to facilitate substantive and procedural convergence between domestic merger regimes. If such convergence can be facilitated, it has the potential to 'neutralise' the influence of certain socio-economic factors by encouraging greater uniformity.

In practice, initiatives launched by competition convergence champions (namely, epistemic communities including the ICN,[61] the OECD,[62] and UNCTAD,[63] among others) have reached

[56] See, for example, Dabbah who suggests that the mere fact that almost all competition regimes are derived from a particular political philosophy makes it extremely difficult to separate competition law from its socio-economic framework. Dabbah (n 15) 63.
[57] Eleanor M. Fox and Michael J. Trebilcock, 'The GAL Competition Project: The Global Convergence of Process Norms' in Eleanor M. Fox and Michael J. Trebilcock (eds), *The Design of Competition Law Institutions: Global Norms, Local Choices* (OUP 2013) 4.
[58] Larry Fullerton and Megan Alvarez, 'Convergence in International Merger Control' (2012) 26 Antitrust ABA 20, 21.
[59] Mariana Prado and Michael Trebilcock, 'Path Dependence, Development, and the Dynamics of Institutional Reform' (2009) 59 University of Toronto Law Journal 341, 354.
[60] Ratnakar Adhikari, 'What Type of Competition Policy and Law Should a Developing Country Have?' (2004) 5(1) South Asia Economic Journal 1, 2.
[61] Namely the ICN Recommended Practices (n 1) and the ICN Merger Working Group.
[62] OECD, 'Recommendation of the Council on Merger Review' (23 March 2005, C (2005) 34) <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=195&InstrumentPID=191&Lang=en&Book=False> accessed 20 September 2015.
[63] The United Nations Conference on Trade and Development. UNCTAD's convergence materials are derived from its peer reviews of merger control in certain regions and jurisdictions; see e.g. UNCTAD, 'A Tripartite Report on the United Republic of Tanzania-Zambia-Zimbabwe: Comparative Assessment' (2012) UNCTAD/DITC/CLP/2012/1 <http://unctad.org/en/PublicationsLibrary/ditcclp2012d1_overview_en.pdf> accessed 20 September 2015.

important milestones in their efforts to promote substantive convergence in merger control.[64] Nevertheless, Section 3.3 observes that, between them, the 75 states in the sample have adopted 15 different approaches to accommodating public interest criteria in practice. This is indicative of the notable inconsistencies that persist between states at a substantive and institutional level when considering public interest criteria.[65] So what has been the main obstruction to convergence in this area of law? A number of socio-economic factors potentially hold the answer.

4.1. Identifying socio-economic variables

This section will analyse the potential influence that five socio-economic variables have on how a state chooses to accommodate public interest criteria in its merger regime. These variables include:

(a) Geographic locality;
(b) Economic development;
(c) The type of legal system in place;
(d) The effectiveness of domestic governance; and
(e) Openness to foreign investment.

The decision to analyse these particular variables as part of the empirical assessment has been made for several reasons. The primary reason is that four of these variables – (a), (b), (c) and (d) – have either formed the basis of previous studies in competition law, or have been cited as potentially influential factors when states are seeking to design and implement competition policy.[66] Given their perceived significance in the literature, these variables offer a useful starting-

[64] These initiatives have succeeded in facilitating tangible convergence on market definition and substantive standards of analysis; see Jenny (n 2). However, procedural divergences endure in relation to timeframes for assessment in some countries, which creates unnecessary costs for merging parties in international transactions; Jonathan Galloway, 'Convergence in International Merger Control' (2009) 5(2) Competition Law Review 179, 185.
[65] The Chairman of the OECD Competition Committee, Frédéric Jenny, suggests that substantive differences between merger regimes are primarily due to differing economic characteristics or the presence of public interest clauses. He suggests further convergence can be achieved by reducing the importance of public interest considerations; ibid 41.
[66] For examples of studies of these variables or references to their potential significance, see (a) Geographic locality, e.g. Mark RA Palim, 'The worldwide growth of competition law: an empirical analysis' (1998) 43 Antitrust Bulletin 105, and Brian A. Facey and Cassandra Brown, *Competition and Antitrust Laws in Canada: Mergers, Joint Ventures and Competitor Collaborations* (LexisNexis Canada 2013) 19; (b) Economic development, e.g. Adhikari (n 60) 2, and Moisés Naím, 'Does Latin America Need Competition Policy to Compete?' in Moisés Naím and Joseph S. Tulchin (eds), *Competition Policy, Deregulation, and Modernization in Latin America* (Lynne Rienner Publishers 1999) 31; (c) Type of legal system, e.g. Fox and Trebilcock (n 57) 5-6,

point for the empirical assessment. In contrast, the fifth variable to be tested – (e) Openness to foreign investment – has been afforded relatively little mention in the competition law literature. It is, however, beginning to receive greater attention in practitioners' circles, owing to the interplay between merger control and foreign direct investment (FDI) review when overseeing cross-border mergers.[67] As it is possible for both merger control assessments and FDI reviews to consider public interest criteria, it is interesting to consider the relationship between the two and how they cohabit.

An important point to raise with regards to variable (e) concerns the dynamics of its relationship with merger control. If we consider variables (a) to (d), it appears that the relationship between these variables and the design of merger control is predominantly one-way; in other words, variables (a) to (d) have the capacity to influence – but not *be influenced by* – the design of merger control. For example, how a state chooses to design its merger control will not affect its geographic locality, nor is it remotely likely to prompt a change in its legal system or alter the effectiveness of its domestic governance (which includes factors such as political stability and rule of law). Variable (b) is a slight exception to this because, in the long-term, it is conceivable that the design of merger control will have a tangible impact on the economic development of a state. However, given the wide range of measures that are considered in the calculation of economic development,[68] and the relative infancy of merger control in developing states, we can legitimately assume that no domestic merger control regime has yet given rise to a developing country achieving developed status. For variable (e), on the other hand, there is every possibility that a two-way relationship exists between itself and the design of merger control. If a state adopts a macro-economic stance of being 'closed' to foreign investment, it is logical that the state's merger control will reflect this in some way (e.g. by embedding a public interest clause that seeks to protect 'the national interest' or strategic sectors). Equally, by enforcing these protectionist clauses (and, as such, sheltering domestic firms from potential foreign purchasers), merger control can itself be

and Dabbah (n 15) 15; and (d) Effectiveness of domestic governance, e.g. David J. Gerber, *Global Competition: Law, Markets and Globalization* (OUP 2009).

[67] The inspiration to consider openness to foreign investment as a variable comes from the author's attendance of the GCR Live conference on 'Foreign Investment Review – Getting the Deal Done in the Evolving Regulatory World' (London, 17 October 2013).

[68] The World Bank, International Monetary Fund and United Nations Development Programme all consider a broad range of economic, environmental and social factors in their development indices; Lynge Nielsen, 'Classifications of Countries Based on Their Level of Development: How it is Done and How it Could be Done' (2011) IMF Working Paper 11/31, 7-18 <http://www.imf.org/external/pubs/cat/longres.aspx?sk=24628.0> accessed 24 March 2015.

said to influence the state's overall 'openness' to foreign investment. It is therefore important to bear in mind this two-way relationship when it comes to analysing whether openness to foreign investment has an influence over how a state chooses to accommodate the public interest in merger control.

One limitation to note, which indirectly stems from the adoption of an empirical methodology, is the absence of 'the goals of competition law' as a socio-economic variable in this study. Indeed, there exists a wealth of literature that speaks of the observable relationship between the goals that states attribute to competition law and the design of the competition laws that states ultimately adopt.[69] To analyse the influence that individual goals have had on how states accommodate the public interest would certainly produce some insightful findings. Unfortunately, there are practical limitations associated with such an analysis in an empirical study. In practice, domestic states have a long 'shopping list' of different goals to choose from.[70] The length of this list does not, in itself, pose a practical problem for the empirical analysis because the states in the sample can be grouped according to their chosen goal, in much the same way as this paper has done for the legislative framing options and decision-makers. The practical limitation lies in the fact that states will define these goals differently, in terms of meaning and scope, and may also select more-than-one goal. As a consequence, to model the variable would require grouping the states according to standalone goals (of multiple definitions) and joint-goals (of multiple combinations). As the potential number of groups is high, there is a risk that the data set will become fragmented which, in turn, has the effect of reducing the robustness of the statistical analysis.[71] For this reason, the analysis refrains from considering 'the goals of competition law' as a socio-economic variable.

[69] See, e.g. David A. Hyman and William E. Kovacic, 'Institutional Design, Agency Life Cycle, and the Goals of Competition Law' (2013) 81(5) Fordham Law Review 2163.
[70] This list includes, inter alia, protecting jobs, protecting small firms, promoting domestic industries and promoting a diverse spread of ownership. Eleanor Fox and Michal S Gal, 'Drafting Competition Law for Developing Jurisdictions: Learning from Experience' in Michal S Gal and others, *Economic Characteristics of Developing Jurisdictions: Their Implications for Competition Law* (Edward Elgar, Cheltenham (UK) 2015).
[71] This is particularly true where a small or moderate sample size is involved (such as the 75 states considered in this study), meaning the average number of states in each group will be small.

4.2. Overview of data on socio-economic variables

Whereas in Section 3 the data pertaining to domestic merger control has been derived from two main sources (the GCR Handbook and the GWU Database), it has been necessary to consult a number of sources in order to populate the socio-economic fields within the data set.[72] The relevant data sources for each variable are referred to separately under each of the empirical tests conducted in Section 4.3, below. Further details of the data collection process for the socio-economic variables can be found in Appendix 3.

By way of an overview, it is worth noting that some of the socio-economic variables in this section are modelled with discrete data,[73] whereas others make use of continuous data. The decision to use one or the other is, in the most part, a matter of necessity. For example, 'Geographic locality' and 'Type of legal system' are clearly discrete variables that cannot be measured numerically. In contrast, 'Effectiveness of domestic governance', 'Economic development' and 'Openness to foreign investment' can all be considered continuous variables, which can be assigned a numerical value to reflect the level of stability, development or openness in a state.[74] As an extension of this, it is also possible to model these continuous variables with discrete data by defining classes or thresholds. For example, if political stability (a component of domestic governance) is measured on a scale between -2.5 and 2.5,[75] a threshold could be imposed (for example, at point '0') to distinguish between 'politically stable states' and 'politically unstable states'. This 'categorisation' of continuous variables is often seen in the expression of economic development, where continuous data is relied upon to categorise states as discrete variables; either 'developed' or 'developing'.

Both continuous and categorical data have their advantages and disadvantages when undertaking empirical analyses. Continuous data provides greater detail on a variable and can be modelled using more robust statistical methods, but categorical data are less prone to the reliability issues

[72] These sources are referred to below and include openly accessible data from the IMF, World Bank and OECD.
[73] i.e. Categorical data.
[74] A number of international bodies – including the World Bank, the IMF and the OECD – have developed indices for measuring these variables numerically; see Sections 4.3.2 – 4.3.5.
[75] This is the range adopted by the World Bank for expressing 'political stability' (a component of domestic governance) within its World Governance Indicators; see Section 4.3.4.

often faced by continuous data that rely on estimates.[76] For the analysis in this section, continuous data is used to model the 'Effectiveness of domestic governance' and 'Openness to foreign investment' variables, whereas categorical data is used to test 'Economic development'. Although continuous data is available on economic development via the World Bank,[77] the data takes the form of separate indicators – such as estimates for human development, environmental resources and industrial development – rather than a single aggregated indicator that specifies the overall level of development in a given country. In the absence of an aggregated indicator, the analysis relies on the development classifications of the International Monetary Fund (IMF), which groups countries into discrete categories of 'developed' and 'developing' economies.[78]

4.3. Observations on the influence of socio-economic variables

4.3.1. Geographic locality

Turning first to consider the potential influence that geographic locality has on how a state chooses to accommodate the public interest, what patterns (if any) would we expect to observe? Here, the process of 'knowledge exchange' offers a possible indication. A common occurrence when a country adopts or adapts its competition laws is that it will draw on the experiences of other competition regimes, in an effort to optimise the effectiveness of its own practices. The United States and the European Union have 'dominated' knowledge transfer in terms of inspiring the competition laws of other states,[79] so we might expect that the states located in geographically close proximity to the US or EU will share similar characteristics. Given that the US, in particular, has historically demonstrated a high degree of competition advocacy,[80] it might be that countries in the Americas take a similarly strict competition-based approach to merger control and, as such, afford little scope to public interest criteria. Furthermore, neighbouring states may also seek to

[76] Dawn Iacobucci, 'Continuous and Discrete Variables' (2001) 10(1) Journal of Consumer Psychology 37.
[77] World Bank, 'World Development Indicators' <http://data.worldbank.org/data-catalog/world-development-indicators> accessed 25 March 2015.
[78] International Monetary Fund (n 23).
[79] Dabbah (n 15) 3.
[80] Maurice E. Stucke, 'Is competition always good?' (2013) 1(1) Journal of Antitrust Enforcement 162, 162-165.

accommodate public interest criteria in similar ways in order to address public interest concerns experienced in a particular geographic region.

The geographic locality variable can be examined in several ways. For this section, choropleth mapping has been used to visualise the distribution of legislative framing options and decision-makers across the geographic spectrum. A limitation of conducting choropleth mapping across international states is that it is prone to exaggerating the significance of land mass, which one should be mindful of when interpreting the maps. However, this aside, choropleth mapping allows clusters of countries adopting similar framing options and decision-makers to be directly observed. The existence of these clusters would indicate that geographic locality is influential when accommodating the public interest in merger regimes in certain parts of the world.

Figure 3, below, shows a choropleth map illustrating the geographic distribution of each option for framing the public interest across the sample states. The lighter shaded regions represent states that adopt legisltative framing options that afford little-or-no scope to the public interest, whereas darker regions indicate states that adopt options which afford a greater degree of consideration to public interest criteria.

