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How is 'efficiency' determined in the insolvency context?

Clarifying the meaning of efficiency with the conjunction of insolvency jurisprudence and economic methodology

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__Abstract__

The thesis aims to understand how the meaning of efficiency is determined in the insolvency context. This is important as there are a multiple number of efficiency criteria in the economics literature that can more often than not obscure its meaning. Normative considerations guide the selection of the most appropriate criterion in a certain context. The thesis pursues the context in a framework comprised of the conjunction of insolvency jurisprudence and economic method.

It advances two arguments. First, the context for understanding what efficiency means is provided by the perspectives of insolvency law. This is the jurisprudence component of the framework. The thesis argues that each perspective demonstrates an affinity for an efficiency criterion (or criteria) in the pursuit of the objectives of insolvency law under it.

Just as the meaning of efficiency varies with jurisprudential context, its properties vary according to the economic methodology it is associated with. Schools of economic thought, like insolvency jurisprudence, are not homogeneous, raising the possibility that one may hold to a methodological position that can conflict with the methodology underlying an efficiency criterion. An example of this conflict can be seen between the methodologies of mainstream neoclassical and Austrian economics, the two schools of economics analysed in the thesis. Against this backdrop, the second argument is that whether the efficiency criterion (that is affined with an insolvency perspective) is endorsed for use depends upon its compatibility with one's methodological views. This is the economic component of the framework.

Hence, the thesis answers the question of how 'efficiency' is determined by reference to a framework that requires the concordance between an efficiency criterion's associated insolvency perspective and one's economic methodological position. At times, the legal and economic components may discord with each other. This is problematic to the extent that efficiency is not properly defined in a particular context. It is in the difficulty of resolving this jurisprudence–method conflict that the thesis argues for the concordance between both components in clarifying efficiency.

This jurisprudence–method framework for determining the meaning of efficiency is a hitherto neglected course of developing the theoretical insolvency literature. By directly considering how economic method can endorse or oppose particular efficiency criteria, the thesis gives pause for thought to the way that policy proposals are affected by the decision-maker's stance on economic method.

<u>Declaration by author</u>

This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

I have clearly stated the contribution of others to my thesis as a whole, including statistical assistance, survey design, data analysis, significant technical procedures, professional editorial advice, and any other original research work used or reported in my thesis. The content of my thesis is the result of work I have carried out since the commencement of my research higher degree candidature and does not include a substantial part of work that has been submitted to qualify for the award of any other degree or diploma in any university or other tertiary institution. I have clearly stated which parts of my thesis, if any, have been submitted to qualify for another award.

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Publications during candidature

Journal articles

Rachel Lee and David Morrison, 'Australian Bankruptcy Law: Debtor Profile Update 2011' (2012) 20 *Insolvency Law Journal* 279

David Morrison and Rachel Lee, 'Trends in Personal Insolvency in Australia – An Update' (2012) 20 *Insolvency Law Journal* 18

Publications included in this thesis

No publications included

<u>Contributions by others to the thesis</u>

No contributions by others

<u>Statement of parts of the thesis submitted to qualify for the award of another degree</u>

None

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I remember at one point in 2008, while working as a research assistant for Associate Professor David Morrison, he began a sentence with "When you get your honours…" "What honours degree?" I thought to myself. But sure enough, in 2009, I commenced and completed an honours degree in economics. Then curiously, David began to address me as "Dr Lee." "Never!" I replied. But here I am today! Anyway, I would not have ventured into insolvency law if it were not for that research with David. I thank him and also my other supervisor, Professor Ross Grantham, for their guidance and feedback for this thesis.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ABBREVIATIONS

CBM Creditors' Bargain Model

DOCA Deed of company arrangement

L&E Law and Economics

UNCITRAL United Nations Commission on International Trade Law

VA Voluntary administration

CHAPTER 1

Introduction

1.1 Introduction

The term 'efficiency' often emerges in discussions surrounding insolvency policy, particularly when insolvency law seeks a more 'efficient' resolution to financial distress or a more 'efficient' distribution of an insolvent company's resources. The problem of resource scarcity in insolvency highlights the consideration of efficiency further since it is concerned with allocating resources where they are valued the most. Social welfare, moreover, is frequently described in terms of the efficiency of an allocation of resources.[1] But while important, efficiency is not the sole consideration when weighing between rescuing and liquidating a company;[2] it is indeed controversial when seen as the sole value that a society's public institutions should pursue but not when viewed as one among others.[3] Efficiency analysis nevertheless has been and will continue to be a core activity within the Law and Economics literature and an underlying economic character of insolvency law.[4]

Before proceeding further, it is helpful to clarify what 'efficiency' means in a general and preliminary sense. In ancient Greece, 'economics' was first used to refer to the efficient management of the family home or estate.[5] There are two ways to increase one's estate that are equivalent to two aspects of efficiency, namely static efficiency (the sound management of available resources to prevent wastage) and dynamic efficiency (increasing one's estate through

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[1] Robert Rasmussen and David Skeel Jr, 'The Economic Analysis of Corporate Bankruptcy Law' (1995) 3 *American Bankruptcy Institute Law Review* 85, 86.

[2] Warren disagrees with Jackson and Baird's contention that insolvency law's sole aim is economic efficiency (see Elizabeth Warren, 'Bankruptcy Policy' (1987) 54 *University of Chicago Law Review* 775, 800-804). Efficiency as a goal of the legal system is a separate question by itself; see Elisabeth Krecké, 'The Nihilism of the Economic Analysis of Law' (undated) <http://mises.org/journals/scholar/Krecke.PDF>.

[3] Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 252; Armin Kammel, 'The Law and Economics of Corporate Insolvency – Some Thoughts' in Paul Omar (ed), *International Insolvency Law: Themes and Perspectives* (Ashgate, 2008) 61, 63.

[4] Gillian Hadfield, 'The Second Wave of Law and Economics: Learning to Surf' in Megan Richardson and Gillian Hadfield (eds), *The Second Wave of Law and Economics* (Federation Press, 1999) 50, 56. Bainbridge concurs in writing that 'It is virtually impossible to find serious corporate law scholarship that is not informed by economic analysis.' (Stephen Bainbridge, 'Community and Statism: A Conservative Contractarian Critique of Progressive Corporate Law Scholarship' (1997) 82 *Cornell Law Review* 856, 856). Indeed, the provision of an efficient process for winding up companies is still one of the chief concerns of Australian corporate insolvency law (Jennifer Dickfos, 'Improving Outcomes for Creditors: Balancing Efficiency with Creditor Protections' (2008) 16 *Insolvency Law Journal* 84, 85). Colin Anderson, 'Commencement of the Part 5.3A Procedure: Some Considerations from an Economics and Law Perspective' (2001) 9 *Insolvency Law Journal* 4, for one, draws out a brief outline of Australian Voluntary Administration from a law and economics perspective.

[5] Jesús Huerta de Soto, *The Theory of Dynamic Efficiency* (Routledge, 2009) 2.

entrepreneurial activity).[6] Of equal relevance to the law is categorising efficiency as a substantive or a procedural goal.[7] The thesis describes the former as 'ends-efficiency' and the latter as 'means-efficiency.' A substantive goal of the law, whether in part or in whole, is an end that the law seeks after and that justifies why a particular part of the law exists and is worthwhile to have.[8] An example in the insolvency context is 'To provide a fair scheme of cooperation under the circumstances peculiar to insolvency'[9] (ignoring the difficulties of defining 'fair'). Meanwhile, procedural goals concern how the law seeks to attain the substantive goals, such as the methods undertaken to provide the said fair scheme of cooperation.[10] Assessing whether an insolvency regime is 'efficient' hence requires clarity on whether the assessment pertains to means-efficiency or ends-efficiency; to wit, whether the regime advances a particular set of goals such as better outcomes for creditors efficient*ly*, or if efficiency is advanced as a *goal in itself* in terms of the allocation of the company's assets.[11]

Context plays a key role in this clarification. An important one is provided by insolvency jurisprudence. This refers to the theoretical perspectives that justify the existence of and demonstrate the role and proper function of insolvency law.[12] Each perspective sets the objectives of insolvency law that frame how efficiency is to be understood in pursuing them. For instance, the contractarian perspective of insolvency law, focused on improving creditor outcomes, demonstrates an affinity for a criterion that measures efficiency with respect to the value of the debtor's assets for creditors. This differs from the communitarian perspective where efficiency is less concerned with maximising social wealth *per se* than with distributional considerations, where efficiency is here more of a procedural than a substantive goal.

Nevertheless, this jurisprudential context is insufficient for determining the meaning of efficiency that is endorsed for use. Just as legal theorists differ on jurisprudence, economic theorists differ on economic methodology, the study of economics as a science. The relevance of this point is that an efficiency criterion may not be endorsed for use if it is incompatible with one's view on economic

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[6] Xenophon, *Xenophon in Seven Volumes*, translated by O. J. Todd (Harvard University Press, 1979) vol 4, Ec. 6.4, 8.3, 12.18, 20.22-24, 20.27-28 <http://www.perseus.tufts.edu/cgi-bin/ptext?lookup=Xen.+Ec.+1.1>, cited in ibid 2,3.
[7] See Rizwaan Mokal, *Corporate Insolvency Law: Theory and Application* (Oxford University Press, 2005) 24-26.
[8] Ibid 25.
[9] Ibid 25.
[10] Ibid 25.
[11] The latter is exemplified by views that it is more 'efficient' to rescue a company if this produces a 'more valuable' allocation of the company's resources, often with higher creditor returns as a proxy or by what is deemed to increase 'social welfare.'
[12] Vanessa Finch, *Corporate Insolvency Law: Perspectives and Principles* (Cambridge University Press, 1st ed, 2002), terms these 'visions of corporate insolvency law.' Linda Rusch, 'Bankruptcy Reorganization Jurisprudence: Matters of Belief, Faith, and Hope – Stepping into the Fourth Dimension' (1994) 55 *Montana Law Review* 9, 10-11 n 1, has a list of references for the many debates among insolvency scholars regarding the purpose of company reorganisation.

method.[13] That is to say, the meaning of efficiency is determined not just by its affinity with a particular context but also by its compatibility with one's methodological inclinations.

An example of a methodological question concerns whether economic value is objective and therefore measurable by third party external observers, or whether it is subjective and is only ascertainable by the individuals making an economic decision. The notion of valuation is fundamental because it enables alternative courses of action to be compared to inform decision-making, such as how to proceed with the assets of an insolvent company. This methodological question is important precisely as efficiency assessments are often made by third parties such as insolvency administrators, although differences in methodological opinion on the objectivity – and hence, measurability – of value affects whether efficiency can and how it is to be ascertained.

The thesis examines the methodologies of mainstream neoclassical and Austrian economics in particular. Both economic schools take contrary positions on valuation, among other methodological considerations. The fact that economic methodology is not homogeneous across the various schools opens up the possibility for one to disagree with the method underlying an efficiency criterion, especially where it differs from one's own methodological commitments. This conflict between methods is significant to the extent that one will not endorse the use of a specific criterion, even if it is affined with a particular insolvency perspective.

This potential for discordance between insolvency jurisprudence and economic method in clarifying the meaning of efficiency is crucial to answering the thesis question. In response to how 'efficiency' is determined in the insolvency context, the thesis argues for a framework that requires the concordance of its associated insolvency law perspective with one's economic methodological position. If the efficiency criterion (or criteria) associated with an insolvency perspective is incompatible with one's own position on economic method, then efficiency is not properly defined for a particular context. Otherwise, efficiency is properly defined.

1.2 Research Question and Structure

The thesis seeks to answer the question:

How is 'efficiency' determined in the insolvency context?

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[13] In this thesis, 'method', 'economic method', 'methodology' and 'economic methodology' are used interchangeably.

It argues that the answer lies in the conjunction of insolvency jurisprudence and economic method. It makes two important arguments. First, the context for understanding what efficiency means is provided by the perspectives of insolvency law (the jurisprudence component). Second, whether this understanding of efficiency is endorsed for use depends upon its compatibility with one's position on economic method (the economic method component). The thesis is divided into three Parts to address these arguments sequentially. The structure of the thesis is as follows.

Part I

Part I addresses the first of the two arguments by discussing the affinities between specific insolvency law perspectives and particular efficiency criterion (or criteria). Each of Chapters 2 to 4 demonstrates that the objectives of insolvency law under a particular perspective frame what 'efficiency' is implied to mean in pursuing them. Chapter 2 discusses insolvency law from an economic theory perspective whereas Chapters 3 and 4 take the discussion from a social benefit one.[14] More specifically, Chapter 2 discusses the contractarian perspective of insolvency law and reveals its affinity with the wealth maximisation efficiency criterion. Since contractarianism primarily seeks to obtain the best outcomes for creditors, usually measured by the level of monetary returns to them, it is affined with the wealth maximisation criterion since greater efficiency is associated with achieving more of that insolvency perspective's dominant goal. Wealth maximisation is subsequently described, with a discussion of its shortcomings to practical application.

Chapter 3 discusses the insolvency perspective of communitarianism and demonstrates its affinity with transaction cost efficiency. As the communitarian perspective considers distributional justice issues apart from mere creditor wealth maximisation, the relevant efficiency criterion is one that refers to the costs involved in effectuating a set of goals. Consistent with communitarianism, transaction cost efficiency is not concerned with maximising wealth *per se* and where greater efficiency enables more communitarian goals to be achieved. The criterion is described, together with a discussion of its shortcomings to practical application. A brief comparison is made with the wealth maximisation criterion owing to their complementary relationship.

Whilst the previous chapters explore perspectives with a single efficiency criterion, Chapter 4 discusses the multiple values approach that has an affinity with both transaction cost and Kaldor-Hicks efficiency. Like communitarianism, the multiple values approach considers that insolvency law seeks to fulfil a number of objectives; so efficiency can be measured by reference to the

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[14] This categorisation is due to Thomson Legal & Regulatory, *Crutchfield's Corporate Voluntary Administration*, at 10 October 2014) [10.160], [10.180].

transaction costs involved in effectuating them. The Kaldor-Hicks efficiency criterion that weighs the utility gains from changes in the allocation of economic resources against its utility losses is also appropriate since it considers that not all values can be assigned a monetary value. Efficiency can instead be measured by judging potential courses of action according the level of welfare gains they generate, where gains in societal welfare translate to higher efficiency. The Kaldor-Hicks criterion is discussed in more detail with its shortcomings to practical application. A brief comparison is also made with the wealth maximisation criterion as it is a variant of Kaldor-Hicks.

Part II

Having demonstrated that insolvency jurisprudence provides the context for understanding what efficiency means, Part II introduces the thesis' second argument that whether these efficiency criteria are to be endorsed for use depend upon their compatibility with one's position on economic method. (Part III formally discusses the subject of compatibility.) Chapter 5 addresses the topic of economic methodology and how it affects the properties of efficiency. It distinguishes mainstream neoclassical from Austrian economics on four methodological points. These are on valuation, argumentation, equilibrium and entrepreneurship, and the future. Among other reasons, Austrian economics is contrasted against the mainstream because its methodology is distinct from all other economic schools, making it a prime candidate for illuminating how method affects the endorsement of efficiency criteria. Subsequently, the chapter argues that the efficiency criteria of Part 1 have properties aligned with mainstream economic methodology.

Chapter 6 extends the methodological discussion of Chapter 5 to what the thesis terms the 'rights–efficiency interaction.' It asks whether modifications to the rights of property owners, such as compromises to the rights of secured creditors in insolvency, can promote efficiency. The response varies with one's methodological position. Again, the chapter argues that the efficiency criteria of Part I demonstrate the mainstream rights–efficiency interaction. The thesis points out that over Chapters 5 and 6, it is already possible to see that an efficiency criterion aligned with mainstream economic methodology materially differs from one that assumes the Austrian method.

Part III

So long as one adopts a mainstream position on method, one can endorse efficiency criteria aligned with the said methodology in both their properties and rights–efficiency interaction; namely, all of the efficiency criteria of Part I. But what if one disagrees with the mainstream? This is the focal point of Part III that further develops the thesis' second argument by addressing the conflict that arises when efficiency criteria are not appropriate for use because of methodological reasons.

To demonstrate this potential for conflict, Chapter 7 hypothesises an insolvency perspective that is affined with a non-mainstream – specifically, Austrian – efficiency criterion. This perspective is termed 'Austrian contract-centrality' with the corresponding criterion of 'dynamic efficiency.' Austrian contract-centrality upholds the initial debtor-creditor contract in resolving disputes over claims in insolvency and with regard to decisions surrounding the fate of the company. It is affined with dynamic efficiency as both are focused upon enforcing contracts made around security, both in and out of insolvency. The chapter describes the dynamic efficiency criterion with its methodological properties and rights–efficiency interaction, and discusses its shortcomings to practical application.

The relevance of Austrian contract-centrality is brought to light in Chapter 8 when compared with the other three established insolvency perspectives. This chapter formally introduces the jurisprudence–method framework for determining the contextualised and endorsed meaning of efficiency. To wit, while the context for understanding what efficiency means is provided by the insolvency perspectives (the jurisprudence component), whether this understanding of efficiency is endorsed for use depends upon its compatibility with one's position on economic method (the economic method component). At times, the legal and economic components may discord with each other, as demonstrated by upholding Austrian contract-centrality and mainstream efficiency criteria or any of the three insolvency perspectives and Austrian dynamic efficiency simultaneously. It is in the difficulty of resolving this jurisprudence–method discord that the thesis argues for the concordance between both components to determining the meaning of efficiency. This analysis is then applied to determining what efficiency means in the Australian voluntary administration context for a practical application of the jurisprudence–method framework.

Finally, Chapter 9 summarises and concludes the thesis.

1.3 Limitations and Significance

There is much that is glossed over in singling out only two components – insolvency jurisprudence and economic methodology – for understanding efficiency, especially where the debates within both are worthy of consideration in themselves. There are also other angles to adopt in the endeavour to clarify efficiency, such as by extending the jurisprudence–method conjunction to the purpose of law. For instance, Austrian school proponent Friedrich Hayek views the purpose of law differently from Richard Posner, who uses mainstream neoclassical economics in the Law and

Economics framework.[15] The different views on the purpose of law, in addition to those on economic methodology, can be associated with different conceptions of efficiency. The same applies to theories of property rights and of contracts as the Austrian view differs from neoclassical economics (as will be noted later), although the thesis does not address the debates regarding these theories. A limitation of the thesis is thus that it merely seeks to analyse the conjunction of a subset comprising of four insolvency law perspectives and the method of two economic schools.[16]

The thesis also restricts the methodological exploration of efficiency to a subset of differences between the neoclassical and Austrian economic schools. Nevertheless, they are sufficient for providing a general background of how method affects the properties of efficiency in the author's opinion. Further, the thesis considers only a selection of the more relevant shortcomings to the practical application of each efficiency criterion. These delineations are necessary in order to make a comparative analysis at first instance.

Restricted though it may be, the jurisprudence–method framework for determining the meaning of efficiency is a hitherto neglected course of developing the theoretical insolvency literature. While the merits of particular efficiency criteria are disputed, methodological considerations are notably lacking.[17] References to efficiency criteria often presuppose mainstream economic methodology without much question. By explicitly considering how method can endorse or oppose particular efficiency criteria, the thesis encourages giving pause for thought to the way that policy proposals are affected by the decision-maker's stance on both economic method and insolvency jurisprudence.

1.4 Background: The Significance of Clarifying Efficiency in Corporate Insolvency

To provide a backdrop for the analysis that follows, this section presents a select literature review around the use of the term 'efficiency' from both international and domestic sources on insolvency law. Notably, efficiency is often referred to without clear guidance on what it means, thereby highlighting the thesis' significance in endeavouring to clarify this notion.

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[15] See generally Todd Zywicki and Anthony Sanders, 'Posner, Hayek, and the Economic Analysis of Law' (2008) 93 *Iowa Law Review* 559, for a Hayek versus Posner comparison.

[16] Other perspectives of insolvency law, apart from the most common law and economics theory of contractarianism and communitarianism, include the forum and ethical visions (Finch, above n 12, 38-40). The thesis specifically focuses on the contractarian, communitarian and multiple values approach since they cover the economic and social benefit approaches, together with more values-based ones, as a sample of the spectrum of insolvency perspectives in the literature.

[17] Mokal, for one, has critiqued the Pareto and Kaldor-Hicks efficiency criteria and provides reasons for advocating the transaction cost efficiency criterion in insolvency law (Mokal, above n 7, 23). Nevertheless, his critique has more to do with technical and moral problems of the criteria rather than due to methodological reasons.

With respect to international sources, in the 1999 report of the International Monetary Fund, entitled *Orderly & Effective Insolvency Procedures: Key Issues*, the terms 'efficient' and 'efficiency' occur multiple times without specific definition.[18] The most relevant occurrence that hints at what efficiency might refer to is found in the following quote, with respect to the speed of arriving at a decision regarding the fate of the company:

> **Efficiency**
>
> An insolvency proceeding is a dynamic process. Unlike many other adjudicative proceedings, which involve an inquiry into historical events, an insolvency proceeding takes place in 'real time': delays in a court's adjudication can have an adverse effect on the value of the assets or the viability of the enterprise. *It is therefore critical that procedures be put in place to ensure that hearings can be held quickly and that decisions are rendered soon thereafter*. Similarly, it is critical that an *accelerated appeal process* be available. In any event, during the period of appeal, the lower court's decision should normally continue to be binding.[19]

Efficiency here appears to relate to the speed taken to deal with insolvency, where the faster the process of insolvency administration, the lower its cost and the higher its efficiency.[20] This interpretation has intuitive appeal as delays in decision-making can threaten the level of asset recovery and hasten asset deterioration. Efficiency by reference to speed is also implied in the *Legislative Guide on Insolvency Law* prepared by the United Nations Commission on International Trade Law (UNCITRAL). Its purpose is 'to assist the establishment of an efficient and effective legal framework to address the financial difficulty of debtors.'[21] One of the key objectives of an effective and efficient insolvency law in the *Legislative Guide* is found in Objective 5:

> Insolvency should be addressed and resolved in an orderly, quick and *efficient* manner, with a view to avoiding undue disruption to the business activities of the debtor and to minimizing the cost of the proceedings. Achieving timely and *efficient* administration will support the objective of maximizing asset value, while impartiality supports the goal of equitable treatment. The entire process needs to be carefully considered to ensure maximum *efficiency* without sacrificing flexibility. At the same time, it should be focused on the goal of liquidating non-viable and *inefficient* businesses and the survival of *efficient*, potentially viable businesses.[22]

A cursory reading of the above paragraph suggests that not all of the instances of 'efficiency' equate to each other. In the last sentence, the context of 'efficient' appears to differ from its prior occurrences. Efficiency refers not so much to speed as to perhaps the value, worth, cost-

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[18] Legal Department of the International Monetary Fund, *Orderly & Effective Insolvency Procedures: Key Issues* (1999) <http://www.imf.org/external/pubs/ft/orderly/.

[19] Ibid (emphasis added).

[20] Ringe, for instance, acknowledges efficiency to refer to speed: 'I take efficiency to mean a speedy process designed to allocate the available resources to their best use.' (Wolf-Georg Ringe, 'Strategic Insolvency Migration and Community Law' in Wolf-Georg Ringe, Louise Gullifer and Philippe Théry (eds), *Current Issues in European Financial and Insolvency Law: Perspectives from France and the UK* (Bloomsbury, 2009) 71, 91).

[21] United Nations Commission on International Trade Law, *Legislative Guide on Insolvency Law* (2005) 1 [1].

[22] Ibid 12 [8] (emphasis added).

effectiveness or profitability of the business (and even then, it is not clear that this is indeed what 'efficient' refers to). In this sense, a company that is 'inefficient' can mean that its resources are potentially more valuable in alternative uses.[23] Further, when it is stated that 'The entire process needs to be carefully considered to ensure maximum efficiency without sacrificing flexibility,' efficiency can be interpreted to mean something along the lines of effectiveness, referring to the successful attainment of most of the goals, or that the means used are the most suitable to reach the goals. It can alternatively refer to efficiency as filtering, where the insolvency process is efficient if it successfully discriminates between 'efficient' firms that are suitable candidates for reorganisation and 'inefficient' ones that are not.[24] However, this understanding of efficiency first presupposes an initial definition of efficiency that may be in terms of whether the resources are most valued inside or outside of the company, itself requiring clarification.

Efficiency as cost saving is again a recurring theme, as exemplified by the World Bank in its *Principles and Guidelines for Effective Insolvency and Creditor Rights Systems* document. There are multiple references to efficiency in both the 2001 and the revised 2005 versions of the document that are generally consistent with the legislative guidelines set by UNCITRAL on insolvency laws.[25] Again, guidance on what efficiency means in specific terms is lacking.

In Australia, the Law Reform Commission *General Insolvency Inquiry* of 1988 (also known as the Harmer Report) appears to contextualise efficiency by reference to speed.[26] In it, the Commission held that the development of a modern insolvency law should be guided by a number of principles that it has identified in Discussion Paper 32.[27] These principles guided the development of the new voluntary administration (VA) procedure that was unavailable at the time and are helpful in understanding why VA has the structure it does.[28] One of the principles is efficiency: '(iii) That an insolvent administration should be impartial, *efficient* and expeditious.'[29] By itself, there is little

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[23] White considers this understanding of efficiency in her paper. See Michelle White, 'Does Chapter 11 Save Economically Inefficient Firms?' (1994) 72 *Washington University Law Review* 1319.

[24] Efficiency as filtering is one understanding provided in the US literature by White (ibid) and Michelle White, 'Corporate Bankruptcy as a Filtering Device: Chapter 11 Reorganizations and Out-of-Court Debt Restructurings' (1994) 10 *Journal of Law, Economics, and Organization* 268, and outside of the US by Xavier Giné and Inessa Love, 'Do Reorganization Costs Matter for Efficiency? Evidence from a Bankruptcy Reform in Colombia' (2010) 53 *Journal of Law and Economics* 833.

[25] World Bank, *Principles and Guidelines for Effective Insolvency and Creditor Rights Systems* (2001) <http://www.iiiglobal.org/component/jdownloads/finish/352/4167.html>; World Bank, *Principles for Effective Insolvency and Creditor Rights Systems* (2005) <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/04/20/000334955_20090420051400/Rendered/PDF/481660WP0FINAL10Box338887B01PUBLIC1.pdf>.

[26] Law Reform Commission, *General Insolvency Inquiry*, Discussion Paper No 32 (1987); Law Reform Commission, *General Insolvency Inquiry*, Report No 45 (1988) ('Harmer Report').

[27] Law Reform Commission, *General Insolvency Inquiry*, Discussion Paper No 32, above n 26; Harmer Report [33].

[28] Voluntary administration is contained in *Corporations Act 2001* (Cth) pt 5.3A.

[29] These principles are taken from the Harmer Report [33] (emphasis added).

guidance as to what 'efficiency' might mean apart from being distinguished from 'impartial' and 'expeditious.' Other principles around principle (iii) can be taken to provide the context for defining efficiency, for instance principle (ii) ('That insolvency law should provide mechanisms that allow debtors and creditors to participate with the *least delay and expense* as possible') and principle (iv) ('That the law should provide a *convenient means* of collecting or recovering property that should be applied in paying the debts and liabilities of the insolvent person.').[30] Jointly, 'efficient' can mean that the process of dealing with insolvency in voluntary administration be both cost- and time-saving.

Following the Harmer Report, the Corporate Law Reform Bill 1992 Explanatory Memorandum notes that the overall aim of the reforms in implementing the Harmer Report recommendations is to make corporate insolvency laws operate more efficiently and effectively than before.[31] There are multiple references to efficiency and the majority of these occurrences again refer to both speed and cost considerations.[32] Similar references to speed and cost can also be found in the Parliamentary Joint Committee on Corporations and Financial Services Report of 2004, as in the following statements:

> The provisions of the Corporations Act that deal with corporate insolvency are primarily concerned with *efficient* procedures for the winding up of companies, the orderly realisation of the available assets of those companies and the equitable distribution of the proceeds to creditors (including employees) and shareholders. They include procedures governing corporate rescue or reorganisation (as an alternative to liquidation) set out in Part 5.3A of the Corporations Act.[33]
>
> Because [insolvency] almost invariably involves financial loss, there is a public interest in ensuring that the economic adversity of insolvency is limited, resources are *efficiently* re-allocated to more productive uses and confidence in the workings of fair and *efficient* markets and the corporate sector is maintained.[34]
>
> Companies that are beyond the point of rescue, or that should be brought to an end, should be liquidated promptly and *efficiently*.[35]

In any case, despite the frequency of its usage, there is no entry for either 'efficient' or 'efficiency' in Section 9 of the *Corporations Act 2001* (Cth) (the dictionary). Deference to the Encyclopaedic Australian Legal Dictionary neither provides much guidance. The definition of efficiency may

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[30] Ibid (emphasis added).
[31] Explanatory Memorandum, Corporate Law Reform Bill 1992 (Cth) [14].
[32] See, eg, ibid [450] (emphasis added):
    Proposed section 435A [voluntary administration] will also recognise that, no matter how *efficiently* the new administration procedure operates, there will be cases where it is not possible to save a company or its business. In this situation, the object of the new provisions will be to provide for a fair and *efficient* winding up, and in particular one that results in a better return for the company's creditors and members than would result from an immediate winding up of the company.
[33] Parliamentary Joint Committee on Corporations and Financial Services, Parliament of Australia, *Corporate Insolvency Laws: A Stocktake* (2004) 9 [2.4] (emphasis added).
[34] Ibid 23 [3.2] (emphasis added).
[35] Ibid 78 [5.26] (emphasis added).

nevertheless be inferred from other terms in the encyclopaedia although there is no definition for the concept *per se*.[36] The closest inference is derived from the entry on 'efficient resource allocation,' quoted at length here:

> A fundamental economic principle that resources should be rationed or allocated in the most productive or beneficial way. The need for efficient resource allocation arises because of the scarcity of resources. As there is a scarcity of environmental resources, there is a need to ration them with a view to efficiency and equity. For example, under the principle, it may be asked whether it is more efficient for an activity to occur which results in environmental degradation (giving rise to costs to society) or for it to occur in a manner which minimises the damage (and resultant costs) though the damage prevention measures increases costs at the initial point when the activity is carried out.

Efficiency, as inferred from above, can be taken to mean a kind of ends-efficiency in resource allocation that involves balancing costs and benefits to attain the most valuable outcome.

In summary, the foregoing occurrences of 'efficiency' generally relate to cost, speed and more valuable outcomes of an insolvency regime.[37] Despite its importance, as exemplified by its frequent mention in the aforementioned documents, efficiency is often not specifically defined.[38] This lack of clarity can affect insolvency legislation that seeks to increase the efficiency of insolvency regimes, since differences in the meaning of efficiency can imply different prescriptions. In economic theory, not all conceptions of efficiency relate to the sort mentioned above because it is not always determined by reference to objectively measurable costs, speed or a common conception of social efficiency.[39]

It is with the aim of clarifying this vaguely-employed notion that the thesis proceeds onto Part I that addresses the first step in contextualising its meaning.

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[36] In the dictionary are three entries starting with efficient, namely efficient market theory, efficient portfolio and efficient resource allocation, but there is no entry for 'efficiency' (see Butterworths, *Encyclopaedic Australian Legal Dictionary* (at 1 October 2014)).

[37] See generally Edith Hotchkiss et al, 'Bankruptcy and the Resolution of Financial Distress' in B E Eckbo (ed) *Handbook of Corporate Finance: Empirical Corporate Finance* (Elsevier/North-Holland, 2008) vol 2, ch 14 (where the efficiency of the mechanisms used to resolve insolvency can be measured by the time taken in the process of the asset and debt restructuring or the liquidation).

[38] This is especially where efficiency is known by specific names, such as Pareto or Kaldor-Hicks efficiency, in economic theory proper.

[39] See Chapter 5.

Part I

Part I addresses the first of the two arguments the thesis seeks to make by demonstrating how insolvency jurisprudence contextualises an understanding of efficiency. To do this, each of Chapters 2 to 4 discusses the affinities between specific perspectives of insolvency law and particular efficiency criterion (or criteria). The criterion (or criteria) is subsequently described in more detail, including their shortcomings to practical application. This is to express that no efficiency criterion is perfect nor always trumps the usefulness of that of others.

CHAPTER 2

Contractarianism and Wealth Maximisation

The aim of this chapter is to present the insolvency perspective of contractarianism and demonstrate its affinity with the wealth maximisation efficiency criterion. It then describes the criterion in more detail and applies it to the insolvency context, noting the shortcomings encountered in the process.

2.1 Contractarian Perspective of Insolvency Law

One way of viewing the role of corporate insolvency law is through a contractual perspective that focuses on the rights of debtors and creditors that result from their contractual relationship. This is arguably the most prominent law and economics theory of insolvency law, described by the Creditors' Bargain Model (CBM) that focuses on maximising the wealth of those who invested in the debtor, namely, the creditors.[1] This Bargain approach treats insolvency law as fundamentally a collective debt-collection proceeding that is only necessary absent a sole owner of the assets of the company.[2] It seeks to solve a common pool problem brought on by multiple creditors looking to enforce their claims over a common and limited pool of assets. The aim is to improve creditor outcomes by enhancing their collection efforts and by maximising the value of the asset pool.[3]

The CBM is a hypothetical *ex ante* bargain. In this view, insolvency law should be seen as a system that is designed to mirror the agreements that creditors are expected to arrive at among themselves if it were possible for them to negotiate such agreements before any lending occurs.[4] It is argued that the creditors would choose a compulsory collective procedure that enables them to act as if they were the sole owner of the assets and determine a way of realising their highest value.[5] This involves and justifies the (compulsory) collective proceeding that freezes the rights of the firm's investors in order to solve the collective action problem and to value and distribute the assets

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[1] See Thomas Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain' (1982) 91 *Yale Law Journal* 857; Robert Rasmussen, 'The Efficiency of Chapter 11' (1991) 8 *Bankruptcy Developments Journal* 319, 323. Rasmussen refers readers to the works of Thomas Jackson, *The Logic and Limits of Bankruptcy Law* (Harvard University Press, 1986) 20-7; Douglas Baird, 'A World without Bankruptcy' (1987) 50 *Law and Contemporary Problems* 173; Robert Scott, 'Through Bankruptcy with the Creditors' Bargain Heuristic' (1986) 53 *University of Chicago Law Review* 690, 700-7. 'Creditors' refer to the individuals 'who, outside of bankruptcy [(corporate insolvency)], have property rights in the assets of the firm.' (Douglas Baird and Thomas Jackson, 'Corporate Reorganizations and the Treatment of Diverse Ownership Interests: A Comment on Adequate Protection of Secured Creditors in Bankruptcy' (1984) 51 *University of Chicago Law Review* 97, 103).
[2] Jackson, *The Logic and Limits of Bankruptcy Law,* above n 1, 3.
[3] Baird and Jackson, above n 1, 108, write that the question of how a company's assets are to be deployed should be separate from how they are to be distributed.
[4] Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain', above n 1, 860.
[5] Ibid 864-65.

according to an agreed-upon priority scheme.[6] Nevertheless, variations to existing pre-insolvency rights are possible (such as overriding the remedies of individual creditors outside of insolvency), but they are justified only when those rights interfere with group advantages related with creditors acting jointly.[7]

This analysis also extends to corporate rescue. It is treated as a different kind of collective proceeding where 'rights are frozen and ownership interests reallocated according to nonbankruptcy entitlements.'[8] But rescue can only be justified if the investors before the fact would, if they could, agree to a hypothetical asset sale (in rescue) rather than an actual one (in liquidation).[9] (In liquidation, the asset sale is real since the ownership rights to the company's assets are sold on the open market to third parties, whereas the sale is hypothetical in a reorganisation as the rights are effectively transferred to the old owners in exchange for cancelling their pre-insolvency entitlements.[10]) This caveat exists because corporate rescue does not always maximise value for creditors over liquidation due to the high costs involved, and more so when a successful rescue is likely to be infrequent.[11] Further, collective action is not always in the interests of the creditors as a group where individual action is unlikely to impair the value of the company's assets.[12]

This is because a collective proceeding incurs costs beyond those of the procedure itself. As an example, a secured creditor's ability to seize collateral controls debtor misbehaviour to the benefit of all parties. But the same parties may be made worse off where secured creditors are prevented from doing so in favour of a trustee that supervises the assets of the estate, even if the secured creditor's priority right is adequately protected.[13] Consequently, rescue, with its attendant interference in the rights of secured creditors, is only chosen over liquidation where it yields a higher total dollar-equivalent return from the company's assets; a result that is consistent with the CBM.[14]

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[6] Douglas Baird, 'The Uneasy Case for Corporate Reorganizations' (1986) 15 *Journal of Legal Studies* 127, 131. See also Jackson, *The Logic and Limits of Bankruptcy Law,* above n 1, ch 1-2.

[7] Vanessa Finch, *Corporate Insolvency Law: Perspectives and Principles* (Cambridge University Press, 1st ed, 2002) 28-29; Baird and Jackson, above n 1, 100.

[8] Baird, above n 6, 133.

[9] Ibid 127-8.

[10] Ibid 127. More accurately, Baird writes that 'In a [US] Chapter 7 proceeding the sale is real; in a [US] Chapter 11 proceeding the sale is hypothetical': at 127. This is also generalisable to a liquidation and corporate rescue context.