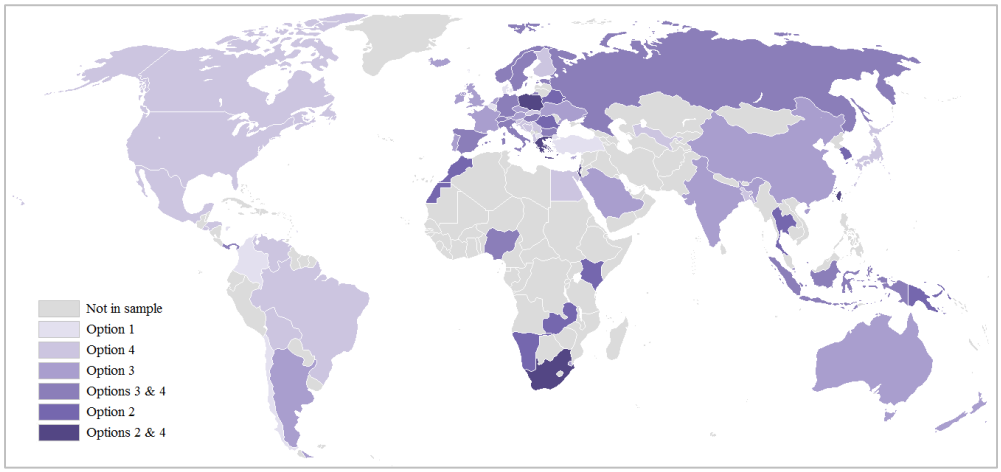

Figure 3. Choropleth map showing geographical distribution of legislative framing options across states [Source: Appendix 4A].

The value of *Figure 3* as a visual aid is somewhat limited by the moderate number of states in the sample but, nonetheless, several observations can be made. Firstly, public interest criteria appears to display a high degree of influence in the merger regimes concentrated around Africa, Southeast

Asia and, to a lesser degree, Eastern Europe. Of the 8 African states in the sample, 5 of these states (62.5%) adopt either Option 2 or a combination of Options 2 & 4, which afford the greatest scope to the public interest.[81] This is in contrast to the relatively small proportion of states that adopt the two most influential options in other regions: Asia (33.3%), Europe (10.8%), North America (0.0%), South America (0.0%), and Oceania (20.0%). A larger sample size would be necessary to substantiate these percentages but the preliminary indication is that legislative framing options which afford an extensive role to the public interest are much more likely to be adopted in African states, compared to other geographic regions. More generally, the choropleth gradient in *Figure 3* also suggests that states in the Eastern Hemisphere demonstrate a greater willingness to afford scope to the public interest, compared to their Western counterparts.

In terms of regions that exhibit less of a willingness to consider public interest criteria, all 6 of the South American states in the sample adopt either Option 1, Option 4 or Option 3, which afford the least scope to the public interest. Additionally, 6 of the 7 North American states in the sample adopt one of these three options.[82] Furthermore, not a single one of the North and South American states in the sample has adopted Option 2 or a combinations of Options 2 & 4, corroborating the idea that merger control in the Americas will tend to adhere more strictly to competition-based principles.

Inference 4. *African states are considerably more likely to assign an extensive role to the public interest in their merger control regimes. North and South American states typically frame public interest criteria more restrictively in their merger regimes. These observations indicate that the geographic region does have a bearing on how the public interest is framed in merger legislation, although they may also be explained by other socio-economic variables present in a particular geographic region.*

[81] See Appendix 4A.

[82] The remaining North American state, Panama, adopts a combination of Options 3 & 4.

Further observations can also be made by referring to the geographic distribution of public interest decision-makers between states. The map in *Figure 4*, below, charts the decision-makers appointed by each of the sample states.

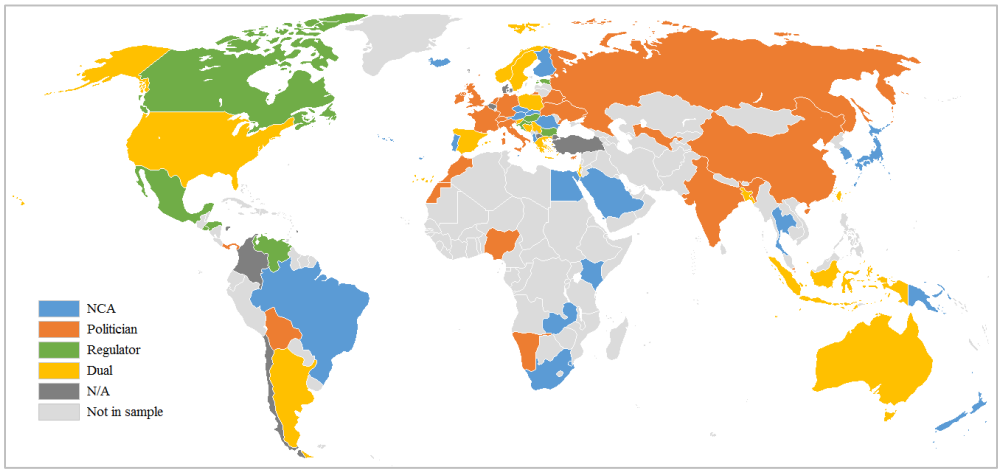

Figure 4. Choropleth map showing geographical distribution of public interest decision-makers. [Source: Appendix 4B].

The map reveals that a geographically diverse range of appointments have been made in each region, with at least two types of decision-maker present in every continent. As has been noted in Section 3.3.2, NCAs and politicians are the most-favoured decision-makers within the sample and, if we consult the blue and orange-shaded regions in *Figure 4*, we can observe the geographical distribution of each. At first glance, one would be forgiven for thinking that political decision-making is concentrated in Eastern Europe and large parts of Asia, but this is somewhat misleading given the large land mass of China, India and Russia (who each appoint politicians as decision-makers). In reality, the proportion of NCAs and political decision-makers is fairly even on all continents.[83] Nevertheless, there are clusters of neighbouring states which share the same type of decision-maker, therefore implying the existence of regional influence. As aforementioned, both Europe and Asia see large clusters of neighbouring states appointing politicians. In the case of Europe, the cluster of states adopting political decision-makers might be explained by the fact that EU Member States are caught under the jurisdiction of EU merger control, which may have influenced the domestic merger regimes of Member States.[84] In contrast, states appointing NCAs

[83] This is more apparent from Appendix 4B.
[84] The governments of EU Member States can intervene to assume competence over EU-level merger assessments where it is considered necessary in order to protect a legitimate public interest concern, under Article 21(4) EUMR.

are comparatively well-dispersed; the only region that resembles a 'hot spot' for NCAs is in central and southern Africa. Much of Oceania and even some Nordic territories have opted for dual decision-makers.

Inference 5. *Decision-makers are very widely distributed between continents, suggesting that geographic locality does not have a significant influence on the type of public interest decision-maker selected by a state. NCA and politicians, the two most common types of decision-maker in the sample, are also distributed relatively equally on each continent. A cluster of political decision-makers in Europe may be explained by the influence of EU merger control, whereas there is also a high concentration of NCA decision-makers in Africa.*

Although there are certain inferences we can take from the influence of geographic locality as a socio-economic variable, it is important to consider why we observe similarities in particular regions. Although knowledge transfer, as noted above, provides a possible explanation for these similarities, another possible reason is that states in a particular region are facing similar socio-economic challenges and, as such, are forced to adopt similar laws and institutional designs in order to address these challenges. The analyses of the remaining socio-economic variables in this section should shed further light on why we observe these geographic patterns.

4.3.2. Economic development

Economic development is commonly cited as a key influencing factor when states decide how to design and implement competition law. This has, in the most part, been attributed to the different types of challenges faced by developed countries when compared with developing and emerging economies.[85] Although the development goals of every developing country are unique in form and scale, they very often seek to address public interest concerns, such as mass unemployment,

The fact that governments perform this public interest function in relation to EU-level mergers may have also influenced the public interest decision-making role in relation to domestic mergers.

[85] For example, whereas developed countries may adopt competition laws to promote welfare and efficiencies, many developing countries have implemented competition law for substantive and even symbolic purposes in pursuit of development goals; Spencer Weber Waller, 'Comparative competition law as a form of empiricism' (1998) 23 Brooklyn Journal of International Law 455, 456.

poverty and social inequality. It has been well-documented in the literature that many developing countries have sought to give effect to these development goals by incorporating them within their competition laws.[86] Scholars have suggested that this may be an attempt by developing countries to make competition law and merger control 'more friendly to growth and development'.[87] This has prompted Frédéric Jenny, the Chairman of the OECD Competition Committee, to suggest that public interest criteria may be a 'necessary evil' in some developing countries, who would otherwise decide against adopting competition law if it meant they could not consider wider development goals.[88] Others have suggested that developing countries may also need to assign a prominent scope to the public interest in order to give NCAs (as public interest decision-makers) credibility in the eyes of the public.[89] In light of this literature, one might therefore expect to see that the developing countries in the sample adopt legislative framing options that afford a greater scope to the public interest.

For this analysis, the states in the sample have been grouped into 'developed' and 'developing' states, according to their IMF classification.[90] This produces a ratio within the sample of 38:37 with regards to developed and developing countries. Because the number of developed and developing states in the sample is almost identical, this avoids significant distortions when it comes to comparing the developed and developing states directly against one another.

[86] South Africa has attracted particular attention from academics and practitioners for integrating development goals within its competition law; see Vani Chetty, 'The Place of Public Interest in South Africa's Competition Legislation: Some implications for international antitrust convergence' (53rd Spring Meeting of the ABA Section of Antitrust Law, Johannesburg, April 2005) <http://apps.americanbar.org/antitrust/at-committees/at-ic/pdf/spring/05/aba-paper.pdf> accessed 22 September 2015.
[87] Jenny (n 2) 41.
[88] Henry Vane, 'Public interest clauses may be a necessary evil, says OECD head' (*Global Competition Review*, 13 March 2015) <http://globalcompetitionreview.com/news/article/38187/public-interest-clauses-may-necessary-evil-says-oecd-head> accessed 22 September 2015.
[89] Lewis suggests that, in developing countries, an NCA that is only able to decide mergers on competition grounds, even if the decision appears counterintuitive to development goals, will seriously struggle to achieve credibility and legitimacy; David Lewis, 'The Role of Public Interest in Merger Evaluation' (ICN Merger Working Group, Naples, 28-29 September 2002) 2.
[90] IMF (n 23).

Figure 5, below, shows the respective number of developed and developing countries adopting each legislative framing option.

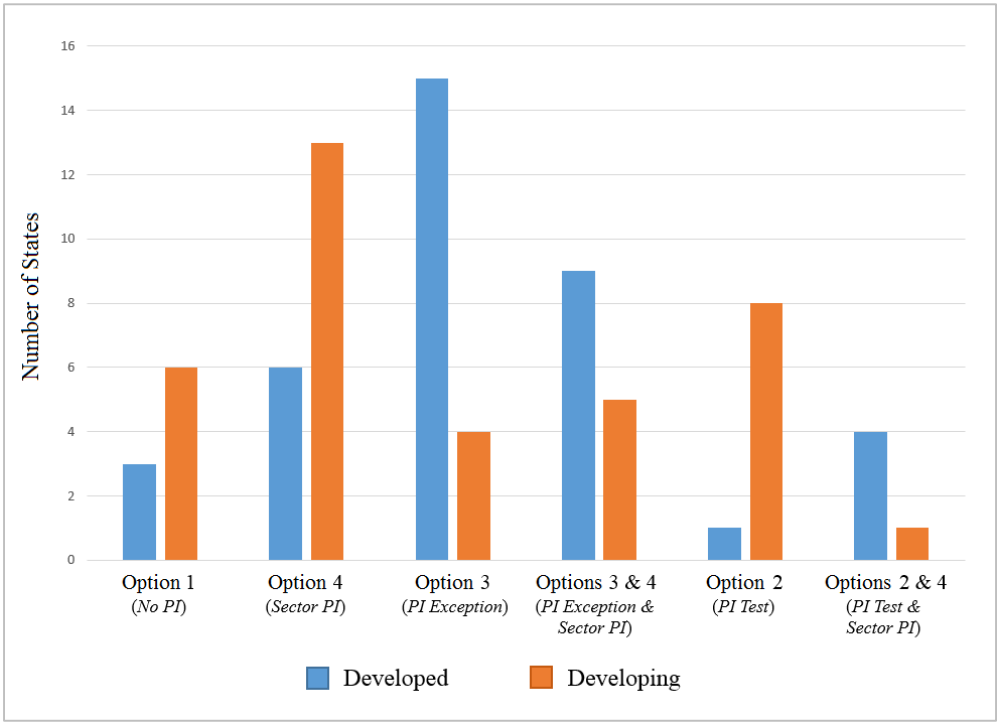

Figure 5. Distribution of legislative framing options adopted by developed and developing countries.

Once again, it is interesting to note that every legislative framing option has been adopted by at least one developed and one developing country. Indeed, we see that developed and developing countries fall into each extreme of the legislative framing options; both Option 1 (no public interest consideration) and Options 2 & 4 (public interest as part of the substantive test and sector-specific policy). This, in itself, is an early indication that economic development does not have a tangible impact on how a state accommodates the public interest.

Indeed, by performing a two-sample *t*-test to compare the respective means of each distribution, as Appendix 5 demonstrates, it transpires that there is no statistically significant difference between the types of legislative framing options that are typically adopted by developed and developing countries.[91] However, even though the *t*-test suggests that economic development does

[91] In testing the null hypothesis that economic development has *no* significant influence on how a state frames the public interest, to a $p = 0.05$ level of significance, the *t*-test returns a *p*-value of 0.338. As this is statistically significant, we fail to reject the null hypothesis. See Appendix 5B.

not generally dictate the level of influence a state affords to the public interest, *Figure 5* does reveal certain intricacies that a *t*-test overlooks. For example, a significant proportion of developed countries (39.5%) choose to frame the public interest as an exception to the substantive test (Option 3), which is considerably more than the proportion of developing countries who choose to take the same approach (10.8%). Conversely, 35.1% of developing countries accommodate the public interest in sector-specific policy (Option 4), compared to 15.8% of developed countries. This is perhaps due to the perceived need that developing states have to protect certain strategic sectors that aid their development goals.[92]

Interestingly, whereas only 3 developed countries in the sample have decided against affording scope to public interest criteria (Option 1), 6 developing countries have decided to do this. This would seem to dispel the commonly held belief that developing countries take an altogether more liberal approach to the public interest. It also hints at the possibility that some developing countries are taking inspiration from the strict competition-based approach witnessed in the United States. However, if we consider the other end of the spectrum, developing countries are also more likely to adopt options that afford extensive scope to the public interest compared to developed countries. Taking Option 2 and Options 2 & 4 as a whole, 9 developing countries apply one of these options, compared with 5 developed countries. In reality then, we observe a disproportionate number of developing countries residing at both extremes on the legislative framing scale, which is in contrast to the common conceptions cited in the literature.

Inference 6. *Considering the sample as a whole, economic development does not have a significant impact on how much influence states choose to afford to the public interest when framing merger law. However, in practice, developed states have typically shown a preference towards public interest exceptions (which appear in the middle of the ordinal public interest scale), whereas developing states favour sector-specific public interest policy and, to a lesser extent, a public interest test (closer to the extremes of the public interest scale). States that afford an*

[92] The former Chairman of the South African Competition Tribunal has himself claimed that it is 'widely accepted that there is a greater role for industrial policy, for targeting support at strategically selected sectors […] in developing than in developed countries'. Lewis (n 89) 2.

extensive role to the public interest are more likely to be developing countries, but states that afford the public interest no scope at all are also more likely to be developing.

Continuing the analysis of this variable, what of the effect that economic development has on the public interest decision-maker a state chooses to appoint? Once again, the literature presents some insights into the norms that we are likely to observe with regards to decision-makers in developed and developing countries respectively. One of these insights has already been referred to in the analysis of legislative framing options above; namely, the suggestion that developing countries have sought to incorporate public interest criteria into their merger regimes in order to provide credibility for NCAs in the eyes of the public.[93] If this has indeed arisen in practice, we would expect to see more developing countries appoint NCAs as public interest decision-makers, in the belief that this role will benefits NCAs. A second insight from the literature is provided by Adhikari who suggests that, due to the natural monopolies that endure in numerous developing countries, the role of sector regulators is sometimes considered a necessity.[94] This could imply that developing countries will also be more likely to prescribe a decision-making role for sector regulators in the merger control context, either as a standalone decision-maker or as part of a dual decision-making set-up. Both of these hypotheses can be tested with a straightforward comparison of the frequencies with the developed and developing country sub-groups.

Figure 6, below, shows the distribution of public interest decision-makers appointed within developed and developing countries.

[93] ibid.
[94] Adhikari (n 60) 12.

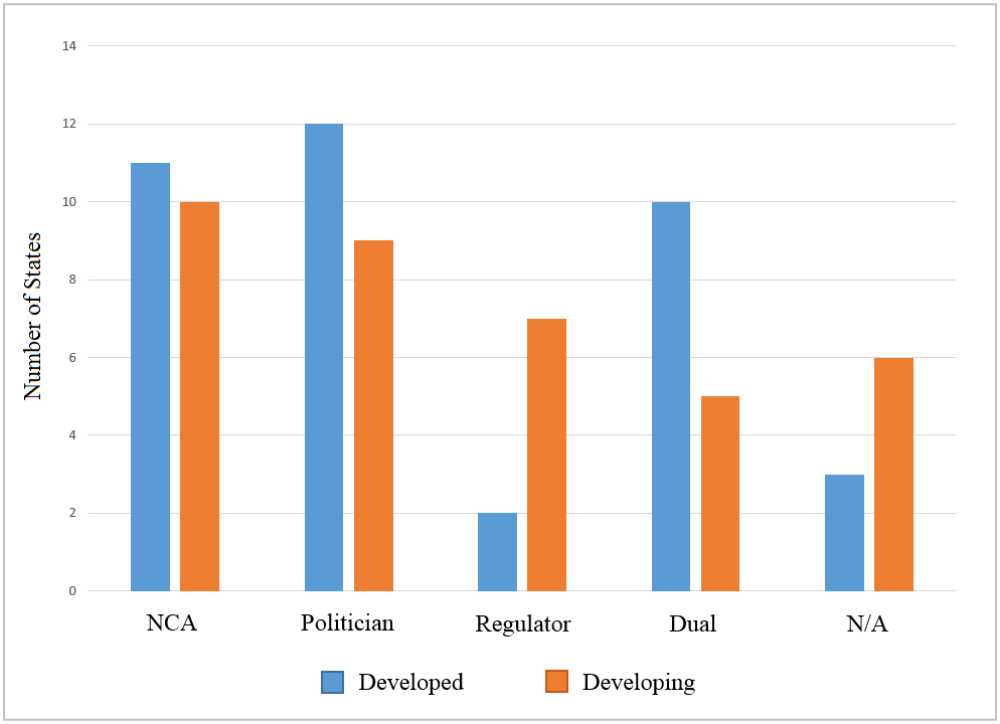

Figure 6. Distribution of public interest decision-makers appointed by developed and developing countries. [Source: Appendix 5C].

On the basis of *Figure 6*, it appears that both of the abovementioned hypotheses possess some credibility. Firstly, with regards to the suggestion that developing countries appoint NCAs to the public interest decision-making role in order to increase their credibility, NCAs are indeed the most popular choice of decision-maker for developing countries. But there is a stark evenness between the number of states adopting NCAs and politicians, which is true of both developed and developing states. The ratio of NCAs to politicians is 11:12 for developed countries and 10:9 for developing countries, which demonstrates that states are equally willing to appoint NCAs and politicians, regardless of their level of economic development. Indeed, 65.7% of developed countries and 61.3% of developing countries have adopted either an NCA or a politician as their decision-maker.[95] Given the absence of any significant discrepancies between developed and developing countries with regards to these two main decision-makers, it appears very unlikely that economic development has a statistically significant impact on the type of public interest decision-maker a state appoints.

[95] Of the states in the sample that have appointed public interest decision-makers,

Secondly, in relation to Adhikari's hypothesis regarding the extended role of regulators in developing countries, *Figure 6* also confirms that standalone regulators are much more likely to be afforded public interest decision-making powers in developing countries compared with developed countries. Sector regulators account for 18.9% of the decision-makers appointed by developing countries in the sample, which is in marked contrast to developed countries, where sector regulators have been the least common appointment to the role (5.3%). This corroborates Adhikari's hypothesis and is also consistent with the aforementioned finding that the single most-common legislative framing option among developing countries is Option 4 (sector-specific public interest policy). Moreover, 28.6% of developed countries have appointed dual decision-makers, compared with 16.1% of developing countries.

Inference 7. *Economic development does not appear to have a significant impact on the type of public interest decision-maker a state chooses to appoint. Developed and developing countries have been equally willing to appoint an NCA or a politician as a standalone decision-maker. Developing countries have made greater use of the specialist skills of regulators (potentially due to the existence of natural monopolies), while developed countries have also been open to the possibility of dual decision-making.*

4.3.3. Type of legal system in place

In a similar vein to the geographic locality variable tested above, the type of legal system an individual state has in place can be readily identified, this time by referring to the sources of law that states attribute the greatest weight to. It is possible to identify whether a state enforces a predominantly civil law, common law, religious law or mixed legal system by referring to its legislative framework and its court system. But, although the task of identifying a legal system is relatively straightforward, establishing how the type of legal system can influence design choices in merger control is less clear. So we can ask whether it likely that a state will assign a different role to the public interest depending on the type of legal system it operates.

The academic commentary on the relationship between the type of legal system and the design of competition law is sparse. Referring to legal systems in the context of the design of competition

agencies, Armoogum and Lyons note the tendency of common law states to afford greater discretion to decision-makers (most notably judges), while civil law countries prioritise the word of the national legislature and afford less discretion to decision-makers.[96] The additional discretion that decision-makers possess in common law jurisdictions has the advantage of allowing them to adapt their decisions according to economic and social change.[97] In turn, it has been suggested that this adaptive decision-making makes common law systems suitable for 'stable, slowly evolving law', whereas civil law is better suited to states who are attempting rapid legal change and institutional upheaval.[98] In terms of what we might expect to see in the context of merger control, the discretion that decision-makers enjoy in common law jurisdictions could suggest that common law countries will afford a more prominent role to public interest criteria, in order to give decision-makers the legislative scope in which to exercise their discretion. Conversely, civil law jurisdictions may be more inclined to frame public interest criteria narrowly in order to limit the scope for discretion to be exercised. Alternatively, if a civil law jurisdiction does afford a wide scope to public interest criteria, it may seek to appoint politicians to the decision-making role order to ensure that this discretion is exercised within the confines of what the legislation intended.

In truth, however, it is difficult to make robust predictions regarding the influence of different types of legal system, not least because the type of legal system a state has in place will itself be influenced by some of the other socio-economic factors that are considered in this section. In addition, empirically testing the influence of legal systems produces its own practical limitations. Of the 75 states in the sample, 48 have adopted civil law, 14 common law, 3 religious law and 10 have incorporated a mixed legal regime. Given the significant proportion of states in the sample that operate under a civil law system, this produces an unbalanced sample that limits the observations one can derive from testing this variable. Nevertheless, by grouping the sample states according to the legal system they have in place, it is still possible that the frequency bar charts can identify the existence of any notable differences between how different legal systems accommodate the public interest in merger control.

[96] Armoogum and Lyons (n 9) 8.
[97] Richard A. Posner, *Economic Analysis of Law* (Little, Brown and Company 1973) 569.
[98] Benito Arruñada and Veneta Andonova, 'Market Institutions and Judicial Rulemaking' in Claude Menard and Mary M. Shirley (eds), *Handbook of New Institutional Economics* (Springer 2005) 229.

Figure 7 shows the distribution of legislative framing options adopted by states that operate under each type of legal system.

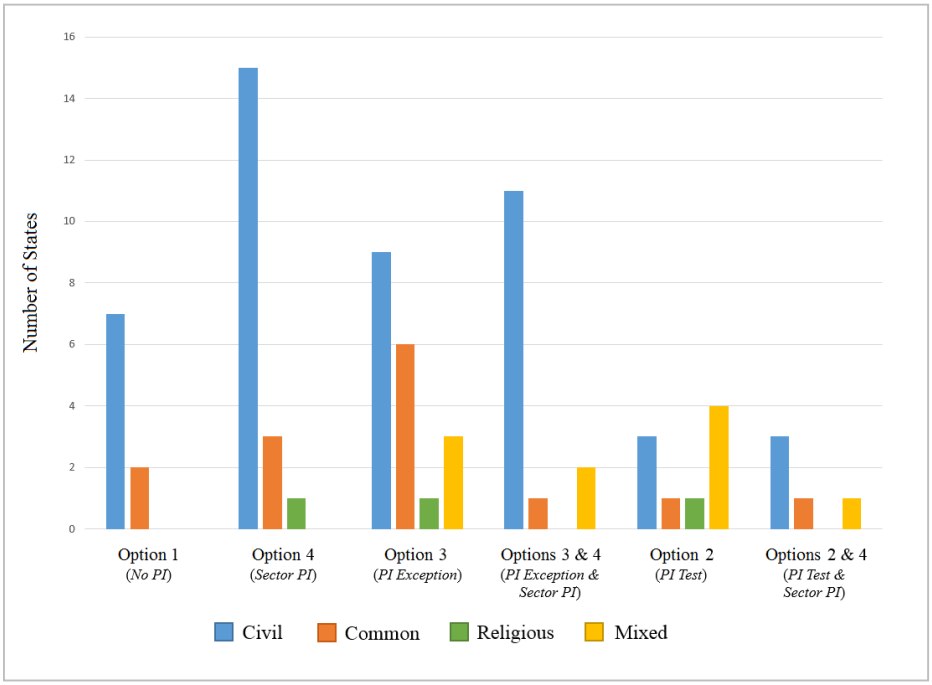

Figure 7. Distribution of legislative framing options adopted by states of different legal systems. [Source: Appendix 6A].

Given that the vast majority of states in the sample are civil law jurisdictions, it is unsurprising that the preferences of civil law countries resemble those of the overall sample. Civil law countries demonstrate a preference for Option 4, Option 3 or a combination of both, which is consistent with the hypothesis that civil legal systems will frame the public interest narrowly in order to limit the discretion of decision-makers. The most popular legislative framing option among common law states is Option 3, which is adopted by 6 of the 14 common law countries. So despite the expectation that common law systems afford greater scope to the public interest, this is not the case in practice. Another observation one can make regards mixed legal systems, which are represented by the yellow bars in the chart. These appear towards the right-hand side of *Figure 7*, suggesting that states operating under a mixed legal system will typically afford a more expansive role to the public interest. It is unclear why this is the case but, given that mixed legal systems will often entail different bodies of law applying to different groups of people within a state, the interests of these groups may be more readily served if public interest criteria is broadly scoped within legislation.

Aside from these observations, the individual sub-groups are distributed relatively evenly. Indeed, although it would be necessary to increase the sample size in order to conduct a meaningful empirical assessment, the lack of any clear divergences within the individual sub-groups in *Figure 7* implies that the type of legal system has no significant bearing on how a state frames the public interest in legislation.