[11] Jackson, *The Logic and Limits of Bankruptcy Law,* above n 1, 212; Kylie Lightman, 'Voluntary Administration: The New Wave or the New Waif in Insolvency Law?' (1994) 2 *Insolvency Law Journal* 59, 73).

[12] Baird, above n 6, 135.

[13] Ibid. Importantly, the contractarian perspective does not assume that secured credit (in its form at the time of writing their piece) is worth having or is easily justifiable but rather only notes the fact that it exists (Baird and Jackson, above n 1, 110-11).

[14] Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain', above n 1, 895.

For this reason, the chapter argues that when the contractarian perspective talks about 'efficiency,' it refers to a criterion that seeks to maximise social wealth as its focal point.[15] An increase in wealth maximisation efficiency is consistent with achieving a greater extent of the chief objective of contractarianism that is likewise wealth maximisation for the specific group of creditors. They are the owners of the firm when it becomes insolvent and insolvency law therefore ought to work to their benefit.[16] Schwartz more specifically writes that social wealth is maximised by way of the instrumental goal of minimising the cost of debt capital that is in turn facilitated by maximising the expected returns to creditors in insolvency.[17]

In sum, the primary objective in the contractarian perspective is to produce better outcomes for creditors in the form of higher returns. This means that an insolvency regime is efficient when it maximises the value of the debtor's assets and minimises the costs of collection for creditors.[18] The next section explores wealth maximisation in more detail, including how it is to be applied in the insolvency context and the shortcomings encountered in doing so.

2.2 Wealth Maximisation Efficiency

2.2.1 Description

The wealth maximisation efficiency criterion states that an efficient law is one that maximises total social wealth (rather than total welfare or utility).[19] Posner writes that

> Efficiency is a technical term: it means exploiting economic resources in such a way that human satisfaction as measured by aggregate consumer willingness to pay for goods and services is maximized. Value too is defined by willingness to pay. Willingness to pay is in turn a function of the existing distribution of income and wealth in the society.[20]

Put another way, resources are efficiently allocated when there exists no reallocation that can increase societal wealth.[21] Because wealth maximisation pertains to the efficiency of an allocation of resources, it is classified as an ends-efficiency criterion. In its technical sense, wealth

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[15] See Paul Cox, 'The Public, the Private and the Corporation' (1997) 80 *Marquette Law Review* 391, 414.
[16] Rasmussen, above n 1, 323-4; Christopher Symes and John Duns, *Australian Insolvency Law* (LexisNexis Butterworths, 2009) 10.
[17] Alan Schwartz, 'A Contract Theory Approach to Business Bankruptcy' (1998) 107 *Yale Law Journal* 1807, 1814.
[18] Rasmussen, above n 1, 324.
[19] This is also be known as the social wealth maximisation criterion (see Gary Lawson, 'Efficiency and Individualism' (1992) 42 *Duke Law Journal* 53).
[20] Richard Posner, *Economic Analysis of Law* (Little, Brown and Company, 1972) 4.
[21] Richard Posner, 'The Value of Wealth: A Comment on Dworkin and Kronman' (1980) 9 *Journal of Legal Studies* 243, 243.

maximisation does not refer to the maximisation of *individual* wealth but rather of society *as a whole*.[22] Wealth is defined as

> the value in dollars or dollar equivalents ... of everything in society. It is measured by what people are willing to pay for something or, if they already own it, what they demand in money to give it up. The only kind of preference that counts in a system of wealth maximization is thus one that is backed up by money-in other words, that is registered in a market.[23]

The stipulation about the marketplace is important. It is used to determine the relative gains and losses that would result from a legal change, where adopting a legal rule is wealth maximising if all individuals who would benefit from it would be willing and able to pay more for its adoption than opponents would be willing and able to pay for it not to be adopted.[24] The use of the marketplace also enables individuals to reduce their preferences to a common currency, in addition to the fact that willingness to pay can measure the intensity of individual preferences, as the best measure of the value of an object to a particular individual is the amount of money they are willing to pay for it.[25] This means that where an individual wishes to acquire an object that yields utility greater than what they can pay for it, wealth maximisation measures the value of an object only to the extent that an individual is both willing and able to make the purchase.[26]

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[22] Suri Ratnapala, *Jurisprudence* (Cambridge University Press, 2nd ed, 2013) 274.

[23] Richard Posner, 'Utilitarianism, Economics, and Legal Theory' (1979) 8 *Journal of Legal Studies* 103, 119.

[24] Herbert Hovenkamp, 'Distributive Justice and the Antitrust Laws' (1982) 51 *George Washington Law Review* 1, 10. See n 46.

[25] Ibid. Posner clarifies that social wealth includes consumer and producer surplus (Richard Posner, 'A Reply to Some Recent Criticisms of the Efficiency Theory of the Common Law' (1981) 9 *Hofstra Law Review* 775, 786). That is, wealth is not just the sum of the market values of all property held but also includes the said surpluses as individuals continue to hold certain items of property because they value those items more highly than the market; furthermore, this surplus is backed up by willingness to pay (Richard Schmalbeck, 'The Justice of Economics: An Analysis of Wealth Maximization as a Normative Goal' (1983) 83 *Columbia Law Review* 488, 492-93). To clarify, the consumer surplus measures the aggregate value that consumers attach to a product over and above the price paid (Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 285). In a similar manner, the producer surplus measures the aggregate value that producers gain from receipts from sales over and above what they are willing to sell for it. It should also be noted that wealth is different from money in that the latter is only a measure of wealth (Richard Posner, 'Wealth Maximization Revisited' (1985) 2 *Notre Dame Journal of Law, Ethics and Public Policy* 85, 85-6). He writes, 'Money… is just a measure of one's entitlement to houses, cars, rewarding work, leisure, privacy and countless other "things" that constitute a person's wealth': at 86.

[26] Hovenkamp, above n 24, 10, n 47. To further clarify how wealth maximisation is different from utility maximisation, a quote from Schmalbeck is provided at length:

> The distinctions among market value, wealth, and utility can be illustrated by imagining that *A* owns a small house in Hollywood having a market value of $150,000. Because *A* has become highly sensitive to smog, the house is not worth $150,000 to him, and he decides to sell it. *B* is insensitive to smog, and needs a home in the Hollywood area. He would pay up to $200,000 for a house like the one *A* owns, though his real estate agent informs him that he can get the sort of house he wants for less. *C* is not only insensitive to smog, but is also much enamored of the possibility of rubbing elbows with movie stars in Hollywood. He would obtain twice the pleasure *B* would receive from owning *A*'s house, but, alas, has neither the cash nor the creditworthiness necessary to pay $150,000. A plausible outcome of this situation is that *A* will sell his house to *B* for $150,000.

> This transaction does not necessarily maximize the aggregate *market* value of all property held. The market value of the house remains the same, or, if anything, declines slightly. Nor does this transaction maximise utility: by assumption, *C* would derive more utility from this house than *B* will. The transaction does maximize wealth, however; after the transaction, the house is held by one who values ownership of that house at $200,000, whereas before the transaction the

At the same time, the use of the marketplace may at times be too costly that it hinders movement to a more wealth maximising resource allocation. Whilst the principle of wealth maximisation implies that there be free markets to enable individual rights to be reassigned over time (according to Posner), there should also be legal rules that simulate the operations of the market when the costs of transacting in the marketplace are prohibitive.[27] That is to say, legal rules that intervene in and rearrange individual rights can effectuate a more wealth maximising allocation of resources that is otherwise unachievable due to the costs involved in voluntary negotiations and exchange. But any interference is in a constrained form. In Posner's view, the only basis for interfering with the economic and personal liberty of individuals is where the market fails to operate momentously because of the prohibitive costs of transacting to an extent that societal wealth can be increased by public coercion (that is itself costly).[28]

2.2.2 Application to Insolvency and Shortcomings

In the insolvency context, wealth maximisation is typically applied towards a specified group of individuals, generally creditors, who are the subjects of an efficiency analysis. Determining if one insolvency regime is more efficient than another asks whether the allocation of the company's resources in the former results in higher net social wealth than the latter over the same time horizon (in terms of the expected returns to creditors discounted to the present). This view of efficiency is one of the most commonly understood in the insolvency literature, as reflected in one of the key objectives of insolvency law specified in the UNCITRAL *Legislative Guide on Insolvency Law*:

> The first key objective of *maximization of value* is closely linked to the balance to be achieved in the insolvency law between liquidation and reorganization. An insolvency law needs to balance the advantages of near-term debt collection through liquidation (often the preference of secured creditors) against preserving the value of the debtor's business through reorganization (often the preference of unsecured creditors and the debtor).[29]

While the criterion appears straightforward, there are shortcomings that hinder practical application. Suppose that a third party observer, who is external to the debtor and creditors, wishes to gauge the relative efficiency of corporate rescue vis-à-vis liquidation. Here it is important to distinguish between two approaches to wealth maximisation. The first is *creditor* wealth maximisation that

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house was held by one who valued it at less than $150,000 (he would not otherwise have sold at that price). That this is the maximum increase can be inferred from the fact that no one outbid *B* for the house.

Schmalbeck, above n 25, 492-3 (citations omitted).

[27] Posner, above n 23, 127.

[28] Ibid 130.

[29] United Nations Commission on International Trade Law, *Legislative Guide on Insolvency Law* (2005) 11 [6] (emphasis added).

focuses on the expected returns to creditors in liquidation and rescue.[30] The second is *stakeholder* wealth maximisation that considers the expected monetary dollars to all stakeholders in both insolvency regimes, including accounting for the externality effects of choosing either.[31]

To calculate efficiency in either approach, the first step is to assemble and compare the relevant values for consideration. Examples are the expected market prices of the assets and the forecasts of future streams of returns in rescue and liquidation. Herein lies the first shortcoming: the information requirements for computing wealth maximisation efficiency are high. This is especially so in the stakeholder wealth maximisation approach. While individuals seek out the relevant information on costs and benefits to inform their choices, they often maximise their own wealth without considering the impact of their decisions on the rest of the economy. However, wealth maximisation takes an aggregate perspective where the third party observer must consider all external effects in determining the allocation of resources that maximises societal wealth as a whole.

This includes considering that one source of efficiency may have to be traded off against another although the magnitude of both may be indeterminate and indeterminable.[32] An example is how the efficiency of the insolvency regime affects the efficiency of the credit market. Credit market efficiency in turn affects the cost of credit that itself affects the amount of economic activity and employment.[33] However, it can be difficult to gauge the likely magnitudes of the competing concerns especially where they are not necessarily demonstrable empirically, raising the issue of

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[30] Another potential name is 'revenue efficiency,' as in Francesca Cornelli and Leonardo Felli, 'Ex-Ante Efficiency of Bankruptcy Procedures' (1997) 41 *European Economic Review* 475, 477, who write that 'A bankruptcy procedure is revenue efficient if it maximizes the sum of all creditors' proceeds.'

[31] Here, rescue is expected to be more wealth maximising in the societal sense if the benefits that accrue to the relevant parties plus any externalities generated on others (such as the benefits that accrue to employees for continued employment) exceeds its cost (the potential loss to the economy from the resources not flowing to another potentially more productive venture).

[32] Schmalbeck, above n 25, 505. He writes at 504 that

> It is one thing for a court to determine, say, that A agreed to pay B three dollars in exchange for a book, and failed to do so upon tender of the book. It is quite another to determine all of the secondary and tertiary economic effects of all of the possible outcomes of the dispute presented. Economic analyses even of very simple legal problems often involve identifying – and, more importantly, estimating the magnitude of – externalities (costs and benefits accruing to persons other than the parties), transaction costs, information costs, risk preferences, etc.

Stringham concurs that there can be large information problems in the calculation of efficiency (see Edward Stringham, 'Kaldor-Hicks Efficiency and the Problem of Central Planning' (2001) 4 *Quarterly Journal of Austrian Economics* 41, 45).

[33] See Robert Rasmussen and David Skeel Jr, 'The Economic Analysis of Corporate Bankruptcy Law' (1995) 3 *American Bankruptcy Institute Law Review* 85, 87. There are studies that seek to examine the relationship between creditor rights protection and credit market efficiency, where one expression is in the form of cheaper credit. It is argued that the protection of creditor rights is important for credit market development and performance, however the view that creditor protection promotes *ex ante* efficiency (in terms of the efficient performance of the credit market) is not undisputed (See, eg, the works of Rafael La Porta et al, 'Legal Determinants of External Finance' (1997) 52 *Journal of Finance* 1131; Rafael La Porta et al, 'Law and Finance' (1998) 106 *Journal of Political Economy* 1113; Cornelli and Felli, above n 30, 477; Martin Jacobson, 'The Secured Creditor's Right to Full Liquidation Value in Corporate Reorganization' (1975) 42 *University of Chicago Law Review* 510, 526-27; Atilano Jorge Padilla and Alejandro Requejo, 'The Costs and Benefits of the Strict Protection of Creditor Rights: Theory and Evidence' (Working Paper No R-384, Inter-American Development Bank, 2000) <http://www.iadb.org/res/publications/pubfiles/pubR-384.pdf>).

whether efficiency can be reckoned.[34] This may be partially resolved by waiting for more data to arrive. But the problems of procuring the appropriate data can lead to a paradox where the information costs of applying wealth maximisation are so high that the wealth maximising strategy is to give up wealth maximisation as a guiding principle of efficiency.[35]

Perhaps fortunately, efficiency within contractarianism is more closely related to the first approach of creditor wealth maximisation, since heavier emphasis is placed upon enhancing returns for creditors than on the interests of those further removed from the immediate debtor-creditor relationship. Yet this does not render the information problems more manageable in practice. They are particularly acute in hypothetical markets and where prices are absent.[36] The absence of market prices *per se* is not necessarily problematic in instances where they are not yet necessarily formed, such as when launching a new product to the market. Nevertheless, without market or quasi prices, exchange has no effect on wealth because an exchange of one good for another neither increases nor reduces wealth.[37] It is possible to infer in an exchange that the individual prefers the good obtained to the good given up in exchange (thereby increasing utility from exchange), but nothing can be said about whether the exchange has increased wealth for anyone without prices.[38]

This shortcoming is relevant since one way of viewing corporate rescue is as a hypothetical sale of the company to current owners (where existing claimants exchange their claims or interests for cash or new claims against the reorganised company) as opposed to an actual sale of the company in the market (liquidation).[39] Whether a hypothetical sale is more advantageous to creditors than an actual one is debatable. It raises the question of why creditors are likely to prefer a stake in the reorganised firm where valuation is determined by a judicial (or other third party) figure as opposed to the current cash value of their interests as determined by market decision-makers such as buyers.[40]

An illustration in the Australian voluntary administration context develops this problem of information further. The voluntary administrator is tasked with comparing the expected monetary

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[34] Schmalbeck, above n 25, 505; see also Mario Rizzo, 'The Mirage of Efficiency' (1979) 8 *Hofstra Law Review* 641.
[35] Ibid 505-6.
[36] As such, the wealth maximisation criterion does not apply overly well to non-voluntary transactions like torts and crimes due to difficulties in assigning a market value to things that are not traded in voluntary markets (Hovenkamp, above n 24, 11).
[37] Jules Coleman, 'Efficiency, Utility and Wealth Maximization' (1980) 8 *Hofstra Law Review* 509, 523.
[38] Ibid.
[39] This analogy is due to Baird, above n 6, 127 (citations omitted):

> Bankruptcy proceedings take one of two forms, depending on whether ownership rights to the assets are sold on the open market to one or more third parties or whether ownership rights to the assets are transferred to the old owners in return or the cancellation of their prebankruptcy entitlements. The first kind of bankruptcy proceeding, a liquidation, is governed by Chapter 7 of the Bankruptcy Code; the second kind, a reorganization, is governed by Chapter 11. A bankruptcy proceeding always involves a sale of assets followed by a division of the proceeds among the existing owners. In a Chapter 7 proceeding the sale is real; in a Chapter 11 proceeding the sale is hypothetical.

[40] Rasmussen and Skeel, above n 33, 94.

value of the company's prospects in rescue and liquidation. This is defined as the sum of the product of the value of each possible outcome and their probabilities of occurring (for instance, 'Liquidating the company is expected to yield $500 000 with a 70% probability and $100 000 with a 30% probability'). The probabilities sum to one if all possible outcomes are considered. In practice it is difficult, if not impossible, to account for all contingencies and to guarantee that the probabilities are correct since different individuals place different levels of confidence on the outcomes. For simplicity, assuming the aforesaid problems out of the equation, the expected value of following through a particular insolvency regime is calculated as follows:

Expected value = (Probability estimate of outcome 1 x Value of outcome 1)
+ (Probability estimate of outcome 2 x Value of outcome 2) +
… + (Probability estimate of outcome n x Value of outcome n)

Where n = total number of outcomes

Let the total return obtainable for creditors in liquidation be $\$L$. Meanwhile, the expected monetary value of rescue depends on whether the rescue plan succeeds or fails. Let s denote the probability that the rescue attempt will succeed in a deed of company arrangement; hence $(1 - s)$ is the probability of failure and transition to liquidation. Let $\$R$ be the total return to creditors obtainable if the rescue attempt succeeds and let $\$F$ be that in failure (liquidation). The expected monetary value of rescue for any probability value of s is determined as follows:

Expected monetary value of rescue ($) = $Rs + F(1 - s)$

But from where is the voluntary administrator (or any other third party external observer) to find the requisite information about the probabilities of the various outcomes? It can be difficult to determine the value of any of the variables (s, R and F) on a scientific basis for the reason that the future is uncertain. Another way to look at the problem of valuation is to calculate the probability of a successful rescue that will make the expected monetary value of rescue equal to that of liquidation. Denote this s^*. Despite its value being unknown, it is useful to know how high s must be in order for it to yield the same expected value as liquidation. This is done by equating the expected monetary values of liquidation and rescue and solving for s^*:

$Rs + F(1 - s) = L$

$s^* = (L - F) / (R - F)$

If the values of R, F and L are known, then s^* is easily solvable. If s exceeds s^*, then rescue has a higher expected monetary value than liquidation. But again, who determines the level of the variables s, R, F and L? There is not only one possible value for each variable in the presence of

uncertainty.[41] Different individuals have different estimates of R and F in addition to having different risk preferences that affect the estimate of s (for instance, an individual more averse to risk may gauge the probability of a successful rescue to be lower than one who is more optimistic). An additional consideration is that two equivalent sums of money may differ trivially only in their location in space-time, yet one may mean more to the individual than another.[42] The fact that this information can vary across individuals raises the question of how the third party is to decide on an 'unbiased' course of action and to determine all the pieces of information that influence their estimates of s, R, F and L.

Aside from information problems, a second challenge to applying the wealth maximisation criterion is raised by instrumentalism in specifying social wealth as the maximand (the measure to be maximised).[43] Social wealth maximisation may be a goal for either a 'strong' reason (where it may be thought to be something worth having for its own sake; as being a component of value) or a 'weaker' reason (where social wealth may be thought to be an instrument, though not a component, of value).[44] Arguably, because wealth is not something of intrinsic value, arguments that rational individuals under uncertainty would choose to pursue wealth maximisation over other goals are instrumentalist in nature 'because in doing so they would secure a desirable combination of wealth, freedom, security, and happiness, and so on.'[45]

As an instrument – and despite the reasonableness of assuming that creditors highly value obtaining the maximum returns possible – wealth can conflict with individual goals if their real maximand is in fact utility.[46] In other words, the outcome or resource allocation that yields the highest wealth does not necessarily equate to the one that is most highly desired (in utility terms). Indeed, whilst

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[41] Armen Alchian, 'Uncertainty, Evolution, and Economic Theory' (1950) 58 *Journal of Political Economy* 211, 212.

[42] See generally Lawson, above n 19, 73-5.

[43] Posner defines the maximand is wealth: '[I] want to define the maximand more narrowly, as "value" in the economic sense of the term or, more clearly I think, as "wealth."' (Posner, above n 23, 119). However, see generally ibid 94-95 on not being able to be use wealth maximisation as a proxy for welfare-as-preference-satisfaction (utility).

[44] See, eg, Ronald Dworkin, 'Is Wealth a Value?' (1980) 9 *Journal of Legal Studies* 191, 194-95 for a more detailed explanation of both reasons; see also Brian Bix, *Jurisprudence: Theory and Context*, (Sweet & Maxwell, 6th ed, 2012) 220-21.

[45] Coleman, above n 37, 540. Due to shortcomings of instrumentalism, Coleman argues that it is questionable if wealth maximisation is even the highest goal to be pursued. By instrumentalism, wealth is intrinsic and there are other higher goals (for instance, liberty and security) to be pursued. But wealth is assumed as the highest goal here. This is contradictory (see at 526 onwards). This is echoed in Kronman:

> [I]f wealth maximisation is desirable, it is only because it leads to something else which we value for its own sake, and the suggestion that we should sacrifice anything (especially respect for individual rights) because more wealth is good in itself, is absurd. As Dworkin correctly observes, anyone urging this last view is 'a fetishist of little green paper.'

Anthony Kronman, 'Wealth Maximization as a Normative Principle' (1980) 9 *Journal of Legal Studies* 227, 239, quoting Dworkin, above n 44, 201 (citations omitted).

[46] Although utility accounts for welfare more broadly than wealth (see Herbert Hovenkamp, 'Positivism in Law & Economics' (1990) 78 *California Law Review* 815, 840), Posner nevertheless counters that

> Wealth maximisation is, to be sure, imperfectly correlated with utility maximization, but the costs – in uncertainty, in protracted litigation, and in error – of using utility as a legal standard support using wealth as a proxy for it…. A rule utilitarian might use wealth maximization as his rule; this is practice of many economists.

Richard Posner, *The Economics of Justice* (Harvard University Press, 1981) 113.

more objectively measurable than utility, employing wealth is very restrictive of individual preferences, such as risk preferences over different ranges of wealth.

To illustrate, suppose a creditor prefers the surer immediate return (from the company's assets) of $l via liquidation rather than the riskier but potentially higher delayed return of $r in rescue. The voluntary administrator and the creditor will agree on the preferred course of action if both share the same risk preferences, *ceteris paribus*. If the creditor is more averse to risk than the administrator, the creditor prefers the lower amount $l whereas the administrator prefers $r. This demonstrates that a course of action that yields higher monetary benefits can be associated with a lower degree of well-being, again raising the question of whether wealth *per se* or rather well-being should be pursued.[47]

The introduction of uncertainty further complicates the pursuit of wealth maximisation. The foregoing example assumes that the values of $l and $r are known by all relevant parties (namely, the creditor and voluntary administrator) and that the values that go into determining both can be assigned a monetary value and are commensurable, as must typically be done in cost-benefit analysis. Suppose now that $l and $r represent the averages of a *distribution* of potential returns rather than a specific pair of returns. The problem becomes not only determining the values of l and r but also the variance of the distribution of wealth, where a higher variance refers to a larger spread of potential returns. The individual must then choose the distribution that is preferable rather than the maximising one, since this maximum outcome cannot be foreseen.[48] Consequently, practical questions as to *whose* judgment about wealth maximisation is 'most accurate' have to be considered since assessments of probability and risk preferences can differ among individuals.[49] This shortcoming is relevant because it questions whether the third party observer (the voluntary administrator in this example) can select an outcome that in fact maximises wealth.

This brings the discussion to the third shortcoming of the wealth maximisation criterion. Even if the information problems and the debate over maximand can be resolved, it cannot be empirically demonstrated that the resource allocation produced by one insolvency regime is more efficient than another. How creditor returns will actually fare in the other insolvency regime when one regime is chosen can never be known or measured because the alternative was never undertaken.[50] This

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[47] Matthew Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (2000) 28 *Florida State University Law Review* 241, 250, provides an example.

[48] Alchian, above n 41, 212.

[49] Robert Frank, 'Why is Cost-Benefit Analysis So Controversial?' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 251) raises the issue that it is difficult for analysts to estimate costs and benefits in practice, particularly since the methods for doing so (whether using survey methods or by drawing inferences of valuation from market behavior via what is known as hedonic pricing models) encounter difficulties.

[50] This shortcoming is exemplified in the Voluntary Administration setting when O'Flynn and Mainsbridge note that

counterfactual precludes a definitive answer on wealth maximisation efficiency, even with wealth maximisation as a guide.

The fourth shortcoming regards the justifiability of treating individuals as means in the pursuit of the ends of others. An objection frequently raised against cost-benefit analysis (with wealth maximisation as its aim) is that it falls afoul of justice, failing to take proper account of the distribution of costs and benefits.[51] Suppose that a secured creditor *S* owns a security right over the property of a debtor that they will sell for $3000 and an unsecured creditor *U* desires it but can only pay $2000 to acquire it.[52] (The $3000 represents the monetary amount that would make *S* indifferent between maintaining possession of their security right (so that they can appoint a receiver to the insolvent company) and selling it and being treated as an unsecured creditor.) Suppose also that the utility that *U* derives from the possession of the security right is higher than that of *S*, ignoring problems of interpersonal utility comparisons for this example. Although transferring the right from *S* to *U* with or without compensation to *S* may increase total utility, wealth will not be increased in either case (assuming that *S* will sell the right for the same amount that they would pay for its initial acquisition). In this example, wealth maximisation constrains utilitarianism by prohibiting the forced expropriation of *S*'s security right for an amount less than that that *S* would voluntarily agree for sale.[53]

However, wealth maximisation does not impose this constraint on the grounds of respecting *S*'s autonomy but rather leaves the right in *S*'s possession because *U* cannot pay any more for it.[54] If instead *U* would pay $5000 for the said right, wealth is maximised by transferring the right to *U* regardless of whether *S* is compensated for the loss as there is nothing in wealth maximisation itself that requires that *S* be paid compensation.[55] If so, then there are instances that satisfy wealth maximisation but one individual will have had their wealth reduced for the sole purpose of increasing total societal wealth.[56] Wealth maximisation, in short, does not respect individual

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Unfortunately, even the Parliamentary report mentioned above was unable to point to any hard statistical evidence that the large number of VAs transitioning into winding up had resulted in a better return for creditors than would have occurred if the company had simply gone into winding up in the first place (the non-DOCA objective in s 435A(b)).
Karen O'Flynn and Ray Mainsbridge, *Voluntary Administration: The Australian Experience* (2008) 4 <http://www.claytonutz.com/area_of_law/restructuring_and_insolvency/docs/VoluntaryAdministration_TheAustralian Experience.pdf>.

[51] Copp argues that such an equity objection is not problematic for cost-benefit analysis and argues that it is inappropriate to embed a standard of justice in the cost-benefit technique (see David Copp, 'The Justice and Rationale of Cost-Benefit Analysis' (1987) 23 *Theory and Decision* 65).

[52] This example is adapted from Kronman, above n 45, 233-4.

[53] Ibid 234; Richard Posner, 'The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication' (1979) 8 *Hofstra Law Review* 487, 497.

[54] Kronman, above n 45, 234.

[55] Ibid.

[56] Ibid.

autonomy *per se*. This is not so much a technical shortcoming of the criterion, but it is important from an ethical and legal viewpoint since the law considers issues beyond economic ones alone.

The cumulative shortcomings of wealth maximisation efficiency translate to difficulties in applying the criterion in practice. They arise not so much when individuals choose to pursue wealth maximisation for themselves, especially where it may form a part of their goals, but rather when a third party external observer uses the criterion for a group of individuals. Even when contractarianism aims to improve outcomes for creditors, it can be difficult for third parties to determine the actual course of action that achieves this outcome both *ex ante*, due to information problems that are compounded by uncertainty, and *ex post*, due to the problem of counterfactuals.

2.3 Conclusion

This chapter has demonstrated that the contractarian perspective of insolvency law has an affinity for the specific efficiency criterion of wealth maximisation. This is because an increase in efficiency, measured by an increase in social wealth, is consistent with achieving a greater extent of the chief objective of contractarianism of improving creditor outcomes. Another efficiency criterion that appears fitting within contractarianism is transaction cost efficiency, where efficiency is gauged by reference to the costs involved in effectuating a particular allocation of the company's resources. Wealth maximisation is arguably more appropriate of the two in contractarianism owing to how the latter is specified.[57]

Despite its limitations, wealth maximisation appears to fit well with the aim of maximising the benefits to creditors.[58] It makes intuitive economic sense on the surface to measure efficiency by reference to changes in the level of wealth. It is in analysing the criterion more closely that one encounters its shortcomings.

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[57] Section 3.2.2 details the shortcomings of the transaction cost criterion in the contractarian perspective.

[58] In spite of its limitations, Posner also defends the wealth maximisation standard:

> I do not want to stake my all on a defense of the Kaldor-Hicks concept of efficiency [(i.e. wealth maximisation)]. For me the ultimate test of cost-benefit analysis employing that concept is a pragmatic one: whether its use improves the performance of government in any sense of improvement that the observer thinks appropriate.

Richard Posner, 'Cost-Benefit Analysis: Definition, Justification, and Comment on Conference Papers' in Matthew Adler and Eric Posner (eds), *Cost-Benefit Analysis: Legal, Economic, and Philosophical Perspectives* (University of Chicago Press, 2001) 317, 319-20. He adds that 'Cost-benefit analysis need be "founded" on nothing deeper or more rigorous than a showing that it has consequences that we like': at 333.

CHAPTER 3

Communitarianism and Transaction Cost Efficiency

The aim of this chapter is to present the insolvency perspective of communitarianism and demonstrate its affinity with the transaction cost efficiency criterion. It then describes the criterion in more detail and applies it to the insolvency context, noting the shortcomings encountered in the process.

3.1 Communitarian Perspective of Insolvency Law

Challenging the narrower contractarian perspective, the communitarian perspective views the role of insolvency law as seeking to benefit a broader range of stakeholders beyond just the immediate contractual creditors. It emphasises various constituent interests, particularly that of the public, without implying that community interests trump other ones.[1] By contrast to the contractarian position that the law should play a small role in structuring relationships, communitarians argue that there is a role for the law to intervene in preventing detrimental externalities that may result from the pursuit of wealth maximisation. This is because the vision of creditor wealth maximisation is in danger of failing to adequately value 'the continuation of business relationships that have not been formalised in contracts and may, indeed, omit from consideration those who suffer the greatest hardships in the context of financial distress.'[2] This is especially so where not all stakeholders can enter into contractual relations to protect their interests from negative externalities caused by insolvency for lack of the resources for effective negotiations.

A definition of the individuals who comprise the 'community' is important if the community matters. This can include 'the courts, the insolvency professionals, governments, identifiable third parties such as customers and tort victims of the insolvent, employees and their families.'[3] Adopting a community viewpoint considers the losses to those who do not have formal legal pre-insolvency rights, such as employees who will lose their jobs, suppliers who will lose customers and other externalities such as neighbouring traders who may face a devaluation of their business

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[1] Karen Gross, 'Taking Community Interests into Account in Bankruptcy: An Essay' (1994) 72 *Washington University Law Quarterly* 1031, 1033. However, what constitutes the public interest in the insolvency context is debatable. See, eg, Andrew Keay, 'Insolvency Law: A Matter of Public Interest?' (2000) 51 *Northern Ireland Legal Quarterly* 509.

[2] Vanessa Finch, *Corporate Insolvency Law: Perspectives and Principles* (Cambridge University Press, 1st ed, 2002) 32 (citations omitted). Finch refers the reader to Donald Korobkin, 'Contractarianism and the Normative Foundations of Bankruptcy Law' (1993) 71 *Texas Law Review* 541, 581.

[3] Christopher Symes and John Duns, *Australian Insolvency Law* (LexisNexis Butterworths, 2009) 10.

environments.[4] But this viewpoint is not undisputed since it may be impossible to discover the course of action that best advances the interests of society, especially where some community interests cannot be measured in economic terms.[5] To illustrate, permitting a bad restaurant to shut down does not necessarily reduce the number of jobs in the economy, particularly if its replacement by another business hires more people or is more financially successful than the previous one.[6] On the other hand, jobs are saved when an insolvency regime rescues companies that have going-concern values higher than that in liquidation, but a conflict exists between preserving jobs and maximising creditor returns where the company's liquidation value exceeds that in rescue.[7]

In any case, distributional concerns are key in communitarianism; concerns that wealth maximisation does not provide much assistance on.[8] It is then understandable why insolvency law in this perspective pursues distributional objectives that differ from those implied in the body of pre-insolvency rights, rather than merely giving effect to them.[9] For instance, where community interests are better served by the rescue of an insolvent company, the pre-insolvency rights of secured creditors may be interfered with in order to pursue this outcome. Such redistribution is seen not so much as a deviation from creditor rights protection but rather as 'a core and unavoidable function of insolvency law' where insolvency is viewed as a scheme that is designed to distribute the costs amongst the stakeholders at risk.[10] As Finch describes it,

> It is insolvency law's application to the turbulence of financial crisis, as distinct from the calm waters that mark pre-insolvency contracts, that can be said to justify the intrusion of a number of value judgments concerning relative priorities of various liabilities and the order in which groups of liabilities should be discharged.[11]

Compared to contractarianism, the communitarian perspective is arguably more partial to rescue even if this might come at the expense of creditor wealth maximisation.[12] In particular, some economic 'inefficiencies' may be desired for distributional justice reasons, such as the desire to protect certain economically weak parties.[13] This is why it is not advisable to assume wealth

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[4] Finch, above n 2, 32.

[5] Gross, above n 1, 1046; Barry Schermer, 'Response to Professor Gross: Taking Community Interests into Account in Bankruptcy: An Essay' (1994) 72 *Washington University Law Quarterly* 1049, 1050.

[6] Douglas Baird, 'A World without Bankruptcy' (1987) 50 *Law and Contemporary Problems* 173, 184.

[7] Alan Schwartz, 'A Contract Theory Approach to Business Bankruptcy' (1998) 107 *Yale Law Journal* 1807, 1818.

[8] Finch, above n 2, 36, 53, referring the reader to Elizabeth Warren, 'Bankruptcy Policy' (1987) 54 *University of Chicago Law Review* 775 and Elizabeth Warren and Jay Westbrook, *The Law of Debtors and Creditors: Text, Cases and Problems* (Little, Brown, 1986) 3-7, 219-226.

[9] Finch, above n 2, 32.

[10] Ibid 36; Warren, above n 8, 790.

[11] Ibid 32-33.

[12] Indeed, the goal of maximising returns to creditors can potentially conflict with business continuation (John Armour, 'The Law and Economics of Corporate Insolvency: A Review' (2001) 10 <http://disciplinas.stoa.usp.br/pluginfile.php/35886/mod_resource/content/1/CHY%20The%20Law%20and%20Economics%20of%20Corporate%20Insolvency.pdf>).

[13] Finch, above n 2, 54.

maximisation as the next best statement of the substantive objectives of corporate insolvency law absent clear mandates otherwise, if such a concern overlooks others such as fairness and justice.[14]

In light of the distributional emphasis of communitarianism, the chapter argues that efficiency in this perspective is affined with transaction cost efficiency. The guiding principle here is to economise on the transaction costs involved in effectuating the goals of insolvency law to minimise the wastage of available funds. This is especially attractive if the cost savings increase the amount distributable to the economically weaker stakeholders or are applied towards attaining the other goals under communitarianism.

To summarise, contracts are not generally sufficient for dealing with insolvency in communitarianism, considering the number of non-contractual parties affected by insolvency (and the importance of their inclusion) and for whom transaction costs may prohibit negotiations. Rather than efficiency as wealth maximisation simpliciter, communitarianism is affined with transaction cost efficiency in economising on the resources expended in bringing about a set of goals. Communitarianism aims to distribute the gains and losses from insolvency where transaction costs may be high and so minimising the costs of doing so is appropriate in this context. This efficiency criterion is described in more detail in the next section.

3.2 Transaction Cost Efficiency

3.2.1 Description

Transaction cost efficiency is a means-efficiency criterion that seeks to reduce the costs of executing an economic transaction, measured using the metric of money. This criterion is reflected in one of the key objectives of insolvency law noted in the UNCITRAL *Legislative Guide on Insolvency Law* referring to minimising the cost of its operation: 'Insolvency should be addressed and resolved in an orderly, quick and efficient manner, with a view to avoiding undue disruption to the business activities of the debtor and to *minimizing the cost of the proceedings*.'[15]

Before going further, it is important to note at the outset that the analysis of transaction costs *per se* is the focal point of a school of economics different from the mainstream neoclassical and the

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[14] Ibid 53. Helen Anderson, 'Creditors' Rights of Recovery: Economic Theory, Corporate Jurisprudence and the Role of Fairness' (2006) 30 *Melbourne University Law Review* 1, 3-6, for instance, discusses the meaning and relevance of fairness in corporate law. This is not explored in the thesis.

[15] United Nations Commission on International Trade Law, *Legislative Guide on Insolvency Law* (2005) 12 [8] (emphasis added).