Inference 8. *The impact that the type of legal system has on a state's choice of legislative framing option is inconclusive from the analysis, due to the unbalanced sample. However, both common law and civil law states show a preference for framing the public interest narrowly within legislation.*

With regards to the relationship between the type of legal system and the choice of public interest decision-makers, we can again draw observations from the frequency distributions for each type of legal system. *Figure 8*, below, illustrates the distribution of public interest decision-makers appointed within each type of legal system.

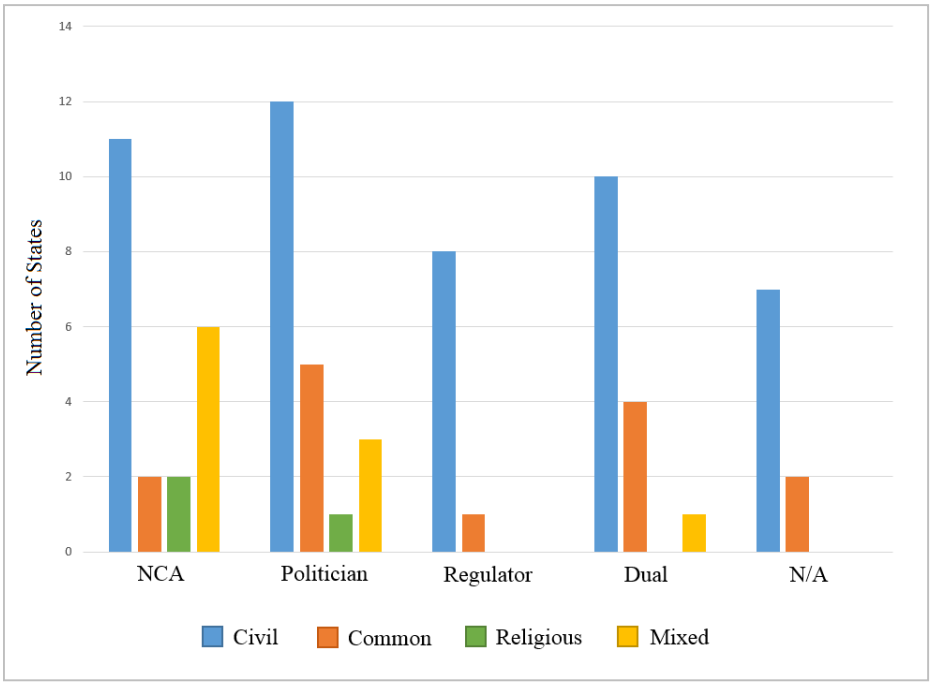

Figure 8. Distribution of public interest decision-makers appointed by states of different legal systems. [Appendix 6B].

Again, as one would expect given its relative size within the sample, the choice of public interest decision-makers in civil law systems is broadly consistent with the choices of the sample as a whole, i.e. showing a preference for politicians, NCAs and dual decision-makers. In common law countries, politicians are the most favoured decision-makers (35.7%), more so than NCAs (14.3%) and regulators (7.1%) combined. This is an interesting finding given that the literature implies common law states are more willing to delegate discretionary decision-making powers to non-state bodies. One explanation for this is evident from the analysis of the legislative framing options in *Figure 7*, above, which shows that many common law systems choose to frame the public interest as an exception to the substantive test. Like the merger regime in the United Kingdom, which itself operates under a common law system, it may be that national governments have been willing to delegate the majority of merger decision-making powers to an NCA (or another body), but has reserved itself the power to rule on exceptional mergers affecting the public interest.

Note, however, that the unbalanced sample makes it difficult to draw robust conclusions on the influence that different types of legal system have on the choice of public interest decision-makers.

Inference 9. *There is no conclusive evidence to suggest that the type of legal regime a state operates under has any significant bearing on that state's choice of public interest decision-maker. However, a notable observation regards the number of common law states that appoint politicians as decision-makers, which is over twice the number of common law states appointing an NCA.*

4.3.4. Effectiveness of domestic governance

Before analysing the potential influence of domestic governance on how states accommodate the public interest, it is worth unpacking the meaning of 'governance' in this context. The World Bank affords a wide-ranging definition to governance, which it refers to as 'the traditions and institutions by which authority in a country is exercised'.[99] This includes, inter alia, the way in which a country selects and monitors its government, the capacity for government to create and implement sound policies, and the government's respect for citizens and their rights. Two components of this

[99] World Bank WGI (n 24).

definition are particularly applicable in relation to merger control and the public interest; namely, 'rule of law' and 'political stability'.

There are several elements of the rule of law that are of relevance in the context of designing merger control legislation and appointing decision-makers. Generally speaking, a state that adheres to the rule of law will attribute significant value to applying laws with predictability and consistency.[100] Therefore, if consistency between decisions is attributed particular importance in states adhering to the rule of law, the merger laws in these states may afford only a very limited scope to the public interest, to avoid the risk of it being applied inconsistently. Additionally, these states may also be more likely to favour the appointment of NCAs or sector regulators as public interest decision-makers, again due to the consistency and continuity that these bodies provide in contrast to politicians.

Political stability encompasses a host of features, ranging from government stability and ethnic tensions to armed conflict and torture.[101] For the purposes of this assessment, government stability perhaps represents the most relevant feature with regards to the design of merger control. For example, one hypothesis that can be put forward is that states with a low rate of government stability will be more likely to assign decision-making powers to NCAs or sector regulators because of the increased likelihood of political upheaval. Indeed, if certain states demonstrate particularly low levels of political and government stability, it follows that these states are likely to experience a change of government more frequently, meaning there are more opportunities for new governments to gain power and exert own influence and ideologies on domestic merger control. If politicians from across different parties recognise the instability that this could also bring to the domestic merger regime, they might be more inclined to delegate the public interest decision-making role to an independent agency (e.g. an NCA or a sector regulator). As well as facilitating stability and consistency within the merger regime, this also reduces the risk of the public interest criteria being applied differently whenever a new political party gains power.[102]

[100] Edward Iacobucci and Michael J. Trebilcock, 'Canada: The Competition Law System and the Country's Norms' in Eleanor M. Fox and Michael J. Trebilcock (eds), *The Design of Competition Law Institutions: Global Norms, Local Choices* (OUP 2013) 131.
[101] See World Bank WBI (n 24) for definitions of 'political stability' and the other dimensions of governance.
[102] This does not, of course, prevent a new government from reforming the merger legislation to suit its own manifesto. But, depending on the level of political instability, time constraints may hamper the ability of a new

This analysis makes use of the World Bank's Worldwide Governance Indicators (WGI) which, as well as providing an aggregated rating for overall governance within a state, also provides ratings for individual components of governance.[103] The aggregated WGI for each state is represented on a scale from 0-100, with a rating of '100' allocated to states whose domestic governance demonstrates optimal effectiveness.

Figure 9, below, plots the WGI ratings of all 75 states in the sample and groups them according to their choice of legislative framing option. It overlays box-and-whisker plots in order to visually illustrate the distributions of the WGI ratings within each group of states.

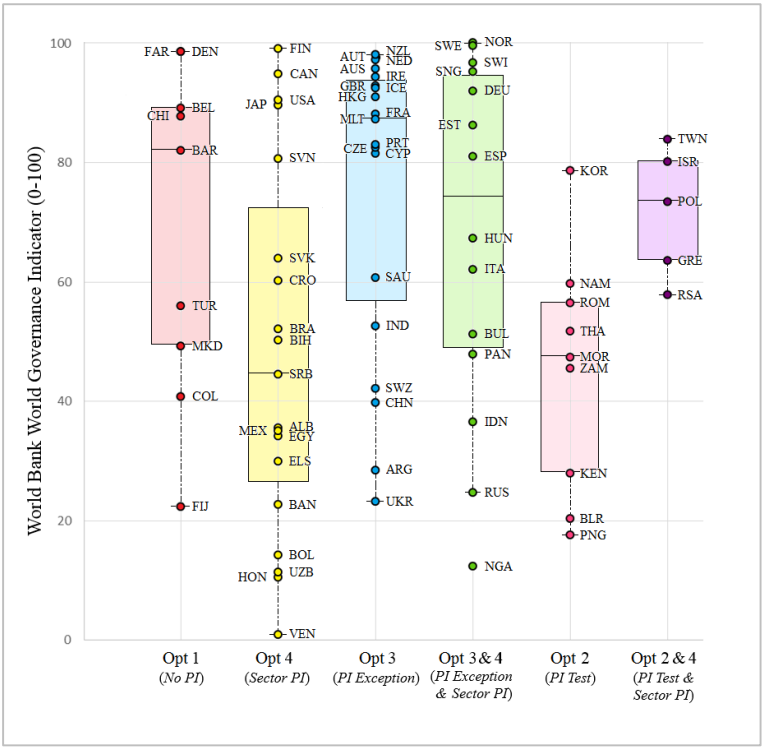

Figure 9. Scatter plot with box-and-whisker overlay showing states' ratings for domestic governance and the legislative framing option adopted. [Source: World Bank Worldwide Governance Indicators 2013].

government to undertake these reforms. Moreover, if all political parties are mindful of the political instability in the country, there may exist a cross-party consensus on limiting political decision-making if rival parties are frequently in power.

[103] These individual governance indicators include: 'voice and accountability', 'political stability and absence of violence', 'government effectiveness', 'regulatory quality', 'rule of law' and 'control of corruption'. World Bank WGI (n 24).

As *Figure 9* illustrates, the WGI ratings within each group appear to be very broadly distributed, with the notable exception of the states in the 'Options 2 & 4' group, which are clustered between the values of 57.82 (South Africa) and 83.89 (Taiwan). The Option 4 category, in particular, demonstrates an extremely broad distribution of states.[104] The means of each group also reveals some interesting results. On average, states that adopt Option 4 or Option 2 perform relatively poorly in relation to governance (both have a median average WGI rating between 40-50). In contrast, states that adopt one of the mixed options ('Options 3 & 4' or 'Options 2 & 4') have a median WGI rating between 70-80, and states adopting Option 1 or Option 3 have the highest median ratings (80-90). These medians do not appear to directly corroborate the hypothesis that states with a high adherence to the rule of law (and, as such, a high WGI rating) will generally frame public interest criteria narrowly. However, if we focus on the states that have achieved the highest WGI ratings (90 and over), we observe that not one of these states feature in Option 2 or Options 2 & 4, the options that afford the greatest legislative scope to the public interest.

The wide distributions and the lack of any notable pattern between the points in *Figure 9* would suggest that there is no relationship between governance and legislative framing options. However, we can test this hypothesis using inferential statistical methods. One way of testing whether domestic governance influences the choice of legislative framing option is to conduct an analysis of variance (ANOVA), which can be used to determine whether one of the legislative framing groups is significantly different to the other groups.[105] With reference to the ANOVA carried out in Appendices 7A and 7B, the test finds that there actually is evidence within the sample that suggests governance has a statistically significant influence on the choice of legislative framing option.[106] This would appear to be a reflection of the considerable differences between some of the median WGI ratings within the groups of legislative framing options, as referred to in the

[104] Of the states adopting Option 3, Venezuela has the poorest WGI rating (0.95) and Finland the highest (99.05). The spread of the distribution is so broad that neither of these states amount to statistical outliers. Indeed, the only outlier in the entire sample is Nigeria, whose WGI rating of 12.32 falls below the lower fence of the Options 3 & 4 group.

[105] ANOVA is appropriate in this instance because we are comparing more than two groups (i.e. a multivariate test). It was appropriate to use a *t*-test (a bivariate test) for the analysis of economic development in Section 4.3.2 because the analysis was framed to compare only two groups, developed and developing countries.

[106] The ANOVA in Appendix 7B tests the null hypothesis that the effectiveness of domestic governance has *no* significant influence on how a state frames the public interest, to a $p = 0.05$ level of significance. The test returns an F-value of 2.9823. This exceeds the critical F-value (2.35) which denotes the upper limit of statistical similarity between different groups. As a consequence, we reject the null hypothesis.

previous paragraph. The relationship itself is not linear; it is not simply the case that a higher level of governance will see a state afford a lower degree of scope to the public interest (or vice versa). Rather, the respective medians within each group suggest the distribution is multimodal, with Option 1 and Option 3 representing the preferred choices for states with effective domestic governance. Therefore, in statistical terms at least, we can draw the conclusion that it is likely that the 'effectiveness of domestic governance' has a tangible impact on a state's choice of public interest decision-maker.[107]

Inference 10. *The 'effectiveness of domestic governance' within a state does appear to have a statistically significant bearing on how that state chooses to frame public interest criteria within merger legislation. States with a highly effective system of governance have all chosen to frame the public interest narrowly, potentially as a means of ensuring consistency between decisions (an important factor of the rule of law).*

Given the influence that domestic governance appears to have on how the public interest is framed in legislation, do we observe a similar influence with regards to the choice of public interest decision-maker? *Figure 10*, below, plots the WGI ratings of the states according to their choice of public interest decision-maker.

[107] An extension of this analysis would be to use multivariate inferential tests to assess the influence of the 'rule of law' and 'political stability' components separately.