Austrian.[16] The analysis more properly falls under the paradigm of New Institutional Economics (NIE) that places heavy emphasis on the study of institutions.[17] NIE does not assume that the institutional framework individuals operate within is given but rather considers how institutional arrangements affect economic behaviour and how they can minimise the costs of transacting.[18] Institutions here are defined as 'the rules of the game in a society; more formally, they are the humanly devised constraints that shape human interaction.'[19] They include formal legal rules and informal customs, traditions and social rules.[20]

The relevant unit of analysis within NIE is transaction costs and the focus is on market transactions rather than on commodities.[21] Transaction cost efficiency likewise centres on the costs of transacting more so than on commodities, although the approach taken in this thesis is more neoclassical than NIE. This is because efficiency concerns minimising costs in a mainstream economic cost-benefit analysis (in reverse fashion to maximising returns), rather than about identifying the optimal institutional arrangements based on transaction costs *per se*. Further, the analysis of NIE is developed within a neoclassical context with the goal of explaining the economic institutions of capitalism using neoclassical tools.[22] As such, the thesis classifies the analysis of transaction cost efficiency under the mainstream neoclassical paradigm.[23]

In the insolvency context, Mokal delineates between two broad overlapping categories of transaction costs in implementing a set of substantive goals. The first is coordination costs that arise

> from the fact that there are limits on what people in the real world can foresee, and on their cognitive capacity for selecting the appropriate response to a set of circumstances presented to them [and also because] there are informational asymmetries, for example, where information relevant to the

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[16] Williamson distinguishes the field of Transaction Cost Economics from neoclassical microeconomics in Oliver Williamson, *The Mechanisms of Governance* (Oxford University Press, 1996).

[17] Cosmin Marinescu, 'Transaction Costs and Institutions' Efficiency: A Critical Approach' (2012) 71 *American Journal of Economics and Sociology* 254, 269, citing Thráinn Eggertsson, *Economic Behaviour and Institutions* (Cambridge University Press, 1990). Several assumptions of the NIE school differ from those of neoclassical economics (for instance, NIE assumes bounded rationality, that contracts are incomplete and that there is room for opportunism).

[18] Douglass North, *Transaction Costs, Institutions, and Economic Performance* (International Center for Economic Growth, 1992) 5; Rudolf Richter, 'The New Institutional Economics: Its Start, its Meaning, its Prospects' (2005) 6 *European Business Organization Law Review* 161, 163.

[19] North, above n 18, 5.

[20] Suri Ratnapala, *Jurisprudence* (Cambridge University Press, 2nd ed, 2013) 270. Importantly, '"Institutions" in this context does not mean organisations like firms, government departments and central banks': at 270.

[21] The economics of transaction costs start with Ronald Coase, 'The Nature of the Firm' (1937) 4 *Economica* 386, who introduced the concept of transaction costs into economic theory and further developed it in 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1.

[22] Giulio Palermo, 'The Convergence of Austrian Economics and New Institutional Economics: Methodological Inconsistency and Political Motivations' (1999) 33 *Journal of Economic Issues* 277, 277.

[23] However, it should be noted that Mokal draws on the literature on transaction cost economics in this defense of transaction cost efficiency (see Rizwaan Mokal, 'Contractarianism, Contractualism, and the Law of Corporate Insolvency' (2007) *Singapore Journal of Legal Studies* 51, 58).

common plans of both *A* and *B* is available only to the former, or is available to him to a greater degree than to the latter.[24]

Implementing a set of substantive goals that involves cooperation, as faced by the creditors of an insolvent company, requires expending resources to ensure that information is more fully and uniformly available to all relevant decision-makers or that the adverse effects of having asymmetric information are remedied.[25] The second category of transaction costs is motivation costs that arise because of a potential conflict of interests, such as between the interests of firm managers and those of creditors.[26] These costs are incurred when requiring that the interests of different parties be aligned with each other such that the relevant decision-makers are encouraged to cooperatively pursue a set of substantive goals.[27] In short, transaction costs are those incurred in effectuating a set of substantive goals that include the costs of obtaining information regarding alternatives and negotiation, policing/monitoring and contract enforcement costs.

Mokal specifies transaction cost efficiency as follows:

> A method of implementing a set of substantive goals is efficient in this way when the resources it consumes in the process of implementation are lower than would be consumed by adopting any other feasible method of implementation. Put differently, a method is efficient, given a particular amount of resources dedicated towards implementation, when it can operationalize the set of substantive goals to a greater degree than would be possible for any other feasible method.[28]

Finch phrases it similarly: whatever social and distributional goals are set by society, the aim should be to achieve them with the minimal use of resources and costs and minimal waste of effort.[29] Violating transaction cost efficiency means consuming more resources than necessary in implementing a particular proposal. This amounts to wastage since the same objective would have been reached plus a surplus would have been available for other valuable goals.[30] Incurring waste is morally objectionable to the extent that attaining other valuable goals is morally desirable; hence the attainment of 'transaction cost efficiency should be a (procedural) goal of every part of a morally defensible legal system.'[31]

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[24] Rizwaan Mokal, 'On Fairness and Efficiency' (2003) 66 *Modern Law Review* 452, 460-1.
[25] Ibid 461.
[26] Ibid.
[27] Ibid.
[28] Rizwaan Mokal, *Corporate Insolvency Law: Theory and Application* (Oxford University Press, 2005) 25-26.
[29] Finch, above n 2, 52, 190.
[30] Mokal, *Corporate Insolvency Law: Theory and Application*, above n 28, 25.
[31] Ibid 26; see also Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 27.

3.2.2 Application to Insolvency and Shortcomings

The practical application of transaction cost efficiency is more complex than it initially appears to be. It is problematic to compare the efficiency of alternative insolvency regimes or courses of action by the level of their transaction costs because of the shortcomings of not considering the total perspective and 'intensity' problems. These are considered in turn.

The first shortcoming of not considering the total perspective pertains to the possibility that the pursuit of transaction cost efficiency can come at the expense of attaining more of the sought-after goals. This shortcoming arises particularly if the goals are monetary ones, such as aiming for maximum societal wealth, since they share the same monetary metric as transaction cost efficiency itself. This shortcoming is best illustrated by comparing rescue, in the form of a post-voluntary administration (VA) deed of company arrangement (DOCA) with immediate liquidation.

Rescue and liquidation individually involve different schedules of expected returns and costs. Suppose that liquidation yields a total return to creditors of $5000 and a post-VA DOCA yields a higher expected total return of $7000. The transaction costs involved in conducting an immediate liquidation are lower at $1000 whereas those of rescue are $2000. For simplicity, assume that other non-transaction costs are equal in both regimes. Here, the option that maximises total returns is rescue (net return of $5000), but it is not as transaction cost efficient as liquidation (net return of $4000).

But can liquidation really be deemed 'more efficient' than rescue in this example? There is something unsatisfactory in affirming that it is. By itself, transaction cost efficiency is inadequate as a guide for deciding whether rescue is more efficient than liquidation where the aim of corporate insolvency is to obtain 'better outcomes for creditors,' defined as maximum aggregate creditor returns.[32] This is because transaction cost efficiency and wealth maximisation are not perfect complements. That is to say, lower transaction costs do not always imply higher wealth, particularly where the pursuits of rescue and of liquidation are both different goals with multiple (and perhaps even conflicting) means of accomplishing each. Rescue aims to preserve the company (or its business at the least) and increase the pool of resources for distribution. Liquidation focuses on dividing a more or less fixed pool of resources where resource allocations vary with distribution rules. However, transaction cost efficiency is applicable where there are multiple means available for achieving the single end of rescue *separately* from the single end of liquidation. To wit, if there are multiple methods of liquidating a company, transaction cost efficiency advocates in favour of the least costly means of doing so. Consequently, it is a criterion that is more applicable where a

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[32] In this case, wealth maximisation is a more appropriate criterion as it considers the totality of costs and benefits.

decision is already made about whether the company is to be rescued or liquidated and not when its fate is still pending.

Even if the fate of the company is already sealed, the second shortcoming of transaction cost efficiency is an 'intensity' problem. Whilst the problem of not considering the total perspective arises when there are multiple goals to pursue, the 'intensity' problem arises when debating the extent that a single goal is aimed at. The issue is that the most transaction cost efficient course of action to effectuate a set of goals is not independent from the said goals. To illustrate this point, suppose that the company is to be rescued via a DOCA. If a particular set of transactions expected to effectuate a DOCA provides a 90% chance of survival as a going-concern whereas another less costly set provides a lower 70% survival probability, should the option that yields a higher chance of a successful rescue at higher transaction cost or the lower chance at lower cost be preferred?

Again, transaction cost efficiency by itself does not provide a satisfactory answer on the most efficient course of action absent further context, such as with regard to the targeted 'intensity' of rescue; namely, the desired probability of a successful attempt. Nevertheless, the criterion may be used for judging the efficiency of the alternative means available once a particular level of 'intensity' is specified.[33] Where monetary goals are concerned, if the total wealth attainable from a particular regime is known and remains fixed (meaning, a fixed 'intensity' of wealth), then the most transaction cost efficient course of action that realises this fixed figure should be chosen.

To summarise, transaction cost efficiency is inadequate for comparing whether one insolvency regime is more efficient than another if both regimes serve different goals. However, it is useful for choosing among the means available to pursue the goals of either regime with the relevant 'intensities' specified. The shortcomings of not considering the total perspective and 'intensity' problems arise because transaction cost efficiency can compete with the goal of obtaining better returns for creditors. This is why, in the contractarian perspective, efficiency refers more so to wealth maximisation as it overcomes both shortcomings of the transaction cost criterion by balancing transaction (plus other) costs against benefits to obtain the best net returns for creditors.[34]

One way that transaction costs may nevertheless be minimised is by reducing the duration of an insolvency regime. Another is by minimising coordination costs by providing uniform levels of

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[33] Mokal acknowledges something similar:

> Given the small pool of assets which is to be distributed, but from which also the costs of distribution are to be met, the choice is between either spending a lot on investigating who should get what and then distributing, at most, a minute proportion of the estate amongst the claimants, or, softening the demands made on the investigation process in order to distribute a larger proportion to them. *The choice, then, is about how much of the goal (more abstractly construed) should be implemented, and this itself is to be determined using fairness or justice reasoning.*

Rizwaan Mokal, 'On Fairness and Efficiency', above n 24, 459 (emphasis added).

[34] It is nevertheless not without problems of its own, as Section 2.2.2 demonstrates.

information to creditors.[35] However, it is important to ask at what point the increase in information provision incurs extra costs before defeating the efficiency argument on its own grounds. Despite its drawbacks, transaction cost efficiency is still frequently referred to in the insolvency literature.[36] It is arguably more appealing than wealth maximisation from a moral perspective since the latter raises questions over the justifiability of the treatment of individuals to attain efficiency.[37]

3.3 Conclusion

This chapter has demonstrated that the communitarian perspective of insolvency law has an affinity with the specific criterion of transaction cost efficiency. This is because an increase in efficiency, measured by a decrease in transaction costs, minimises the wastage of available funds that can be channelled towards increasing the amounts distributable to stakeholders or towards advancing other communitarian goals. However, a caveat is that the shortcomings of not considering the total perspective and 'intensity' problems demonstrate that the very same cost savings may come at the expense of achieving less of the goals at hand.

Despite its limitations, it makes intuitive economic sense on the surface to measure efficiency by reference to the costs incurred in transacting. Whilst transaction cost efficiency can compete with wealth maximisation, it is appropriate for guiding the selection of means for achieving goals that are non-monetary (or if related to money, have a fixed monetary figure). For instance, it is possible to talk of achieving a substantive goal such as 'fairness' more-cost effectively. Additional considerations are required for deciding whether to adopt transaction cost or wealth maximisation efficiency, for instance by reference to an individual's perspective on insolvency law.

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[35] Jennifer Dickfos, 'Improving Outcomes for Creditors: Balancing Efficiency with Creditor Protections' (2008) 16 *Insolvency Law Journal* 84, 87.

[36] For an example of the popularity of transaction cost efficiency, White refers to economic efficiency measured as a 'decrease in aggregate bankruptcy costs' in the US literature (Michelle White, 'Bankruptcy Costs and the New Bankruptcy Code' (1983) 38 *Journal of Finance* 477, 478).

[37] Mokal is critical of the Kaldor-Hicks efficiency criterion (to be discussed in Section 4.2), of which wealth maximisation is an augmented version, due to its violation of the egalitarian philosophy that underlies his analysis of insolvency law where all relevant individuals are to be regarded as equals and treated as ends and not merely as means (see Mokal, *Corporate Insolvency Law: Theory and Application*, above n 28, 23-5).

Multiple Values Approach, Transaction Cost and Kaldor-Hicks Efficiency

The aim of this chapter is to present the multiple values approach to insolvency law and demonstrate its affinity with the transaction cost and Kaldor-Hicks efficiency criteria. It then describes the latter in more detail and applies it to the insolvency context, noting the shortcomings encountered in the process.

4.1 Multiple Values Approach to insolvency law

The multiple values, value-based or eclectic approach considers that insolvency law has multiple goals and is broader than contractarianism. This approach challenges the economic account of Baird and Jackson that suggests a single unifying theory of insolvency law, namely, creditor wealth maximisation. Here, insolvency law is seen as serving several values with no possibility of ordering into neat priorities, thereby lacking the 'neatness' of a more economic-based account.[1]

Owing to the competing and potentially conflicting values where no one value dominates over the others, Warren argues that insolvency policy is an attempt to address how the consequences and losses from insolvency are to be distributed among different stakeholders.[2] To do this, she identifies four principal goals of the insolvency system as '(1) to enhance the value of the failing debtor; (2) to distribute value according to multiple normative principles; (3) to internalize the costs of the business failure to the parties dealing with the debtor; and (4) to create reliance on private monitoring.'[3] In a similar vein, Korobkin argues that insolvency law does not respond to the economic problem of debt collection alone but also to the larger problem of financial distress that is understood as a crisis of diverse human values, encompassing moral, political, personal, social and economic ones.[4] This includes not only the debtor and their creditors but also the '…whole network of persons who suffer the effects of the debtor's financial troubles.'[5] Finch further extends the range

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[1] Vanessa Finch, *Corporate Insolvency Law: Perspectives and Principles* (Cambridge University Press, 1st ed, 2002) 40.

[2] Elizabeth Warren, 'Bankruptcy Policy' (1987) 54 *University of Chicago Law Review* 775, 777.

[3] Elizabeth Warren, 'Bankruptcy Policymaking in an Imperfect World' (1993) 92 *Michigan Law Review* 336, 344.

[4] Donald Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking' (1992) 33 *William & Mary Law Review* 333, 335, 337, 341; Donald Korobkin, 'Rehabilitating Values: A Jurisprudence of Bankruptcy' (1991) 91 *Columbia Law Review* 717, 762-66.

[5] Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 341. Korobkin proposes a broader approach to the contractarian model, taking the focus away from pure creditor wealth maximisation and emphasising two important principles to govern insolvency, namely a 'principle of inclusion' and a 'principle of rational' planning (see generally Donald Korobkin, 'Contractarianism and the Normative Foundations of Bankruptcy Law' (1993) 71 *Texas Law Review* 541, for his alternative contractarian model for insolvency law termed the 'bankrutpcy choice model.'). While classified under a 'broad-based contractarian approach' in Finch (Finch, above n 1, 33-5), his approach

of considerations under the multiple values approach by setting out four important values or benchmarks for evaluating insolvency law, namely efficiency, expertise, accountability and fairness.[6]

As a whole, the multiple values approaches generally

> incorporate communitarian philosophies and take on board distributive rationales, placing value, for instance, on relative ability to bear costs; the incentive effect on pre-insolvency transactions; the need to treat like creditors alike; and the aim of compelling shareholders to bear the lion's share of the costs of failure.[7]

The multiplicity of concerns makes it difficult to decide on matters of resource allocation and to resolve the conflict between different distributive goals.[8] Since there are no 'scientific principles for arbitrating such disputes,' one way forward is to constrain decision-making in rational ways suited to the specific characteristics of financial distress when viewing insolvency law as a response to the financial distress problem.[9] This is by considering how an actual person works through a decision they have to make, whether by reference to rational principles (such as Rawls' 'principles of rational choice')[10] or in deciding to trust the advice of other important individuals.[11] Supplementary to this is a consideration of the values to be protected in bankruptcy to assist decision-making even if it does not prescribe precise answers.[12] The focus is thus on viewing insolvency as a system for rendering better-informed decisions when dealing with financial distress, especially where it is difficult to maximise the economic welfare of creditors because of conflicts among values, and even more so where the values are deemed by the approach to be important.[13]

Against this backdrop, efficiency in this perspective of insolvency law arguably refers to both transaction cost and Kaldor-Hicks efficiency. Like communitarianism, the transaction cost efficiency criterion is appropriate in the multiple values approach because economising on the costs involved in effectuating the objectives of insolvency law frees up more resources for application

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is classified under the multiple values approach owing to the plurality of governing principles (Finch likewise classifies Korobkin's approach under the multiple values/electric approach in Finch, above n 1, 40-2).

[6] Finch, above n 1, 54.

[7] Finch, above n 1, 41.

[8] Warren, 'Bankruptcy Policymaking in an Imperfect World', above n 3, 352-61. Talking about the multiple values approach, Warren's paper offers a 'dirty, complex, elastic, interconnected view of bankruptcy from which I can neither predict outcomes nor even necessarily fully articulate all the factors relevant to a policy decision.' (Warren, 'Bankruptcy Policy', above n 2, 811).

[9] Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 336. But this can make the multiple values approach appear vague and indeterminate, especially when it comes to managing tensions and contradictions between various values, something it has been criticised for (Gerard McCormack, *Corporate Rescue Law: An Anglo-American Perspective* (Edward Elgar, 2008) 35).

[10] John Rawls, *A Theory of Justice* (Harvard University Press, 1971) 408, cited in Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 346.

[11] Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 344-7.

[12] Warren, 'Bankruptcy Policy', above n 2, 796.

[13] Korobkin, 'Rehabilitating Values: A Jurisprudence of Bankruptcy', above n 4, 787; Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 342-3.

towards other objectives. Nevertheless, the shortcomings pertaining to not considering the total perspective and 'intensity' problems must be borne in mind when using this criterion.[14]

The Kaldor-Hicks efficiency criterion is arguably also applicable here. It defines an efficient resource allocation as one where the utility gains from a change in resource allocation outweigh its utility loss. Since creditor wealth maximisation is neither strictly pursued nor is it possible to assign a monetary value on all of the multiple values of insolvency law, the set of objectives that is ultimately pursued is one that will 'maximally satisfy the aims at stake'[15] and lead to the most efficient outcome in terms of the level of welfare gains it generates. With that said, there is no way around the problem of resolving the conflicts among incommensurable values. Nevertheless, the principle behind Kaldor-Hicks remains in that the set of aims that is ultimately pursued is decided in a calculated manner that involves weighing its utility costs and benefits, where various considerations permit variations to the importance of individual aims.[16]

To summarise, the multiple values approach sees insolvency law as serving multiple objectives, where the efficient attainment of the objectives can refer to transaction cost and Kaldor-Hicks efficiency. Having described the transaction cost efficiency criterion in Section 3.2, the next section proceeds to examine the Kaldor-Hicks criterion in more detail.

4.2 Kaldor-Hicks Efficiency

4.2.1 Description

The Kaldor-Hicks efficiency criterion is widely used by law and economics scholars and is indispensable to welfare economics.[17] It is often employed as a normative guide to evaluate alternative policies in Law and Economics (L&E) where maximising social welfare is held to be the general goal of the law. The criterion employs a utility metric to measure efficiency. It is best explicated by first describing the Pareto efficiency criteria that the Kaldor-Hicks criterion is a refinement of.

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[14] See Section 3.2.2.

[15] Korobkin, 'Contractarianism and the Normative Foundations of Bankruptcy Law', above n 5, 627.

[16] Korobkin writes:

> The person's decisionmaking process is to be considered rational not because it is constrained by some absolute standard that leads to a determinate outcome. Rather, the rationality of her decisionmaking flows from her following an ongoing procedure of reflection that, consistent with applicable normative and deliberative constraints, clarifies and coordinates her aims in meaningful ways and helps her to achieve the aims that she ultimately chooses. Such a procedure is expressive of personal autonomy; if carried out, it thereby translates into a proper outcome. Let us call this method 'procedural rationality.' Unlike the determinate rationality of the absolute standard, procedural rationality is suited to the human crisis that the person seeks to address.

Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking', above n 4, 351 (citations omitted).

[17] Suri Ratnapala, *Jurisprudence* (Cambridge University Press, 2nd ed, 2013) 273.

Pareto optimality refers to an allocation of resources among individuals where any further reallocation improves the welfare of one individual at the expense of another; in other words, the optimal resource allocation is reached where no individual can be made better off without making another worse off.[18] A particular resource allocation is Pareto superior to an alternative one if and only if no individual is made detriment by this allocation and the welfare of at least one individual increases.[19] In practice, it is difficult for Pareto superiority to be an efficiency goal of legal policy because adopting any legal rule produces both losers and gainers.[20] In such a scenario, the Pareto criteria will rule out almost all transactions, meaning that almost any initial allocation is Pareto optimal; thereby failing to provide much guidance about the real world.[21]

By contrast, the Kaldor-Hicks efficiency criterion, also known as a potential Pareto improvement, takes an aggregate perspective.[22] If an individual can be made better off despite disadvantaging another, the net gain in welfare has to be positive for the allocation to be considered a Kaldor-Hicks improvement. With reference to law, a legal rule or policy is Kaldor-Hicks efficient if those benefitting from the rule gain enough to fully compensate the losers, although this compensation is hypothetical rather than actual.[23] If actual compensation were made and there were no transaction costs involved, Kaldor-Hicks distributions will be transformed into Pareto-superior distributions.[24] The Kaldor-Hicks criterion is similar to the wealth maximisation criterion as the latter is an augmented version of the former and employs a monetary rather than utility metric.[25] Thus, like wealth maximisation, Kaldor-Hicks efficiency is classified as an ends-efficiency criterion since it focuses on resource allocation efficiency.

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[18] See Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 12-13.

[19] Jules Coleman, 'Efficiency, Utility and Wealth Maximization' (1980) 8 *Hofstra Law Review* 509, 513.

[20] Herbert Hovenkamp, 'Distributive Justice and the Antitrust Laws' (1982) 51 *George Washington Law Review* 1, 9.

[21] Rizwaan Mokal, *Corporate Insolvency Law: Theory and Application* (Oxford University Press, 2005) 22. Mokal refers readers to the works of Guido Calabresi and Philip Bobbit, *Tragic Choices* (Norton, 1978) 83-7 and Gary Lawson, 'Efficiency and Individualism' (1992) 42 *Duke Law Journal* 53, 87 for this point.

[22] This is derived from the works of Nicholas Kaldor, 'Welfare Propositions of Economics and Interpersonal Comparisons of Utility' (1939) 49 *Economic Journal* 549 and John Hicks, 'The Foundations of Welfare Economics' (1939) 49 *Economic Journal* 696.

[23] See Richard Posner, 'Utilitarianism, Economics, and Legal Theory' (1979) 8 *Journal of Legal Studies* 103; Kaldor, above n 22, 549-50. The problems of hypothetical compensation are addressed in Section 4.2.2.

[24] Coleman, above n 19, 513.

[25] The Kaldor-Hicks and wealth maximisation criteria are often employed synonymously, as in 'Kaldor-Hicks wealth maximization criterion' (see generally Elisabeth Krecké and Carine Krecké (2006) 'The Anti-Foundational Dilemma: Normative Implications for the Economic Analysis of Law' 9 *Advances in Austrian Economics* 201, 211). This is also seen in Posner, when he writes that 'Under the Kaldor-Hicks definition of efficiency . . . a reallocation of resources is efficient if it enables the gainers to compensate the losers, whether or not they actually do so. This is equivalent to wealth maximization.' (Richard Posner, 'The Value of Wealth: A Comment on Dworkin and Kronman' (1980) 9 *Journal of Legal Studies* 243, 244). This thesis distinguishes between both criteria in that Kaldor-Hicks employs utility and wealth maximisation employs wealth. This distinction is furthermore important since Posner considers that there are serious shortcomings in utilitarianism as a guide to social decision-making (Posner, 'Utilitarianism, Economics, and Legal Theory', above n 23, 119).

4.2.2 Application to Insolvency and Shortcomings

An insolvency regime is more Kaldor-Hicks efficient than another if the allocation of resources it produces yields comparatively higher net social welfare, understood as the aggregation of individual utilities. Whilst conceptually straightforward, Kaldor-Hicks efficiency is difficult to determine in practice. To establish it, the gains and losses from any change in resource allocation have to be ascertained and interpersonal cardinal utility comparisons need to be made to know if the 'winners' have more than compensated the 'losers' of the change.[26] One immediate shortcoming pertains to the criterion's utility metric.

In its usage in the L&E literature, utility is derived from the satisfaction of preferences that is an experiential state unique to a particular individual.[27] Understood in this manner, interpersonal comparisons of utility are incoherent, rendering attempts to aggregate utility across individuals likewise incoherent.[28] Apart from the inability to sum utility, jurisprudential theories that aim to maximise utility arguably give equal weight to the preferences of all individuals. In doing so, they unrealistically assume that individual utility preferences are the same irrespective of their level of wealth; something that is not true in reality.[29] The first and most basic objection is essentially that the Kaldor-Hicks efficiency calculations cannot be performed in practice.

A second shortcoming relates to the obstacle of determining the sufficient amount of compensation since Kaldor-Hicks efficiency is attained only when the 'losers' from a change in resource allocation are at least fully compensated to their satisfaction by the 'winners' in hypothetical terms. If any individual 'loser' objected strongly to the change such that a very high level of *ex post* compensation is required, then it becomes uncertain if this change is efficient, if at all, especially if there is one individual who 'seriously cannot be bought.'[30] But the rhetorical question must be asked: on both the side of the compensator and the individual receiving compensation, what is hypothetically permissible and what is not?

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[26] Coleman, above n 19, 519.

[27] Rizwaan Mokal, 'On Fairness and Efficiency' (2003) 66 *Modern Law Review* 452, 455, n 23. Posner writes that utility is used in two different senses in economics; one is entwined with the concept of risk (i.e. to distinguish an uncertain cost or benefit from a certain one) and the other in the sense that is employed by philosophers of utilitarianism, roughly understood as happiness (Posner, *Economic Analysis of Law*, above n 18, 11).

[28] See generally Lawson, above n 21; Lionel Robbins, 'The Nature and Significance of Economic Science' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 73, 90-91. Although there are skeptics about the possibility of interpersonal welfare comparisons, some authors (modern theoretical welfare economists, unlike Kaldor and Hicks and their contemporaries) argue that generally, well-being is neither indeterminate nor unknowable, leaving room for the possibility of interpersonal welfare comparisons (See Matthew Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (2000) 28 *Florida State University Law Review* 241, 258-9).

[29] Hovenkamp, above n 20, 10-11, n 48. This is not true in reality because of the assumption of the diminishing marginal utility of wealth, where the where marginal utility of income declines with wealth.

[30] Lawson, above n 21, 91-2, citing Jules Coleman, *Markets, Morals and the Law* (Cambridge University Press, 1988) 138.

A third drawback is the challenge posed by the Scitovsky Paradox.[31] The paradox reveals, by way of an example, that it is possible to imagine a scenario where a particular resource allocation *X* can be Kaldor-Hicks superior to an alternative allocation *Y*, at the same time that *Y* can be superior to *X*.[32] This potential for an inconsistency in preferences over allocations renders Kaldor-Hicks efficiency paradoxical as a standard of utility.[33] The paradox means that the Kaldor-Hicks criterion does not permit a complete ranking of resource allocations (such that each allocation can be determined to be better than, worse than or equal to another), although this is not necessarily detrimental.[34] In essence, just because Kaldor-Hicks is satisfied, a net utility gain has not necessarily occurred.[35]

A fourth drawback regards the justifiability of the treatment of individuals especially as the criterion ignores the 'separateness of persons.'[36] Relying on Kaldor-Hicks efficiency in defending a rule or policy implies that a gain for a group of individuals (ends) justifies losses to another (who are treated as the means) albeit without the payment of actual compensation.[37] In the extreme, even great losses are acceptable so long as a sufficiently large number of individuals derived small

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[31] See Tibor Scitovsky, 'A Note on Welfare Propositions in Economics' (1941) 9 *Review of Economic Studies* 77.

[32] Coleman, above n 19, 520. The following elaborates the Scitovsky paradox, quoted at length at 519, n 14:

> Suppose there are two persons, *A* and *B,* and two commodities, X and Y. The following table gives the outputs in two states of the economy: *E* and *E'.*

	E		E'	
	X	Y	X	Y
A	2	0	1	0
B	0	1	0	2

> In *E,* Mr. *A* has two units of X and no units of *Y;* Ms. *B* has no units of X and one unit of Y. In *E', A* has one unit of X and none of Y. Suppose now that A and *B* have the following preferences for *X* and Y:

> Mr. *A* prefers one unit of X and one unit of Y to two units of X and no units of Y, which is itself preferred to one unit of and no units of Y. Ms. *B* prefers one unit of *X* and one unit of Y to no units of X and two of Y, which is itself preferred to no units of X and one of Y. *E* is Kaldor-Hicks efficient to *E',* and *E'* is Kaldor-Hicks efficient to E. In *E* Mr. *A* has two units of X and one of Y; were he to give one unit of *X* to Ms. *B,* he would be exactly as well off as he was in *E';* Ms. *B* would be better off. She would then have one unit of X and one of Y which she prefers to both *E'* and *E*. Compensation would make her better off and Mr. *A* no worse off. So *E* is Kaldor- Hicks efficient to *E'.*

> In *E',* Ms. *B* has no units of X and two of Y; Mr. *A* has one unit of X and none of Y. Suppose Ms. *B* gives Mr. *A* one unit of Y. Then she has no units of X and one of Y. He has one unit of both X and Y. She would then be exactly as well off as in *E*. Mr. *A,* however, would be better off, since he prefers one unit of both X and Y. Consequently, *E'* is Kaldor-Hicks efficient to E.

> As it stands, Kaldor-Hicks does not provide an adequate efficiency basis for preferring one state of the economy to another. The Kaldor-Hicks criterion may be reformulated so that one state of affairs is Kaldor-Hicks preferable to another if and only if the winners could compensate the losers in going from *E* to *E',* but the winners could not compensate the losers in going from *E'* to *E*. This eliminates the paradox, but then Kaldor-Hicks will not be transitive.

[33] Coleman, above n 19, 520.

[34] Adler, above n 28, 260.

[35] Coleman, above n 19, 519.

[36] See generally H L A Hart, 'Between Utility and Rights' (1979) 79 *Columbia Law Review* 828.

[37] Mokal, *Corporate Insolvency Law: Theory and Application*, above n 21, 23. Mokal is critical of the Kaldor-Hicks efficiency criterion as it violates the egalitarian philosophy that underlies his analysis of insolvency law, where all relevant individuals are to be regarded as equals and treated as ends and not merely as means to the goals of other individuals.

individual benefits that aggregated to a gain larger than the loss.[38] While some rules or policies are justifiable despite resulting in some losses to one individual and greater gains to another, Mokal argues that the process of justification should not merely be consequentialist. Proper justification (on the grounds of egalitarianism) requires demonstrating that the selection of a particular rule or policy resulted from a process where it provided due and equal protection to certain fundamental interests of all the relevant parties at the very least.[39] Nevertheless, individuals do and are made worse off under the Kaldor-Hicks criterion in reality.[40]

The cumulative shortcomings of the Kaldor-Hicks criterion – the problem of determining the sufficient amount of compensation, the Scitovsky paradox and the justifiability of the treatment of individuals in pursuing efficiency – make determining whether one insolvency regime is more efficient than another difficult, if not impossible in practice. In particular, even where the multiple values approach aims to improve outcomes for creditors, it can be difficult for third parties to determine the actual outcome that achieves efficiency due to the problem of measuring utility.

4.3 Conclusion

This chapter has demonstrated that the multiple values approach to insolvency law is affined with the specific criteria of transaction cost and Kaldor-Hicks efficiency. This is because an increase in transaction cost efficiency minimises the wastage of available funds that can be directed towards attaining more of the multiple values of insolvency law (bearing in mind the shortcomings of transaction cost efficiency). Further, an increase in Kaldor-Hicks efficiency is consistent with achieving a set of objectives that produces the highest net level of social utility. Both criteria can work as complements in the multiple values perspective where the ultimate set of objectives to be pursued, in terms of their quantity and 'intensity,' is that deemed to yield the highest welfare to society at the lowest transaction cost. It is in analysing the criteria more closely that one encounters their individual shortcomings to practical application.

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[38] Ibid 23.
[39] Ibid 23, n 90.
[40] Ratnapala, above n 17, 274.

Part II

Having demonstrated that the perspectives of insolvency law contextualise what efficiency refers to, Part II introduces the thesis' second argument that whether a criterion is endorsed for use depends upon its compatibility with one's position on economic method. To do this, Part II addresses topic of economic methodology before entering the subject of compatibility that is reserved for Part III.

Chapter 5 explores the methodological differences between mainstream neoclassical and Austrian economics on four critical points of valuation, argumentation, equilibrium and entrepreneurship, and the future. It applies these differences to the properties of efficiency and argues that the efficiency criteria of Part I have properties aligned with mainstream economic methodology.

Chapter 6 extends the methodological discussion of the previous chapter by questioning whether modifying the rights of property holders can increase efficiency. The answer is dependent upon the position adopted on economic method. Again, the chapter argues that the efficiency criteria of Part I demonstrate the mainstream rights–efficiency interaction.

Economic Methodology and the Properties of Efficiency

5.1 Introducing Economic Methodology

Part I has described the efficiency criteria under contractarianism, communitarianism and the multiple values approach. Whether efficiency refers to wealth maximisation, transaction cost or Kaldor-Hicks efficiency depends upon the jurisprudential context. But while necessary, this context is insufficient for confirming that efficiency means what is implied under those perspectives. This is because one may take issue with the economic methodology underlying those criteria.

To better understand what economic methodology encompasses, Blaug describes it as

> a study of the relationship between theoretical concepts and warranted conclusions about the real world; in particular, methodology is that branch of economics where we examine the ways in which economists justify their theories and the reasons they offer for preferring one theory over another; methodology is both a descriptive discipline – 'this *is* what most economists do' – and a prescriptive one – 'this is what economists *should* do to advance economics'…[1]

In other words, methodology refers to how economists construct and justify economic theories based on a chosen set of axioms and underlying assumptions. It is relevant to insolvency law as economic insights are often called upon to inform policy in this discipline. Methodology is a non-trivial topic, having been the subject of long debates over the course of economic history and that, in the context of this thesis, also affects the endorsement of efficiency criteria.

To elaborate, efficiency criteria have 'properties' that reflect underlying methodological assumptions that explain why they appear as they do. One of the most important properties concerns whether the values for calculating efficiency are objective or subjective; a property that has implications for whether third party observers can calculate efficiency. Wealth maximisation, for example, assumes that the requisite values are objective since costs and benefits are measured in monetary dollars. This metric is discernible by both decision-makers and third party observers external to the decision-making process. But not all economists concur with value objectivism. The dissidents will consequently hesitate to endorse wealth maximisation as a usable criterion in spite of its affinity with a particular insolvency perspective (contractarianism in this instance). The potential for a conflict between an efficiency criterion's underlying methodology and one's own methodological stance is problematic to the extent that efficiency is not properly defined for a specific jurisprudential context.

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[1] Mark Blaug, *The Methodology of Economics: Or, How Economists Explain* (Cambridge University Press, 2nd ed, 1992) xii.

This conflict can be most clearly seen by contrasting the heterodox school of Austrian economics against the neoclassical mainstream (also termed 'mainstream economics' in this thesis). Apart from being methodologically distinct from all other economic schools, the analysis of Austrian economics in this thesis is motivated by its historical contention with neoclassical economics. The latter is the most popular rational choice model employed in the Law and Economics (L&E) literature applied to legal problems and is also the basis of efficiency analysis in the majority of studies in L&E.[2] Since L&E is the predominant body of thought for analysing the law and legal institutions from an economic perspective, neoclassical economics is used as a baseline for comparison.

Historically, both economic schools emerged from the Marginal Revolution of the 1870s, a landmark event in the history of economic theory surrounding the contentious issue of economic valuation. The term 'neoclassical economics' in fact refers to an economic tradition that dates from the Marginal Revolution against classical economics. Prior to the emergence of the neoclassical paradigm, the explication of economic value relied upon classical economic theory. Here, market prices are established by reference to a basic commodity or the amount of resource input – labour in particular – necessary to produce a good, referring to its (objective) cost of production.[3]

Against the objective labour theory of value, neoclassical economics argues that it is the subjective preferences of individuals (specifically the subjective value of the goods'/services' marginal contribution to satisfying human desires) that determine equilibrium market prices. That is, rather than the cost of production determining the price of a good, it is the amount that consumers would pay for the goods that are produced from those resources that determines resource prices (labour and capital, for instance).[4] Although the neoclassical school continued to acknowledge value subjectivism on the side of demand, it later strayed away from the subjectivist conception of cost and returned to the idea of supply being primarily determined by 'objective' considerations, such as

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[2] Gary Lawson, 'Efficiency and Individualism' (1992) 42 *Duke Law Journal* 53, 53, n 1; Suri Ratnapala, *Jurisprudence* (Cambridge University Press, 2nd ed, 2013) 290; Gregory Crespi, 'Exploring the Complicationist Gambit: An Austrian Approach to the Economic Analysis of Law' (1998) 73 *Notre Dame Law Review* 315, 318. See, eg, Robert Cooter and Thomas Ulen, *Law & Economics* (Prentice Hall, 6th ed, 2012) 11-51 who describe the role that neoclassical price theory plays in Law and Economics; and Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 3-10. The basic idea of rational choice theory is the analysis of human behaviour *as if* individuals were trying to maximise their expected utility (where utility is derived from the satisfaction of an individual's preferences). This is what is typically understood when individuals are assumed to 'act rationally.'