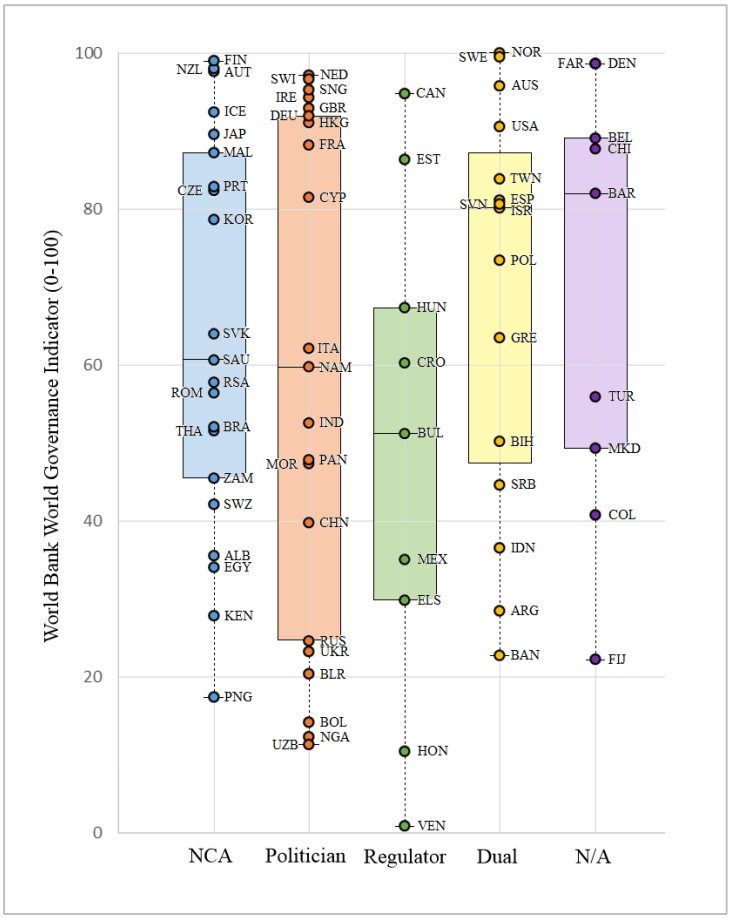

Figure 10. Scatter plot with box-and-whisker overlay showing states' ratings for domestic governance and the public interest decision-maker appointed. [Source: World Bank Worldwide Governance Indicators 2013].

Once again, the box-and-whisker diagrams demonstrate a very broad spread of WGI ratings within each group of decision-makers. However, on this occasion, we do not observe such significant differences between the median WGI ratings of each group. Indeed, the median average WGI ratings of states adopting either an NCA, politician or sector regulator only range from 51.18 to 60.66.[108] If domestic governance does have a tangible influence on the choice of decision-maker, we would expect to observe greater distortions between these medians. An ANOVA test can again be used to estimate whether it is likely that this influence exists. This time, the ANOVA finds there

[108] The median WGI ratings for the states in each decision-maker group are: 60.66 (NCA), 59.72 (Politician), 51.18 (Regulator), and 80.09 (Dual). The median rating of states that do not consider public interest criteria and, as such, do not appoint a public interest decision-maker is 81.99.

is no statistically significant relationship between domestic governance and the type of public interest decision-maker operating in a state.[109]

Figure 10 can also be used to establish whether states with high WGI ratings are more likely to appoint non-political expert decision-makers – namely, independent NCAs and sector regulators – in order to facilitate consistency between merger decisions. Interestingly, *Figure 10* actually implies that the reverse is true, and that states with a high WGI rating prefer to appoint politicians as public interest decision-makers. In total, 19 of the states that appoint public interest decision-makers have a WGI rating of 90 or over, and 7 of these states have chosen to appoint politicians. This is in contrast to NCAs (5 states), sector regulators (1 state) and dual decision-makers (3 states). However, one should also bear in mind that, of the lowest ranking states (the 13 states with a WGI rating of 30 or under), 6 of these states have chosen to appoint politicians. We therefore observe this somewhat odd finding, whereby politicians seem to be the favoured decision-makers of (i) countries with very effective domestic governance, and (ii) countries with very ineffective domestic governance.

Inference 11. *The type of public interest decision-maker that a state decides to appoint is not significantly influenced by the effectiveness of its domestic governance. Politicians are the preferred choice of public interest decision-maker for both states with a very high level of effective governance and states with a very low level of effective governance*.

4.3.5. Openness to foreign investment

The fifth and final socio-economic variable that this paper examines is a state's 'openness to foreign investment'. Does there exist a discernible relationship between how open or closed a state is to foreign direct investment (FDI),[110] and how that state chooses to accommodate the public

[109] See Appendices 7C and 7D for the statistical descriptives of the sample and the ANOVA. Once again, the ANOVA tests the null hypothesis that the effectiveness of domestic governance has *no* significant effect on a state's choice of public interest decision-maker to a $p = 0.05$ level of significance. The analysis returns an F-value of 0.9295 which sits below the critical F-value (2.50). As such, we fail to reject the null hypothesis.

[110] The intricacies of FDI are plentiful, but they broadly take the form of either (i) a foreign takeover (where foreign firms invest or gain ownership of an existing domestic firm), or (ii) greenfield entry (where foreign firms set up

interest in its domestic merger regime? There is literature that alludes to this possibility. Economic scholars, for example, have observed a tendency for some states to apply merger control strategically in order to promote national interests – such as the employment of domestic citizens and the competitiveness of domestic firms – at the expense of foreign competitors.[111] One way for a state to serve these strategic national interests is to formulate public interest criteria that enables mergers to be assessed on grounds that promote domestic firms and discriminate against foreign bidders. For this reason, we might expect states that are relatively closed to FDI to afford a broad scope to public interest criteria in their merger control legislation. This is a result to look out for when it comes to testing the influence that 'openness to foreign investment' has on the choice of legislative framing option.

However, there are also good reasons for anticipating a completely different result. Countries often have separate laws for regulating domestic mergers and FDI, sometimes justifying this on the basis that FDI poses additional risks to national security and strategic interests.[112] In theory, states can use these foreign investment rules to pursue industrial policy goals; for example, by using FDI rules to block foreign takeovers and, in turn, promote and maintain 'national champions'. Indeed, where industrial policy goals are pursued, the dynamics between merger control and FDI regulation is interesting, because FDI regulation can either be used as a complement to merger control or as an alternative to it. If the latter is true (i.e. states prefer to frame public interest and industrial policy criteria in FDI regulation, rather than in merger control), we might expect states that are closed to FDI to afford less scope to the public interest in merger control.

We can also frame a hypothesis with regards to the potential effect that 'openness to foreign investment' has on a state's choice of public interest decision-maker. States that have a tendency to block foreign takeovers or heavily restrict FDI are, in effect, exerting their control over domestic

business from scratch in a domestic country). See Financial Times, 'Definition of foreign direct investment' <http://lexicon.ft.com/Term?term=foreign-direct-investment> accessed 24 September 2015.

[111] Mario Mariniello, Damien Neven and Jorge Padilla, 'Antitrust, Regulatory Capture and Economic Integration' (2015) Bruegel Policy Contribution 2015/11, 4 <http://www.bruegel.org/publications/publication-detail/publication/891-antitrust-regulatory-capture-and-economic-integration/> accessed 27 July 2015.

[112] For an overview of FDI rules in Australia, China, France, Germany, Russia, the United Kingdom, and the United States, see Alex Chisholm and Nelson Jung, 'The Public Interest and Competition-based Scrutiny of Mergers: Lessons from the evolution of merger control in the United Kingdom' (2014) 4(1) CPI Antitrust Chronicle 17-22 <https://www.competitionpolicyinternational.com/the-public-interest-and-competition-based-scrutiny-of-mergers-lessons-from-the-evolution-of-merger-control-in-the-united-kingdom-/> accessed 25 September 2015.

ownership. Therefore, this would also imply that these states will want to exert greater control over domestic merger control and, as a consequence, they are more likely to appoint politicians as public interest decision-makers in order to ensure the 'word of the State' is given effect to. This is another outcome we can expect to observe in the analysis.

In terms of sourcing data for the analysis, a measure for the 'openness to foreign investment' variable is available from the OECD's FDI Regulatory Restrictiveness Index (hereafter, the 'FDI Index').[113] The FDI Index offers an aggregated estimate for the level of restrictiveness that countries impose on foreign investment within their domestic legislation.[114] The estimates are derived by rating the individual levels of restrictiveness in 22 different industries within each country. These ratings take account of what the OECD describes as 'the four main types of restrictions on FDI': (i) foreign equity limitations, (ii) screening or approval mechanisms, (iii) restrictions on the employment of foreign nationals as key personnel, and (iv) operational restrictions (e.g. restrictions on the repatriation of capital or on land ownership).[115]The 'restrictiveness' of a given state is indicated by a rating between 0 and 1, with '0' indicating a state that imposes no restrictions on foreign investors, and '1' indicating a state that restricts all foreign investment.[116] The FDI Index does have its limitations. For example, it considers the restrictiveness posed by legislative provisions, but it does not take account of how often these provisions are exercised or the quality of the institutions that conduct the assessment.[117] Furthermore, the FDI Index itself takes account of any restrictive provisions embedded in domestic merger control (whether these be public interest provisions or otherwise). Given that they each take account of domestic merger control, there may be an inherent correlation between the FDI Index ratings and the legislative framing options adopted by the states in this sample, which is an

[113] OECD, 'FDI Regulatory Restrictiveness Index' (*OECD Investment*, June 2014) <www.oecd.org/investment/fdiindex.htm> accessed 8 January 2015. The analysis in this section uses the ratings from the 2014 study, which are the most recent at the time of writing.
[114] Although a rating in the FDI Index measures how 'closed' a state is to foreign investment, this same rating can be interpreted to measure how 'open' a state is to foreign investment.
[115] Blanka Kalinova, Angel Palerm, and Stephen Thomsen, 'OECD's FDI Restrictiveness Index: 2010 Update' (2010) OECD Working Papers on International Investment 2010/03, 6 <www.oecd-ilibrary.org/finance-and-investment/oecd-s-fdi-restrictiveness-index_5km91p02zj7g-en> accessed 12 April 2015.
[116] As will become apparent in this section, no state within the FDI Index has had a restrictiveness rating that exceeds 0.5 in practice. The state with the highest level of restrictiveness in the OECD sample is China, with an FDI Index of rating of 0.418.
[117] Stephen Thomsen, 'OECD FDI Regulatory Restrictiveness Index: A tool for benchmarking countries, measuring reform and assessing its impact' (Overview presentation, OECD 2014) 2 <www.slideshare.net/OECD-DAF/oecd-fdi-regulatory-restrictiveness-index?ref=http://www.oecd.org/investment/fdiindex.htm> accessed 12 April 2015.

issue to bear in mind when interpreting the results of this section. A final limitation to note is the number of states considered in the FDI Index. The 2014 version of the Index includes aggregates for 58 countries, but only 46 of these countries overlap with the 75 states in the domestic data set that the paper has utilised up to this point. This means that some of the legislative framing options or public interest decision-makers are likely to be underrepresented in the analysis that follows.

The 'openness to foreign investment' variable can be tested with similar techniques to those used for testing the impact of domestic governance in Section 4.3.4, above. Firstly, we can analyse the potential influence that openness to foreign investment has on the way states choose to frame the public interest within merger legislation. *Figure 11* plots the FDI restrictiveness ratings of the states according to their choice of legislative framing options.

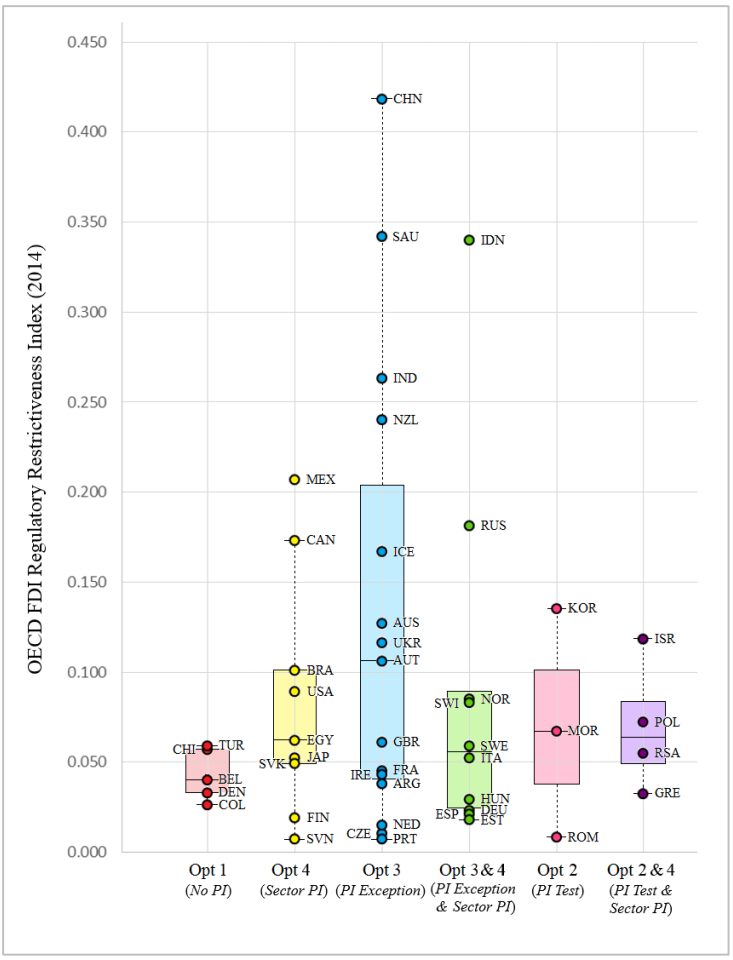

Figure 11. Scatter plot with box-and-whisker overlay showing states' ratings for FDI restrictiveness and choice of legislative framing option. [Source: OECD FDI Regulatory Restrictiveness Index 2014].