[3] The relationship between market prices and cost in the classical view is seen as follows: 'If among a nation of hunters it usually costs twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer. It is natural that what is usually the produce of two days' or two hours' labour, should be worth double of what is usually the produce of one day's or one hour's labour.' (Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (University of Chicago Press, first published 1776, 1976 ed) 53, cited in Jack High, 'Marginal Utility' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 87, 87).

[4] High, above n 3, 87, 88.

specifiable production or opportunity costs.[5] The neoclassical school thus adopts more of what is known as a Marshallian determination of value where both utility and (objective) cost, typically for the supply side, play a part in this determination.[6]

Austrian economists, on the other hand, remain committed to value subjectivism in both the demand and supply side of the market that jointly determine (equilibrium) prices.[7] The views on valuation are only one of many differences between both economic schools. Foundationally, the Austrian school is distinct from the mainstream in its epistemology (how and where the axioms of economic theory come from) and methodology (how economic theory is constructed).[8] It disputes the neoclassical economic emphasis on the features of an actual economy and on methodological points such as regarding the division of knowledge among market participants.[9]

Since economic theory is used to inform legal analysis in L&E, it is important to understand the assumptions it brings to the table particularly when methodological discussions are generally lacking in economics departments, let alone in law. It is the purpose of this chapter to explicitly bring a discussion of economic methodology to the fore of discussions surrounding efficiency in insolvency. This is now explored in detail.

5.2 Methodological Monism–Dualism Divide

By and large, the methodological differences between neoclassical and Austrian economics hinge upon how economics, as a science, is viewed. The starting point is to ask if economics is like the physical sciences and consequently adopts a similar methodology or whether economics is a different kind of science. Both economic schools take contrary positions on this monism versus dualism debate that in turn explains why efficiency is conceived differently under both schools.

Methodological monism is a doctrine that states the unity of epistemology in all disciplines, in particular that there is a unified scientific method where the rules for good science apply to all

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[5] Jesús Huerta de Soto, *The Austrian School: Market Order and Entrepreneurial Creativity* (Edward Elgar, 2008) 53; Steven Horwitz, 'Subjectivism' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 17, 18.

[6] Sir John R Hicks, 'Is Interest the Price of a Factor of Production?' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 51, 51.

[7] Jesús Huerta de Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 53; Roger Garrison, 'Comment: Waiting in Vienna' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 215, 220.

[8] This reflected in the famous *Methodenstreit*, or the dispute surrounding the correct method of analysing economic phenomena. See Samuel Bostaph, 'The Methodenstreit' in Peter Boettke (ed) *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 459.

[9] Christopher Wonnell, 'Contract Law and the Austrian School of Economics' (1986) 54 *Fordham Law Review* 507, 516.

disciplines.[10] The neoclassical mainstream is methodologically monistic. It views economics as sharing the methodology of the physical sciences. In this regard, the model of nineteenth century mathematised physics has been held to be the one that all empirical disciplines including economics should emulate, in its forms and methods, to be regarded as a science.[11] Caldwell[12] labels the philosophy of science that is the basis of traditional economic methodology as 'logical empiricism.'[13] This was an outgrowth of the logical positivism of the 1950s, a doctrine 'that held that scientific knowledge could be fully accounted for as either direct *empirical observation* or as *deductions from a closed logical system*.'[14]

Whilst both empirics and mathematics are emphasised in mainstream economics, heavier emphasis is afforded to the latter since economics does not comply strictly with the empiricist method of the natural sciences.[15] With that said, there are views that neoclassical economists have regarded their science as an empirical one with the methodology being mostly that of Popper's 'critical rationalism' and falsificationism, although falsifiable theories are seldom submitted to empirical testing in practice (although in some fields there is empirical application of models and statistical estimation (but not the empirical testing) of relations).[16] This dual focus of empirics and mathematical logic can be seen in a tendency in Law and Economics. For instance, the efficient amount of damages payable is often calculated in terms of a function of some mathematical probability and statistical estimates of costs and benefits.

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[10] Tamás Dusek, 'Methodological Monism in Economics' (2008) 1 *Journal of Philosophical Economics* 26, 26-7; Sheila Dow, 'Mainstream Economic Methodology' (1997) 21 *Cambridge Journal of Economics* 73, 75.

[11] Dow, above n 10, 75; Dusek, above n 10, 27. Dow refers the reader to Philip Mirowski, *More Heat Than Light: Economics as Social Physics, Physics as Nature's Economics* (Cambridge University Press, 1989); Alexander Rosenberg, *Microeconomic Laws: A Philosophical Analysis* (University of Pittsburgh Press, 1976) 10. Hutchison (Terence Hutchison, *The Significance and Basic Postulates of Economic Theory* (Augustus M Kelley, 1938, reprinted 1965) and Blaug (Blaug, above n 1) have notably propounded the traditional mainstream economic methodology. See also Stavros Drakopoulos, 'Some Implications of the New Physics for Economic Methodology' (1994) 62 *South African Journal of Economics* 198 for how physics has influenced economics.

[12] Bruce Caldwell, *Beyond Positivism: Economic Methodology in the Twentieth Century* (Allen & Unwin, 1982).

[13] Dow, above n 10, 75. See also Song for the argument that mainstream economic methodology is founded on modern logical empiricism and the logical positivist philosophy (Longxiang Song, *The Methodology of Mainstream Economics and its Implications for China's Economic Research* (PhD Thesis, Washington University, 1995).

[14] Kevin Hoover, 'Review: Why Does Methodology Matter for Economics?' (1995) 105 *Economic Journal* 715, 718 (emphasis added); Ibid. Hovenkamp writes that

> The development of positivism as a methodology for economics was driven strongly by a desire to emulate the methodology that had accounted for so much progress in the natural sciences since the time of Darwin. As Friedman put it, 'positive economics is, or can be, an "objective" science, in precisely the same sense as any of the physical sciences.'

Herbert Hovenkamp, 'Positivism in Law & Economics' (1990) 78 *California Law Review* 815, 841-2, citing Milton Friedman, 'The Methodology of Positive Economics*'* in *Essays in Positive Economics* (University of Chicago Press, 1953) 3, 4.

[15] D Wade Hands, 'Empirical Realism as Meta-Method: Tony Lawson on Neoclassical Economics' in Steve Fleetwood (ed) *Critical Realism in Economics: Development and Debate*, (Routledge, 1999) 169, 179.

[16] Geert Reuten, 'A Revision of the Neoclassical Economics Methodology' (1996) 3 *Journal of Economic Methodology* 39, 41; Sam Peltzman, 'Ronald Coase and the Methodology of Economics' (2011) 54 *Journal of Law and Economics* S15, S15. The Popperian philosophy of science has been very influential in economic methodology, but whether it is suited for economics is another question altogether: See D Wade Hands, 'Popper and Lakatos in Economic Methodology' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 188.

Juxtaposed against this, the Austrian paradigm is methodologically dualistic. Since economics deals with conscious actors who have desires and beliefs about how to fulfil them, its methodology is distinguished from that of the physical sciences relating to external natural events because of the particularities of being human and how human concepts are understood.[17] A notable difference between nature and economics is that while the physical scientist remains an outside observer of their subject, social scientists are in a relatively better position because they are themselves the very subjects of their study, enabling them to get inside the mind of their subject.[18] This lends a preference for studying purposive and meaningful action as the focus is primarily on individuals and their purposes rather than on things and quantities.[19]

What sets the Austrian school apart from the mainstream is its position that economic laws exist independently of the particularities of time and place and are known though deductive reasoning.[20] The body of Austrian economic theory is argued to be implied in and can be deduced from the starting point of the meaning of action, with additional general assumptions about the empirical reality where action occurs.[21] Human action means that 'man purposefully aims at ends he has chosen.'[22] In other words, action involves consciously and purposively employing means to attain one's pursued ends.[23] Knowledge regarding human action is *a priori*; the fact that humans act is not gained through experience but is prior to it.[24] The reasoning is that if the axiom of action is true, and the universal axioms that ground economic theory are true absolutely, then deductive logic and the axiomatic method is the appropriate methodology for economic analysis that is true for 'all of the actions of all persons in all societies at all times.'[25] This methodically deductive study and general

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[17] Peter Leeson and Peter Boettke, 'Was Mises Right?'(2006) 64 *Review of Social Economy* 247, 253; Ludwig von Mises, *Theory and History: An interpretation of Social and Economic Evolution* (Ludwig von Mises Institute, 2007) 1; Rosenberg, above n 11, 10.

[18] Leeson and Boettke, above n 17, 253.

[19] Leland Yeager, 'Austrian Economics, Neoclassicism, and the Market Test' (1997) 11 *Journal of Economic Perspectives* 153, 154-5. Mises says regarding economics:

> Economics is not about things and tangible material objects; it is about men, their meanings and actions. *Goods, commodities, and wealth and all the other notions of conduct are not elements of nature; they are elements of human meaning and conduct.* He who wants to deal with them must not look at the external world; he must search for them in the meaning of acting men.

Ludwig von Mises, *Human Action: A Treatise on Economics*, *Scholar's Edition* (Ludwig von Mises Institute, 1998) 92 (emphasis added).

[20] Jörg Hülsmann, 'Introduction' in Ludwig von Mises, *Epistemological Problems of Economics* (Ludwig von Mises Institute, 3rd ed, 2003) ix, x-xi.

[21] See generally Hans-Hermann Hoppe, *Economic Science and the Austrian Method* (Ludwig von Mises Institute, 2007).

[22] Mises, *Theory and History: An interpretation of Social and Economic Evolution*, above n 17, 3.

[23] David Prychitko, 'Praxeology' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 77, 77.

[24] To deny that humans act is to engage in the action of denying, thereby confirming the proposition that humans indeed act; a fact that can be known prior to empirical confirmation (see Mises, *Human Action*, above n 19, 32-6). Though human action is an *a priori* truth for Mises, not all Austrians, such as Friedrich Hayek, embrace apriorism (see Bruce Caldwell, 'Praxeology and its Critics: An Appraisal' (1984) 16 *History of Political Economy* 363). Nevertheless, 'most Austrians agree that the action axiom is universally true, self-evident and therefore unchallengeable': Ibid 78.

[25] Lewis Hill and Gene Uselton, 'The Economic Epistemology of Ludwig von Mises' (1976) 3 *Reason Papers* 64, 68.

science of human action is termed praxeology, a term that emphasises that economics is more similar to a discipline such as applied logic rather than to the empirical natural sciences.[26] Such a construction of economic theory is more atypical to the mainstream Law and Economics literature especially where economics often brings to mind the heavy use of statistics and mathematics.

To recapitulate, both economic schools diverge from each other over the realm that economic science properly belongs to. Their disagreement is not merely superficial but touches upon the very core of how economic theory is constructed, with empirical and mathematical model building on one hand and deductive logic on the other. Against the backdrop of the monism-dualism divide, the chapter reviews four broad methodological differences between neoclassical and Austrian economics that collectively explain why efficiency criteria associated with a particular economic school possess the properties that they do.[27] It presents the general mainstream of each school given the diverse opinions within each.[28] In so doing, the chapter provides a methodological explanation for why legal analysis and its recommendations around efficiency are affected by the kind of economic school used to inform it.

5.3 Four Methodological Differences between Mainstream and Austrian Economics

This section explores four methodological differences between mainstream neoclassical and Austrian economics and how they affect efficiency, as a component of the thesis argument that economic method is important to determining the meaning of efficiency. Of the four

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[26] Hoppe, above n 21, 8. A caveat is that there is a difference between what is 'empirical' and 'empiricism,' the latter of which Austrians reject. See Larry Sechrest, 'Praxeology, Economics, and Law: Issues and Implications' (2004) 7 *Quarterly Journal of Austrian Economics* 19, 22.

[27] The differences discussed in this chapter are not exhaustive. For a more extensive treatment, see Jesús Huerta de Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 2-4 and Jesús Huerta de Soto, 'The Ongoing Methodenstreit of the Austrian School' (1998) 8 *Journal des économistes et des études humaines* 75.

[28] A 'static' comparison between both schools is only possible if both schools each have an unchanging set of assumptions that forms their Lakatosian hard core, although this is difficult to isolate (Roger Backhouse, 'Austrian Economics and the Mainstream: View from the Boundary' (2000) 3 *Quarterly Journal of Austrian Economics* 31, 34). For this reason, the thesis seeks to present the general mainstream of each school, acknowledging that not all adherents of each school agree on various points of methodology. Proponents of the Austrian school of economics, for instance, have varying opinions on the school's methodology. Since the time of Carl Menger, Austrian economists have differed in their methodological views (see Peter Boettke, 'Introduction' in Peter Boettke (ed) *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 1 and Lawrence White, 'The Methodology of the Austrian School Economists' (2003) <http://mises.org/pdf/methfinb.pdf>). Nevertheless,

> Despite the heterogeneity of opinion within the Austrian school...there exist common characteristics of the work done in this tradition that justify the label of a 'school' of thought. The basic set of questions Austrians raise, and the approach to answering those questions, reflect *the* Austrian approach. In this tradition, the task of economics is twofold: first, the economist must render economic phenomena intelligible in terms of purposive human action; second, the economist must trace the unintended consequences of those actions. In order to accomplish these tasks, Austrians believe that three basic methodological tenets should be adhered to: (1) methodological individualism, (2) methodological subjectivism, and (3) theoretical attention should be on processes rather than equilibrium states. From Menger on this has been the unifying task and method of approach of the Austrian school of economics.

Boettke, above n 28, 3-4.

methodological differences, pride of place is given to valuation because of its crucial role in informing resource allocation in insolvency and in the calculation of efficiency. The other three on how efficiency is to be reckoned, how the passing of time complicates this task and whether efficiency is compared against a hypothetical benchmark further elaborate on the divide between mainstream and Austrian economics.

Each of the methodological differences is first explored in isolation and then collectively for the consolidative effect, although some overlap is inevitable because they interrelate with each other. The consideration of value, in particular, recurs in the other three methodological differences. How each point of difference affects efficiency is stated in italics at the outset to provide the scope for understanding the exposition in each section. This discussion is then applied to the three aforementioned criteria of Part I (wealth maximisation, transaction cost and Kaldor-Hicks efficiency) to demonstrate that they are aligned with mainstream economic methodology. This demonstration is significant for Part III of the thesis when discussing the subject of compatibility with one's position on economic method.

5.3.1 Objective versus Subjective Value and Constraints

Influence on efficiency: efficiency can be calculated by third parties owing to the assumption of objective value and information (neoclassical economics); efficiency cannot be calculated by third parties in the same way as the mainstream (Austrian economics)

Economic valuation is crucial in economics and is arguably one of the most, if not the most important among the methodological properties of efficiency. It is the valuation of alternative courses of action that informs decision-making, such as how to proceed with the assets of an insolvent company. The question of the Marginal Revolution on whether value is subjective or objective, meaning whether value can be gauged by reference to a calculable object (such as hours of time or a market price) still applies today. Value subjectivism is emphasised with different strengths in both schools. It is the Austrian economic belief in subjectivism that distinguishes it from neoclassicism.[29]

'Subjective' in neoclassical economics primarily means that individual preferences are subjective in that individuals assign weights to the arguments (input variables) in their utility functions according to how much significance they place on them.[30] A utility function is a mathematical expression,

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[29] A general treatment of subjectivism in economics can be found in Horwitz, above n 5.

[30] Joshua Hall and Adam Martin, 'Austrian Economics: Methodology, Concepts, and Implications for Economic Education' (2011) 10 *Journal of Economics and Finance Education* 4, 7; Karen Vaughn, *Austrian Economics in*

comprising of different arguments, that maps an individual's preference ranking of bundles of goods (often termed 'commodity bundles') to numerical values. Neoclassical economists in the tradition of Adam Smith, a classical economist, were of the belief that individuals were able to somehow make calculations in terms of value (utility), thereby assuming, implicitly or explicitly, the quantifiability of subjective value (subjective utility).[31] This is especially as the derivation of marginal utility in neoclassical economics requires that utility be measurable, at least in principle, since it is not in practice.[32] This objectivism reflects the influence of empiricist/positivist philosophy that considers economic phenomena as objective data.[33]

This applies especially to costs. It is an implicit assumption of conventional neoclassical theorists that costs are objective and determinable by outside observers.[34] This is typically the market price of the resources used in production, where the 'cost' of producing something is a summation of the market values of the relevant inputs.[35] However, the market price of an input may be considerably different from its opportunity cost as perceived by the entrepreneur, since a measurable objective cost as a piece of data (an accounting cost) is different from cost as a subjective element that is relevant to the process of choice (an economic cost).[36] Even when mainstream economics recognises costs as opportunity costs, they normally refer to objectivised foregone revenues (that is, market value) and not so much to forgone subjective values that one sacrifices to pursue a particular course of action.[37]

Contradistinctively, subjectivist value theory pervades Austrian economics where both the nature and measure of value are subjective.[38] Subjectivity is the specific way that each individual views the world and makes decisions according to their own unique scale of value. Value, defined as 'the importance that acting man attaches to ultimate ends,' is expressed ordinally rather than cardinally.[39] It is 'always relational and relational meanings constantly change with every choice or exchange that is made; hence no good has any meaningful value in an isolated and abstract sense as

America: The Migration of a Tradition (Cambridge University Press, 1998) 4. The emphasis on utility in economics comes from the fact that many of the early neoclassical economists were influenced by the ethical theory of utilitarianism as expounded by Jeremy Bentham and John Stuart Mill (Daniel Hausman, 'Introduction' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 1, 26).

[31] Hülsmann, above n 20, ix, xxiv – xxv. Kornhauser provides a brief summary of utilitarianism, including the premise that the utility levels of various individuals can be compared, again reflecting the quantifiability of utility (Lewis Kornhauser, 'A Guide to the Perplexed Claims of Efficiency in the Law' (1980) 8 *Hofstra Law Review* 591, 598).

[32] High, above n 3 87, 90.

[33] Hoppe, above n 21, 53-4.

[34] E C Pasour Jr, 'Cost and Choice – Austrian vs Conventional Views' (1978) 2 *Journal of Libertarian Studies* 327, 328.

[35] Ibid.

[36] Ibid (see the example at 328 for an illustration of the difference); Cosmin Marinescu, 'Transaction Costs and Institutions' Efficiency: A Critical Approach' (2012) 71 *American Journal of Economics and Sociology* 254, 257.

[37] Horwitz, above n 5, 18.

[38] Carl Menger, *Principles of Economics* (New York University Press, first published 1870, 1981 ed) 146.

[39] Mises, *Human Action*, above n 19, 96.

it is derived from the relationship that any act, thing, person or idea has in relation to others.'[40] Value cannot be quantified or aggregated across individuals since it is entirely psychical and is not extended in space.[41] As a consequence, third party observers are unable to perform calculations based on value because it is incommensurable.[42]

Beyond value, the core subjectivist point is that 'social scientific explanations must start with the subjective mental states of the actors being studied…it is the subjective perceptions of actors that drive their actions, not the objective reality that might underlie the situation.'[43] By contrast to the limited subjectivism of neoclassical economics, Austrians term their view as 'radical subjectivism' where individual subjective valuations and perceptions are consistently and strictly upheld.[44]

Accordingly, the value of a particular good is not its monetary price but the satisfaction one derives from its possession or from experiencing it. (Money does not measure value in the Austrian view.)[45] The same applies to costs. Unlike neoclassical economics that tends to conflate costs with monetary prices, 'the cost of adopting a course of action is the expected want satisfaction that is perceived to be sacrificed by forgoing the next most highly-valued course of action'[46] in Austrian economics. Importantly, costs do not refer to what has been sacrificed but rather to what the individual expects to give up to pursue a particular course of action.[47] Consequently, external observers cannot measure costs because once an individual chooses a particular course of action to undertake, the cost – namely, what the individual expected to sacrifice – cannot be experienced and is therefore immeasurable.[48] This Austrian notion of cost is vastly different from the more common mainstream

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[40] Robin Malloy, *Law and Market Economy: Reinterpreting the Values of Law and Economics* (Cambridge University Press, 2000) 142. Malloy continues on the same page that 'A parcel of real property, for example, has value based on the nature of other properties within its proximity (an ocean view versus a garbage dump), and in relation to transportation routes, schools, jobs, wildlife, air quality, climate, and a variety of other factors.' Mises similarly writes that 'Value is not intrinsic, it is not in things. It is within us; it is the way in which man reacts to the conditions of his environment.' (Mises, *Human Action*, above n 19, 96).

[41] Hülsmann, above n 20, ix, xxxv.

[42] Ibid. A calculus can only be performed with multiples of an extended unit, such as adding apples together, but not with different extended units (such as a witty remark to a silent thought); since value is not extended, it is therefore not measurable: at xxxv. Therefore, there is no general principle of value calculation, although price calculation exists: at xxxiv.

[43] Horwitz, above n 5, 17.

[44] Vaughn, above n 30, 4. This approach is sometimes known as 'methodological individualism' (Roy Cordato, 'The Austrian Theory of Efficiency and the Role of Government' (1980) 4 *Journal of Libertarian Studies* 393, 395). The mainstream is also methodologically individualist but Austrian methodological individualism emphasises more upon 'Austrian' concepts such as basing individual action upon their personal subjective evaluations in the face of uncertainty (see Karl-Heinz Paqué, 'How Far is Vienna from Chicago? An Essay on the Methodology of Two Schools of Dogmatic Liberalism' (1985) 38 *Kyklos* 412).

[45] See Robert Murphy, 'Why Money Doesn't Measure Value' (2014) <http://mises.org/library/why-money-doesn't-measure-value>.

[46] Mario Rizzo, 'Cost' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 92, 93. Mises describes it similarly: 'Costs are equal to the value attached to the satisfaction which one must forego in order to attain the end aimed at.' (Mises, *Human Action*, above n 19, 97).

[47] Rizzo, 'Cost', above n 46, 93.

[48] See generally James Buchanan, *Cost and Choice* (Liberty Fund, first published 1969, 1999 ed).

understanding using historical accounting prices. While cost is closely related to individual choice in the Austrian view, it is not directly so in the strict neoclassical model.[49]

The implication of the strict subjectivity of costs is that only the decision-maker can accurately assess the value of the sacrificed alternative since the knowledge about costs is unavailable in principle to third party observers.[50] In the insolvency context, third parties such as voluntary administrators may use the objective *accounting* costs and benefits (informed by historical or projected market prices) to decide whether rescue is more efficient than liquidation. They nevertheless do not have access to the requisite *economic* costs and benefits that individuals subjectively perceive that are more relevant to decision-making. Indeed, in the company setting, 'cost is not an outlay by the firm but, in disequilibrium, the alternative perceived profit opportunity.'[51] This can lead to problems of appraising the value of the company's resources in alternative insolvency settings, and by implication, the calculation of efficiency also.

Further to valuation, another aspect of the objectivity-subjectivity distinction concerns the nature of information. Information tends to be treated as something objective that can be traded on the market in performing maximising decisions in neoclassical economics.[52] This economic school tends to view that objective elements, such as the quantities of available resources and knowledge of technology, can determine or limit individual behaviour and outcomes.[53] Here, individuals face the economic problem of using objective external means to pursue subjectively established interests, given both external constraints (that are identifiable by third parties) and internal desires.[54] Crucially, such knowledge of ends and means are assumed to be given, reducing the economic problem to that of allocation, maximisation or optimisation subject to restrictions (that are again assumed to be known).[55]

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[49] Ibid 28.

[50] On the subjective nature of cost, see ibid.

[51] Rizzo, 'Cost', above n 46, 94.

[52] Yeager, above n 19, 155. Knight, although associated with the Chicago school of economics, had concerns with the consequences of strict positivism that implies the objectification of all things. When goods are objectively defined, it is implicitly assumed that there is some physical characteristic about the good that is identifiable to everyone, and accordingly, the methods of the physical sciences are assumed to be transferable to the social sciences (Richard McKenzie, *The Limits of Economic Science: Kluwer-Nijhoff Studies in Human Issues* (Kluwer-Nijhoff, 1983) 31-2).

[53] Kiichiro Yagi, 'Subjectivism and Objectivism in the History of Economic Analysis' in Yukihiro Ikeda and Kiichiro Yagi (eds), *Subjectivism and Objectivism in the History of Economic Thought* (Routledge, 2012) 1, 1.

[54] McKenzie, above n 52, 43.

[55] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 5. An exemplification of the neoclassical assumption of given information is that some constant variables must be presumed to exist to make mathematical calculation possible. Solving a set of simultaneous equations (common in mainstream economics) requires there to be a minimum number of exogenous or fixed variables, otherwise a solution (to an economic problem based on a quantitative model) is not possible.

On the other hand, the Austrian school emphasises that information and expectations are purely subjective.[56] Restrictions in the economy are not imposed by objective phenomena or material factors of the outside world (such as oil reserves) but by entrepreneurial knowledge possessed by individuals.[57] Moreover, individuals do not so much allocate given means to given ends as that they seek new ends and means through action.[58] The Austrian emphasis on searching for information rather than taking it as given implies a key role for entrepreneurs in the *discovery* of new means (see Section 5.3.3). This emphasis is diminished within neoclassical economics owing to its focus on *maximising* an objective function that is subject to known constraints.[59] Applied to the voluntary administration context, mainstream and Austrian economics differ on whether administrators can ascertain the relevant information when drafting a proposal about how the company's resources are to be allocated.

The methodological point on the objectivity-subjectivity of valuation and information affects the determination of efficiency in insolvency. To illustrate, if values and information were objective, third party observers can be virtually as informed the creditors themselves (particularly secured creditors who hold security rights) about the most efficient way of allocating the company's assets or about the most efficient resource allocation. In theory then, third parties may be substituted for individual creditors in allocation decisions. Hence, the question of *who* is tasked with evaluating the efficiency of a resource allocation or of an insolvency regime is not material to the actual outcome that is chosen in mainstream economics. The determination of efficiency depends more upon balancing the readily ascertainable costs and benefits than on the identity of the valuator.

But if values and information are strictly subjective, third parties cannot perform the task more efficiently than the rights holders themselves for lack of the requisite values and information. In this scenario, the valuator's identity, whether a rights holder or a third party, is non-trivial. Opinion on efficiency can very well differ between individual decision-makers even for the same data set because things in themselves do not divulge information on value or about the utility of their employment in alternative courses of action. To wit, differences in opinion do not arise purely due to having different sets of objective information but rather due to different evaluations of the *same*

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[56] Vaughn, above n 30, 4.
[57] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 5-6. De Soto provides the example of the discovery of a carburettor that is capable of doubling the efficiency of internal combustion engines as exerting the same economic effect as doubling all the physical oil reserves.
[58] Ibid 5.
[59] Yeager, above n 19, 155.

problem at hand. This is particularly so when there is no reason to expect that neoclassical objective cost estimates are directly related to the costs that are relevant to the act of choice.[60]

In sum, the Austrian school draws out the implications of subjectivism more consistently than the neoclassical school. It is possible for third parties to make judgments about efficiency in neoclassical economics by recognising the objective information, constraints and values that enter into efficiency calculations. Conversely, Austrian economics does not permit third parties to make such calculations in like manner because values and information are strictly subjective. Third party Austrian efficiency judgments instead have to defer to some reference to individual preferences and their perceptions of the external world.

5.3.2 Econometrics and Mathematical Formalism versus Verbal Reasoning

Influence on efficiency: efficiency is argued for using the tools of econometrics and mathematics (neoclassical economics) rather than with verbal logic (Austrian economics)

An economic school's position on the role that economics serves affects how economic theory is constructed and how efficiency is argued over. This is useful from a legal perspective because it addresses the place of mathematical arguments in debating efficiency in insolvency law. On the role of economics, neoclassical economics seeks to predict future occurrences of economic phenomena whereas Austrian economics seeks to describe and explain economic behaviour.[61] The divergence in purpose sees economic theory constructed differently under both schools.[62]

The methodologically monistic neoclassical school mimics the physical sciences in using formalistic approaches to model and predict economic phenomena. Specifically, it uses mathematical deduction and applies inductive statistical methods for predicting future events, more commonly known as econometrics.[63] Econometrics primarily focuses on finding empirical models for usable predictions rather than attempting to prove the truth of theories or to seek understanding

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[60] Buchanan, above n 48, 28.

[61] Mainstream economics can be described as essentially 'model theory' that 'define norms of behaviour against which actual behaviour may be compared and explained' while the Austrian theory of the market is seen as a causal process theory that *describes* the basic causal processes of nature (Uskali Mäki, 'The Market as an Isolated Causal Process: A Metaphysical Ground for Realism' in Bruce Caldwell and Stephan Boehm (eds) *Austrian Economics: Tensions and New Directions* (Springer Netherlands, 1992) 35, 46 citing Brian Ellis, 'What Science Aims to Do' in P Churchland and C Hooker (eds) *Images of Science* (Chicago University Press, 1985) 55).

[62] Coddington writes that prediction and explanation are not equivalent: 'For if explanation and prediction were structurally equivalent, predictive accuracy would be both a necessary and a sufficient condition for explanatory power' but this is not the case (Alan Coddington, 'Positive Economics' (1972) 5 *Canadian Journal of Economics* 1, 5).

[63] This mathematical theoretical work is deductive from axioms of deterministic rational economic behaviour; in particular, it 'takes the form of a deductive nomological system of axioms (here assumptions function as axioms) and rules of deduction (those of mathematics and formal logic).' (Reuten, above n 16, 40).

and explanation.[64] The emphasis on prediction reflects the influence of empiricism that regards economic phenomena as objective data that exists spatially and that is quantifiable.[65]

There is nevertheless an important trade-off between the relative precision of a theoretical prediction on the one hand and how accurately the theory describes reality on the other as more control over predictability is sought.[66] This is because the theory is restricted by the need to collect and manipulate data where the 'good' concerned has to be externally and objectively defined to verify a theory empirically.[67] This requires further assumptions and restriction of the individual's utility function, such as specifying the goods in their utility function. However, doing so takes focus away from understanding behavioural patterns towards more specific predictions about human behaviour.[68] Mathematical formalism likewise places restrictions on economic problems to make them amenable to mathematical treatment.[69] The problems are reduced to those of constrained optimisation, referring to maximising or minimising an objective function (such as pursuing maximum utility or minimum cost) subject to some constraints. Otherwise, economic models that are not precisely specified encounter problems with mathematical tractability.

Law and Economics is familiar with such formalism in modelling and solving economic problems. Its usage of econometric and mathematic tools means that information and values have to be restricted to those that are quantifiable (or made quantifiable); otherwise it is difficult to make calculations or predictions about efficiency. This is exemplified in the insolvency context where efficiency is typically assessed by comparing the objective costs and benefits of alternative courses

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[64] Mary Morgan, 'Finding a Satisfactory Empirical Model' in Neil B de Marchi (ed) *The Popperian Legacy in Economics* (Cambridge University Press, 1988) 199, 199; Daniel Hausman, 'Economic Methodology in a Nutshell' (1989) 3 *Journal of Economic Perspectives* 115, 120.

[65] Hoppe, above n 21, 53. Supporters of the testability of economic theories using statistical methods uphold that 'econometrics shares its logical foundations with psychometrics and biometrics and, for that matter, with meteorology and even experimental physics' (Jacob Marschak, 'On Econometric Tools' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 1984) 294, 294).

[66] McKenzie, above n 52, 21. Friedman's response to this problem is instrumentalism, arguing that postulates (the assumptions that go into an economic model) need not be realistic so long as they are successful in providing correct and useful predictions. That is, a model should be assessed by its explanatory and predictive power rather than by the realism of the assumptions (See Friedman, above n 14, 3).

[67] McKenzie, above n 52, 31. McKenzie provides the illustration of maximising 'child services' in order to demonstrate the restriction on utility functions that comes as part and parcel of defining a good objectively at 31-2:

> The individual must maximize 'child services' of a certain kind, the kind of child services on which data are collected, and he is not free to define for himself what he means by 'child services.' … [T]he individual cannot maximize (or be presumed to maximize) soft-spoken children when the dictates of the empirical analysis call for him to maximize the quantity of children.

[68] McKenzie phrases it thus:

> Indeed, once the good that people are assumed to maximize is specified and the nature of the demand curve and cost function are defined, the theory becomes totally deterministic: The curves then become the theoretical equivalent of the walls of the rat maze through which the individual must run.

Ibid 21.

[69] Roger Backhouse, 'The Value of Post Keynesian Economics: A Neoclassical Response To Harcourt and Hamouda' (1988) 40 *Bulletin of Economic Research* 35, 36.

of action. The one that maximises the objectively defined benefit or minimises costs is deemed to be the most efficient among the alternatives.

Precisely because prediction and formalism are deeply embedded in mainstream economics, the Austrian reasoning method can appear crude and 'un-economic' by comparison. The Austrian school prefers verbal argumentation owing to the shortcomings it perceives with the neoclassical argumentation tools in the context of economic science. This preference is also consistent with the methodically deductive study of praxeology since economic theory is constructed via deduction using a verbal chain of logic, given meaningful propositions and axioms. Law in general can sympathise with this Austrian preference as it also heavily employs verbal logic in argumentation and less so on formal predictive models that are subject to empirical tests.

To begin, Austrian economics views econometrics negatively for its probabilistic approach to economic data. The mathematical theory of probability engages with a sequence of repetitive random events under the same set of conditions.[70] The issue is that statistical data that refer to economic events are historical data about what occurred in a non-repeatable instance in the past and not information about how the future will play out. This is very different from physical events where people have knowledge about constant relations as established by experimental evidence.[71] Forecasting is problematic precisely because there are no constant relations in economics; hence measurement is not possible and economics is not quantitative.[72]

Additionally, for a historical fact to be usable for testing theories, it must be '…a simple fact, homogeneous with other facts in accessible and repeatable classes.'[73] But every historical event is complex (as a result of multiple causes that never stay in a constant relationship with other causes), heterogeneous and neither simple nor repeatable.[74] This means that whether one insolvency regime is likely to be more efficient than another cannot be gauged by reference to statistical data that extrapolates the aggregated historical experiences of other companies for the current one. That

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[70] Dusek, above n 10, 31.

[71] Hoppe, above n 21, 27. Robbins concurs:

> In the absence of rational grounds for supposing intimate connection, there would be no sufficient reason for supposing that history 'would repeat itself.' For if there is one thing which *is* shown by history, not less than by elementary logic, is that historical induction, unaided by the analytical judgment, is the worst possible basis of prophecy.

Lionel Robbins, 'The Nature and Significance of Economic Science' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 73, 77 (emphasis in original).

[72] Mises, *Human Action*, above n 19, 55. On the same page, Mises provides the following example:

> If a statistician determines that a rise of 10 percent in the supply of potatoes in Atlantis at a definite time was followed by a fall of 8 percent in the price, he does not establish anything about what happened or may happen with a change in the supply of potatoes in another country or in another time.

See Lawson for the argument that generally, econometrics lacks logical validity (Tony Lawson, 'Realism and Instrumentalism in the Development of Econometrics' (1989) 41 *Oxford Economic Papers* 236).

[73] Murray Rothbard, *Economic Controversies* (Ludwig von Mises Institute, 2011) 74. It is important to note that historical facts that have many similarities with each other are nevertheless not homogeneous.

[74] Ibid.

returns tend to be higher in one insolvency regime vis-à-vis another does not mean that they are higher in all instances because the courses of action taken to obtain the returns are contingent upon many factors. Perhaps an even bigger objection is that no amount of empirical confirmation can corroborate or disprove the proposition that a particular insolvency regime tends to encourage efficiency over another, owing to the famed problem of induction in philosophy, raising the question of the usefulness of empirics in economics.[75]

To add to the complexity, economic predictions are unreliable since it is not possible to know all of the conditions that decisions are made under.[76] Unlike nature, people change their preferences and goals over time, making it difficult to predict how they are to behave if there are an infinite number of possible ways to do so. Coupled with the Austrian position that third party observers are denied the subjective information of the relevant individuals, there is in fact no objectively correct way to model the data since it is possible for two econometric analyses using different modelling techniques on the same data set to produce differing or even conflicting results on efficiency.[77] Austrian economics is wary of econometrics for this shortcoming.

Since the Austrians view their theories as primarily *explanations* of phenomena, they regard efforts to predict beyond the most general features of future events as dubious.[78] Proponents of the school argue that it is introspective understanding that enables one to anticipate the choices of other individuals and to approximate a reliable forecast of future economic conditions, since one is an individual himself or herself (bearing in mind that the imperfections of human knowledge make such an endeavour likewise imperfect).[79] The most that introspection can do is general predictions of trends that are qualitative and theoretical, such as recognising patterns and explanations of the likely outcomes of planned actions rather than specific numerical forecasts.[80] The focus on understanding motivations for action clarifies the Austrian preference for verbally arguing why one expects future conditions to materialise in a particular manner, in place of econometrics.

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[75] This problem is noted by O'Flynn and Mainsbridge in the voluntary administration context:

> Anecdotally, there is no doubt that Australian insolvency practitioners are pretty happy with VA. Hard evidence is somewhat more difficult to come by. Statistics are not much of a guide: *changing economic conditions, overlapping insolvency administrations (eg, simultaneous appointment of receivers and liquidators) and changes to data collection and presentation methods make it extremely difficult to do a numerical analysis of the impact of [voluntary administration] on the mix of insolvency regimes.*

Karen O'Flynn and Ray Mainsbridge, *Voluntary Administration: The Australian Experience* (2008) 2-3 <http://www.claytonutz.com/area_of_law/restructuring_and_insolvency/docs/VoluntaryAdministration_TheAustralian Experience.pdf> (emphasis added).