A striking initial observation that can be derived from *Figure 11* is the broad spread of FDI restrictiveness ratings within the group of states that choose to frame public interest criteria as an exception to the substantive test (Option 3, represented by the blue-shaded region).[118] In contrast, the interquartile ranges for the other groups of legislative framing options are relatively narrow, particularly those states that choose not to accommodate public interest criteria (Option 1, illustrated by the red points). This difference between the spreads of the distributions can, in part, be attributed to the revised sample size, where the states adopting Option 3 are comparably well-represented in relation to other the groups, thus increasing the likelihood of a broad distribution.[119] Nonetheless, the median average FDI restrictiveness rating for states adopting Option 3 is also notable higher than the other legislative framing options, which implies that states which frame the public interest as an 'exception' in domestic merger control are also more likely to impose more restrictions on foreign ownership and investment. This is suggestive of a high instance of broad public interest exceptions, such as 'national security' or 'national interest' exception, which apply to all mergers but are inherently more likely to be of relevance to mergers that involve foreign bidders. However, this finding aside, *Figure 11* reveals no obvious pattern to hint at the relationship between FDI openness and the choice of legislative framing option. Indeed, by conducting an ANOVA in the same way as in the previous section, it finds that there is no statistically significant difference between the variances of the six legislative framing groups.[120] We can therefore conclude that 'openness to foreign investment' has no tangible influence on how states choose to frame the public interest in legislation.

Inference 12. *A country's 'openness' to foreign investment has no tangible impact on how a state chooses to frame public interest criteria in its merger laws. Indeed, countries that frame the public interest as an exception to the substantive test for assessment (Option 3) demonstrate a particularly wide range of different attitudes to foreign investment. However, states that do not*

[118] In fact, the distribution of the states adopting Option 3 is so broad that neither China (CHN) nor Saudi Arabia (SAU) are statistical outliers, despite being the most restrictive states in the FDI Index.
[119] In contrast, Option 4 (sector-specific public interest policy) is underrepresented, having constituted 19 out of the 75 states (25.3%) in the original sample, but only 9 of the 46 states (19.6%) in the revised sample.
[120] See Appendix 8A for FDI data descriptives, and Appendix 8B for the corresponding ANOVA. The AVOVA tests the null hypothesis that 'openness to foreign investment' has no discernible impact on the choice of legislative framing option, to a $p = 0.05$ level of significance. This returns an F-value of 0.8907, which is lower than the critical F-value (2.45). Thus, we do not reject the null hypothesis.

consider public interest criteria in their merger assessments (Option 1) are, on average, the states that show the most 'openness' to foreign investment.

Finally, we can test to see whether there exists a noticeable relationship between a state's 'openness to foreign investment' and the type of public interest decision-maker it appoints. Above, it is suggested that countries that are 'closed' to foreign investment are more likely to appoint politicians as decision-makers, but is this actually the case? *Figure 12*, below, plots the FDI restrictiveness ratings of the states according to their choice of public interest decision-maker.

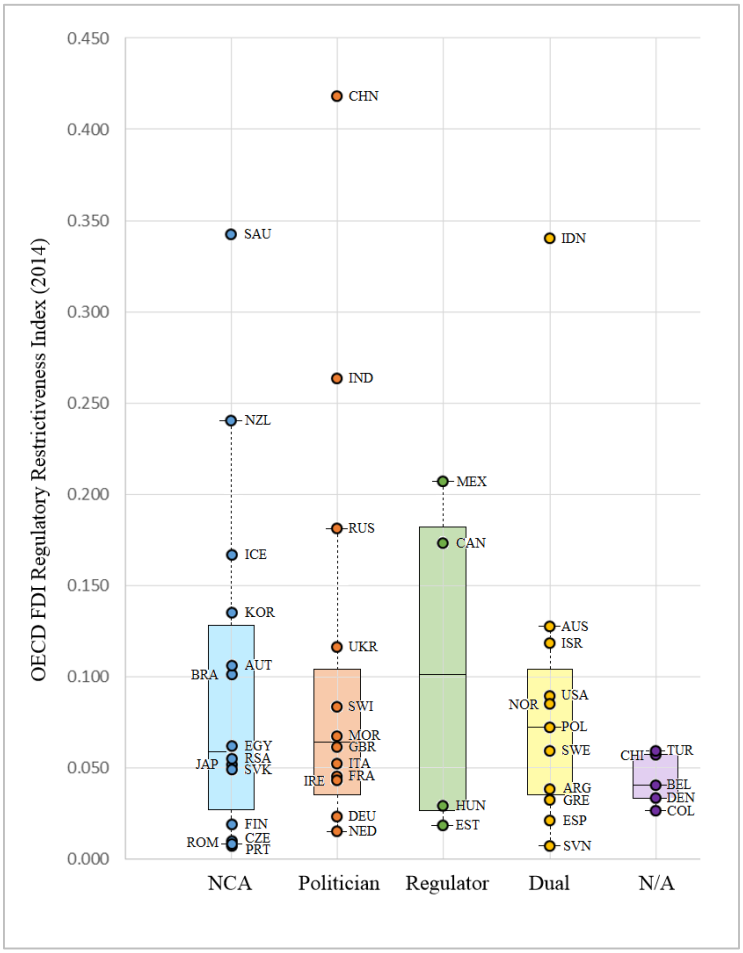

Figure 12. Scatter plot with box-and-whisker overlay showing states' ratings for FDI restrictiveness and public interest decision-maker. [Source: OECD FDI Regulatory Restrictiveness Index 2014].

From an initial glance at *Figure 12*, we see that 2 out of the 4 states that are most 'closed' to foreign investment do indeed appoint politicians as public interest decision-makers.[121] However, both of these states are statistical outliers in terms of their position relative to the other states in the sample.[122] The medians of each group actually reveal that the states that are more 'closed' to foreign investment are most likely to appoint regulators as their public interest decision-makers (see the median of the green shaded region), but this is hardly a robust observation given it is based on the FDI restrictiveness ratings of only 4 states. Lastly, an ANOVA of the sample again finds there to be no statistically significant relationship between 'openness to foreign investment' and the choice of public interest decision-maker.[123]

Inference 13. *A state's 'openness to foreign investment' has no significant impact on its choice of public interest decision-maker. There is an indication that states that demonstrate a restrictive stance towards foreign investment are more likely to appoint sector regulators, but the sample would need to be expanded in order to corroborate this.*

4.1. Remarks on the influence of socio-economic variables

This section has undertaken an empirical analysis to assess the influence that key socio-economic variables have on the way in which states accommodate public interest criteria in their merger control regimes. In doing so, it has made a number of preliminary observations regarding the potential effect of (a) geographic locality, (b) economic development, (c) the type of legal system in place, (d) the effectiveness of domestic governance, and (e) openness to foreign investment.[124] It could be argued that each of these variables has had at least some discernible impact on how states have accommodated the public interest, even if this merely relates to only a single type of

[121] The four states with an FDI restrictiveness rating over 0.25 are: China and India (who both appoint politicians), Saudi Arabia (which appoints an NCA), and Indonesia (which has adopted a dual decision-making arrangement).
[122] The upper fence for the FDI restrictiveness ratings in the 'Politicians' group is 0.246, which both China (0.418) and India (0.264) exceed.
[123] See Appendices 8C and 8D. On this occasion, the ANOVA tests the null hypothesis that 'openness to foreign investment' does not significantly influence the choice of public interest decision-maker to a $p = 0.05$ level of significance. The ANOVA returns an F-value of 0.4867, which is lower than the critical F-value (2.60). Thus, we do not reject the null hypothesis.
[124] These findings are detailed in Inferences 3-13, above.

legislative framing option or decision-maker. However, in terms of statistical significance, the only tangible relationship that the analysis uncovers is the influence that the 'effectiveness of domestic governance' has on how a state frames public interest within its merger legislation. This specifically infers that states demonstrating a high degree of governance will tend to either avoid considering public interest criteria completely (Option 1), or will frame the public interest criteria narrowly as an 'exception' to the substantive test for assessment (Option 3).

In many ways, the fact that there are very few observable patterns between the socio-economic variables and the methods of accommodation is an interesting finding in itself. It would seemingly imply that none of the socio-economic variables examined in this section are key determinants in how states choose to accommodate the public interest. But given that other studies have referred to the significant potential influence of these socio-economic variables in competition law – in particular, geographic locality and economic development – it is remarkable that the design and implementation of merger control rules does not correlate with any of these variables. Perhaps the main determinant of how public interest is accommodated in merger control is a socio-economic variable that has not been discussed in this paper. The 'goals of competition law' – which this paper has chosen not to assess due to practical issues posed by modelling them empirically – could well be one such determinant. Alternatively, it is certainly possible that public interest accommodation is determined by more than one of these variables. If this is the case, it becomes more difficult to empirically analyse the influence of individual variables independently, in the knowledge that other factors are also exerting an influence.[125] Indeed, as has been mentioned above, one should also bear in mind the potential impact of knowledge exchange between competition regimes. If knowledge exchange is prominent between the 75 states in the sample, it could be inferred that these states have not so much been influenced by socio-economic variables but, rather, by the existing laws and procedures of other countries.

[125] A possible way to overcome this would be to perform a 'Two-way ANOVA' using different combinations of socio-economic variables. This can be used to estimate the combined influence of two dependent variables on a single independent variable.

5. CONCLUDING REMARKS

This paper has drawn insights on the role that domestic states have afforded to the public interest in merger control by pursuing three distinct research avenues: (i) by identifying the different methods that are available to states who seek to accommodate the public interest; (ii) by considering the methods of accommodation that states have adopted in practice; and (iii) by analysing the potential influence that key socio-economic variables may have on the choices that states exercise when accommodating public interest criteria. By adopting an empirical approach to pursue these avenues, the paper makes a number of revelations and dispels several myths regarding the wider role that the public interest plays in modern-day merger control.

The study estimates that approximately 88% of domestic merger regimes incorporate some form of public interest criteria within their merger control laws. This corroborates the suggestion that 'public interest' does not merely reside on the periphery of international merger control but, rather, retains the potential to influence merger assessments in most jurisdictions. This represents a key motivating factor for the continued research and debate on the role that public interest considerations should play in merger control and competition policy in general.

Based on the assumption that the two main choices a state must make before accommodating public interest criteria are (a) *how to frame the public interest in merger legislation*, and (b) *who to appoint as decision-maker*, the paper finds that there are 21 possible approaches that states can implement. Within the sample, 15 of these approaches have been implemented in practice, with the most popular being: (i) to avoid considering public interest criteria completely, (ii) to appoint a politician and frame the public interest as an 'exception' to the substantive test, and (iii) to appoint a national competition authority and frame the public interest as an 'exception' to the substantive test. The wide variety of different approaches that states have adopted in practice signals a lack of substantive and institutional convergence with regards to how public interest criteria is accommodated in domestic merger control around the world.

Overall, the vast majority of states that incorporate public interest criteria within their merger laws have chosen to frame this criteria narrowly, i.e. as an 'exception' to a competition-based test, or as

part of a parallel sector-specific policy.[126] This illustrates a general preference for states to assess mergers according to competition criteria as a default position, and implies that these states appreciate the wider welfare benefits that a competition-based approach can facilitate, in addition to consumer benefits. Moreover, national competition authorities and politicians have each proved to be equally popular appointments to the public interest decision-making role, with 63.6% of states appointing one or the other. This offers an intriguing insight into the ongoing debate regarding political involvement in competition policy, as it infers that an equal proportion of states are convinced by the perceived advantages of NCAs making decisions (i.e. making effective use of their economic expertise and relative independence) and political decision-making (i.e. satisfying the constitutional belief that matters of significant 'public interest' should be decided by publically-elected representatives). In practice, it is wholly apparent that states take different sides in this debate, and this is a catalyst for institutional divergence between states.

Finally, the paper's statistical analysis of key socio-economic variables acts to dispel a number of myths often associated with states that consider public interest criteria. For example, the geographic location of a state appears to have little bearing on how that state chooses to accommodate the public interest; although, certain patterns emerge, including the tendency of African states to assign an extensive role to the public interest and to appoint NCAs as decision-makers. However, the empirical analysis finds that the level of effective governance within a state often corresponds with that state's design choices, with regards to framing public interest criteria within merger legislation. States with a highly effective system of governance tend to frame the public interest narrowly, perhaps as a means of facilitating consistency and predictability between decisions.

Contrary to oft-cited assertions in the existing literature, there is no evidence to suggest that the economic development of a state has any statistically significant correlation with how much influence it chooses to afford to public interest criteria. Having said this, states that afford an *extensive* role to the public interest are more likely to be developing countries.[127] Therefore, if the

[126] Of the states that have chosen to afford consideration to public interest criteria, 78.8% have framed this criteria narrowly within merger control legislation.
[127] Which is intriguing given that the majority of states that afford the public interest no scope whatsoever are also developing countries.

epistemic communities (e.g. the ICN, OECD, UNCTAD, etc) believe that states adopting an 'extensive public interest role' pose an obstacle to effective cross-border merger control, these communities should afford due consideration to economic development variables if they decide to draft 'International Best Practice Guidelines'.

APPENDICES

APPENDIX 1. Collecting and compiling the domestic data set

The data collection for the empirical analysis in this paper has been extensive, utilising five different sources,[128] to sample 75 domestic states, and therein collect 1200 unique readings.

The main task with regards to collecting the data has been to interpret the qualitative data sources (namely, the written information in the *GCR Handbook* and the *GWU Database* that relates to domestic merger control and competition law) and identify the relevant extracts that relate to the legislative framing options and the public interest decision-makers that each of the 75 states has adopted. Having identified the options that each state has adopted in practice, the sample states could then be grouped according to their public interest accommodation methods, ready for statistical testing. Segregating the sample in this way lays the foundations for the empirical analysis and, in the case of the legislative framing options (which have been subjected to ordinal ranking in *Figure 1*), it indirectly affords a quantitative dimension to the qualitative data.

For identifying a state's legislative framing choice and its public interest decision-maker, it has been necessary to refer to the *GCR Handbook* and, in particular, the answers that the expert practitioners had given to the following questions: Q1) 'What is the relevant legislation and who enforces it?'; Q8) 'Are there also rules on foreign investment, special sectors or other relevant approvals?'; Q19) 'What is the substantive test for clearance?'; and Q22) 'To what extent are non-competition issues (such as industrial policy or public interest issues) relevant in the review process?'. The answers to these questions have been recorded and interpreted within the data set. The accuracy of these readings was checked against the corresponding information in the *GWU Database* and, in order to increase the sample size to 75 states, the data for approximately 10

[128] These include: Global Competition Review, *Getting the Deal Through: Merger Control 2014* (Law Business Research 2013); Competition Law Center, 'Worldwide Competition Database' (*GWU Competition Law Center*) <http://www.gwclc.com/World-competition-database.html> accessed 3 June 2014. Hereafter, 'the GWU Database'; World Bank Governance Indicators; World Bank, 'Worldwide Governance Indicators (WGI) project' <http://info.worldbank.org/governance/wgi/index.aspx#home> accessed 23 March 2015; International Monetary Fund, *World Economic Outlook: Uneven Growth – Short- and Long-Term Factors* (IMF 2015) 150-153 <http://www.imf.org/external/pubs/ft/weo/2015/01/> accessed 5 May 2015; and OECD, 'FDI Regulatory Restrictiveness Index' (*OECD Investment*, June 2014) <www.oecd.org/investment/fdiindex.htm> accessed 8 January 2015.

further states was harvested from the *GWU Database*. The decision was made to add these additional states in order to increase the number of developing countries in the sample, in order to minimise data distortions when testing the 'economic development' variable. Given that the *CGR Handbook* is aimed at legal practitioners, its selection of countries is somewhat skewed towards states that experience a relatively high degree of merger activity, or have a long-established merger regime. This means the *GCR Handbook* includes a higher proportion of developed countries. So there is a need to redress this imbalance in the data set with reference to other sources.

Finally, the accuracy for the data relating to these 10 states was checked with reference to the national legislation websites, and the websites of state governments, sector regulators and national competition authorities

APPENDIX 2. Distribution of the domestic data set

Appendix 2A. Sample skewness for distribution of states adopting legislative framing options.

n	75
$\Sigma\, x_i$	235[†]
$\bar{x}$	3.1333
$\Sigma\,(x_i - \bar{x})^2$	148.6666
$\Sigma\,(x_i - \bar{x})^3$	70.3556
$\Sigma\,(x_i - \bar{x})^4$	672.5956
$\frac{n\sqrt{n-1}}{n-2}\,\frac{\Sigma(x_i - \bar{x})^3}{(\Sigma(x_i - \bar{x})^2)^{3/2}}$	0.3430 (Skewness of sample)
$\frac{n(n+1)(n-1)}{(n-2)(n-3)}\,\frac{\Sigma(x_i - \bar{x})^4}{(\Sigma(x_i - \bar{x})^2)^2}$	2.4422 (Kurtosis of sample)

[†] Represents total 'ranking values' where the each legislative framing options is assigned a value from 1-6 according to the potential influence they afford to the public interest (for rankings, see *Figure 1*). 1 = *Option 1*, 2 = *Option 4*, 3 = *Option 3*, 4 = *Options 3 & 4*, 5 = *Option 2*, 6 = *Options 2 & 4*.

Appendix 2B. List of states adopting each option for framing the public interest within legislation.

Option 1 (*No PI*)	Option 4 (*Sector PI*)	Option 3 (*PI Exception*)	Options 3 & 4 (*PI Exception & Sector PI*)	Option 2 (*PI Test*)	Options 2 & 4 (*PI Test & Sector PI*)
Barbados, Belgium, Chile, Columbia, Denmark, Faroe Islands, Fiji, Macedonia, Turkey	Albania, Bangladesh, Bolivia, Bosnia & Herz, Brazil, Canada, Croatia, Egypt, El Salvador, Finland, Honduras, Japan, Mexico, Serbia, Slovakia, Slovenia, United States, Uzbekistan, Venezuela	Argentina, Australia, Austria, China, Cyprus, Czech Republic, France, Hong Kong, Iceland, India, Ireland, Malta, Netherlands, New Zealand, Portugal, Saudi Arabia, Swaziland, Ukraine, United Kingdom	Bulgaria, Estonia, Germany, Hungary, Indonesia, Italy, Nigeria, Norway, Panama, Russia, Singapore, Spain, Sweden, Switzerland	Belarus, Kenya, Papua New Guinea, Republic of Korea, Morocco, Namibia, Romania, Thailand, Zambia	Greece, Israel, Poland, South Africa, Taiwan

Appendix 2C. List of states adopting each option for appointing a public interest decision-maker.

NCA	Politician	Regulator	Dual	N/A
Albania, Austria, Brazil, Czech Republic, Egypt, Finland, Iceland, Japan, Kenya, Republic of Korea, Malta, New Zealand, Papua New Guinea, Portugal, Romania, South Africa, Saudi Arabia, Slovakia, Swaziland, Thailand, Zambia	Belarus, Bolivia, China, Cyprus, France, Germany, Hong Kong, India, Ireland, Italy, Morocco, Namibia, Netherlands, Nigeria, Panama, Russia, Singapore, Switzerland, Ukraine United Kingdom, Uzbekistan	Bulgaria, Canada, Croatia, El Salvador, Estonia, Honduras, Hungary, Mexico, Venezuela	Argentina, Australia, Bangladesh, Bosnia & Herz, Greece, Indonesia, Israel, Norway, Poland, Serbia, Slovenia, Spain, Taiwan, USA	Barbados, Belgium, Chile, Columbia, Denmark, Faroe Islands, Fiji, Macedonia, Turkey

Appendix 2D. Table specifying political independence of public interest decision-makers appointed by states within the sample. [Source: GWU Database].

	Total in sample	Proportion independent	
NCA	21	13	(61.90%)
Politician	21	0	(0.00%)
Regulator	9	6	(66.67%)
Dual	15	6	(40.00%)
Total	69	25	(37.88%)

Appendix 2E. Distribution of combinations of legislative framing and public interest decision-maker options adopted by states.

	NCA	*Politician*	*Regulator*	*Dual*	*N/A*
Option 1	0	0	0	0	9
Option 4	6	2	6	5	0
Option 3	8	9	0	2	0
Options 3 & 4	0	7	3	4	0
Option 2	6	3	0	0	0
Options 2 & 4	1	0	0	4	0
Total	21	21	9	15	9

Appendix 2F. Descriptive statistics for decision-makers and the influence afforded to the public interest in the merger legislation they oversee.

	NCA	*Politician*	*Regulator*	*Dual*	*N/A*
n	21	21	9	15	9
$\Sigma\, x_i$	72	74	24	56	9
$\bar{x}$	3.429	3.524	2.667	3.733	1

Where $\bar{x}$ represents the mean category of each decision-maker.[†]

[†] The means are calculated by assigning a value from 1-6 for each legislative framing option, based on the potential influence that each option afford to the public interest (for rankings, see *Figure 1*). 1 = *Option 1*, 2 = *Option 4*, 3 = *Option 3*, 4 = *Options 3 & 4*, 5 = *Option 2*, 6 = *Options 2 & 4*.

APPENDIX 3. Compiling data for the analysis of socio-economic variables

As with any empirical study of this kind, the objective is to test for any relationship between the independent and dependent variables. Identifying which variables are independent and which are dependent is not always straightforward and much depends on how the study is framed. In simple terms, empiricists will generally seek to change the independent variable and measure the effect that this change has on the dependent variable. This logic can be applied to the analysis in Section 4. As the aim of Section 4 is to identify the effect that key socio-economic variables have on how the public interest is accommodated domestically, it follows that the *independent variable* will be the socio-economic variable and the *dependent variable* will be the method of accommodation.

APPENDIX 4. Estimating the influence of 'economic development' on accommodating the public interest in merger control

Appendix 4A. Table showing distribution of states adopting each legislative framing option according to their geographic region.

	Africa	*Asia*	*Europe*	*N. America*	*S. America*	*Oceania*
Option 1	0	0	5	1	2	1
Option 4	1	3	7	5	3	0
Option 3	1	4	11	0	1	2
Options 3 & 4	1	1	10	1	0	1
Option 2	4	2	2	0	0	1
Options 2 & 4	1	2	2	0	0	0
	8	12	37	7	6	5

Appendix 4B. Table showing distribution of states appointing each public interest decision-maker according to their geographic region.

	Africa	*Asia*	*Europe*	*N. America*	*S. America*	*Oceania*
NCA	5	4	9	0	1	2
Politician	3	5	11	1	1	0
Regulator	0	0	4	4	1	0
Dual	0	3	8	1	1	2
N/A	0	0	5	1	2	1
	8	12	37	7	6	5

APPENDIX 5. Estimating the statistical significance of 'Economic development' on accommodating the public interest

To examine whether a state's economic development has a meaningful impact on how a state frames the public interest in merger legislation, the following null and alternative hypotheses can be proposed:

> H_0: The economic development of a state has no significant impact on the legislative framing option it chooses. ($\mu_{Developed} = \mu_{Developing}$).
>
> H_1: The economic development of a state has a significant impact on the legislative framing option it chooses. ($\mu_{Developed} \neq \mu_{Developing}$).

In order to test the legitimacy of H_0, it is necessary to establish that there is no significant difference between the data relating to developed and developing states. For this analysis, we are only comparing two data categories, so it is appropriate to use a *t*-test.[129] A *t*-test assesses the similarity of two groups of data by comparing their respective means relative to the overall spread of the data. However, which type of *t*-test is appropriate depends on whether the variance between the two data groups is equal or not.[130] The equality between the respective variances of the developed and developing state data can be assessed using Levene's test, as detailed in Appendix 5A, below.[131]

[129] To compare the statistical similarity of three-or-more data groups, an analysis of variance (ANOVA) would be required.
[130] David W Nordstokke and others, 'The operating characteristics of the nonparametric Levene test for equal variances with assessment and evaluation data' (2011) 16(5) Practical Assessment, Research & Evaluation 1.
[131] Because the sample data is not distributed normally (rather, it is positively skewed, see Appendix 2A), a non-parametric Levine's test is required. ibid 2.

Appendix 5A. Non-parametric Levine's test for equality of variances between developed and developing states, at $p = 0.05$ significance level.
(H_0: $\sigma_{Developed}{}^2 = \sigma_{Developing}{}^2$ and H_1: $\sigma_{Developed}{}^2 \neq \sigma_{Developing}{}^2$).

Source of Variation	*SS*	*df*	*MS*	*F*	*p - value*
A (Between Groups)	8788.468	5	1757.694	361.420	0.000
B (Within Groups)	335.568	69	4.863		
Total	9124.036	74			
					$p < 0.05$, so reject null hypothesis.

In this instance, Levine's test returns a *p-value* which is less than 0.05 (the level of significance), so we reject the null hypothesis that the variance between the data groups is equal. As such, when comparing the respective means of the developed state and developing state data groups, it is important that the *t*-test assumes unequal variances. The results of the *t*-test feature in Appendix 5B, below.

Appendix 5B. Two-sample *t*-test assuming unequal variances between developed and developing states, at $p = 0.05$ significance level.
(H_0: $\mu_{Developed} = \mu_{Developing}$).

	Developed	*Developing*
n	38	37
$\bar{x}$	3.2895	2.9730
$SD = \sqrt{\frac{\Sigma(x_i - \bar{x})^2}{n-1}}$	1.7248	2.3048
df	70.993	
t	0.965	
p-value	0.338	
		$p > 0.05$, so do not reject null hypothesis.

As the table illustrates, the *t*-test returns a *p*-value of 0.338, meaning we fail to reject the null hypothesis H_0. We therefore conclude that there is a significant probability that the economic development of a state has *no* significant impact on the legislative framing option it chooses.

Appendix 5C. Table showing distribution and proportions of developed and developing states appointing public interest decision-makers.

	Developed	*Developing*
NCA	11 (31.4%)	10 (32.3%)
Politician	12 (34.3%)	9 (29.0%)
Regulator	2 (5.7%)	7 (22.6%)
Dual	10 (28.6%)	5 (16.1%)
N/A[†]	3	6
	35 (38)	31 (37)

[†] Figures for 'N/A' are not counted when calculating percentages because the state has chosen not to accommodate the public interest and, as such, does not exercise a choice to appoint a decision-maker.

APPENDIX 6. Observing the relationship between types of legal systems and how states accommodate public interest

Appendix 6A. Table showing distribution and proportions of legislative framing options adopted in each type of legal system.

	Civil	*Common*	*Religious*	*Mixed*
Option 1	7	2	0	0
Option 4	15	3	1	0
Option 3	9	6	1	3
Options 3 & 4	11	1	0	2
Option 2	3	1	1	4
Options 2 & 4	3	1	0	1
Total	48	14	3	10

Appendix 6B. Table showing distribution and proportions of public interest decision-makers appointed in each type of legal system.

	Civil	*Common*	*Religious*	*Mixed*
NCA	11	2	2	7
Politician	12	5	1	2
Regulator	8	1	0	0
Dual	10	4	0	1
N/A	7	2	0	0
Total	48	14	3	9

APPENDIX 7. Estimating the statistical significance of 'Effectiveness of domestic governance' on accommodating the public interest

H_0: The level of 'rule of law' in a state has no significant impact on the legislative framing option it chooses.

($\mu_{Opt1} = \mu_{Opt4} = \mu_{Opt3} = \mu_{Opt3\&4} = \mu_{Opt2} = \mu_{Opt2\&4}$).

H_1: The level of 'rule of law' in a state has a significant impact on the legislative framing option it chooses.

(Not every μ is equal).

Appendix 7A. Descriptives of adherence to 'rule of law' and chosen legislative framing options.