[76] Even if the result of econometric evidence yielded a correct prediction, this would be in spite of the econometric method, not because of it (Hill and Uselton, above n 25, 65, 70; Hoppe, above n 21, 29-30).

[77] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 12; see also Section 5.3.1.

[78] Crespi, above n 2, 323.

[79] Hill and Uselton, above n 25, 65-6; Mises, *Human Action*, above n 19, 118.

[80] Yeager, above n 19, 157; De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 13.

To continue the critique, Austrian economics is also critical of the use of mathematics for lacking the ability to capture the multifaceted reality of human action. It is through verbal arguments that individuals explain and justify why they value one thing or course of action more than another based upon their preferences that are not expressible in mathematical form. This is because quantifiable relationships only apply when there is no change, but change happens as people act; and while mathematics captures what has occurred, it cannot capture what will occur.[81] On the other hand, verbal language can do what mathematics cannot in capturing the essence of economic phenomena since each verbal proposition is meaningful whereas mathematical symbols *per se* are not.[82]

Further, mathematics cannot incorporate another two key foci of Austrian economics, namely entrepreneurial creativity and the dynamic quality of market processes (discussed in the next section), where neither can be reduced to a system of formal relationships.[83] Words, by contrast, can incorporate and describe these two that are otherwise difficult to do under mainstream economics because of the restrictions it places on the definition and measurement of goods and goals. Consequently, Austrian arguments about efficiency afford heavier significance to verbal logic although basic mathematics may still be utilised as an aid in a more limited scope.

In sum, mainstream and Austrian economics employ different tools to argue about efficiency. The former appeals to econometrics and mathematics (such as forecasting empirical data on creditor returns in alternative insolvency regimes and optimising a particular function subject to certain constraints to determine the most efficient course of action).[84] The latter school employs verbal logic. The dissimilarity is crucial since the Austrian method of arguing about efficiency may be

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[81] Library of Economics and Liberty, *The Concise Encyclopedia of Economics,* (at 1 October 2014), Austrian Economics <http://www.econlib.org/library/Enc1/AustrianEconomics.html>. Regarding the inadequacies of employing mathematical formalism in economics, Mayer writes that:

> In essence, there is an immanent, more or less disguised, fiction at the heart of mathematical equilibrium theories, that is, they bind together, in simultaneous equations, non-simultaneous magnitudes operative in genetic-causal sequence as if these existed together at the same time. A state of affairs is synchronized in the 'static' approach, whereas in reality we are dealing with a process. But one simply cannot consider a generative process 'statically' as a state of rest, without eliminating precisely that which makes it what it is.

Hans Mayer, 'The Cognitive Values of Functional Theories of Price: Critical and Positive Investigations Concerning the Price Problem' in Israel Kirzner (ed), *Classics in Austrian Economics: A Sampling in the History of a Tradition* (William Pickering, 1994) vol 2, 92, cited in De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 11.
[82] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 11; Rothbard, *Economic Controversies*, above n 73, 62.
[83] Arjo Klamer, 'Formalism in Twentieth-Century Economics' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 48, 48; De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 11.
[84] This is exemplified in Australian studies such as by Abe Herzberg, Mark Bender and Lee Gordon-Brown, 'Does the Voluntary Administration Scheme Satisfy its Legislative Objectives? An Exploratory Analysis' (2010) 18 *Insolvency Law Journal* 181 and James Routledge, 'An Exploratory Empirical Analysis of Part 5.3A of the Corporations Law (Voluntary Administration' (1998) 16 *Company and Securities Law Journal* 4, comparing returns to creditors in liquidation and in rescue (voluntary administration and deed of company arrangement).

considered 'un-economic,' although this heterodox school has reasons for challenging the mainstream argumentation tools. This is important to recognise from a legal perspective because it gives pause for thought to the utility of formalistic tools in debating efficiency depending upon one's methodological inclinations.

5.3.3 Equilibrium State versus Disequilibrium Process and Entrepreneurship

Influence on efficiency: efficiency is seen against the backdrop of an equilibrium state (neoclassical economics) rather than in the context of disequilibrium and the process of entrepreneurship (Austrian economics)

Equilibrium is a key concept in mainstream economic theory.[85] It complements the previous methodological point as equilibrium is attained through mathematical optimisation. To introduce it, Kirzner writes that

> The state of equilibrium is the state in which all actions are perfectly coordinated, each market participant dovetailing his decisions with those which he (with complete accuracy) anticipates other participants will make. The perfection of knowledge which defines the state of equilibrium ensures complete coordination of individual plans.[86]

In mainstream economics, economic problems are resolved against the backdrop of equilibrium where the efficiency of a solution is gauged by reference to and distance from an equilibrium benchmark. This benchmark is usually maximum utility, maximum wealth or minimum cost, where the allocation of resources that meets such benchmarks is said to be optimal. An example is where the market price of a good is set such that the quantity suppled at this price equals the quantity demanded, without any shortage or abundance. At this price, the consumer and producer surpluses from trade are maximised. It is an equilibrium point since it is the best obtainable outcome given the individual's utility function, constraints and information or belief set, where the expectations of all individuals are mutually compatible such that no further change improves the situation.[87] This is

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[85] Hausman identifies the central commitment to equilibrium theorising as the core of the coherence of mainstream economic theory (Daniel Hausman, *The Inexact and Separate Science of Economics* (Cambridge University Press, 1992) cited in Dow, above n 10, 84). The same can be said of Boland and Rosenberg, as Hoover writes:
> For Hausman and Boland the core of economics is equilibrium theory, that is the theory of the successful optimisation of economic agents subject to constraints. For Rosenberg the core is general equilibrium theory, the theory of the coordination of such optimizing agents.
Hoover, above n 14, 723-4 (citations omitted).
[86] Israel Kirzner, *Competition and Entrepreneurship* (University of Chicago Press, 1973) 218. It should be noted that the very definition of equilibrium is not always clear-cut as there is a variety of equilibrium concepts in the theoretical literature: Arnis Vilks, 'A Set of Axioms for Neoclassical Economics and the Methodological Status of the Equilibrium Concept' (1992) 8 *Economics and Philosophy* 51, 51. For a brief word on several concepts of equilibria, see generally Mario Rizzo, 'Disequilibrium and All That: An Introductory Essay' in Mario Rizzo (ed), *Time, Uncertainty, and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 1.
[87] Geoffrey Brennan and Michael Moehler, 'Neoclassical Economics' (2010) in *Encyclopedia of Political Theory*, 947 <http://knowledge.sagepub.com.ezproxy.library.uq.edu.au/view/politicaltheory/n305.xml>; Christian Arnsperger and

what is meant in saying that all actions are perfectly coordinated, as the foregoing quote from Kirzner mentions. Outcomes that fall short of this optimum are thereby deemed 'less efficient.' It should be noted that there are two equilibrium notions, general and partial equilibrium. General equilibrium is where the decisions of participants in an economy (consumers and firms) lead to equilibrium in *all* markets.[88] It is a mental construct and not an operational concept.[89] Meanwhile, partial equilibrium refers to equilibrium with respect to one firm or *one part* of the economy. Both notions are spoken of when talking about 'equilibrium' in this chapter.

Establishing equilibrium presupposes certain conditions, for instance that the necessary information for a solution is fully known or given.[90] This includes knowledge about demand and supply functions, resource availability, technology and preferences. Individual preferences are also assumed to remain unchanged over the period of analysis.[91] With these conditions, neoclassical economics investigates a well-defined solution to the problem of resource allocation.[92]

There are two important Austrian critiques to the neoclassical equilibrium concept. The first challenges the assumed knowledge and availability of the requisite information for attaining equilibrium. Instead of being objective and given, information and values need to be discovered. Even so, the large volume of knowledge required for determining equilibrium cannot possibly be centralised or known perfectly by one person but is highly decentralised and dispersed widely among the separate minds of numerous individuals in the market economy.[93] The nature of this information is also tacit (referring to knowledge about particular times and places that cannot be codified or made explicit, such as regarding available labour supplies or stocks of goods)[94] and subjective, so different individuals do not necessarily perceive costs and benefits in like manner. This raises the question of whose information is to be considered in the equilibrium determination. The task of pursuing the equilibrium outcome is further compounded when individual plans are constantly being discoordinated due to the imperfect fulfilment of individual expectations about the future. In short, the information problems involved in coordinating resources towards an

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Yanis Varoufakis, 'What is Neoclassical Economics? The Three Axioms Responsible for its Theoretical Oeuvre, Practical Irrelevance and, Thus, Discursive Power' (2006) 1 *Panoeconomicus* 5, 10-1.

[88] In mainstream economic theory, 'General equilibrium will be achieved only when competitive forces have led to the equality of marginal benefit and marginal cost in the market for every single commodity and service.' (Cooter and Ulen, above n 2, 38).

[89] Mario Rizzo, 'Uncertainty, Subjectivity and the Economic Analysis of Law' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 71, 87; Amartya Sen, 'Economic Methodology: Heterogeneity and Relevance' (1989) 56 *Social Research* 299, 310.

[90] Sherwin Rosen, 'Austrian and Neoclassical Economics: Any Gains From Trade?' (1997) 11 *Journal of Economic Perspectives* 139, 140; De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 8.

[91] Ratnapala, above n 2, 290.

[92] Yeager, above n 19, 158.

[93] Friedrich Hayek, 'The Use of Knowledge in Society' (1945) 35 *American Economic Review* 519, 519-20.

[94] See Ibid 521-2.

equilibrium outcome make it difficult to measure efficiency against an equilibrium benchmark. The concession is that allocations that are preferable to others, because they result in higher wealth or utility or lower cost, can be deemed to approach equilibrium more closely than their alternatives even if the exact location of this equilibrium point is unknown.

Second, mainstream equilibrium is often viewed as a *state* that obscures the *process* of the discovery of value and information required to attain it. This process is central in Austrian economics because it does not assume that such knowledge is given. Until plans are coordinated (in equilibrium), the economy is in disequilibrium since there are gains to be made from trade in the pursuit of equilibrium.[95] Indeed, profits continue to persist in a market economy owing to disequilibrium in some sector of the economic system.[96]

The Austrian solution to overcoming disequilibrium is entrepreneurship. It consists of the human ability to continually discover and create new ends and means, where each individual has a capacity to perceive, discover and take advantage of profit opportunities that arise in their environment.[97] It is through entrepreneurship that alert, profit-seeking entrepreneurs capitalise on the ignorance of other individuals that is responsible for the rise of profit opportunities. In so doing, individuals become aware of the mutually beneficial opportunities for trade that, when grasped, resolve coordination problems and produce market coordination.[98] The Austrian school thus critiques the neoclassical fixation on equilibrium for neglecting the role of entrepreneurship, especially since the 'dynamic entrepreneurial-competitive discovery process' enables individuals to obtain the requisite information for coordinating the means at their disposal to their pursued goals and thereby act more efficiently.[99] The marked absence of the role of entrepreneurs in neoclassical economics is

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[95] Rizzo, 'Disequilibrium and All That: An Introductory Essay', above n 86, 1-2; Israel Kirzner, *Market Theory and the Price System* (Ludwig von Mises Institute, 2007) 42.

[96] Ludwig Lachmann, *Macro-Economic Thinking and the Market Economy* (The Institute of Economic Affairs, 1973) 32.

[97] Jesús Huerta de Soto, *The Theory of Dynamic Efficiency* (Routledge, 2009) 19-20. De Soto lists six features of entrepreneurship relevant to dynamic efficiency on pages 9-10. First, entrepreneurship continually generates new information as each entrepreneurial action involves discovering new information previously not possessed by the actor, such as previously unnoticed profit opportunities. Importantly, this information is subjective. Second, entrepreneurship is creative, meaning that social maladjustments are embodied in profit opportunities that are hidden until entrepreneurs discover them. Third, entrepreneurship communicates information. Fourth, entrepreneurship produces a coordinating effect. Fifth, entrepreneurship is competitive. Sixth, the entrepreneurial process is continuous in that it never stops or ends.

[98] Israel Kirzner, *How Markets Work: Disequilibrium, Entrepreneurship and Discovery* (Institute of Economic Affairs, 1997) 67; De Soto, *The Theory of Dynamic Efficiency*, above n 97, 37. See also Linda Schwartzstein, 'An Austrian Economic View of Legal Process' (1994) 55 *Ohio State Law Journal* 1049, 1049-50; Kirzner, *Market Theory and the Price System*, above n 95, 43; Israel Kirzner, 'The Economic Calculation Debate: Lessons for Austrians' (1988) 2 *Review of Austrian Economics* 1, 6 and Israel Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship* (University of Chicago Press, 1979) 5, 8.

[99] Kirzner, 'The Economic Calculation Debate: Lessons for Austrians', above n 98, 5-6. Regarding the entrepreneurial *process* of competition, 'To compete means… to perceive an opportunity to serve the market better (than it is currently being served by one's competitors).' (Israel Kirzner, 'Entrepreneurship' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 103, 107). The use of the term *process* is key in distinguishing the Austrian

understandable given the assumption of already-defined goods, when perfect information exists among market participants and when markets are in equilibrium.[100] But in a perpetually disequilibrated economy, it makes little sense to assume that third party observers can coordinate resources to attain equilibrium by way of mere mathematical optimisation.

Nevertheless, Austrian economics recognises an equilibrium concept since entrepreneurial action triggers a spontaneous process of coordination that moves the economy from disequilibrium toward equilibrium.[101] This equilibrium is never reached, however, because entrepreneurial action also has a discoordinating effect.[102] It arises because the process of creating and transmitting new information also modifies the general perception that individuals have regarding the potential ends and means available, setting in motion new maladjustments as new opportunities for entrepreneurial profit.[103] The Austrian school consequently places more emphasis on disequilibrium processes.

The relevance of this section to efficiency regards the context for comparing the relative efficiency of alternative courses of action. In sum, third parties can gauge the comparative efficiency of alternative resource allocations against hypothetical equilibrium benchmarks in mainstream economics.[104] These benchmarks are absent in Austrian economics because not only do individual

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view of competition as a rivalrous market process vis-à-vis the neoclassical model of perfect competition as a *state* of affairs (See Friedrich Hayek, 'The Meaning of Competition' in *Individualism and Economic Order* (University of Chicago Press, 1948) 92; see Mark Blaug, 'Is Competition Such a Good Thing? Static Efficiency versus Dynamic Efficiency' (2001) 19 *Review of Industrial Organization* 37 for a brief history of the distinction of the notions of competition as an end-state and as a process).

[100] Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship*, above n 98, 5; McKenzie, above n 52, 35. Kirzner even goes so far as to say that 'It is by now fairly well recognized that the mainstream of modern equilibrium microeconomics has, particularly since its decisive absorption of Walrasian influence, assumed a form in which scope for the entrepreneurial role is conspicuous by its absence.' (Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship*, above n 98, 53, referring the reader to William Baumol, 'Entrepreneurship in Economic Theory' (1968) 58 *American Economic Review* 72 for an example).

[101] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 5; Rosen, above n 90, 149. But this is not undisputed as not all Austrians agree with the concept of pursuing equilibrium. Ludwig Lachmann, an economist associated with the Austrian school, questions and rejects the tendency of market processes towards equilibrium. Vaughn writes that there are two very different views of how Austrian economists should proceed with constructing economic theories of human action:

> One side of the divide believes that Austrian insights into time and ignorance, subjectivity and processes serve as a vital supplement to neoclassical economics… Kirzner and those who agree with him argue that in economics, equilibrium does no more than describe an end state in a market process, whereas it is the process itself that is of interest. Hence, while accepting the basic legitimacy of the equilibrium construct for theorizing about economic action, these Austrians see their role as one of providing a theoretical supplement to show how equilibrium is in principle capable of being achieved… [The other side of the debate], taking its inspiration from Ludwig Lachmann, believes that taking time and ignorance seriously requires abandoning conventional concepts of equilibrium and developing a whole new paradigm for Austrian economics.

Vaughn, above n 30, 5.

[102] Yeager, above n 19, 154; De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 8.

[103] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 6, 8-9; Israel Kirzner, 'Comment: X-Inefficiency, Error, and the Scope for Entrepreneurship' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 140, 142.

[104] See Cooter and Ulen, above n 2, 38. To illustrate, in neoclassical economics the most efficient form of market structure is perfect competition where the equilibrium price and quantity of a particular good/service is ideally set such that its price equals its marginal cost. In this equilibrium scenario, all consumer and producer surpluses are maximised. A less efficient allocation violates this relationship, such as imperfect competition in general (such as monopolistic competition) and monopoly in particular. This means that moving to the equilibrium solution can attain a better

preferences vary with time (thereby making equilibrium an elusive target), third party observers do not have the requisite subjective information for coordinating plans towards equilibrium. Instead, Austrian economics emphasises the *process* that enables individuals to obtain the required information to lead them to their own subjective idea of an efficient solution, whether it is to maximise a benefit or minimise a cost function, or some other goal.[105] Appraisals on efficiency consequently defer to how much entrepreneurial freedom a particular institutional setting (such as an insolvency regime) affords to individuals, rather than distance from a particular equilibrium benchmark *per se*.

5.3.4 Risk versus Uncertainty and Economic Rationality

Influence on efficiency: determining efficiency is uncomplicated since the future can be predicted with a degree of risk (neoclassical economics) rather than challenging due to unpredictable uncertainty (Austrian economics)

Time is an important concept in economics since expectations about how impending outcomes and prices will materialise are factored into current considerations in deciding matters of resource allocation. Its relevance to the thesis regards how easily third parties can form a reliable expectation of the most efficient course of action to undertake or the most efficient outcome to pursue when making judgments on efficiency. Neoclassical and Austrian economics treat the predictability of the future differently and make varying assumptions on the assumed rationality of individuals with regard to prediction.[106]

The treatment of time can be better understood by Knight's differentiation of risk from uncertainty.[107] Risk is measurable, where the possible future outcomes and variables are known, can be grouped and have their probabilities calculated; it assumes that a known probability distribution

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economic outcome since this increases the available surplus. Hence, there is no incentive to deviate from equilibrium, setting it as a benchmark that other resource allocations are compared against.

[105] Yagi, above n 53, 3, writes that:

> [Hayek] broke down the neoclassical synthesis of subjectivism and objectivism within equilibrium solutions and returned to the original sense of 'subjectivism,' as per the Austrian School… wherein one gives priority to subjective elements in the comprehension of economic actors, rather than to the attainment of the optimal solution.

[106] For a general treatment of uncertainty in economics, see Christian Schmidt (ed), *Uncertainty in Economic Thought* (Edward Elgar, 1996). Dempster provides a good overview in Gregory Dempster, 'Austrians and Post Keynesians: The Questions of Ignorance and Uncertainty' (1999) 2 *Quarterly Journal of Austrian Economics* 73. Another extensive treatment is provided in Gerald O'Driscoll and Mario Rizzo, *The Economics of Time and Ignorance* (Basil Blackwell, 1985) 52-70, distinguishing between the 'real time' of Austrian economics and the static or 'Newtonian' time of neoclassical economics. See also Joan Robinson, 'Time in Economic Theory' (1980) 33 *Kyklos* 219, distinguishing logical from historical time.

[107] Frank Knight, *Risk, Uncertainty and Profit* (Houghton Mifflin, 1921). Mises also writes on uncertainty by reference to the distinction between class probability ('risk') and case probability ('uncertainty') (see generally Mises, *Human Action*, above n 19, 107-113).

exists.[108] Uncertainty is immeasurable, where the variables to be considered are neither known nor can their probabilities be calculated due to reasons such as the uniqueness of the situation; it assumes that there is an unknown probability distribution.[109] Uncertainty cannot always be reduced to mere mathematical risk.[110] The former is applicable in situations where there is 'no scientific basis on which to form any calculable probability whatever.'[111] This even includes market valuations that relate to investments in the future, where they 'cannot be uniquely correct, since our existing knowledge does not provide a sufficient basis for a calculated mathematical expectation.'[112] This leaves room for emotions and intuition to motivate decisions, as Keynes famously noted when he wrote that most individual decisions to act 'can only be taken as the result of animal spirits – a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.'[113]

Despite Keynes' acknowledgement that uncertainty rather than risk is the central problem in economics, the Knight-Keynes concept of uncertainty is not within the mainstream and is often confounded with risk.[114] This goes hand-in-hand with the mathematical formalisation of economics and the positivist emphasis on prediction, since optimisation and prediction cannot occur if future outcomes cannot be accurately incorporated into the current economic problem.[115] Indeed, the neoclassical framework largely abstracts from the difficulties posed by time and uncertainty to preserve analytical tractability and to generate quantitative predictions in the effort to predict individual behaviour.[116] The mainstream leaning towards risk also ties in with the school's emphasis on equilibrium, since equilibrium is 'associated with a world view that treats the future as implied in the present.'[117]

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[108] Knight, *Risk, Uncertainty and Profit*, above n 107, 19-20, 233; E Roy Weintraub, '"Uncertainty" and the Keynesian Revolution' (1975) 7 *History of Political Economy* 530, 532.
[109] Knight, *Risk, Uncertainty and Profit*, above n 107, 19-20, 233; Weintraub, above n 108, 532.
[110] See Omar Hamouda and John Smithin, 'Some Remarks on 'Uncertainty and Economic Analysis'' (1988) 98 *Economic Journal* 159, 162.
[111] John Maynard Keynes, 'The General Theory of Employment' (1937) 51 *Quarterly Journal of Economics* 209, 214.
[112] John Maynard Keynes, *The General Theory of Employment, Interest and Money* (Macmillan, 1936) 152.
[113] Ibid 161-2.
[114] See Richard Bronk, 'Epistemological Difficulties with Neo-Classical Economics' (Conference Paper, Washington Marriott Wardman Park, 19-21 November 2011) 6
<http://eprints.lse.ac.uk/39423/1/Epistemological_difficulties_with_neoclassical_economies_(LSERO).pdf>.
[115] Geoffrey Hodgson, 'The Eclipse of the Uncertainty Concept in Mainstream Economics' (2011) 45 *Journal of Economic Issues* 159, 159. See also Section 5.3.2.
[116] Crespi, above n 2, 322, 323, 325. The notion of equilibrium, to recall the methodological discussion in the previous section, is also important for tractability, demonstrating the close relationship between equilibrium and risk (Sen, above n 89, 309-10).
[117] James Buchanan and Viktor Vanberg, 'The Market as a Creative Process' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 378, 380; Richard Langlois, 'Risk and Uncertainty' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 118, 119. Hence, the equilibrium concept is also closely tied with the view adopted on time. Ratnapala writes,

The said emphasis is also associated with the mainstream assumption on individual rationality. 'Rational' means that individuals strive to make themselves as well off as possible given their tastes, available resources and the amount of knowledge they possess.[118] Rational individuals are assumed to know the probabilities (as the expression of the possibilities of miscalculation and error) that are used to appropriately discount the levels of utility attached to success.[119] According to the (neoclassical-Chicago) economic position espoused by Becker, individuals are essentially treated as having complete rationality for theory purposes, even if they are not in fact rational in all their endeavours in practice.[120] This epistemic rationality assumption, understood as the correct appraisals of the consequences of action, is important for the predictability of economic theories.[121] The rationality axioms (axioms of deterministic individual behaviour) are also important for mathematical formalisation as they are required to fulfil the goal 'of developing a closed, axiomatic, mathematically-expressed theoretical system [that yields] equilibrium solutions.'[122] These reasons collectively explain why uncertainty is thereby not part of the Beckerian frames of reference.[123]

By contrast, the Austrian school views the economic world as an open as opposed to a closed system, seeing the future as unknowable.[124] Individuals act under uncertainty and are subject to a wide range of 'sheer ignorance' where they lack complete knowledge about the very structure of the economic problem facing them.[125] This is argued to be implied in human action:[126]

> [N]eoclassical analysts make time stand still while they consider the [economic] problem. This means, among other things, that people's individual preferences are ascertained or assumed to exist at the relevant point in time, from which the economist can determine the efficient solution to the problem.

Ratnapala, above n 2, 290.

[118] Anton Lowenberg, 'Neoclassical Economics as a Theory of Politics and Institutions' (1990) 9 *Cato Journal* 619, 621. In mainstream economics, the theory of rationality is specific: 'individuals choose (or act) rationally if their actions are determined by their preferences, and their preferences are themselves rational…Preferences are rational if they are complete and transitive': See Daniel Hausman and Michael McPherson, 'The Philosophical Foundations of Mainstream Normative Economics' in Daniel Hausman (ed) *The Philosophy of Economics* (Cambridge University Press, 3rd ed, 2008) 226, 235).

[119] McKenzie, above n 52, 29. The behavioural critiques of the mainstream economic rationality assumption have since been addressed, especially since Simon's work on what is known as 'bounded rationality' (see Herbert Simon, 'A Behavioral Model of Rational Choice' (1955) 69 *Quarterly Journal of Economics* 99). Psychologists Daniel Kahneman and Amos Tversky (see, eg, Amos Tversky and Daniel Kahmenan, 'Judgment under Uncertainty: Heuristics and Biases' (1974) 185 *Science* 1124), have also made progress in the field of behavioural economics that accounts for the fact that individuals do not have the rationality assumed in neoclassical economics. In the behavioural L&E literature, works by Christine Jolls, Cass Sunstein and Richard Thaler, 'A Behavioural Approach to Law and Economics' (1998) 50 *Stanford Law Review* 1471 and Russell Korobkin and Thomas Ulen, 'Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics' (2000) 88 *California Law Review* 1051, for example, raise a challenge to the rationality assumption.

[120] McKenzie, above n 52, 29.

[121] Cristina Bicchieri, 'Rationality and Predictability in Economics' (1987) 38 *British Journal for the Philosophy of Science* 501, 501.

[122] Dow, above n 10, 83.

[123] McKenzie, above n 52, 29.

[124] Yeager, above n 19, 157.

[125] Israel Kirzner, 'Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach' (1997) 35 *Journal of Economic Literature* 60, 62.

[126] Prychitko, above n 23, 79. See also Mises, *Human Action*, above n 19, 254.

> To act is to embark upon change, to create, to make a difference, to substitute one state of affairs for (it is hoped) a better state of affairs. Change, of course, takes place over time. And to be conscious of time, and willing to act, implies uncertainty. If a being enjoyed full and perfect knowledge (or its probabilistic counterparts), it would not have to act, but instead would react to its environment in a pre-programmed manner.

This uncertainty cannot always be treated as mere risk since it ignores that the future is unknowable in a dynamic and complex system.[127] Austrian economists are consequently critical of objective probability theory to reduce real-world uncertainty to certainty equivalents.[128] Each historical event is unique, heterogeneous and non-reproducible, thereby ruling the application of objective probability theory impermissible.[129] Expectations and forecasting are furthermore a matter of subjective estimates of the future that cannot be reduced to an objective formula, especially as there is no 'given' future that is independent of the choices that individuals will make.[130] Consequently, what a reasonable person would do in the presence of uncertainty is a value judgment rather than a question of fact.[131] Although expectations may be 'more or less reasonable (in the sense of being more or less defendable in the light of past experience)… they can, ultimately, not be more than conjectures about an undetermined and, therefore, unknowable future.'[132] Uncertainty thereby rules out any possibility of rational behaviour when 'rational' is understood in the neoclassical sense of calculating the optimal course of action given available probabilistic knowledge of the future.[133]

This is not to say that individuals act irrationally. Contrariwise, Austrian economics emphasises rational choice although its conception of individual rationality is thinner. Rationality does not entail epistemic rationality (the correct appraisals of the consequences of action) but rather consciously striving after ends.[134] In the Austrian view, all action is purposeful and rational by definition since individuals use means in the attempt to achieve an end when acting.[135] Rational individuals can nevertheless make entrepreneurial errors whenever an opportunity for profit in the market remains undiscovered.[136] But such ignorance and commissions of error do not contradict the Austrian rationality concept since individuals rationally choose among the opportunities within the

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[127] Malloy, above n 40, 142.

[128] A certainty equivalent is defined as the guaranteed amount of payoff (whether monetary or utility) that an individual will accept to be indifferent between that payoff and an uncertain gamble.

[129] Murray Rothbard, 'Comment: The Myth of Efficiency' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 90, 93-4.

[130] Ibid; Caldwell, above n 24, 366; Buchanan and Vanberg, above n 117, 381; Bradley Bateman, 'Keynes's Changing Conception of Probability' (1987) 3 *Economics and Philosophy* 97, 100.

[131] Rizzo, 'Uncertainty, Subjectivity and the Economic Analysis of Law', above n 89, 87.

[132] Buchanan and Vanberg, above n 117, 381.

[133] Tony Lawson, 'Uncertainty and Economic Analysis' (1985) 95 *Economic Journal* 909, 919.

[134] Hall and Martin, above n 30, 6.

[135] Mises, *Human Action*, above n 19, 11, 18. He adds at 20 that 'The opposite of action is not irrational behavior, but a reactive response to stimuli on the part of bodily organs and instincts which cannot be controlled by the volition of the person concerned.' All action is rational, including habitual behaviour as it too involves choice and is therefore rational by definition (Caldwell, above n 24, 366).

[136] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 7.

limitations of their awareness that are also subject to change.[137] Though this might appear 'undesirable' from a neoclassical viewpoint, uncertainty is an unavoidable part of entrepreneurial activity and is not seen as market failure.[138] The conjunction of uncertainty, ignorance and rationality are not inconsistent with each other because of how the Austrian school defines rationality.

The aforesaid conjunction is also closely associated with the school's emphasis on market process. To wit, while entrepreneurial action reduces the uncertainty and ignorance that individuals face as their plans become more coordinated, it also produces discoordinating effects that again generate uncertainty in the process.[139] Until this creative and discovery process is complete, the requisite information for coordinating individual plans does not exist nor can it be known. It therefore makes little sense to view the future as already existing and waiting for its discovery, that correct forecasting is even possible or that it is possible to make any neoclassical allocative decision based on expected costs and benefits in advance.[140] Accordingly, Malloy writes that

> Thinking in terms of selecting the most efficient outcome is also problematic because, in part, it suggests that one can predict a sequence of future events. That is, it implicitly assumes that future values can be identified and played back into our current decision-making process. This, of course, ignores the reality of our inability to know future states in a dynamic and complex system.[141]

Albeit unknowable, the future is not unimaginable. Rather than a quantitative approach to economic problems with the assumption that all outcomes can be anticipated with varying degrees of risk, individuals rely upon conjecture and understanding of the impact of their decisions in the midst of uncertainty. Whilst unsatisfactory from a mainstream perspective, Mises argues that 'understanding is the only appropriate method of dealing with the uncertainty of future conditions [in place of a quantitative approach to economic problems].'[142]

The relevance of this section to efficiency in insolvency regards the difficulty of its determination. In sum, within the mainstream economic framework, individuals are assumed to be able to

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[137] Hall and Martin, above n 30, 6-7; Caldwell, above n 24, 366.
[138] Knight, *Risk, Uncertainty and Profit*, above n 107, 232, cited in Bronk, above n 114, 5.
[139] See Section 5.3.3.
[140] De Soto, *The Austrian School: Market Order and Entrepreneurial Creativity*, above n 5, 6; Bronk, above n 114, 8-9.
[141] Malloy, above n 40, 142. Coddington extends this point by writing that
> Suppose, moreover, that we were to start with the (as it will turn out, naive) idea that foresight is correct if the future, when it arrives, exactly resembles what was foreseen, in every particular, at every instant. If that is what is meant by 'correct foresight', then its absence or nonattainment is a matter of utter triviality. But as soon as it is admitted that any reasonable conception of correct foresight must allow for some (reasonable) margins of error, we are on the beginnings of a slippery slope. For we then have to admit that there is no clear dichotomy between certainty and uncertainty (or between knowledge and ignorance, for that matter). Just to emphasize this point, we could go to the other extreme and claim that all foresight is 'correct' (to some sufficiently lax standards of approximation), just as all foresight is 'incorrect' (by the absurd standards of comprehensive exactness).

Alan Coddington, 'Deficient Foresight: A Troublesome Theme in Keynesian Economics' (1982) 72 *American Economic Review* 480, 483-4.
[142] Mises, *Human Action*, above n 19, 118.

anticipate (known) future outcomes with degrees of risk in judging whether a company's resources are more efficiently allocated in one insolvency regime compared to another. That is, individuals can have expectations about the future that is in principle knowable, even if this knowability is bounded by the individuals' imperfections.[143] Third party observers can thus make a determination on efficiency without much complication. On the other hand, uncertainty impedes making better conjectures in determining the most efficient way of allocating a company's resources. Coupled with the challenge from the subjectivity of information, third parties face more difficulties making *ex ante* efficiency assessments in Austrian than in mainstream economics. From a legal perspective, this methodological point cautions third party observers regarding proposals for increasing the efficiency of insolvency regimes as it throws light on the assumptions made regarding the possibility and accuracy of making such efficiency assessments.

5.4 Consolidation of Methodology and the Method of the Three Efficiency Criteria of Part I

The foregoing exposition demonstrates that the neoclassical and Austrian economic schools diverge from each other on four important methodological points. This section summarises the effect of each school's method on efficiency and demonstrates that the efficiency criteria of Part I (wealth maximisation, transaction cost and Kaldor-Hicks efficiency) are aligned with mainstream economic methodology. This is significant from a legal perspective because it reveals their affinity with mainstream economics, implying that any policy or assessments of efficiency using those criteria can be challenged from the methodological perspective of alternative economic schools.

The collective effect of the mainstream method on efficiency is as follows. Third party observers (external to the parties that are transacting with each other) can make assessments on efficiency by collecting the requisite information and cost and benefit values in alternative courses of action. These are assumed to be objectively ascertainable, where third parties and individuals alike have the possibility of equal access to them. Given this information, and coupled with the assumption that knowledge of the future is more or less predictable with varying degrees of risk (meaning that individuals are able to factor this information into present considerations), mathematics and econometrics are the primary tools for arguing about efficiency. The degree of efficiency of a specific resource allocation or of an insolvency regime can then be calculated and gauged against a hypothetical equilibrium benchmark, usually a resource allocation with the maximum attainable net benefit or minimum attainable cost. Overall, the assessment of efficiency in mainstream economics can be relatively 'precise' – for instance that one resource allocation is more efficient than another

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[143] Buchanan and Vanberg, above n 117, 381.

by a certain amount of monetary dollars or a certain degree – since it largely abstracts from the difficulties posed by the passage of time.

The collective effect of the mainstream economic method can be seen in each of the efficiency criteria of Part I. On valuation, all three criteria assume that the relevant cost and benefit values for calculating efficiency are objectively ascertainable, quantifiable and thus can be aggregated by third parties external to the debtor-creditor relationship. For wealth maximisation, wealth is the value of a particular object in dollar or dollar equivalents, measured by willingness to pay.[144] In Kaldor-Hicks efficiency, costs and benefits are assumed to be abstractly quantifiable in utility terms. This value objectivity assumption is implicit; an allocation is gauged to be more efficient than another as if the utility of different individuals can be meaningfully aggregated and compared across allocations. The transaction cost efficiency criterion measures costs objectively following from its definition that transaction costs must be able to be compared across different institutions, where comparability assumes the objectivity of value. To be sure, ignoring the problem of how the third parties are to determine the relevant information, valuation must be objectively discernible by third parties in all three criteria for them to be practical for policy since efficiency cannot be calculated otherwise.[145] This is seen in the fact that the inputs for calculating efficiency are often creditor returns or the costs involved in different insolvency regimes.[146]

While it is not known with certainty *ex ante* that pursuing one course of action over another will attain efficiency, determining efficiency in any of the three criteria assumes that the estimates of future values (outcomes and prices) are somewhat predictable to a certain degree, demonstrating the preference for risk as opposed to uncertainty. Again, without this assumption, efficiency cannot otherwise be reckoned since wealth maximisation, transaction cost and Kaldor-Hicks efficiency require that the relevant information for alternative courses of action be available to inform whether one course is preferred over another. This task is aided by statistical and econometric data such as the historical prices for certain assets and projections of future prices and values. Efficiency is then

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[144] See Section 2.2.1.

[145] Posner indeed assumes that third parties are able to ascertain willingness to pay for the efficiency calculation:

> The purist would insist that the relevant values are unknowable since they have not been revealed in an actual market transaction, but I assume that (in many cases anyway) a court can make a reasonably accurate guess as to the allocation of resources that would maximize wealth. Since, however, the determination of value (that is, of willingness to pay) made by a court is less accurate than that made by a market, the hypothetical-market approach should be reserved for cases, such as the typical accident case, where market-transaction costs preclude use of an actual market to allocate resources efficiently. By 'actual market' I mean one based on voluntary exchange, whether or not money is used in the exchange.

Richard Posner, 'Utilitarianism, Economics, and Legal Theory' (1979) 8 *Journal of Legal Studies* 103, 120.

[146] For instance, in the international literature, Stefan Sundgren's paper ('Does a Reorganization Law Improve the Efficiency of the Insolvency Law? The Finnish Experience' (1998) 6 *European Journal of Law and Economics* 177, 194) finds that a reorganisation law increases the efficiency of the insolvency procedure by reference to the indications of his data set that creditors receive a better payoff in reorganisations compared to liquidations. In Jackson's seminal paper detailing the Creditor's Bargain, inefficiency appears to be used in the sense of lower returns for creditors in an individualistic versus a government-imposed collective regime (see Thomas Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain' (1982) 91 *Yale Law Journal* 857).

calculable by way of mathematical optimisation to obtain the maximum monetary or welfare benefits (for wealth maximisation and Kaldor-Hicks) or minimum costs (for transaction cost efficiency) subject to various constraints.[147] Herein lies the reference to equilibrium, since outcomes that fall short of attaining maximum wealth or utility or minimum cost are potentially superseded by a superior one that is closer to those mathematical optima. Last, the role of entrepreneurship is not overly significant in any of the three criteria as establishing wealth maximisation, Kaldor-Hicks or transaction cost efficiency requires the ability of mathematical optimisation more so than on information discovery, although more information can lead to better opportunities for optimisation.

As their methodological properties are aligned with the mainstream economic method, the thesis classifies the abovementioned efficiency criteria as mainstream criteria. Notably, these properties are vastly different from those of the Austrian school, as the following collective effect of the Austrian economic method on efficiency demonstrates. Third parties cannot calculate efficiency in the same manner as in neoclassical economics as they lack knowledge of the requisite subjectively perceived values and information. For instance, albeit reasonable to assume that individuals prefer more wealth to less, there may be subjectively determined reasons why individuals do not always pursue wealth maximisation. Unless the third party understands why a particular constrained level of wealth is preferred, they may gauge efficiency against the incorrect benchmark of maximum attainable wealth given certain *other* constraints; in essence, lacking knowledge of the true subjectively-determined equilibrium benchmark by which individuals themselves gauge efficiency. In its place, third party Austrian efficiency judgments defer to a disequilibrium backdrop and the extent of entrepreneurial freedom afforded to individuals. Specifically, institutional arrangements that uphold property rights minimises interference in entrepreneurial freedom, enabling individuals to freely coordinate individual plans with one another amidst market disequilibrium and to create and discover more efficient ways to act in the process (discussed more in Section 7.3). But it is not always possible to pursue efficient courses of action in the sure and calculated way of neoclassical economics because individuals can only imperfectly conjecture about the uncertain future. Since this uncertainty is not reducible to risk, determining efficiency conclusively is more difficult than in the mainstream. Whilst these hindrances affect individuals in pursuing efficient courses of action, they disadvantage third parties even more because of the problem of procuring the requisite information. In light of the circumstances to determining efficiency brought on by Austrian economics, third parties employ verbal logic in arguing for efficiency that is cruder compared to the

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[147] For instance, with regard to wealth maximisation, the liquidation versus rescue decision can be reduced to a quasi-mathematical formula that estimates the income stream that the assets are expected to generate if kept together, factoring into account the risk of rescue failure, and comparing it to the amount that the assets are expected to realise in liquidation (Gerard McCormack, 'Corporate Rescue Law in Singapore and the Appropriateness of Chapter 11 of the US Bankruptcy Code as a Model' (2008) 20 *Singapore Academy of Law Journal* 396, 397).

more 'accurate' mainstream tools of mathematics and econometrics, but with the benefit of accommodating qualitative variables such as the respect for property rights and subjective variables (individual preferences and appraisals of information and values). These cannot otherwise be captured when they have to be quantified and objectified for mathematical manipulation.

Already it is possible to see that an efficiency criterion aligned with mainstream economic methodology materially differs from one that assumes the Austrian method. If one is a proponent of mainstream neoclassical economics, one encounters no methodological conflict in endorsing any of wealth maximisation, transaction cost or Kaldor-Hicks efficiency for use. Otherwise, conflict can arise in the absence of this subscription, such as if one adopts the contrary methodological position of Austrian economics (the discussion of the potential for conflict is reserved for Chapter 8).

This is why economic methodology is relevant to the insolvency literature in general, beyond being a subject of interest within the confines of economic history or theory alone. Arguably, much of the literature debating the efficiency of alternative insolvency regimes tends to presuppose mainstream economic methodology in that, as Section 1.4 has covered, it tends to be defined by reference to wealth and costs; in other words, wealth maximisation and transaction cost efficiency. Without considering how methodology underlies general understandings of efficiency in the insolvency law literature, one may accept the use of a particular efficiency criterion without first checking how it compares against one's own methodological views. For instance, it is relevant to policymaking that in the Austrian view, third parties cannot judge the efficiency of individual action *per se* as in mainstream economics due especially to their lack of access to the requisite subjective values and information.

Before concluding that this heterodox school is thereby useless for policy, an Austrian rebuttal is that the 'determinacy' or 'precision' of efficiency analyses in mainstream economics is questionable because it holds water only by making a number of restrictive methodological assumptions on valuation, rationality and knowledge about the future. Meanwhile, the methodological assumptions of Austrian economics are arguably more realistic, albeit at the sacrifice of a more determinate third party measurement of efficiency. In any case, rather than remaining hidden, the thesis argues that methodological considerations be overtly acknowledged because not all economists accept mainstream economic methodology. Moreover, not all lawyers may object to economics *per se* although they may object to particular economic models of firms and human behaviour that are incorporated in the law and economics school of corporate law.[148]

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[148] Stephen Bainbridge, 'Community and Statism: A Conservative Contractarian Critique of Progressive Corporate Law Scholarship' (1997) 82 *Cornell Law Review* 856, 859.

5.5 Conclusion

This chapter has explored four important methodological differences between the mainstream neoclassical and Austrian economic schools, with particular emphasis on value. Its purpose was to give pause for thought to how methodological assumptions affect the properties of efficiency criteria. The chapter began with an introduction on how the methodological divide between mainstream and Austrian economics hinges upon whether economics belongs to the realm of inquiry surrounding social or physical phenomena. The neoclassical mainstream generally takes a monistic view on methodology where the method of economics emulates that of the physical sciences. The Austrian school is dualist, arguing that economic methodology is distinct from that of the physical sciences applied to economics. This stems from the difference between the scientist-subject relationships of the physical and social sciences. In turn, economic phenomena are viewed and analysed differently in both economic schools as exemplified by their variance on the four methodological points on valuation, argumentation, equilibrium and entrepreneurship, and the future. The chapter also classifies the efficiency criteria of wealth maximisation, transaction cost and Kaldor-Hicks efficiency as mainstream economic criteria owing to their methodological properties being aligned with the said school.

Studying the effect of economic method on efficiency is incomplete without addressing the related methodological question of whether intervention, specifically on rights, can increase efficiency. This is significant because attendant to insolvency regimes are the modifications to the rights of secured creditors, particularly in corporate rescue. This is addressed in the next chapter.

CHAPTER 6

Economic Methodology and the Rights–Efficiency Interaction

6.1 Introduction

This chapter extends the discussion of the previous chapter in demonstrating that whether third party rights modification can promote efficiency depends upon methodology. Rights modification in the insolvency context, and in particular voluntary administration, refers to the variations and restrictions of the rights and actions of creditors (secured ones in particular) during the period of administration. Both economic and non-economic reasons justify this modification. An example of the latter is fairness, such as to prevent a race to the courthouse since less attentive creditors may otherwise be left without a share of the insolvent estate. Elsewhere, the Harmer Report of 1988 (Australia) argued for the necessity of placing some restraint on the enforcement of securities over property in order to support the principle of an ordered and fair form of administration to deal with the company's affairs.[1]

As regards economic reasons, rights modification gives the administrator room to investigate the affairs of the company without being obstructed by aggressive debt recovery actions by individual creditors or others such as lessors. These actions may otherwise undermine the company's financial position to the disadvantage of the creditor majority, especially where the administrator is attempting to determine the most means-efficient way of allocating a company's assets or to ascertain the most ends-efficient asset allocation. Another economic reason is to lower the costs that creditors incur in monitoring the firm and in enforcing their claims individually, since creditors are assured that they will receive a share of the company's assets in insolvency with rights modification in place.[2] Further, restraining the right to withdraw assets that are subject to a security interest (contrary to the goal of strong creditor protection)[3] can also facilitate an attempt at corporate rescue that may yield a more wealth-maximising outcome for creditors.

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[1] Law Reform Commission, *General Insolvency Inquiry*, Report No 45 (1988) [33] ('Harmer Report').

[2] There is, however, another side to this. Secured creditors may seek higher rents to cover their monitoring costs if they cannot exercise withdrawal rights over security in the event of insolvency. This can drive up the future cost of credit compared to where they are allowed to freely exercise their security rights.

[3] See, eg, Jennifer Dickfos, 'Improving Outcomes for Creditors: Balancing Efficiency with Creditor Protections' (2008) 16 *Insolvency Law Journal* 84. Nevertheless, the scope of investor protection should not be limited by the goal of an efficient insolvency regime (see Jason Harris, 'Before the High Court: Charting the Limits of Insolvency Reorganisations: *Lehman Brothers Holdings Inc v City of Swan*' (2010) 32 *Sydney Law Review* 141, 157).

But can rights modification increase efficiency? The mainstream and Austrian economic schools diverge on the answer on methodological grounds. Like the previous chapter, this one also shines the methodological spotlight on valuation. The chapter commences by examining the mainstream economic viewpoint of the relationship between rights modification and efficiency – termed the 'rights–efficiency' interaction in this thesis – as illuminated by the Coase Theorem that considers how legal rules can encourage efficiency. This analysis centres upon the hindrance that *transaction costs* pose to negotiations in achieving a more efficient resource allocation. The Austrian critique of the Theorem demarcates the Austrian rights–efficiency interaction. By sharp contrast, it is the restrictions on *entrepreneurial freedom* that hinder efficiency, rather than on any notion of objective costs such as transaction costs. Again, the chapter demonstrates that the each of the efficiency criteria of Part I demonstrates the mainstream rights–efficiency interaction.

6.2 The Coase Theorem

The Coase Theorem is the starting point for examining the mainstream economic view of the relationship between rights modification and efficiency.[4] It holds pride of place in Law and Economics and describes how efficiency is affected under various legal delimitations of rights. The Theorem states that in the presence of zero (or negligible) transaction costs,[5] the legal determination of rights and liabilities does not make a difference to the efficiency of the outcomes.

Transaction costs are the costs that arise in market exchange, representing the value of resources consumed in the process of carrying out an exchange in the market (when there is a bilateral voluntary exchange of property).[6] This 'cost of using the price mechanism' includes the costs of discovering the relevant prices and of negotiating and concluding separate contracts for every exchange transaction that occurs on a market.[7] When they are low, an economic transaction can

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[4] The Theorem is derived from the seminal work of Ronald Coase in 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1. It is later authors who refer to Coase's work dealing with efficiency and externalities as the Coase Theorem: George Stigler, *The Theory of Price* (Macmillan, 3rd ed, 1966) 113.

[5] Coase refers to this as that the '…pricing system is assumed to work smoothly (that is, costlessly)…' (Coase, 'The Problem of Social Cost', above n 4, 6).

[6] Glenn Fox, 'The Real Coase Theorems' (2007) 27 *Cato Journal* 373, 378.

[7] Ronald Coase, 'The Nature of the Firm' (1937) 4 *Economica* 386, 390-1. Coase provides several examples of the costs involved: '…to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on.' (Coase, 'The Problem of Social Cost', above n 4, 15). Fox writes that the understanding of the concept of transaction costs has changed over time. Specifically, the costs of discovering the relevant prices are referred to as search costs (the value of resources consumed in finding potential partners for bi-or multilateral voluntary exchanges); the value of resources consumed in the process of trying to reach exchange terms that are mutually satisfactory with potential partners are referred to as negotiation costs; and the value of the resources consumed to verify that other parties to the exchange have complied with the agreed terms of

proceed where one party exchanges the right over a particular a good with another party (for the right to a sum of money, for instance). Once the costs of transacting exceed the benefit to be gained, the exchange is not proceeded with because it is deemed to be inefficient. The Coase Theorem thereby presumes that efficiency is defined in terms of social wealth maximisation.

Coase's analysis opens up the opportunity for a rearrangement of legal rights via intervention by the government or legal system to increase efficiency in such high transaction cost scenarios. This analysis applies to the insolvency context since it involves both transaction costs and rights modifications. Three points related to the Coase Theorem are reviewed to demonstrate this from the mainstream economic viewpoint and subsequently critiqued from the Austrian.

6.2.1 Point One: Zero Transaction Cost World

In the absence of transaction costs, the legal determination (or the initial assignment) of rights and liabilities does not make a difference to the efficiency of the resulting resource allocation.[8] This is Point One of the Theorem. If party A, who values a certain right more than party B, is awarded the right, then no private bargaining will improve the allocation of resources. If party B is awarded the right instead, both parties may bargain where the final result is that party A obtains that right by paying B for it.[9] Contextualised for insolvency, pro-rescue parties (unsecured creditors, for instance) may negotiate voluntarily with pro-liquidation parties (such as secured parties) and obtain the rights to either rescue or liquidation by paying the other for it.[10] This bargain yields an outcome that is Pareto optimal if contracting is costless and there are no barriers to exchange.[11] The requirement for this to happen is that the rights of the parties involved be well-defined and the

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the transaction are referred to as concluding costs, although this is also called monitoring and enforcement costs (Fox, above n 6, 378-9).

[8] Herbert Hovenkamp, 'Marginal Utility and the Coase Theorem' (1989) 75 *Cornell Law Review* 783, 783. Other authors phrase it slightly differently: 'the delimitation of rights is an essential prelude to market transactions; but the ultimate result (which maximizes the value of production) is independent of the legal decision.' (Ronald Coase, 'The Federal Communications Commission (1959) 2 *Journal of Law and Economics* 1, 27); 'If there are zero transaction costs, the efficient outcome will occur regardless of the choice of legal rule.' (A Mitchell Polinsky, *An Introduction to Law and Economics*, (Little, Brown and Company, 2nd ed, 1989) 12). The initial rights assignment does however affect the distribution of wealth between both parties because it determines the party that has to purchase the rights from the other (see Jules Coleman, *Markets, Morals and the Law* (Cambridge University Press, 1988) 71).

[9] For specific examples, including numerical ones, see Coase, 'The Problem of Social Cost', above n 4.

[10] Rights here refer to the withdrawal rights of secured creditors over property of the company that is subject to a security interest. If pro-rescue creditors purchase these rights from the secured creditors, who may otherwise exercise them, the former can choose not to exercise those rights and thereby opt to place the company into a scheme of rescue.

[11] Simon Deakin and Alan Hughes, 'Economic Efficiency and the Proceduralisation of Company Law' (Working Paper No 133, University of Cambridge Centre for Business Research, 1999) 4 <http://www.cbr.cam.ac.uk/pdf/wp133.pdf>. See Section 4.2 regarding the Pareto efficiency criteria.

consequences of legal actions be easy to forecast.[12] This zero-cost world sets the theoretical backdrop for comparing the world of positive cost, discussed next.

6.2.2 Point Two: Positive Transaction Cost World

Transaction costs always exist in the real world.[13] Where they exceed the value of production to be gained from exchange, the initial delimitation of legal rights affects efficiency in that a particular delimitation may result in a greater value of production than any other.[14] If two individuals would voluntarily bargain to exchange property rights with each other if not for the prohibitively high transaction costs involved, the legal or government system can rearrange the ownership of these rights to produce the desired exchange and the consequent resource allocation, in theory.[15] This is the essence of Point Two of the Coase Theorem: rearranging rights overcomes the hindrance that transaction costs pose to voluntary exchange, enabling resources to be moved to a more efficient allocation.

The guiding principle is to maximise social wealth by assigning property rights according to the market-driven allocation that is expected to result in the zero transaction cost scenario.[16] Here, efficiency is increased when the party that values the property right the most is assigned it.[17] Direct regulation is another option, where individuals have to comply with a set of binding regulations instead of a legal system of rights that are modifiable by transacting in the market.[18] This is, for instance, the initial prohibitions on the rights of secured creditors in the moratorium during the administration period in order to provide the option to rescue the company, obtain better outcomes for creditors and hence increase efficiency.

The following example in the insolvency context demonstrates Point Two. Suppose that the voluntary administrator appraises the allocation of resources in rescue to be more efficient than liquidation, in that it is possible to produce more social wealth from the company's assets in the former than in the latter regime. Here, the right of *not* withdrawing security (and rescuing the

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[12] Coase, 'The Problem of Social Cost', above n 4, 19.

[13] Coase acknowledges that the zero transaction cost world does not exist in reality but spells out its implications for the legal determination of rights. See Ronald Coase, 'The Institutional Structure of Production' (1992) 82 *American Economic Review* 713, 717.

[14] Coase, 'The Problem of Social Cost', above n 4, 16; see also Deirdre McCloskey, 'Other Things Equal: The So-Called Coase Theorem' (1998) 24 *Eastern Economic Journal* 367, 368.

[15] Coase, 'The Problem of Social Cost', above n 4, 15, 19; See Oliver Williamson, 'Transaction-Cost Economics: The Governance of Contractual Relations' (1979) 22 *Journal of Law and Economics* 233.

[16] See Guido Calabresi, 'Transaction Costs, Resource Allocation and Liability Rules – A Comment' (1968) 11 *Journal of Law and Economics* 67, 69.

[17] Robert Cooter and Thomas Ulen, *Law & Economics* (Prentice Hall, 6th ed, 2012) 93.

[18] Coase, 'The Problem of Social Cost', above n 4, 16-18.

company) is 'worth more' than the right of withdrawal. If transaction costs were negligible, those in favour of rescue (unsecured creditors, for instance) could voluntarily bargain with those in favour of liquidation for that right (secured creditors, who favour liquidation as it does not prohibit them from appointing a receiver to take control of and realise the charged assets on their behalf). A hypothetical example is where the unsecured creditors agree to pay secured creditors a certain amount of monetary dollars $R for their security rights, where $R is less the amount that unsecured creditors collectively expect to receive in rescue and more than the secured creditors expect to receive in a receivership. The unsecured creditors can subsequently choose not to exercise the withdrawal right so that the company may be rescued, as intended.

But there inevitably are coordination and hold up problems to negotiations when multiple creditors are involved.[19] Even if there are gains to be made from exchange, the transaction costs involved in bargaining can make it no longer worthwhile. In theory, there is room for gain if the security rights are 'transferred' from secured creditors to the general body of pro-rescue unsecured creditors, bypassing the need for any exchange and the attendant incurrence of any transaction costs.[20] This transfer is made possible with the statutory restrictions placed upon secured creditors in exercising their withdrawal rights, making a rescue attempt possible (especially if the secured creditors are forced to participate in a rescue scheme).[21] The economic justification for the moratorium in voluntary administration may be seen to fit within this view since Coase's analysis provides an efficiency rationale for rights modification.

6.2.3 Point Three: Total Effect

While voluntary market transactions are costly, so is intervention. Point Three of the Coase Theorem is that whether a change in resource allocation is to be achieved by the market or by the

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[19] Thomas Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain' (1982) 91 *Yale Law Journal* 857, 863-65.

[20] An example of a rearrangement or a 'transfer' of rights can be seen in Douglas Baird, 'A World without Bankruptcy' (1987) 50 *Law and Contemporary Problems* 173, 185: 'Requiring those with rights against a firm's assets to take account of the interests of the workers [(who might lose their jobs)] is tantamount to giving the workers rights to the firm's assets.'

[21] See *Corporations Act 2001* (Cth) pt 5.3A div 6 ('*Corporations Act*')where the moratorium that comes into effect upon the commencement of voluntary administration prevents creditors from taking actions against the company or its property without the written consent of the administrator or the leave of the Court. There are exceptions to the restrictions on the exercise of property rights, such as where a secured creditor holds a charge over perishable property (s 441C; see generally *Corporations Act* pt 5.3A div 7).

government or legal system depends upon the *total effect*. To wit, the costs and benefits involved in alternative social arrangements must be considered as a whole.[22]

Direct regulation does not necessarily produce better results than the market although it may in certain circumstances. This is so when there are many individuals involved, where the state's coercive powers can economise on transaction costs and where voluntary transactions might not occur otherwise.[23] Nevertheless, with regulation comes substantial administrative costs and without guarantee that it will increase the efficiency of the economic system, especially when made by a fallible administration that is itself subject to political pressures or that can be captured by interest groups.[24] This is something that Demsetz cautions against, termed the 'nirvana approach' when comparing an existing 'imperfect' institutional arrangement ('free markets' in the Coasean example) to an ideal perfect government interventionist solution.[25]

Further caution is raised where corrective measures to encourage efficiency may lead to more harm than the original deficiency, or where the costs of obtaining the more efficient allocation exceed the anticipated benefits.[26] In particular, a change in the existing social arrangement that leads to an improvement in some decisions may also lead to a worsening in others. Intervention is still not necessarily ruled out completely, especially where the benefits can exceed its costs.[27] However, this should not be taken to mean an endorsement of frequent involuntary rights reassignment, especially where this can threaten confidence in the longevity of property rights.[28] In short, while efficiency requires a stable property rights system, it does not necessarily preclude all involuntary rights reassignment.[29]

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[22] Steven Medema and Richard Zerbe, Jr, 'The Coase Theorem' (1999) in *Encyclopedia of Law and Economics*, 836, 877 <http://encyclo.findlaw.com/0730book.pdf>.

[23] Coase, 'The Problem of Social Cost', above n 4, 17-18; Deakin and Hughes, above n 11, 5; Kenneth Arrow, 'Political and Economic Evaluation of Social Effects and Externalities' in Julius Margolis (ed) *The Analysis of Public Output* (UMI, 1970) 1, 18).

[24] Coase, 'The Problem of Social Cost', above n 4, 18.

[25] See Harold Demsetz, 'Information and Efficiency: Another Viewpoint' (1969) 12 *Journal of Law and Economics* 1. With that said, Demsetz's 'Nirvana Fallacy' also has to be contrasted with that of Eisenberg's 'Heavenly Market Fallacy,' defined as 'the erroneous belief that because regulation is imperfect, any market, no matter how terribly flawed, is heavenly, and therefore to be preferred to a mandatory legal rule.' (Melvin Eisenberg, 'The Structure of Corporation Law' (1989) 89 *Columbia Law Review* 1461, 1525; see also Melvin Eisenberg, 'Bad Arguments in Corporate Law' (1990) 78 *Georgetown Law Journal* 1551, 1551-2).

[26] Coase, 'The Problem of Social Cost', above n 4, 42-3; see also Mario Rizzo, 'The Mirage of Efficiency' (1979) 8 *Hofstra Law Review* 641, 641-2.

[27] Richard Posner, 'Nobel Laureate Ronald Coase and Methodology' (1993) 7 *Journal of Economic Perspectives* 195, 202; Calabresi, above n 16, 69.

[28] Harold Demsetz, 'Ethics and Efficiency in Property Rights Systems' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 97, 106.

[29] Ibid.

6.3 Mainstream Rights–Efficiency Interaction and Application to the Efficiency Criteria of Part I

The foregoing three Points collectively argue that intervention by rights reassignment or by direct regulation can promote efficiency, understood as social wealth maximisation, when transaction costs hinder a voluntary rearrangement of rights. Just as the wealth maximisation criterion has properties aligned with mainstream economic methodology, so do the assumptions underlying the Coase Theorem analysis. Judging that a resource allocation is 'inefficient,' that transaction costs are 'sufficiently high' and that rights modification will 'increase efficiency' echoes the assumption that third parties are able to measure the relevant costs and benefits. This is the case, as the values are expressed in terms of a common objective denominator, specifically monetary dollars. Without this value objectivism, the values cannot be aggregated or compared with each other and the Theorem calculations cannot be performed.

Implicit in the Coase Theorem is also the assumption that the expected costs and benefits in alternative rights arrangements can be estimated with a degree of certainty; as is reflective of the emphasis on risk in the mainstream method. Otherwise, the Coase Theorem calculations will neither produce a determinate answer on efficiency nor have an economic argument for intervention if future values are wholly uncertain. The methodological focus on equilibrium is also present in the Theorem, since the rights arrangement that yields the highest level of wealth is preferred to other arrangements, viz. the optimum outcome that no party has an incentive to deviate from.

Notably, the methodological assumptions of mainstream efficiency criteria are, by the same token, those that permit intervention to increase efficiency, as described in the Coase Theorem. It is then no surprise that wealth maximisation, transaction cost and Kaldor-Hicks efficiency are amenable to rights intervention to increase them. The most important methodological property that demonstrates this is valuation. Since each of the criteria assumes value objectivity, by implication, third parties can measure changes in efficiency by changes in net utility or monetary dollars when contractual rights are modified. For wealth maximisation, Posner claims that intervention is appropriate, whether in the form of rights reallocation or direct intervention, where transaction costs hinder a movement of resources to a more wealth-maximising resource allocation.[30] The same applies to Kaldor-Hicks efficiency since a net increase in utility from a change in resource allocation without actual compensation means that the rights of some individuals may be compromised (involuntarily) in the pursuit of efficiency. As regards transaction cost efficiency, that rights modification can

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[30] Richard Posner, 'Utilitarianism, Economics, and Legal Theory' (1979) 8 *Journal of Legal Studies* 103, 130.

effectuate a more efficient allocation where transaction costs are prohibitively high follows directly from the Coase Theorem.

But the Coase Theorem has its critics, especially from the Austrian school. A methodological critique reveals the disparate position that Austrian economics holds on the rights–efficiency interaction compared to the Law and Economics mainstream. While there are more critiques available than are discussed, the ones presented in the next section are sufficient to distinguish the rights–efficiency interaction between both economic schools in the author's opinion.

6.4 Critique of the Coase Theorem and the Austrian Rights–Efficiency Interaction

To reiterate, the three Points of the Coase Theorem are that (i) in a zero transaction cost world, the initial allocation of rights does not affect resource allocation efficiency; (ii) rights modification or direct intervention can increase efficiency where transaction costs are high as it can effectuate a transaction that would not occur otherwise; and (iii) whether rights should be reallocated voluntarily via the market or involuntarily (via the legal or government system) depends upon the total effect; that is, the net benefits obtainable under alternative social arrangements. Rather than addressing each Point separately, the ensuing analysis presents the critique from the vantage point of the zero-cost and positive-cost world to minimise repetition.

6.4.1 Zero Transaction Cost World

The first Austrian critique is that the Coase Theorem disregards value subjectivity and assumes that third parties can ascertain the costs and benefits for calculating that rights modification can increase efficiency. Since the Theorem calculations use objectively quantifiable monetary values rather than subjective ones, the concept of 'psychic income' can be used to demonstrate the critique. Psychic income refers to income that is subjectively perceived, not the pecuniary income that is measured by an individuals' endowment of monetary wealth. The critique is that even where transaction costs are zero, the view that resource allocation is not affected by the distribution of rights is mistaken because it does not account for psychic income.[31]

Recall that according to the Theorem, the right to a particular property should be assigned to the individual who values it the most in order to secure an efficient resource allocation. Exemplified for

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[31] Walter Block, 'Coase and Demsetz on Private Property Rights' (1977) 1 *Journal of Libertarian Studies* 111, 111; Murray Rothbard, 'Law, Property Rights, and Air Pollution' (1982) 2 *Cato Journal* 55, 58.

the insolvency setting, withdrawal rights should be assigned to the party who values them most highly. Suppose that rescue is expected to yield better monetary outcomes for creditors as a whole compared to immediate liquidation or receivership (from a third party perspective). Additionally, suppose that unsecured creditors are in favour of rescue. But suppose that a secured creditor prefers to exercise their withdrawal right over security and appoint a receiver as they deem this course of action to be more valuable. From a third party perspective, and despite the secured creditor owning the security rights, those rights are more highly valued in rescue (that is, in the hands of the unsecured creditors who will decide not to exercise those rights). To facilitate the rescue attempt, secured creditors are restricted from exercising their withdrawal rights, effectively 'transferring' their rights to the group of pro-rescue unsecured creditors. The Theorem assumes that if secured creditors truly valued the rights more than the pro-rescue parties, the former can pay the latter to recover them. In this case, an efficient allocation will result because there are no transaction costs to hinder voluntary negotiations.

But what if the original right owners lack sufficient pecuniary income to recover their rights despite attaching great psychic income to them?[32] The question is rhetorical; the point is that even where transaction costs are zero, the immediate resource allocation *is* affected by any third party modifications to the initial distribution of rights where psychic income and pecuniary income constraints are considered.[33] This is because the original rights owners are not always able to pay to maintain possession should mainstream efficiency reasons dictate otherwise. Hence, resource allocation and efficiency is contingent upon the distribution of rights even in the zero transaction cost world, contra Point One of the Coase Theorem.

6.4.2 Positive Transaction Cost World

Once again, the Coase Theorem disregards value subjectivity in its argument that rights modification can increase efficiency in a positive-cost world. To wit, reallocating property rights according to the route that minimises social transaction costs overlooks the fact that the subjectivity of costs precludes their aggregation.[34] Since costs are non-additive and non-comparable, any concept of social costs, including those of transaction costs, is rendered meaningless in the Austrian

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[32] See Walter Block, 'Private-Property Rights, Erroneous Interpretations, Morality, and Economics: Reply to Demsetz' (2000) 3 *Quarterly Journal of Austrian Economics* 63, 69.

[33] See Block, 'Coase and Demsetz on Private Property Rights', above n 31, 111-12; Walter Block, 'Ethics, Efficiency, Coasian Property Rights, and Psychic Income: A Reply to Demsetz' (1995) 8 *Review of Austrian Economics* 61, 73.

[34] Rothbard, 'Law, Property Rights, and Air Pollution', above n 31, 59; Peter Lewin, 'Pollution Externalities: Social Cost and Strict Liability' (1982) 2 *Cato Journal* 205, 220, 222.

view.[35] In any case, it is mistaken to assume that a way around measuring costs and benefits is to utilise market prices as a proxy.[36] Price expresses a going rate of exchange (for instance, the monetary dollars given up in exchange for a good) whereas cost is subjective value (the value attached to the *satisfaction* that one foregoes to attain the goal that one aims at).[37] The price of something may differ significantly from its opportunity cost to an individual entrepreneur.[38] While Coaseans typically employ present market prices as indications of value, prices are only indications of minimal value in light of the existence of consumer and producer surpluses.[39] There is further no justification for employing market prices in place of subjective value.[40] Consequently, it is impossible for third party observers to maximise the value of production where no knowledge of costs and benefits is available.

This point can be underscored by the significance of upholding property rights regardless of whether the current owners of property have sufficient pecuniary income to protect the possession of their entitlement. The distinction between entitlements protected by property versus by liability rules is helpful here.[41] The guide in Law and Economics is that a property rule should be chosen when transaction costs are low (since the parties can bargain to establish the relevant values) whereas a liability rule is used when transaction costs are high (such as when there are large numbers of individuals involved).[42] Where transaction costs are high, denying property rights holders an injunctive remedy against invasions of their rights and limiting them instead to a remedy in damages facilitates the movement of resources to the allocation where they are most highly valued, expressed in terms of social wealth.[43] This assumes that the information costs that third party observers incur to discover the information about the value of security (for determining the damages payable) are low compared to the transaction costs incurred in voluntary market

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[35] Murray Rothbard, *The Logic of Action: Method, Money, and the Austrian School* (Edward Elgar, 1997) 269.

[36] This is done in wealth maximisation that in effect employs prices to measure the values of various goods (Lewis Kornhauser, 'A Guide to the Perplexed Claims of Efficiency in the Law' (1980) 8 *Hofstra Law Review* 591, 595).

[37] Eamonn Butler, *Austrian Economics: A Primer* (Adam Smith Institute, 2010) 36; Ludwig von Mises, *Human Action: A Treatise on Economics*, *Scholar's Edition* (Ludwig von Mises Institute, 1998) 97.

[38] E C Pasour Jr, 'Cost and Choice – Austrian vs Conventional Views' (1978) 2 *Journal of Libertarian Studies* 327, 328.

[39] Walter Block, 'Private Property Rights, Economic Freedom, and Professor Coase: A Critique of Friedman, McCloskey, Medema, and Zorn' (2003) 26 *Harvard Journal of Law and Public Policy* 923, 934, n 42.

[40] Ibid.

[41] See Guido Calabresi and A Douglas Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85 *Harvard Law Review* 1089.

[42] Michael Krauss, 'Property Rules vs. Liability Rules' (1999) in *Encyclopedia of Law and Economics*, 782, 788 <http://encyclo.findlaw.com/3800book.pdf>.

[43] Richard Posner, *Economic Analysis of Law* (Aspen Publishers, New York, 7th ed, 2007) 69.

transactions.[44] If both transaction costs and third party assessment costs are high, protecting an entitlement with a liability rule is not necessarily more conductive to efficiency.[45]

This property–liability rule distinction can be exemplified in the insolvency setting. If the withdrawal rights of pro-liquidation secured creditors were protected by a property rule, pro-rescue unsecured creditors can only obtain the withdrawal right over security (and not exercise it) if they can successfully bargain with the secured creditors for a specific sum in exchange. If the withdrawal rights were instead protected by a liability rule, secured creditors would be denied an injunctive remedy against invasions of their rights and are instead granted a remedy in damages in order to effectuate the more 'efficient' resource allocation. One such example of 'converting' an entitlement protected by a property to a liability rule are the provisions that enable the Court to limit the powers of secured parties in relation to secured property (except as permitted by the order). Section 441D of the *Corporations Act 2001* (Cth), for instance, enables voluntary administrators to apply to the Court to order secured parties not to exercise specified powers if the Court is satisfied that the administrator's proposal will 'adequately protect' the interests of the secured parties.[46] Another similar example is in a deed of company arrangement, where the Court may again limit the rights of secured creditors. However, the Court can only order a secured creditor not to realise or otherwise deal with the security interest if satisfied that doing so would materially adversely affect the achievement of the purposes of the deed and if the creditor's interests will be 'adequately protected.'[47] Requiring that dissenting creditors submit to court order but have their rights 'adequately protected' presumes that third parties have a reasonable estimate of the relevant values to creditors' interests that ensure their 'adequate protection.' This is problematic from the Austrian standpoint since liability rules do not and cannot include an estimate of psychic costs or benefits and it neglects the value of the rights to their owners. An individual who is willing to pay a certain amount for security is not always willing to accept approximately the same amount in order to give it up, raising questions as to the adequacy of the protection.[48] If there is to be protection, value *per se* cannot be protected because it is subjective; the way to protect value is to protect the entitlement that property owners impute value to or derive value from.[49]

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[44] Krauss, above n 42, 788.
[45] Ibid.
[46] See generally *Corporations Act 2001* s 441D.
[47] See generally ibid s 444F.
[48] See Herbert Hovenkamp, 'Positivism in Law & Economics' (1990) 78 *California Law Review* 815, 839.
[49] See, eg, Hans-Hermann Hoppe, *The Economics and Ethics of Private Property: Studies in Political Economy and Philosophy* (Ludwig von Mises Institute, 2nd ed, 2006) 343.

The subjectivist critique on value is also applicable to preferences. Whilst the Theorem requires expected costs and benefits to be incorporated into the present calculation to determine if rights modification can promote efficiency, individuals differ among themselves in their subjective expectations of and risk preferences for the future. One individual may anticipate the schedule of costs and benefits or weigh the probability of the same values materialising differently from another. The Austrian challenge regards whose expectations are correct, and how much weight should be afforded to different risk preferences in making the Coase Theorem calculations.

Expectations are moreover not fixed. They can be frustrated because of uncertainty, making it difficult to provide a determinate solution to the Coase Theorem calculations. Transaction costs can change radically and unexpectedly if an act of pure entrepreneurial creativity leads to the discovery of new alternatives, production possibilities and solutions that had been overlooked up to that point.[50] In addition to these changes, the numbers used in performing a Coasean analysis are based upon perpetually changing relative prices; hence the decisions made by the legal system between periods can be altered.[51] To compare the costs of alternative economic arrangements as if these remain at their fixed equilibrium values rather than being variable amidst market disequilibrium is misguided. The Austrian critique of subjectivism combined with uncertainty suggests that it is difficult to prove that rights reallocation increases efficiency conclusively.

A further Austrian critique is that third party judgment on the sub-optimality of decisions made by disputing parties assumes that the former possesses more superior information than the latter. An illustration of the Coase Theorem in an externality scenario clarifies this point. Suppose a laundry owner tolerates living with the smoke emitted by a neighbouring steel operator in the incorrect *belief* that it costs too much to negotiate to reduce the emissions.[52] While the former party may reap some benefits from negotiation, from their viewpoint, the transaction costs more than exceed the anticipated benefits. Assume that in truth, the actual transaction costs of doing so are lower than initially believed. From the laundry owner's perspective, their choice not to bargain to reduce the smoke emissions was not incorrect as they made an optimal decision *given the information at hand*, even if they later realise their 'mistake.'[53]

Here, whether a better resource allocation is achievable depends on whether the information about

[50] Jesús Huerta de Soto, *The Theory of Dynamic Efficiency* (Routledge, 2009) 16.
[51] Block, 'Private Property Rights, Economic Freedom, and Professor Coase: A Critique of Friedman, McCloskey, Medema, and Zorn', above n 39, 934.
[52] This example is derived from Carl Dahlman, 'The Problem of Externality' (1979) 22 *Journal of Law and Economics* 141, 148-50.
[53] Strictly speaking, 'there can be no "correct" or "incorrect" probability estimates when probabilities are purely subjective but only when there is some objective "truth" that can be ascertained' (Ibid 149, n 12).

better alternatives is available.[54] It is incorrect to say that the laundry owner made an inefficient decision on the grounds of not having all of the relevant information at the time the decision was made. The same critique of the suboptimality of the laundry owner's decision is equally applicable to the third party observer. Third parties are not always more alert to information about better alternatives and about the future than the disputing parties concerned, especially where the knowledge required is tacit (knowledge about particular time and places that cannot be codified or made explicit, such as about available labour supplies or stocks of goods).[55] Even granting that costs and benefit figures can be objectified as required for Coasean analysis, this does not solve the information problem that plagues knowing *how* to achieve knowledge of these figures. Having complete information does not necessarily guarantee an efficient allocation either because there can be many subjective interpretations of the same information set.[56] More than information is required for coordinating plans successfully, namely the coordination of *subjective* expectations and knowledge.[57]

Collectively, the Austrian methodological critiques of the Theorem, regardless of whether the analysis proceeds from a zero- or positive-cost world, imply scepticism of the ability of intervention to increase efficiency. Since all costs are subjectively perceived, including those involved in transactions, there is no way for third parties to establish that they are too high (and that they are the only reason that a transaction is otherwise not proceeded with).[58] Third parties can neither deem that certain individuals value a right more than others and justify rights modification again because value is subjective. Although third parties may know the objective *prices* of engaging in transactions, such as the level of returns in an insolvency regime, price is not the sole factor or necessarily the main consideration that drives individual decision-making. The problem of information furthermore precludes knowledge being centralised in the mind of one person (the legal or government system) that enables them to perform the Coase Theorem calculations. Last, since values and information change over time and since uncertainty can hinder making accurate expectations, Austrian economics is cautious of interventionist attempts to 'increase value' where

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[54] Ibid 148-50.