	Option 1 (*No PI*)	Option 4 (*Sector PI*)	Option 3 (*PI Exception*)	Options 3 & 4 (*PI Exception & Sector PI*)	Option 2 (*PI Test*)	Options 2 & 4 (*PI Test & Sector PI*)
n	9	19	19	14	9	5
Σx_i	624.17	919.91	1428.43	952.60	405.22	358.77
μ	69.352	48.416	75.181	68.043	45.024	71.754
$\Sigma (x_i - \mu)^2$	6211.29	17416.38	11572.70	11357.14	3181.18	481.80

Appendix 7B. One-way ANOVA for effect of adherence to 'rule of law' on chosen legislative framing option.

Source of Variation	*SS*	*df*	*MS*	*F*	*p - value*	*F crit*
A (Between Groups)	10853.18	5	2170.6357	2.9823	< 0.05	2.35
B (Within Groups)	50220.49	69	727.8331			
Total	61073.67	74				

$F(5,69) = 2.9823$, $p < 0.05$; $F(5,69) > 2.35$, so reject H_0.

H_0: The level of 'rule of law' in a state has no significant impact on the public interest decision-maker it appoints.

($\mu_{NCA} = \mu_{Politician} = \mu_{Regulator} = \mu_{Dual} = \mu_{N/A}$)

H_1: The level of 'rule of law' in a state has a significant impact on the public interest decision-maker it appoints.

(Not every μ is equal).

Appendix 7C. Descriptives of adherence to 'rule of law' and chosen decision-maker.

	NCA	Politician	Regulator	Dual	N/A
n	21	21	9	15	9
Σx_i	1353.54	1244.55	436.03	1030.81	624.17
μ	64.454	59.264	48.448	68.721	69.352
$\Sigma (x_i - \mu)^2$	12810.69	21133.57	8303.98	9533.89	6211.29

Appendix 7D. One-way ANOVA for effect of adherence to 'rule of law' on chosen decision-maker.

Source of Variation	*SS*	*df*	*MS*	*F*	*p - value*	*F crit*
A (Between Groups)	3080.25	4	770.0620	0.9295	< 0.05	2.50
B (Within Groups)	57993.42	70	828.4774			
Total	61073.67	74				

$F(4,70) = 0.9295$, $p < 0.05$

$F(4,70) < 2.50$, so do not reject H_0.

APPENDIX 8. Estimating the statistical significance of 'Openness to Foreign Investment' on accommodating the public interest

H_0: The openness of a state to foreign direct investment has no significant impact on the legislative framing option it chooses.

($\mu_{Opt1} = \mu_{Opt4} = \mu_{Opt3} = \mu_{Opt3\&4} = \mu_{Opt2} = \mu_{Opt2\&4}$)

H_1: The openness of a state to foreign direct investment has a significant impact on the legislative framing option it chooses.

(Not every μ is equal).

Appendix 8A. Descriptives of openness to foreign direct investment and chosen legislative framing options.

	Option 1 (*No PI*)	Option 4 (*Sector PI*)	Option 3 (*PI Exception*)	Options 3 & 4 (*PI Exception & Sector PI*)	Option 2 (*PI Test*)	Options 2 & 4 (*PI Test & Sector PI*)
n	5	9	15	10	3	4
Σx_i	0.215	0.759	1.998	0.891	0.210	0.277
μ	0.043	0.084	0.133	0.089	0.070	0.069
$\Sigma (x_i - \mu)^2$	0.0009	0.0363	0.2304	0.0914	0.0081	0.0040

Appendix 8B. One-way ANOVA for effect of openness to foreign direct investment on chosen legislative framing option.

Source of Variation	*SS*	*df*	*MS*	*F*	*p - value*	*F crit*
A (Between Groups)	0.0413	5	8.26×10^{-3}	0.8905	< 0.05	2.45
B (Within Groups)	0.3710	40	9.28×10^{-3}			
Total	0.4123	45				

$F(5,40) = 0.8905$, $p < 0.05$; $F(5,40) < 2.45$, so do not reject H_0.

H_0: The openness of a state to foreign direct investment has no significant impact on the public interest decision-maker it appoints. ($\mu_{NCA} = \mu_{Politician} = \mu_{Regulator} = \mu_{Dual} = \mu_{N/A}$)

H_1: The openness of a state to foreign direct investment has a significant impact on the public interest decision-maker it appoints. (Not every μ is equal).

Appendix 8C. Descriptives of openness to foreign direct investment and chosen decision-maker.

	NCA	Politician	Regulator	Dual	N/A
n	14	12	4	11	5
Σx_i	1.353	1.367	0.427	0.988	0.215
μ	0.097	0.114	0.107	0.090	0.043
$\Sigma (x_i - \mu)^2$	0.1239	0.1568	0.0284	0.0837	8.5×10^{-4}

Appendix 8D. One-way ANOVA for effect of openness to foreign direct investment on chosen decision-maker.

Source of Variation	*SS*	*df*	*MS*	*F*	*p - value*	*F crit*
A (Between Groups)	0.0187	4	4.67×10^{-3}	0.4867	< 0.05	2.60
B (Within Groups)	0.3936	41	9.60×10^{-3}			
Total	0.4123	45				

$F(4,41) = 0.4867$, $p < 0.05$

$F(4,41) < 2.60$, so do not reject H_0.

BIBLIOGRAPHY

Adhikari R, 'What Type of Competition Policy and Law Should a Developing Country Have?' (2004) 5(1) South Asia Economic Journal 1

Armoogum KP and Lyons B, 'What Determines the Reputation of a Competition Agency?' (12th Annual International Industrial Organization Conference, Chicago, April 2014) <https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIOC2014&paper_id=470> accessed 20 September 2015

Arruñada B and Andonova V, 'Market Institutions and Judicial Rulemaking' in Claude Menard and Mary M. Shirley (eds), *Handbook of New Institutional Economics* (Springer 2005)

Carletti E, Hartmann P and Ongena S, 'The economic impact of merger control legislation' (2015) 42 International Review of Law and Economics 88

Chetty V, 'The Place of Public Interest in South Africa's Competition Legislation: Some implications for international antitrust convergence' (53rd Spring Meeting of the ABA Section of Antitrust Law, Johannesburg, April 2005) <http://apps.americanbar.org/antitrust/at-committees/at-ic/pdf/spring/05/aba-paper.pdf> accessed 22 September 2015

Chisholm A and Jung N, 'The Public Interest and Competition-based Scrutiny of Mergers: Lessons from the evolution of merger control in the United Kingdom' (2014) 4(1) CPI Antitrust Chronicle <https://www.competitionpolicyinternational.com/the-public-interest-and-competition-based-scrutiny-of-mergers-lessons-from-the-evolution-of-merger-control-in-the-united-kingdom-/> accessed 25 September 2015

Competition Law Center, 'Worldwide Competition Database' (*GWU Competition Law Center*) <http://www.gwclc.com/World-competition-database.html> accessed 3 June 2014

Dabbah MM, *International and Comparative Competition Law* (Cambridge University Press 2010)

Facey BA and Brown C, *Competition and Antitrust Laws in Canada: Mergers, Joint Ventures and Competitor Collaborations* (LexisNexis Canada 2013)

Financial Times, 'Definition of foreign direct investment' <http://lexicon.ft.com/Term?term=foreign-direct-investment> accessed 24 September 2015

Fox E and Gal MS, 'Drafting Competition Law for Developing Jurisdictions: Learning from Experience' in Gal MS, Fox EM, Bakhoum M, Drexl J and Gerber DJ, *Economic Characteristics of Developing Jurisdictions: Their Implications for Competition Law* (Edward Elgar, Cheltenham (UK) 2015)

Fox EM and Trebilcock MJ, 'The GAL Competition Project: The Global Convergence of Process Norms' in Fox EM and Trebilcock MJ (eds), *The Design of Competition Law Institutions: Global Norms, Local Choices* (OUP 2013)

Fullerton L and Alvarez M, 'Convergence in International Merger Control' (2012) 26 Antitrust ABA 20

Galloway J, 'Convergence in International Merger Control' (2009) 5(2) Competition Law Review 179

Gerber DJ, *Global Competition: Law, Markets and Globalization* (OUP 2009)

Global Competition Review, *Getting the Deal Through: Merger Control 2014* (Law Business Research 2013)

House of Commons Debates
– – HC Deb 5 July 1984, vol 63, cols 213-14W

Hyman DA and Kovacic WE, 'Institutional Design, Agency Life Cycle, and the Goals of Competition Law' (2013) 81(5) Fordham Law Review 2163

Iacobucci D, 'Continuous and Discrete Variables' (2001) 10(1) Journal of Consumer Psychology 37

Iacobucci E and Trebilcock MJ, 'Canada: The Competition Law System and the Country's Norms' in Fox EM and Trebilcock MJ (eds), *The Design of Competition Law Institutions: Global Norms, Local Choices* (OUP 2013)

ICN Advocacy Working Group, 'Competition Culture Project Report' (14th ICN Annual Conference, Sydney, April 2015)

International Competition Network, 'ICN Recommended Practices for Merger Analysis' (2009) <http://www.internationalcompetitionnetwork.org/uploads/library/doc316.pdf> accessed 20 September 2015

International Monetary Fund, *World Economic Outlook: Uneven Growth – Short- and Long-Term Factors* (IMF 2015) <http://www.imf.org/external/pubs/ft/weo/2015/01/> accessed 20 September 2015

Jenny F, 'Substantive convergence in merger control: An assessment' (2015) 1 Concurrences 21

Kalinova, B, Palerm, A and Thomsen, S, 'OECD's FDI Restrictiveness Index: 2010 Update' (2010) OECD Working Papers on International Investment 2010/03 <http://www.oecd-ilibrary.org/finance-and-investment/oecd-s-fdi-restrictiveness-index_5km91p02zj7g-en> accessed 20 September 2015

Lewis D, 'The Role of Public Interest in Merger Evaluation' (ICN Merger Working Group, Naples, 28-29 September 2002) <http://www.comptrib.co.za/assets/Uploads /Speeches/lewis5.pdf> accessed 20 September 2015

Mariniello M, Neven D and Padilla J, 'Antitrust, Regulatory Capture and Economic Integration' (2015) Bruegel Policy Contribution 2015/11 <http://www.bruegel.org/publications/publication-detail/publication/891-antitrust-regulatory-capture-and-economic-integration/> accessed 20 September 2015

Naím M, 'Does Latin America Need Competition Policy to Compete?' in Naím M and Tulchin JS (eds), *Competition Policy, Deregulation, and Modernization in Latin America* (Lynne Rienner Publishers 1999)

Nielsen L, 'Classifications of Countries Based on Their Level of Development: How it is Done and How it Could be Done' (2011) IMF Working Paper 11/31 <http:// www.imf.org/external/pubs/cat/longres.aspx?sk=24628.0> accessed 20 September 2015

Nordstokke DW, Zumbo BD, Cairns SL and Saklofske DH, 'The operating characteristics of the nonparametric Levene test for equal variances with assessment and evaluation data' (2011) 16(5) Practical Assessment, Research & Evaluation 1

OECD, 'Recommendation of the Council on Merger Review' (23 March 2005, C (2005) 34) <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx ?InstrumentID=195&InstrumentPID=191&Lang=en&Book=False> accessed 20 September 2015

– – 'FDI Regulatory Restrictiveness Index' (*OECD Investment*, June 2014) <http://www.oecd.org/investment/fdiindex.htm> accessed 20 September 2015

Örücü AE, 'Methodology of comparative law' in Smits JM (ed), *Elgar Encyclopedia of Comparative Law* (Edward Elgar 2006)

Palim MRA, 'The worldwide growth of competition law: an empirical analysis' (1998) 43 Antitrust Bulletin 105

Prado M and Trebilcock M, 'Path Dependence, Development, and the Dynamics of Institutional Reform' (2009) 59 University of Toronto Law Journal 341

Posner RA, *Economic Analysis of Law* (Little, Brown and Company 1973)

Reader D, ‘Does Ofcom Offer a Credible Solution to Bias in Media Public Interest Mergers in the United Kingdom?’ (2014) 4(1) CPI Antitrust Chronicle <http://www.competitionpolicyinternational.com/does-ofcom-offer-a-credible-solution-to-bias-in-media-public-interest-mergers-in-the-united-kingdom> accessed 20 September 2015

Stucke ME, ‘Is competition always good?’ (2013) 1(1) Journal of Antitrust Enforcement 162

Thomsen, S, ‘OECD FDI Regulatory Restrictiveness Index: A tool for benchmarking countries, measuring reform and assessing its impact’ (Overview presentation, OECD 2014) <http://www.slideshare.net/OECD-DAF/oecd-fdi-regulatory-restrictiveness-index?ref=http://www.oecd.org/investment/fdiindex.htm> accessed 20 September 2015

UNCTAD, ‘A Tripartite Report on the United Republic of Tanzania-Zambia-Zimbabwe: Comparative Assessment’ (2012) UNCTAD/DITC/CLP/2012/1 <http://unctad.org/en/PublicationsLibrary/ditcclp2012d1_overview_en.pdf> accessed 20 September 2015

Vane H, ‘Public interest clauses may be a necessary evil, says OECD head’ (Global Competition Review, 13 March 2015) <http://globalcompetitionreview.com/news/article/38187/public-interest-clauses-may-necessary-evil-says-oecd-head> accessed 20 September 2015

Waller SW, ‘Comparative competition law as a form of empiricism’ (1998) 23 Brooklyn Journal of International Law 455

World Bank, ‘World Development Indicators’ <http://data.worldbank.org/data-catalog/world-development-indicators> accessed 20 September 2015
– – ‘Worldwide Governance Indicators (WGI) project’ <http://info.worldbank.org/governance/wgi/index.aspx> accessed 20 September 2015