[55] See Friedrich Hayek, 'The Use of Knowledge in Society' (1945) 35 *American Economic Review* 519, 521-2 and Gerald O'Driscoll Jr, 'Justice, Efficiency, and the Economic Analysis of Law: A Comment on Fried' (1980) 9 *Journal of Legal Studies* 355, 357.

[56] Nicolás Cachanosky, 'Calculation and Equilibrium Problems in the Coase Theorem' (2011) 14 *Quarterly Journal of Austrian Economics* 63, 72. Barnett echoes a further concern with the problem of information:

> Although physical resources differ from personal and local knowledge in that it is possible to redistribute them, …the fact that personal and local knowledge cannot be redistributed places serious limits on the wisdom or justice of redistributing physical resources in some other manner.

Randy Barnett, 'The Function of Several Property and Freedom of Contract' (1992) 9 *Social Philosophy & Policy* 62, 80.

[57] Cachanosky, above n 56, 72.

[58] William Barnett II, Walter Block and Gene Callahan, 'The Paradox of Coase as a Defender of Free Markets' (2005) 1 *NYU Journal of Law & Liberty* 1075, 1079.

the attempts are themselves costly. The consolidated Austrian challenge to the Coase Theorem can thus be summarised in two points: first, information problems hinder a determinate answer to the Coase Theorem calculations even if value were objective; second, intervention cannot be demonstrated to increase efficiency precisely because the knowledge about values is not available to third party observers, barring any attempt at performing the said calculations.

6.4.3 Austrian Rights–Efficiency Interaction

Given the Austrian critique of the Coase Theorem, the school takes a divergent perspective on whether rights modification can increase efficiency. Specifically, the pursuit of more efficient courses of action, understood in the Austrian sense with its corresponding methodological properties (see Section 5.4), occurs against the backdrop of entrepreneurial freedom. This freedom comes by enforcing property rights and abstaining from interfering with them, thereby preserving a given structure of (voluntarily contracted-for) rights in order to ground expectations and provide certainty about the resources and legal framework that entrepreneurs can permissibly act within. The certainty that results from enforcing the expectations of both parties and preserving their individual entrepreneurial incentives for action enables entrepreneurs to better plan their activities knowing that their rights are not subject to involuntary changes on mainstream efficiency reasons. The same freedom permits individuals to act upon profit opportunities to overcome the disequilibrium in the market to the benefit of efficiency. It can now be seen that while Coase's analysis hinges upon the hindrance that *transaction costs* pose to achieving a more efficient resource allocation, Austrian economic analysis centres upon the hindrance that *interference* poses, regardless of transaction cost considerations.

Instead of regarding it as variable, the Austrian school takes the specific system of property rights as given and examines the efficiency of actions within the boundaries of the arrangement of rights as it already is.[59] This is because, as Egger explains, '[A] property rights system lays down the rules, it defines the freedoms and restrictions according to which we evaluate alternatives and make choices, but as such it is conceptually distinct from alternatives among which we choose.'[60] Since the specific property rights distribution determines who is incentivised in each specific time and place towards entrepreneurial activity, the initial property rights distribution is never irrelevant from

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[59] Roy Cordato, 'The Austrian Theory of Efficiency and the Role of Government' (1980) 4 *Journal of Libertarian Studies* 393, 402.
[60] John Egger, 'Comment: Efficiency is Not a Substitute for Ethics' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 117, 120.

an Austrian efficiency viewpoint even where transaction costs are nil.[61] Dynamic incentive problems emerge when traditional rules surrounding property rights are violated on (mainstream) efficiency arguments to 'increase value.' If owners of property anticipate that they will have their property confiscated if the legal or government system decides that it is more valuable in the possession of another individual, the current owners might exercise less careful stewardship over their property than in the case where their consent was necessary before any transfer of property can occur.[62] In this regard, a clearly defined property rights system that is also dependable for the foreseeable future is necessary for individuals to pursue their self-chosen goals and plans, as any involuntary modification of a given property rights structure necessarily obstructs plans made by some property owners with respect to the pursuit of their goals.[63]

This resonates with the Austrian methodological properties of efficiency discussed in Section 5.3. Respecting a given property rights structure and upholding the contracts made around security interests preserves the subjective value that individuals attach to contracting for security rights in the first place, together with their specific time and risk preferences. Nevertheless, rights modification *per se* does not always act to the detriment of Austrian economic efficiency, particularly if this modification is based upon ethical rather than economic reasons of increasing value.[64] For instance, it is appropriate to constrain the use of the rights of property owners if their actions would produce harm to the person or property of other individuals otherwise. More generally, the Austrian view of property rights and of contracts differs from neoclassical economics.[65] Whilst the question of defining property rights as an ethical question is beyond the scope of economic analysis and is not given much treatment in this thesis, Section 7.3.3 briefly mentions the kind that Austrian economics relies on where rights modification does not threaten an Austrian view of efficiency.[66] It suffices to say here that the Austrian view of property rights and the circumstances that are appropriate for legitimately constraining the free use of one's property rights

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[61] De Soto, above n 50, 16.
[62] Fox, above n 6, 391-2. Fox cites the works of Walter Block (Block, 'Coase and Demsetz on Private Property Rights', above n 31; Block, 'Private Property Rights, Economic Freedom, and Professor Coase: A Critique of Friedman, McCloskey, Medema, and Zorn', above n 39) and Gary North (Gary North, 'Undermining Property Rights: Coase and Becker' (2002) 16 *Journal of Libertarian Studies* 75), who have cautioned against the reallocation of property on grounds including dynamic incentive effects.
[63] Cordato, 'The Austrian Theory of Efficiency and the Role of Government' above n 59, 402.
[64] See Section 7.3.3.
[65] Cordato, 'The Austrian Theory of Efficiency and the Role of Government', above n 59, 402; Christopher Wonnell, 'Contract Law and the Austrian School of Economics' (1986) 54 *Fordham Law Review* 507, 527.
[66] Roy Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective* (Ludwig von Mises Institute, 2007) 79.

can be seen as too 'strict' or unrealistic.[67] This can be used as a critique against the Austrian critique of the Coase Theorem.

In sum, it is doubtful if rights modification can increase efficiency because the mainstream economic assumption on objective valuation required for determining whether this is the case, among the other methodological assumptions, is not held in Austrian economics. Instead, respecting the withdrawal rights of secured creditors regardless of whether this conflicts with a third party assessment of efficiency respects subjectivism, does not distort entrepreneurial incentives and grounds expectations about the resources that entrepreneurs have to work with. This view is distinct from the Coase Theorem that sees efficiency as potentially enhanced through different rights allocations rather than within the current one. Sima summarises it succinctly when he writes that

> Instead of looking *forward* and trying to calculate an optimal outcome, the Austrian approach urges judges to look *backward* and try to find the way to the resolution of the conflict in the contractual relations between the parties, social norms, or logic of private property.[68]

6.5 Conclusion

This chapter has analysed whether modifying the rights of property owners increases efficiency from a methodological viewpoint; a relationship that is described by the term 'rights–efficiency interaction' in this thesis. The applicability to the insolvency context is immediate since it asks whether the restrictions secured creditors face in exercising their security rights can act to increase the efficiency of an insolvency regime.

The Coase Theorem serves as the starting point for the analysis and three Points were discussed in relation to it. Collectively, they argue that rights modification can increase efficiency where transaction costs prohibit a voluntary exchange of rights, although whether this rights reallocation is to be achieved by the market or by the legal/government system ultimately depends on the net benefits involved in both. Implicit in the Theorem calculations is the mainstream methodological assumption that values (costs and benefits) are objectively ascertainable by third parties. The calculations are further reliant upon the methodological assumptions that they are performed via mathematical optimisation against an equilibrium backdrop with the requisite values and information being both available and anticipatable with a fair degree of certainty. Notably, the

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[67] See Section 7.3.3.
[68] Josef Sima, 'Praxeology as Law & Economics' (2004) 18 *Journal of Libertarian Studies* 73, 85 (emphasis in original).

methodological assumptions of mainstream economic efficiency criteria are those that permit intervention to increase efficiency, as seen in the Coase Theorem. It is then no surprise that wealth maximisation, transaction cost and Kaldor-Hicks efficiency are amenable to rights intervention to increase them.

As with the properties of efficiency criteria, the Austrian school is critical of the mainstream economic assumptions behind the Coase Theorem. The Theorem disregards subjective valuation (as demonstrated in the critique from psychic as opposed to pecuniary income), ignores the subjective appraisals of information, time and risk preferences, assumes away the information problems that third parties face in determining efficiency and discounts the hindrance that uncertainty poses to making definitive conclusions on whether rights reallocation can increase efficiency. These assumptions raise doubts as to whether efficiency can increase with the aid of intervention, particularly because the Theorem relies upon values and information that are difficult (if not impossible) for third parties to acquire in the Austrian view. It is now understandable to see why rather than transaction costs being a hindrance to attaining efficiency, it is the intervention in the rights of property owners itself that disrupts the entrepreneurial process of discovering more efficient ways to act. The Austrian school, contrary to the mainstream, stands by respecting property rights to provide the conditions for increasing efficiency.

In actuality, proponents of both neoclassical and Austrian economics share sympathy to the operations of the free market and classical liberalism, although when it comes to matters of pure economic theory, they are diverse.[69] If anything, the Coase Theorem strengthened a political perspective that favoured laissez-faire markets.[70] Nevertheless, the methodological assumptions of mainstream economics are also amenable to justifying third party intervention in market operations even if proponents of neoclassical economics are not necessarily in favour of it.[71] By contrast, the methodological assumptions in Austrian economics are largely sceptical about whether rights modification can in fact achieve the increase in value that translates to an increase in efficiency, especially where this increase in value cannot be measured objectively.

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[69] See Robert Murphy, 'The Chicago School versus the Austrian School' (2011) <http://mises.org/library/chicago-school-versus-austrian-school>.

[70] Gary Minda, *Postmodern Legal Movements: Law and Jurisprudence at Century's End* (New York University Press, 1995) 91.

[71] In the corporate context, Cox writes that

> Neoclassical analysis is typically anti-regulatory, in the sense that it opposes governmental review of or constraints upon managerial discretion and favors market constraints on that discretion. *Nevertheless, the efficiency criterion is sufficiently flexible to permit regulatory argument.* Thus, government 'intervention' may be recommended on efficiency grounds employing, at least formally, the conceptual apparatus of the neoclassical, contractarian scheme.

Paul Cox, 'The Public, the Private and the Corporation' (1997) 80 *Marquette Law Review* 391, 416 (emphasis added) (citations omitted).

Thus far in Parts I and II of the thesis, one can see that the efficiency criteria of Part I have properties and rights–efficiency interactions aligned with the mainstream economic method, and that this method is distinguished from that of Austrian economics. If one is a proponent of mainstream neoclassical economics, one will encounter no methodological conflict in endorsing wealth maximisation, transaction cost and Kaldor-Hicks efficiency as appropriate for use. On the other hand, if one subscribes to Austrian economics with its contrary views on efficiency, one will hesitate to endorse the aforesaid criteria in particular and efficiency criteria with methodological underpinnings vastly distinct from one's own in general. This observation is crucial to the thesis because it argues that while insolvency jurisprudence provides the initial context for understanding what efficiency means, it is insufficient for confirming the appropriateness of efficiency criteria because they may possess properties and rights–efficiency interactions that conflict with one's own methodological views. Discussion of this conflict is reserved until Chapter 8 after the Austrian dynamic efficiency criterion has been introduced in the next chapter.

Part III

Having focused on mainstream economic efficiency criteria in previous chapters, Part III develops Part II by exploring the conflict that arises where efficiency criteria affined with particular insolvency perspectives are not endorsed as appropriate for use because of a conflict with economic method.

Chapter 7 hypothesises a perspective of insolvency law affined with an Austrian economic view on efficiency as an example of an insolvency perspective has an affinity with a non-mainstream efficiency criterion. The thesis terms this 'Austrian contract-centrality.'

The significance of Austrian contract-centrality is seen in Chapter 8 when compared against contractarianism, communitarianism and the multiple values approach. The chapter consolidates and synthesises the discussions in the previous chapters, underscoring that the contextualised and endorsed meaning of 'efficiency' appeals to both insolvency jurisprudence and economic method. At times, they may discord with each other, as will be demonstrated in the disaffinity between upholding Austrian contract-centrality and mainstream efficiency criteria or any of the other three insolvency perspectives and an Austrian efficiency criterion simultaneously.

Chapter 9 summarises and concludes the thesis.

CHAPTER 7

Austrian Contract-Centrality and Dynamic Efficiency

The aim of this chapter is to present the insolvency perspective of Austrian contract-centrality and demonstrate its affinity with the dynamic efficiency criterion. It then describes the criterion in more detail and applies it to the insolvency context, noting the shortcomings encountered in the process.

7.1 Introduction

Thus far, the insolvency perspectives covered in the thesis refer to efficiency as wealth maximisation, transaction cost and Kaldor-Hicks efficiency. Having demonstrated that these efficiency criteria are aligned with mainstream economic methodology in their properties and rights–efficiency interaction in Chapters 5 and 6, this chapter introduces the hypothetical insolvency law perspective of 'Austrian contract-centrality. This perspective has an affinity with an efficiency criterion aligned with Austrian economic methodology in its properties and rights–efficiency interaction. Its significance is reserved for the next chapter, where Chapter 8 discusses the discord between insolvency jurisprudence and economic method using the analysis in this chapter.

7.2 Austrian Contract-Centrality Perspective of Insolvency Law

This chapter introduces a hypothetical insolvency perspective called Austrian Contract-Centrality as a contrast to other perspectives that are affined with mainstream efficiency criteria. Austrian contract-centrality is constructed with the entitlement theory of property rights and the title-transfer theory of contracts in mind.[1] Its construction is not thorough like the more established perspectives and is meant to be basic, as the focus of the thesis is on the jurisprudence–method framework and not on developing a new perspective of insolvency law.

Austrian contract-centrality, like contractarianism, has a creditor primacy focus and shares scepticism on the usefulness of a corporate rescue regime.[2] The dominant objective of insolvency law here is to determine the owners of the rights to property (namely, secured creditors) and to enforce their rights (security interests over property). This means that issues that arise both outside of and inside insolvency, such as deciding whether to rescue a company, can be resolved by

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[1] See Section 7.3.3.
[2] See Douglas Baird, 'The Uneasy Case for Corporate Reorganizations' (1986) 15 *Journal of Legal Studies* 127.

reference to the initial debtor-creditor bargain and identifying the relevant individuals with the rights to make this decision. Crucially, unlike contractarianism where security rights may be compromised in pursuit of wealth maximisation, rights continue to be upheld regardless of wealth maximisation considerations. This is not to assume that contracts are always and everywhere complete. However, the system of property rights is at the very least clearly defined beforehand and is upheld regardless of the future state of the world that materialises (that is uncertain at the time of making the contract), including the possibility of insolvency.[3]

In this insolvency perspective, it is secured creditors who have the power to decide the fate of the company over unsecured creditors provided that they act within the law, since the former group made the entrepreneurial decision to bargain for security rights when the loan contract was first entered into. They may opt to appoint a receiver to the company or otherwise give their consent for it to be placed under liquidation or voluntary administration. Importantly, corporate rescue is not ruled out completely in Austrian contract-centrality. However, it requires the consent of secured creditors to be subjected to the attendant restrictions on creditor action as opposed to merely passing a cost-benefit wealth maximisation test. Phrased differently, even where a third party external observer deems rescue to be more wealth maximisation efficient than liquidation, Austrian contract-centrality continues to uphold the withdrawal rights of secured creditors and respects the decision not to rescue the company if they choose not to.

Such a 'strict' insolvency objective preserves contractual certainty in the face of an uncertain future. It also respects Austrian subjectivism in that individuals who do not own the rights to property cannot accurately value what the rights are worth in one course of action over another (such as the value of exercising or not exercising the withdrawal rights). In light of these, the efficiency criterion appropriate within Austrian contract-centrality is dynamic efficiency. This is generally defined as the 'maximization of plan coordination.'[4] It is encouraged when contractually bargained-for property rights are upheld, since individuals can more easily seek out efficient ways to act when there is certainty about the legal framework they operate within. Albeit unconventional from general mainstream understandings of efficiency, dynamic efficiency is suitable for the Austrian contract-centrality context. This is because an increase in efficiency, measured by an increase in the extent of property rights enforcement, is consistent with effectuating the dominant objective of insolvency law in Austrian contract-centrality to a greater degree.

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[3] Indeed, both parties to the contract would otherwise not have agreed to it if it were not mutually beneficial at the time it was made, even if the contract terms may no longer be favourable to at least one party later on.
[4] Gary Lawson, 'Efficiency and Individualism' (1992) 42 *Duke Law Journal* 53, 96; Roy Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective* (Ludwig von Mises Institute, 2007) 45.

In sum, the primary objective in Austrian contract-centrality is to enforce the rights of property owners in insolvency. This insolvency perspective tends to refer to efficiency as dynamic efficiency since both are aligned in focus in encouraging the enforcement of private property rights. Unlike mainstream economic efficiency criteria, dynamic efficiency does not require third party observers to know the costs or the benefits of the alternative courses of action in its determination. The next section discusses dynamic efficiency in more detail, including its properties, rights–efficiency interaction and shortcomings to practical application.

7.3 Dynamic Efficiency

7.3.1 Description

Dynamic efficiency is a means-efficiency criterion that presents itself as an alternative to the more conventional ways of viewing efficiency. The mainstream efficiency criteria discussed previously in the thesis maximise or minimise a particular metric such as utility or money. They are ends-dependent in that they invoke 'social utility functions' or social cost-benefit analysis as guides to determine the relative efficiency of alternative allocations of resources.[5] Since Austrian economics takes the ends that individuals pursue as given, its efficiency criterion does not make implicit judgments about the pursued ends.[6]

Instead, the concern of efficiency in the Austrian view surrounds the means that are applied towards one's goals. Individuals aim to utilise the resources at their disposal in the most effective manner they know, given the pursuit of their own goals.[7] This requires them to allocate resources efficiently in that if an individual desires goal A more urgently than goal B, and where they lack a sufficient amount of resources for attaining both, the 'correct' solution of this economic problem is to devote their resources to A rather than B.[8] Consequently, an individual's course of action is efficient to the extent that their chosen means are consistent with their pursued goals and inefficient when the means are inconsistent with those goals.[9]

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[5] Roy Cordato, 'Efficiency' in Peter Boettke (ed), *The Elgar Companion to Austrian Economics* (Edward Elgar, 1994) 131, 132.

[6] Roy Cordato, 'The Austrian Theory of Efficiency and the Role of Government' (1980) 4 *Journal of Libertarian Studies* 393, 396.

[7] Israel Kirzner, *Market Theory and the Price System* (Ludwig von Mises Institute, 2007) 34.

[8] Ibid.

[9] Cordato, 'Efficiency', above n 5, 132. Kirzner elaborates on how efficiency can be viewed on an individual level:
> Efficiency is nothing else, in the present context, that the consistent pursuit of other goals. Consistency in the pursuit of goals calls for a refusal to apply resources to achieve one goal when this implies forsaking a still more highly cherished goal. Inefficiency is thus synonymous with inconsistency. An inefficient course of action is one that is inconsistent with a given program of goals. A course of action that is inefficient with respect to one set of goals may be highly efficient with

As efficiency exists in relation to particular ends only, only the individuals themselves can gauge the efficiency of the means they use.[10] Society does not have the ability to do this because no single social mind ranks the relative social importance of the objectives of various individuals. Nevertheless, it is how third parties gauge that individuals pursue efficient courses of action that is relevant from a policy perspective. This calls for a distinction between how individuals gauge efficiency (individual efficiency) and how third parties gauge that individuals pursue efficient courses of action (social efficiency).

With regard to the former, since individuals pursue efficient courses of action to the extent that they have knowledge of the available means and their suitability for attaining their goals,[11] the problem surrounding efficiency at the individual level is the acquisition of knowledge. There is therefore a close link between efficiency and knowledge; efficiency is more likely to be increased when fuller use is made of existing knowledge and when new knowledge is uncovered.[12] Accordingly, how to encourage information acquisition is the problem at the societal level. Given that a gap in knowledge can hinder efficiency, Hayek sees the problem faced by society as knowing how to make the best use of its stock of knowledge that 'never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess.'[13]

Cordato uses the term 'catallactic efficiency' that is 'ends independent'[14] while the thesis employs the term used by De Soto, 'dynamic efficiency.' Two descriptions of this concept are:

> 'Dynamic efficiency may be described as the *capacity* of an economic system *to stimulate entrepreneurial creativity and coordination.*'[15] and '*in other words, the entrepreneurial capacity to seek, discover, and overcome different social maladjustments.*'[16]

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respect to a different set. But the point is that, in making plans, individuals have in mind given sets of goals. With respect to *this* set of goals, they seek a consistent, efficient course of action.
Kirzner, *Market Theory and the Price System*, above n 7, 34 (emphasis in original).

[10] Mario Rizzo, 'Uncertainty, Subjectivity and the Economic Analysis of Law' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 71.

[11] Cordato, 'Efficiency', above n 5, 132.

[12] See generally Friedrich Hayek, 'The Use of Knowledge in Society' (1945) 35 *American Economic Review* 519.

[13] Ibid 519. Hayek adds at 519-20 (emphasis added) that

The economic problem of society is thus not merely a problem of how to allocate 'given' resources—if 'given' is taken to mean given to a single mind which deliberately solves the problem set by these 'data.' *It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge not given to anyone in its totality.*

[14] Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective*, above n 4, 58-9. The 'ends independent' term is from Friedrich Hayek, *Law, Legislation and Liberty Volume 2* (Routledge & Kegan Paul, 1973) 36. The adjective 'catallactic' derives from the noun 'catallaxy' that Hayek uses to describe 'the order brought about by the mutual adjustment of many individual economies in a market. A catallaxy is thus the special kind of spontaneous order produced by the market through people acting within the rules of the law of property, tort and contract': at 108-9. By contrast to an economy that 'consists of a complex of activities by which a given set of means is allocated in accordance with a unitary plan among the competing ends according to their relative importance,' a catallaxy instead describes 'the system of numerous interrelated economies which constitute the market order' that recognises that 'the market order serves no… single order of ends:' at 107-8.

[15] Jesús Huerta de Soto, *The Theory of Dynamic Efficiency* (Routledge, 2009) 29 (emphasis added).

> Efficiency for a social system means the *efficiency with which it permits its individual members to achieve their several goals*.[17]

Taken together, dynamic efficiency is viewed in terms of maximising plan coordination.[18] To elaborate, third parties can gauge that individuals pursue efficient courses of action by the extent that institutional settings encourage individuals to search for and seize opportunities to coordinate their subjective plans with others, especially since individual goals are not necessarily comparable in terms of their relative social value.[19] The best way of facilitating this entrepreneurial process amidst market disequilibrium is by having firm property rules, where 'the efficient institutional setting must be based on clearly defined and enforced private property rights.'[20]

This is because for individuals to achieve their goals, they must be able to make plans with regard to the use of resources and be confident about resource availability when the time comes to implement their plans.[21] An individual can only be sure in their plans with respect to the use of a particular resource if they are certain that another individual is not also making plans with the same resource; hence where different individuals pursue different ends, resources can only be used efficiently when conflicts in their use are reduced to a minimum.[22] Upholding these property rights provides legal certainty and predictability that entrepreneurs can rely on when making plans for action, since hindrances to entrepreneurship (such as involuntary rights reallocation) promote social maladjustments where market prices are distorted and resources are allocated to ends other than those desired by participants in the market.[23] Nonetheless, uncertainty is never completely eliminated, in line with the Austrian view on the predictability of the future.

Dynamic efficiency also accommodates the passage of time in Austrian economic theory. In a world of perpetual disequilibrium, it is meaningless to assess the consequences of a policy alternative with any efficiency benchmark that is based upon an unchanging structure of preferences

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[16] Ibid 8 (emphasis in original).

[17] Kirzner, *Market Theory and the Price System*, above n 7, 35 (emphasis added).

[18] The 'maximization of plan coordination' is a term from Lawson, above n 4, 96, referring the reader to Austrian economists who have proposed such a definition of economic efficiency: Dominick Armentano, *Antitrust and Monopoly: Anatomy of a Policy Failure* (Wiley, 1982) 29-30, Roy Cordato, 'Subjective Value, Time Passage, and the Economics of Harmful Effects' (1989) 12 *Hamline Law Review* 229, 237-39 and Israel Kirzner, 'Philosophical and Ethical Implications of Austrian Economics' in Edwin Dolan (ed), *The Foundations of Modern Austrian Economics* (Sheed & Ward, 1976) 75, 85.

[19] See de Soto, above n 15, 7-8; Cordato, 'Efficiency', above n 5, 132-3.

[20] Cordato, 'Efficiency', above n 5, 133; Suri Ratnapala, *Jurisprudence* (Cambridge University Press, 2nd ed, 2013) 290. This efficiency is maximised by 'legal institutions that minimize conflicts in the use of resources and allow the economic system to maximize the dissemination and use of knowledge.' (Cordato, 'Subjective Value, Time Passage, and the Economics of Harmful Effects', above n 18, 239).

[21] Cordato, 'Efficiency', above n 5, 133.

[22] Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective*, above n 4, 63.

[23] De Soto, above n 15, 11-12; Cordato, 'The Austrian Theory of Efficiency and the Role of Government', above n 6, 400.

and institutional framework that cease to exist once that particular policy has been implemented.[24] Efficiency in Austrian economics differs from that in neoclassical economics where the latter assumes that the fundamental economic challenge is to avoid wasting resources that are assumed to be both given and constant.[25] Instead, resources and technology are not 'given' but vary continually due to entrepreneurial action as ends and means are perpetually created *ex novo* by the entrepreneurial action of individuals.[26] It is furthermore not possible to eliminate waste completely because it is an inevitable by-product of entrepreneurial action that always produces new maladjustments with every attempt at coordination.[27] Nevertheless, the dynamic aspect of efficiency incorporates a static aspect also (referring to the prevention of resource wastage),

> …for *the same entrepreneurial force which propels dynamic efficiency through the creation and discovery of new profit opportunities is precisely the one which achieves the highest degree of static efficiency humanly possible at each moment by coordinating pre-existing maladjustments.* (Nevertheless, given the endless flow of new maladjustments, Pareto optimality can never conceivably be reached in a real market economy, as we have stated, and the possibility that existing resources may be wasted cannot be totally eliminated.)[28]

In brief, dynamic efficiency focuses on the institutional property rights framework in place of a particular market outcome, since narrowing in on a particular end-state equilibrium is irrelevant when the market process is open-ended and perpetually in disequilibrium.[29]

7.3.2 Properties and Rights–Efficiency Interaction

This section relates the methodological properties of efficiency discussed in Chapter 5 and the rights–efficiency interaction in Chapter 6 to dynamic efficiency, as has been done for the mainstream efficiency criteria in Sections 5.4 and 6.3.

Dynamic efficiency respects the subjectivism pervasive in Austrian economics. How successful individuals are in achieving their goals is subjective and known only to the individuals themselves, because third parties lack knowledge of the requisite subjective values and information for this determination.[30] Without knowing what individual goals are, third parties cannot measure the efficiency of individual action or know the equilibrium benchmark by which to gauge efficiency.

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[24] Gregory Crespi, 'Exploring the Complicationist Gambit: An Austrian Approach to the Economic Analysis of Law' (1998) 73 *Notre Dame Law Review* 315, 330-1.
[25] De Soto, above n 15, 7-8.
[26] Ibid 4-5, 19-20.
[27] Ibid 11.
[28] Ibid 11 (emphasis in original).
[29] Dominick Armentano, 'Foreword: Property Rights, Efficiency, and Social Welfare' in Roy Cordato, *Efficiency and Externalities in an Open-Ended Universe: A Modern Austrian Perspective* (Ludwig von Mises Institute, 2007) ix, xi.
[30] See Kirzner, *Market Theory and the Price System*, above n 7, 34, 35.

Instead, dynamic efficiency is gauged against a disequilibrium setting. It is encouraged when property rights are enforced and wide entrepreneurial freedom is given to individuals to discover and create more efficient ways of acting, thereby removing the disequilibrium in the market as their plans become more coordinated with each other. Entrepreneurship is vital to increasing dynamic efficiency as Austrian economics does not assume that ends, means and resources are 'given' but are perpetually generated as a consequence of entrepreneurial action.[31] Importantly, the process of discovery is efficiency-enhancing not because it coordinates at every point in the process but because it results in a situation whereby knowledge is more fully utilised.[32]

This explains why third party observers attempting to gauge the dynamic efficiency of alternative social arrangements cannot use mathematical or econometric tools to do so. However, they can verbally argue the reasons why individuals might be encouraged to pursue more efficient courses of action in one insolvency regime over another by reference to the extent of the restrictions on property rights and on entrepreneurship in both. Dynamic efficiency also accommodates the fact that individuals are not always able to act efficiently given that their plans can be disrupted by uncertainty.[33] Hence, it is not a 'precise' measure where one particular regime can be calculated to be more efficient than another by a specific level of monetary wealth or utility (as in the wealth maximisation, transaction cost and Kaldor-Hicks criteria).

In general, the emphasis on entrepreneurship in dynamic efficiency has significant implications for welfare analysis, especially for economic policies and institutional arrangements. Rather than judging them in terms of the pattern of resource allocation they are expected to generate (compared to what is hypothetically optimal), they are instead to be judged according to their ability to promote entrepreneurial discovery.[34] Accordingly, dynamic efficiency can be threatened by rights modification, especially where it hampers the use of one's property rights and one's freedom for entrepreneurial action on grounds other than for ethical reasons.[35]

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[31] De Soto, above n 15, 19-20. The value of entrepreneurship is also recognised by the Parliamentary Joint Committee 2004:

> 4.82 … Entrepreneurship is of immense value to a country. It generates wealth, secures market access and opens up opportunities for a community.

Parliamentary Joint Committee on Corporations and Financial Services, Parliament of Australia, *Corporate Insolvency Laws: A Stocktake* (2004) 68.

[32] Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective*, above n 4, 52.

[33] In any case, perfect efficiency is never achieved because the future is uncertain and perfect knowledge (of the best technology, of unexpected changes, of changing ends over time, of the relevant information of market participants) is not attainable (Murray Rothbard, 'Comment: The Myth of Efficiency' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 90. Rothbard is even stricter in his attitude toward efficiency, going so far as to claim that even individual actions cannot be assumed to be efficient and will not be: at 90.

[34] Israel Kirzner, 'The Economic Calculation Debate: Lessons for Austrians' (1988) 2 *Review of Austrian Economics* 1, 13.

[35] See Section 7.3.3.

7.3.3 Application to Insolvency and Shortcomings

An insolvency regime is more dynamically efficient than another if it imposes fewer restrictions and interventions into previously contracted-for rights. Although Austrian economics does not generally utilise efficiency as a benchmark for assessing the impacts of proposed measures upon the market process,[36] this section demonstrates what it would look like if it were used as a guide. Indeed, Cordato writes that rather than being thrown out of discussions on public policy, efficiency has to be discussed, albeit of a very different kind to the standard view.[37]

The best way of demonstrating the application of dynamic efficiency is with a concrete example. This section compares the dynamic efficiency of voluntary administration (VA) and liquidation. The first step is to identify the relevant owners, as the practical application of dynamic efficiency centres on individuals acting as property owners. Creditors become the owners of the firm upon insolvency.[38] Of particular significance are the holders of security rights. Once identified, the next step is to examine the extent that the owners' rights are upheld in VA (and a deed of company arrangement as part of rescue) and liquidation. These are examined in turn, followed by the shortcomings in attempting to apply the criterion in practice.

The object of VA is to maximise the chances of the company (or its business) continuing in existence (s435A(a)) or if this is not possible, to obtain a better return for creditors than would result from an immediate winding up (s435A(b)).[39] While reasonable to assume that creditors value obtaining the highest possible collective returns, they also derive value from the freedom to exercise their security rights. But with VA comes the possibility that this freedom will be restricted since the administrator has powers to stay creditor action against the company while it is under administration. One instance is where secured creditors may be prevented from exercising withdrawal rights if they do not enforce their security interest before or during the decision period prior to the company entering into administration.[40] Another is that while the voluntary (or deed) administrator must not dispose of the property of the company that is subject to a security interest, a

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[36] Crespi, above n 24, 344, n 105.
[37] Cordato, *Efficiency and Externalities in an Open Ended Universe: A Modern Austrian Perspective*, above n 4, xvi.
[38] Robert Rasmussen, 'The Efficiency of Chapter 11' (1991) 8 *Bankruptcy Developments Journal* 319, 323-4.
[39] See *Corporations Act 2001* (Cth) s 435A.
[40] The decision period begins on the day when notice of the administrator's appointment is given to the secured party or when the administration begins, and ends at the end of the thirteenth business day after that day: Ibid s 9; s 441A.

disposal is not prevented with the leave of the Court.[41] In both cases, secured creditors face potential restrictions to acting with respect to their security interest.

Meanwhile, the administrator acts as a single entrepreneur exercising their own entrepreneurial judgment in deciding matters of asset allocation.[42] Having their own subjective risk preferences and appraisals of the relevant information, administrators cannot account for the subjective value that creditors attach to holding security interests over property and to the corresponding freedom to decide whether to enforce those interests. Personal bias on the part of the administrator is difficult to ignore even if decisions surrounding the future of the company should be based upon 'objective data.' Moreover, the majority voting system used to decide upon the company's fate at the second meeting of creditors[43] cannot consider the subjective interests of all creditors, absent unanimity. If the majority votes in favour of a deed of company arrangement, then although secured creditors who do not vote in favour of the deed are not bound by it,[44] there may be circumstances where they may be prevented from realising or otherwise dealing with their security interest.[45] In brief, there is no *ex ante* guarantee that secured creditors will be allowed to appropriate the result of their entrepreneurial foresight in contracting for security under VA. Unless there is (i) a coincidence of values and goals between the voluntary administrator and all creditors and (ii) unanimous consent in allowing the administrator to lead the task of rescuing the firm, VA encourages the achievement of goals different from that of the actual property owners. This threatens dynamic efficiency because of the disconnect in the means-ends relationship in that the means that secured creditors have in pursuing their ends (whatever that may be, whether rescue or liquidation or receivership) can be interfered with by third parties in order to pursue another end (social wealth maximisation, for instance).

Whether VA is more dynamically efficient than liquidation depends upon how the latter is structured. Similar to the administrator, the liquidator acts as an entrepreneur tasked with realising

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[41] Ibid s 442C(1) and (2)(c).
[42] Ibid s 437A states that the control of the business, property and affairs of the company is vested in the administrator while a company is under administration, while the powers of the other officers of the company are suspended unless the administrator gives written approval (s 437C). The administrator can here be interpreted as serving a kind of central planning role in attempting to value the company (see generally Shruti Rajagopalan and Todd Zywicki, 'The Bankruptcy Judge as a Central Planner' in Todd Zywicki and Peter Boettke (eds), *Research Handbook on Austrian Law and Economics* (Edward Elgar, Forthcoming).
[43] *Corporations Act 2001* (Cth) s 439A.
[44] According to ibid s 444D(1), a deed of company arrangement binds all of the company's creditors so far as concerns claims that arise on or before the day specified in the deed under paragraph 444A(4)(i).
[45] According to ibid s 444D(2), subsection s444D(1) does not prevent a secured creditor from realising or otherwise dealing with their security interest, except where the deed so provides in relation to a secured creditor that voted in favour of the resolution of creditors because of which the company executed the deed or where the Court orders under s 444F(2). S 444F details situations where the Court may limit the rights of secured creditors or owners or lessors where the creditors of a company have resolved that the company execute a deed (or where a company has executed such a deed).

the assets of the company for paying creditors. There are also restraints on creditor action to prevent a destructive race to the courthouse for the company's assets. The nature of this intervention is distinct from rescue in that the stay in liquidation is aimed at preserving the available pool of assets for the purposes of an organised distribution procedure, whereas the prohibitions in administration go beyond preservation to attempting to obtain higher value for creditors. In any case, if it had been contractually agreed beforehand that liquidation is the default regime in insolvency,[46] then the attendant modifications do not distort entrepreneurial incentives as they have been consented to and thereby serve to ground expectations in the possible event of insolvency.

Liquidation, furthermore, arguably addresses the problem of firm valuation better than administration. To wit, the problem of valuation is less acute in liquidation since there is an actual sale to an outsider where the company's assets are exchanged for cash (or cash equivalents, such as marketable securities).[47] Regardless of whether this cash reflects the true value of the assets that are sold, the monetary value of the total available for distribution at least can be known.[48]
 On the other hand, it is generally not possible to place a figure on the value that the reorganised company will have that is unbiased, objective and indisputably certain, particularly where some values may be difficult to quantify and that tend to be ignored as a result.[49]

Although the ideal scenario is where the debtor and creditors can mutually and unanimously agree on the realisation and distribution of the company's assets, immediate winding up is nevertheless more conducive to the conditions of dynamic efficiency than VA. If secured creditors do not wish to proceed with liquidation, they are at least not prevented from remaining outside it by exercising their security rights. This is not to say that liquidation is an efficient regime *per se*.[50] Comparatively, secured creditor rights are more likely to be respected than under VA, preserving more entrepreneurial incentives and enabling wider entrepreneurial freedom to creditors.

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[46] This is an assumption made in the thesis.

[47] Lucian Bebchuk, 'A New Approach to Corporate Reorganizations' (1988) 101 *Harvard Law Review* 775, 778.

[48] Ibid.

[49] Ibid; John Czarnetzky, 'Time, Uncertainty, and the Law of Corporate Reorganizations' (1999) 67 *Fordham Law Review* 2939, 2985; A Mitchell Polinsky, *An Introduction to Law and Economics* (Little, Brown and Company, 2nd ed, 1989) 138. As regards the difficulty in obtaining an objective value of reorganisation, Easterbrook notes that 'Small changes in assumptions about the discount rate and the income stream produce spectacular differences in bankers' estimates of value [Bebchuk and Kahan (1989)], and the judge has no way to evaluate the wisdom of the bankers' assumptions.' (Frank Easterbrook, 'Is Corporate Bankruptcy Efficient?' (1990) 27 *Journal of Financial Economics* 411, 416, citing Lucian Bebchuk and Marcel Kahan, 'Fairness Opinions: How Fair Are They and What Can Be Done about It?' (1989) 27 *Duke Law Journal* 27).

[50] Indeed, liquidation is one of the regimes under insolvency law with interventionist legislation that interferes with the individuals' ability to establish the terms of their loan contracts freely (see Lawrence White, 'Bankruptcy as an Economic Intervention' (1977) 1 *Journal of Libertarian Studies* 281).

An immediate question that can be raised is the following: if a secured creditor chooses to appoint a receiver, is not the receiver, like the voluntary administrator and the liquidator, yet another entrepreneur with their own subjective set of values and information on the best course of action to take with regard to the property of the company subject to the security? Does not the receiver pursue ends different from the secured creditor? The response is that while the actions of the voluntary administrator can act counter to dynamic efficiency, those of the receiver arguably do not because the receiver is consensually appointed whereas the administrator is not always necessarily so. This argument appeals to Kirzner, who writes that

> Even though an employer hires an expert for his knowledge, it is the employer rather than the employee who is the entrepreneur. The employer may not have all the information the hired expert possesses, yet the employer is better informed than anyone else – he knows where knowledge is to be obtained and how it can be usefully employed. The hired expert does not, apparently, see how his knowledge can be usefully employed, since he is not prepared to act as his own employer. The hired expert does not perceive the opportunity presented by the possession of his information. The employer does perceive it. Entrepreneurial knowledge is a rarefied, abstract type of knowledge – the knowledge of where to obtain information (or other resources) and how to deploy it.[51]

Substituting 'secured creditor' for 'employer' and 'receiver' for 'expert' in the above paragraph, the appointment of a receiver does not imply that the secured creditors' valuations are ignored, especially as they have voluntarily appointed an expert to act for their benefit. In the same manner, if the secured creditor voluntarily consents to enter into VA, the administrator's appointment, together with the attendant rights modification, does not act counter to dynamic efficiency. Crucially, the entrepreneur must voluntarily 'hire' the expert rather than the expert deciding on matters of resource allocation on behalf of the entrepreneur without first obtaining their consent. Otherwise, the expert cannot know the preferences of secured creditors apart from what is revealed through action, namely, the giving of consent to act on their behalf.

Nevertheless, the dynamic efficiency criterion may be too vague for policy with its own set of measurement problems. It lacks the 'precision' of the money and utility metrics in the efficiency criteria of mainstream economics.[52] Even if dynamic efficiency may be increased by maintaining a stable property rights system, not much can be said about the *degree* of efficiency of a particular

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[51] Israel Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship* (University of Chicago Press, 1979) 8. Another useful quote is from Israel Kirzner, *Competition and Entrepreneurship* (University of Chicago Press, 1973) 68:

> The entrepreneur is the person who hires the services of factors of production. Among these factors may be persons with superior knowledge of market information, but the very fact that these hired possessors of information have not *themselves* exploited it shows that, in perhaps the truest sense, their knowledge is possessed not by them but by the one who is hiring them. It is the latter who 'knows' whom to hire, who 'knows' where to find those with the market information needed to locate profit opportunities. Without himself possessing the facts known to those he hires, the hiring entrepreneur does nonetheless 'know' these facts, in the sense that his alertness – his propensity to know where to look for information – dominates the course of events.

[52] The other efficiency criteria would not be considered 'precise' in Austrian economics due to their questionable methodological assumptions.

economic exchange from a third party perspective. This can be problematic when assessing the efficiency of more than two insolvency regimes or where the regimes are sufficiently different from each other, since it is difficult to know the hierarchy of least to most dynamically efficient concretely when efficiency is measured by the degree of respect for property rights. Crespi notes the significance of this shortcoming:

> Suppose a policy or practice did improve the ability of some groups of persons to coordinate their behavior with minimal conflict, but made it more difficult for some other persons to achieve their objectives? How are such diverging impacts to be valued and meshed into an aggregate assessment of catallactic efficiency [dynamic efficiency] consequences? The Austrian insistence on the dynamic evolution of individual preferences over time clearly rules out the use of a neoclassical-style 'willingness to pay'-based aggregation formula that assumes as a predicate stable preferences. The Austrian commitment to a subjectivist perspective, for that matter, makes it particularly difficult to develop any acceptable aggregation formula. However, without some aggregation methodology, it would be impossible to ever assess the relative 'catallactic efficiency' of alternative legal or institutional regimes, rendering the concept rather useless.[53]

A second shortcoming of the criterion is with regard to social ethics. Many Austrian economists reject the standard mainstream usage of efficiency to guide policy 'in favor of some form of ethical criteria,' owing to the fact that it invokes interpersonal utility comparisons (impossible in Austrian economics) and that it abstracts from the 'dynamic considerations of market process analysis.'[54] But what sort of ethical commitments are permissible wherein intervention in rights does not discourage dynamic efficiency? This critique has to be addressed since it is important to determine when intervention is justified by ethical reasons and does not threaten dynamic efficiency, and when it is not justified and hampers efficiency.[55] De Soto offers one solution, quoted at length here:

> [I]n the field of social ethics, we arrive at the fundamental conclusion that the conception of human beings as creative, coordinating actors involves the axiomatic acceptance of the principle that *each person has the right to appropriate the results of his entrepreneurial creativity*. That is, the private appropriation of the fruits of entrepreneurial creation and discovery is a tenet of natural law, because if an actor were not able to claim what he or she creates or discovers, his or her capacity to detect profit opportunities would become blocked, and his or her incentive to act would disappear. Moreover, the above principle is universal in that it can be applied to all people at all possible times and in all conceivable places.
>
> …
>
> We must conclude that the aforementioned basic principle of social ethics, one which hinges on the private ownership of all that is entrepreneurially created and discovered, and thus on the voluntary exchange of all goods and services, is both the necessary and the sufficient condition for dynamic efficiency. This principle is a necessary condition, because to impede the private ownership of the

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[53] Crespi, above n 24, 349-51 (citations omitted).

[54] Cordato, 'Efficiency', above n 5, 131.

[55] Nevertheless, ethical attitudes are separable from Austrian economic school principles and are not necessary to Austrian economic analysis, since the nature of Austrian economics is value-free (John Egger, 'Comment: Efficiency is Not a Substitute for Ethics' in Mario Rizzo (ed), *Time, Uncertainty and Disequilibrium: Exploration of Austrian Themes* (Lexington Books, 1979) 117, 119). For instance, the Austrian economic respect for property rights is often seen in conjunction with libertarianism, but they are in principle and in practice distinct from each other: at 119.

fruits of each human action is to remove the most powerful incentive to create and discover profit opportunities as well as the fundamental source of creativity and coordination that propels the system's dynamic efficiency (i.e. the rightward movement of the corresponding production possibility curve). However, the ethics of private property constitute not only the necessary condition for dynamic efficiency, but also the sufficient condition. Given the vital drive which characterizes all human beings, an environment of freedom in which they are not coerced and in which their private property is respected constitutes a sufficient condition for the development of the entrepreneurial process of creativity and coordination which marks dynamic efficiency.

…

Hence, according to our analysis, nothing is more (dynamically) efficient than Justice (in its proper sense). If we perceive the market as a dynamic process, then dynamic efficiency, understood as coordination and creativity, emerges from the behaviour of human beings who follow certain moral laws (regarding the respect for life, private property and the fulfilment of contracts). In this way, the exercise of human action subject to these ethical principles gives rise to a dynamically efficient social process such as we have been describing. It is now easy to see why, *from a dynamic standpoint, efficiency is not compatible with different models of equity or justice (as the second fundamental theorem of welfare economics erroneously stated), but instead arises exclusively from one (that based on the respect for private property and entrepreneurship)*.[56]

In essence, the sort of ethical commitments where rights intervention does not threaten dynamic efficiency is a special kind relating to the private ownership of rights. Insolvency law, in order to accommodate and preserve dynamic efficiency, must be examined for its consistency with an entitlement theory of property rights and a title-transfer theory of contracts.[57] If a debtor defaults on repaying creditors, intervention is not justified for coercively eliminating the debtor's contractual obligations by way of restricting the secured creditors' exercise of their security rights (since this violates the ethics of private property). However, intervention is justified for ensuring that the debtor fulfills the terms of the loan contract and is restrained from theft of the property of creditors otherwise.[58] Unless creditors voluntarily forgive the debt, the debtor is legally coerced to repay them. Crucially, this assumes that at the time the loan contract was entered into, the debtor agreed to a present transfer of the *title* to the property of the company at a future date, and did not grant

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[56] De Soto, above n 15, 20, 21, 22 (emphasis in original).

[57] This specific theory of property rights and theory of contracts are 'the fundamental principles upon which the concept of a pure market system must rest.' (White, above n 50, 283). For the entitlement theory of property rights, see generally Robert Nozick, *Anarchy, State, and Utopia* (Basic Books, 1974). Entitlement theory is based upon the ideas of John Locke, who has identified certain rules underlying the institution of private property. It is only the Lockean idea of establishing claims over property via homesteading – the Lockean private property ethic of libertarianism – that is a just principle of property acquisition (Hans-Hermann Hoppe, *The Economics and Ethics of Private Property: Studies in Political Economy and Philosophy* (Ludwig von Mises Institute, 2nd ed, 2006) 332, 336). For the title-transfer theory of contract, see Murray Rothbard, 'Property Rights and the Theory of Contracts' (2007) <https://mises.org/library/property-rights-and-theory-contracts>; Williamson Evers, 'Toward a Reformulation of the Law of Contracts' (1977) 1 *Journal of Libertarian Studies* 3; and Stephan Kinsella, 'A Libertarian Theory of Contract: Title Transfer, Binding Promises, and Inalienability' (2003) 17 *Journal of Libertarian Studies* 11.

[58] This loan contract is enforceable because the failure to fulfill it is an implicit theft of the creditors' property. (Rothbard writes that 'the right to contract is strictly derivable from the right of private property, and therefore that the only *enforceable* contracts (i.e., those backed by the sanction of legal coercion) should be those where the failure of one party to abide by the contract implies the *theft* of property from the other party': Rothbard, 'Property Rights and the Theory of Contracts', above n 57 (emphasis in original).

creditors a mere *promise* of repayment. Otherwise, the latter is not properly enforceable in this view of contract.[59]

It is beyond the scope of this thesis to discuss and compare these theories of property rights and of contracts with others in the literature. It suffices to say that the 'strict' kind required for dynamic efficiency may not be overly practical especially where there can be pressure from disadvantaged groups to consider their welfare in insolvency, leading policy makers to violate it. A further challenge to practicality is where property rights can be difficult to enforce even if they are clearly defined, such as where both employees and secured creditors have claims against the debtor company, because it has to be argued why the claims of one party are given more significance than the other. Moreover, the institutional setting where property rights are always enforced can be more ideal than it is real, especially in a world where various powers of government such as compulsory acquisition exist.

The cumulative shortcomings of the dynamic efficiency criterion regarding its vagueness for third party usage and the strictness of the social ethics required to protect it can translate to difficulties in practical application. Nevertheless, it is appropriate for the Austrian contract-centrality context and presents an alternative to mainstream approaches to efficiency.

7.4 Conclusion

This chapter has demonstrated that the Austrian contract-centrality perspective of insolvency law has an affinity for the dynamic efficiency criterion. This is because an increase in efficiency, measured by an increase in the extent of property rights enforcement, is consistent with achieving a greater extent of the chief objective of Austrian contract-centrality, namely enforcing the contracts made between debtors and creditors. Importantly, while the mainstream methodological assumptions permit individual rights and entrepreneurial freedom to be compromised in the pursuit of higher value, this higher value is obtained precisely by way of entrepreneurial freedom in the

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[59] See ibid. Rothbard quotes Hobbes to further distinguish a transfer of title from a promise, thereby justifying why the former is legally binding on the promisor whereas the latter is not:

> Words alone, if they be of the time to come, and contain a bare promise [*nudum pactum*], are an insufficient sign of a free gift and therefore not obligatory. For if they be of the time to come, as *tomorrow I will give*, they are a sign I have not yet given, and consequently that my right is not transferred, but remaineth till I transfer it by some other act. But if the words be of the time present, or past, as, *I have given*, or *do give to be delivered tomorrow*, then this is my tomorrow's right given away today…. There is a great difference in the signification of [the] words … between *I will that this be thine tomorrow*, and *I will give it thee tomorrow*: for the word *I will*, in the former manner of speech signifies a promise of an act of the will present; but in the latter, it signifies a promise of an act of the will to come: and therefore the former words, being of the present, transfer a future right; the latter, that be of the future, transfer nothing.

Thomas Hobbes, *Leviathan* (Macmillan, 1958), pt 1, ch 14 (emphasis in original), cited in Rothbard, 'Property Rights and the Theory of Contracts', above n 57.

Austrian view. Dynamic efficiency thereby acknowledges that only the appraisal of those holding rights over property regarding value maximisation matters. Despite its limitations, dynamic efficiency is a suitable criterion for the Austrian contract-centrality context.

Joint Significance of Jurisprudence and Method to Determining the Meaning of Efficiency

8.1 Introduction

Over the past seven chapters, the thesis has sought to develop the arguments to address the thesis question. This chapter consolidates the discussions in the previous chapters and formally explores the jurisprudence–method framework that provides the answer. This framework is essentially a two-component process that guides the determination of the meaning of efficiency in a particular setting.

It starts with understanding the context for defining efficiency by reference to the objectives of insolvency law under a particular insolvency perspective, such as contractarianism or communitarianism. This is the jurisprudence component. The criterion or criteria of efficiency affined with these perspectives are consistent with attaining more of the objectives of insolvency law under them. Once contextualised, it is important to check the compatibility between the criteria's methodological assumptions and one's own methodological position. This is the economic method component.

Economic methodology influences the properties of efficiency criteria and the relationship between rights modification and efficiency. In Sections 5.4 and 6.3, the thesis has demonstrated that the efficiency criteria under the insolvency perspectives of Part I (namely, wealth maximisation, transaction cost and Kaldor-Hicks) have properties and rights–efficiency interactions aligned with the mainstream economic method. Meanwhile, dynamic efficiency presupposes Austrian economic methodological assumptions and the corresponding rights–efficiency interaction as discussed in Section 7.3.2. If one's position on economic method is compatible with the underlying methodological assumptions of the criterion, one can readily endorse that criterion. To wit, if one subscribes to mainstream economic methodology, one will not encounter reservations in endorsing wealth maximisation, transaction cost and Kaldor-Hicks efficiency; the same applies to endorsing dynamic efficiency if one has Austrian methodological leanings. In these instances, the jurisprudence component is concordant with the economic method one, so efficiency is properly defined for that particular context.

But what happens if there is an incompatibility between one's methodological stance and the one underlying the efficiency criterion? This threatens the jurisprudence–method concordance and poses what the thesis terms a jurisprudence–method discord. The Austrian contract-centrality perspective

discussed in the previous chapter, with its affinity for an Austrian efficiency criterion, will be used to demonstrate this discord and discuss possible resolutions. In so doing, the chapter argues for the concordance between insolvency jurisprudence and economic methodology in determining the meaning of efficiency. Otherwise, the consequence of an unresolved discord between jurisprudence and method is that efficiency is arguably not properly defined.

8.2 Discussion of the Jurisprudence–Method Concordance and Discord

When law appeals to economics for an efficiency analysis of insolvency law, such analysis typically overlooks underlying economic methodological assumptions. They are generally mainstream neoclassical, owing to the prevalence of Law and Economics (L&E). This is exemplified in the insolvency law perspectives of contractarianism, communitarianism and the multiple values approach that have affinities with mainstream economic efficiency criteria. Arguably, the influence of mainstream economic methodology in law is so pervasive as to render dynamic efficiency anomalous without first reconsidering insolvency jurisprudence. To demonstrate this, the section first reviews the affinity between efficiency criteria and insolvency jurisprudence, starting with dynamic efficiency and the three insolvency perspectives of Part I.

Dynamic efficiency is unsuitable for the pursuit of the objectives under the contractarian perspective of insolvency law. In this perspective, rights modification (especially of secured creditors) is permissible for overcoming the collective action problem that can hinder obtaining better returns for creditors. Since dynamic efficiency neither uses a monetary metric nor is conducive to intervention for the purpose of attaining higher value (as deemed by a third party observer), it is ill-suited as an efficiency criterion here. More importantly, the degree of dynamic efficiency relies upon the extent of the enforcement of property rights that may at times come at the expense of wealth maximisation. Since the primary contractarian objective is to maximise creditor returns, it is counterintuitive to deem an allocation of resources that achieves higher returns for creditors with intervention 'less efficient' than another with lower returns but without intervention. Additionally, it is true that an allocation that yields higher returns without intervention is 'more efficient' than another with lower returns and with intervention. But then dynamic efficiency is independent of the level of returns, raising the question of its practicality within contractarianism. Consequently, dynamic efficiency is unsuitable for gauging when a particular regime or course of action is more 'efficient' under the contractarian perspective.

Dynamic efficiency is even less suitable with the pursuit of the objectives under the communitarian perspective of insolvency law. The communitarian perspective is amenable to intervention in the rights of secured creditors more so than the contractarian perspective in order to distribute some of the benefit from holding these rights to other individuals on the basis that this improves societal welfare.[1] Again, dynamic efficiency neither uses a monetary metric nor is conducive to intervention for the purpose of attaining higher value as deemed by a third party. The encouragement of property rights protection and, correspondingly, dynamic efficiency, may come about at the sacrifice of achieving fewer of the goals of communitarianism, particularly if intervention is required to effectuate its distributional objectives. As with the contractarian perspective, this understanding of efficiency is ill-suited with promoting the aims of communitarianism, making it unsuitable as an efficiency criterion in this insolvency perspective.

As with the contractarian and communitarian perspectives, dynamic efficiency is again ill-suited with the pursuit of the objectives under the multiple values approach. The same reasons apply. Dynamic efficiency neither utilises a monetary or utility metric nor is conducive to intervention increasing value and therefore efficiency, whereas rights intervention in the multiple values approach is permissible for the purposes of enhancing societal welfare. A caveat is that the multiple values approach embraces a multiplicity of values and objectives that may include encouraging entrepreneurial freedom. The extent of this freedom may nevertheless be constrained by the pursuit of other values such as fairness and redistributive purposes, casting doubt on whether entrepreneurial freedom is actually free. Since a more dynamically efficient course of action may come about at the expense of attaining the other goals of the multiple values approach, another criterion other than dynamic efficiency is arguably more appropriate within this jurisprudential context.

Meanwhile, to recall the discussion in Section 7.3.1, dynamic efficiency is suitable for advancing the primary objective of Austrian contract-centrality. Enforcing contractually agreed-upon rights is a goal for this insolvency perspective and the extent of the enforcement (and its corresponding freedom for entrepreneurial action) is precisely the metric that dynamic efficiency is measured by. Hence, an increase in dynamic efficiency is consistent with promoting the dominant aim of insolvency law under Austrian contract-centrality.

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[1] David Millon, 'Communitarians, Contractarians, and the Crisis in Corporate Law' (1993) 50 *Washington and Lee Law Review* 1373, 1379, writes that '[O]ne way in which communitarians differ from contractarians is in their greater willingness to use legal intervention to overcome the transaction costs and market failures that impede self-protection through contract.'

Just as dynamic efficiency is unsuitable with the insolvency perspectives of Part I, the mainstream criteria of wealth maximisation and Kaldor-Hicks efficiency are likewise ill-suited in general with Austrian contract-centrality. This is because the dominant objective of rights enforcement persists regardless of whether this is 'more beneficial than' or 'less costly than' alternative allocations of rights. That is to say, even if an allocation of resources with intervention (such as rescue with its attendant modifications to creditor rights) yields more wealth or utility than another allocation without intervention, wealth and utility considerations are irrelevant to whether rights are to be enforced, making wealth maximisation and Kaldor-Hicks efficiency inadequate under Austrian contract-centrality. Priority is afforded to rights enforcement regardless of how the enforcement is valued by third parties external to those possessing the rights.

It can be argued that transaction cost efficiency is potentially a suitable criterion in Austrian contract-centrality. After all, it seems intuitive that the lower the transaction costs involved in rights enforcement, the more efficient an insolvency regime or a course of action is. The caveat is that one also specifies the relevant 'intensity' in terms of the extent of rights enforcement aimed at, such that transaction costs are minimised for a particular level of rights enforcement.[2] Otherwise, a costlier method for more rights enforcement is preferred to a less costly one with less rights enforcement, because Austrian contract-centrality places more weight on enforcement than on its monetary costs. This can present a strong argument for considering transaction cost efficiency if one subscribes to mainstream economic methodology. But without this subscription, one may hold to a position on economic method – Austrian economics, in particular – that excludes the use of the transaction cost efficiency criterion if one does not view costs as objectively ascertainable by third parties. This holds true not only for transaction cost, but also for other efficiency criteria that presuppose mainstream economic methodological assumptions.

This steers the section into a discussion on competing methodologies. Even after a suitable efficiency criterion has been identified for a specific insolvency perspective, is the underlying methodology of that criterion (or criteria) compatible with one's own methodological position? If it is not, then there is a jurisprudence–method discord in the determination of efficiency. This discord goes beyond asking whether the two divergent methodologies of mainstream neoclassical and Austrian economics can be reconciled; a topic that can be reserved for debate within economic methodology proper.[3] To wit, rather than merely asking if the criterion is compatible with one's own methodological position (a method–method conflict), the question of interest is whether the

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[2] See Section 3.2.2.
[3] McKenzie attempts a partial reconciliation between both schools; see Richard McKenzie, 'The Neoclassicalists vs. the Austrians: A Partial Reconciliation of Competing Worldviews' (1980) 47 *Southern Economic Journal* 1.

efficiency criterion *affined with a particular insolvency perspective* is compatible with one's methodological position (a jurisprudence–method discord). Figures 1 and 2 below demonstrate the difference between a method–method conflict and a jurisprudence–method discord for clarity.

FIGURE 1: METHOD–METHOD CONFLICT
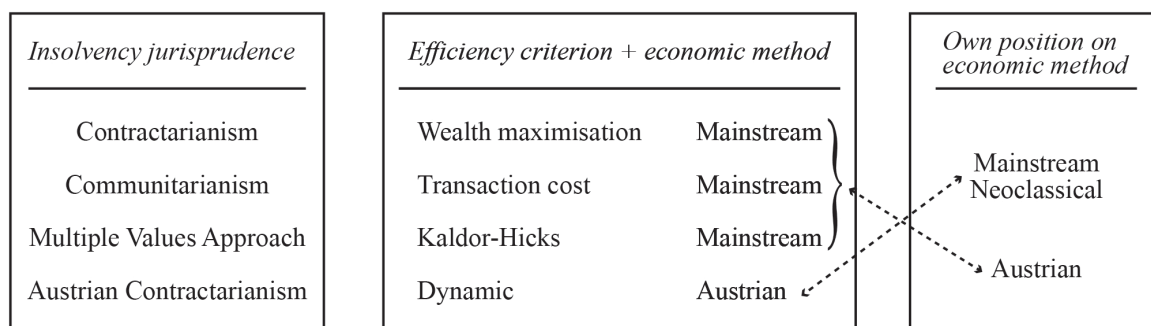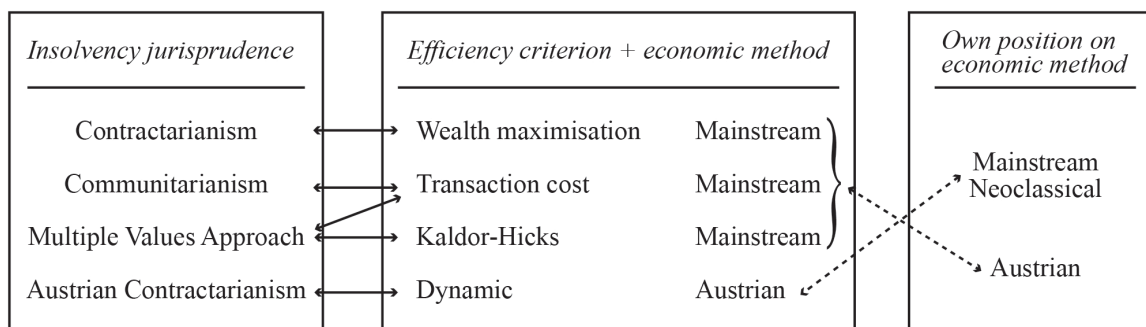(The dashed arrows represent incompatibility)

FIGURE 2: JURISPRUDENCE–METHOD DISCORD
(The solid arrows represent affinity; the dashed arrows represent incompatibility)

There are three courses of action available for resolving the jurisprudence–method discord. They are to (i) abandon the efficiency criterion (that is affined with an insolvency perspective) in favour of another that conforms to one's methodological inclinations, (ii) concede to accept the methodological assumptions of that criterion or more radically, (iii) adopt a different perspective of insolvency law conducive to that criterion. Each of these is considered in turn for their ability to resolve this discord. For illustrative purposes and for simplicity, the ensuing discussion assumes that one subscribes to the Austrian economic method, thereby favouring dynamic efficiency, and

holds to any of the three established perspectives of insolvency law (contractarianism, communitarianism or the multiple values approach).
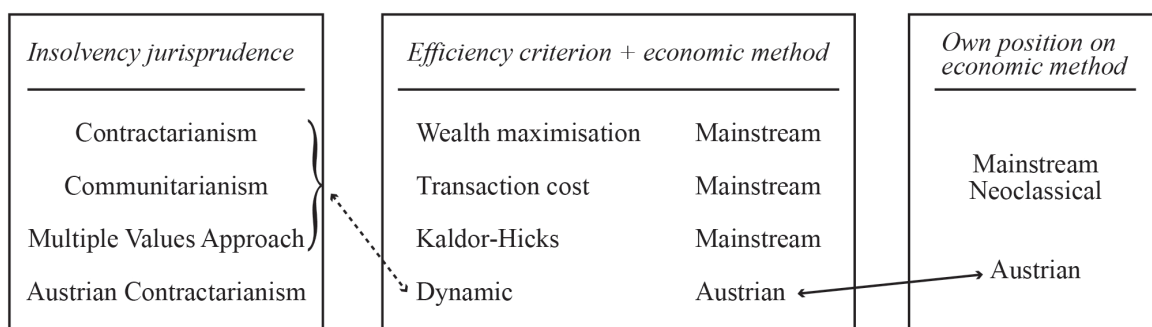
(i)   OPTION 1: *Abandon the efficiency criterion affined with contractarianism, communitarianism and the multiple values approach in favour of dynamic efficiency*

First, while it is possible to abandon the efficiency criterion implied by a particular insolvency perspective in favour of dynamic efficiency, dynamic efficiency may not itself be suitable for achieving the aims of insolvency law under that perspective. As previously demonstrated, dynamic efficiency is ill-suited as an efficiency criterion under the contractarian, communitarian and multiple values perspectives. This 'solution' has simply replaced the incompatibility between the method of the efficiency criterion and one's own methodological position with a disaffinity between the new efficiency criterion (aligned with one's method) and a particular insolvency perspective. In other words, this 'solution' has replaced a method–method conflict with a criterion–jurisprudence disaffinity. In short, this option of dealing with the jurisprudence–method discord is not a workable solution.

Figure 1 demonstrates the criterion–jurisprudence disaffinity diagrammatically for clarity.

FIGURE 3: CRITERION–JURISPRUDENCE DISAFFINITY
(The dashed arrow represents disaffinity; the solid arrow represents compatibility)

(ii)   OPTION 2: *Concede to accept the criterion's methodological assumptions*

The second option for overcoming the jurisprudence–method discord is to concede to accept the methodological assumptions of the efficiency criteria affined with contractarianism,

communitarianism and the multiple values approach (namely, wealth maximisation, transaction cost and Kaldor-Hicks efficiency) despite conflicting with one's Austrian view of methodology. The issue is that whilst this appears to resolve the problem on the surface, it merely masks in reality. It is a concession for the reason that it is incompatible to hold an Austrian view on methodology and a mainstream efficiency criterion because their methodological points are contrary to each other.[4] Option 2 thereby provides somewhat of a solution, though not a complete one to resolve the said discord.

(iii)   OPTION 3: *Adopt a different perspective of insolvency law – namely, Austrian contract-centrality – conducive to dynamic efficiency*

Third, it is possible to adopt an insolvency perspective that is conducive to dynamic efficiency, but not without difficulty. A particular view of insolvency jurisprudence is historically imbedded in a country's system of insolvency law. Revising an insolvency perspective for the sake of concordance with one's view of efficiency is easier said than done, not to mention that efficiency is not the sole consideration that drives changes to insolvency policy or that informs insolvency jurisprudence. Whilst drastic, such a revision provides the highest chance of resolving rather than merely masking the jurisprudence–method discord since concordance can be secured by changing one's perspective of insolvency law to be affined with an efficiency criterion compatible with one's methodological position. Indeed, if Austrian economics played as significant a role as the mainstream in L&E, insolvency jurisprudence will likely look very different from its current state, as exemplified by how different Austrian contract-centrality is compared to the more established perspectives of contractarianism, communitarianism and the multiple values approach.

The foregoing discussion has noted the difficulties encountered in attempting to resolve the discord between insolvency jurisprudence and economic method. It is this difficulty that reveals the significance of both components to determining efficiency. Were the discord easy to resolve, the conjunction of jurisprudence and method is not as significant to defining efficiency because this definition can emerge regardless of one's position on economic method. To recapitulate, the efficiency criterion implied in insolvency jurisprudence must be concordant with one's position on economic method to arrive at a definition of efficiency that is appropriate and usable. Otherwise, the lack of concordance means that the jurisprudence or the method component does not endorse

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[4] Whilst the methodologies of mainstream and Austrian economics are not necessarily always contradictory to each other, their major methodological points are contrary to each other (see Section 5.3). These differences are sufficiently large to the extent that it is not possible to hold both methodological positions simultaneously.

the proposed efficiency criterion of the other component. This is problematic to the extent that efficiency is not properly defined for a particular context.

8.3 Application of the Jurisprudence–Method Framework to Voluntary Administration

To apply the argument the thesis has developed about the significance of the jurisprudence–method framework in practice, this section addresses how to determine what 'efficiency' means within the context of voluntary administration (VA).[5] The first step is to ascertain the goals of insolvency law under VA and Australian insolvency law in general. Australia lacks a developed theoretical perspective on corporate insolvency and its corporate law has developed 'in a pragmatic and piecemeal way with different perspectives exerting varying degrees of influence in the present law.'[6] Although there is no established concord as a point of reference for the construction of principles or aims of insolvency in Australia, there are aims and principles that guide insolvency law making as specified in the Harmer Report (Australia) of 1988.[7] Paragraph 33 lists nine principles that should guide insolvency law:

- The fundamental purpose of an insolvency law is to provide a *fair and orderly process* for dealing with the financial affairs of insolvent individuals and companies.

- The insolvency law should provide mechanisms that enable both debtor and creditor to participate with the *least possible delay and expense*.

- An insolvency administration should be *impartial, efficient* and *expeditious*.

- The law should provide a *convenient means* of collecting or recovering property that should properly be applied toward payment of the debts and liabilities of an insolvent person.

- The *principle of equal sharing* between creditors should be retained and in some areas reinforced.

- The end result of an insolvency administration, particularly as it affects individuals, should, with very limited exceptions, be the *effective relief or release* from the financial liabilities and obligations of the insolvent.

- Insolvency law should, as far as convenient and practical, *support the commercial and economic processes* of the community.

- As far as is possible and practicable, insolvency law should *harmonise with the general law*.

- An insolvency law should *enable ancillary assistance* in the administration of an insolvency

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[5] *Corporations Act 2001* (Cth) pt 5.3A ('*Corporations Act*').
[6] Christopher Symes, Submission No 52 to Corporations and Markets Advisory Committee, *The Social Responsibility of Corporations*, 2006, [1], citing Roman Tomasic, Stephen Bottomley and Rob McQueen, *Corporations Law in Australia* (Federation Press, 2nd ed, 2002) 52.
[7] Christopher Symes and John Duns, *Australian Insolvency Law* (LexisNexis Butterworths, 2009) 6.

originating in a foreign country.[8]

By inference from these principles, the administration of Australian corporate insolvency law is concerned with issues of cost minimisation, community and other values such as impartiality. There appears to be support for a multiple values approach to insolvency law that includes concerns for both immediate creditors and other stakeholders who do not necessarily have formal contractual relations with the company. Indeed, the foregoing aims and objectives cannot be condensed into a single overarching rationale. Against this general backdrop, the efficiency criteria of transaction cost and Kaldor-Hicks are appropriate for gauging the efficiency of alternative courses of action in this context. Transaction cost efficiency is applicable as it accords with the cost minimisation guiding principle in the Harmer Report. Kaldor-Hicks is also applicable since Australian insolvency law seeks to balance a number of objectives, where the set of objectives that is deemed to bring about the greatest overall value (as measured by utility) is the one that is pursued over other competing sets. Together, transaction cost and Kaldor-Hicks efficiency can be used together (to a certain extent) since the most Kaldor-Hicks efficient allocation of resources (generated by pursuing the most highly-valued set of values) can be pursued with the least transaction cost.

However, when voluntary administration is examined more closely, another efficiency criterion is arguably more suitable. The objective of voluntary administration can be found in s435A of the *Corporations Act (2001)* Cth that states that

> The object of this Part is to provide for the business, property and affairs of an insolvent company to be administered in a way that:
>
> (a) *maximises the chances of the company*, or as much as possible of its business, continuing in existence; or
> (b) if it is not possible for the company or its business to continue in existence – results in a *better return for the company's creditors and members* than would result from an immediate winding up of the company.[9]

The wealth maximisation efficiency criterion is arguably the most applicable for voluntary administration in particular because wealth is the target to be maximised for the company as a whole in s435A(a) (where a company that is placed into rescue is expected to generate more wealth than when its assets are liquidated) whereas it is maximised for creditors in s435A(b). This is compatible with Routledge's argument that voluntary administration can also be said, in its construction and judicial interpretation, to generally comply with the Creditors' Bargain.[10] Further, while transaction cost efficiency is relevant and is also one of the Harmer Report guiding principles,

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[8] Law Reform Commission, *General Insolvency Inquiry*, Report No 45 (1988) ('Harmer Report') (emphasis added).
[9] *Corporations Act* s 435A (emphasis added).
[10] See James Routledge, 'Part 5.3A of the Corporations Law (Voluntary Administration): Creditors' Bargain or Creditors' Dilemma?' (1998) 6 *Insolvency Law Journal* 127.

by itself it fails to consider the total perspective where maximising wealth to stakeholders may come by way of a costlier set of transaction costs. Wealth maximisation is also more suitable than the Kaldor-Hicks criterion since the metric for measuring efficiency is arguably money rather than utility in s435A.

In any case, voluntary administration tends to refer to efficiency in the mainstream economic sense. This is also reflected in the rights–efficiency interaction, where the *Corporations Act 2001* (Cth) provides for the rights of creditors (particularly secured ones) to be modified in order to achieve both ends-efficient outcomes (higher value of the company as a going-concern and better returns to creditors) and a means-efficient process of administration.[11] Given the pervasiveness of mainstream economics in L&E, it is not surprising and indeed compatible to view efficiency within the mainstream economic framework. If one subscribes to mainstream economic methodology, one can endorse the wealth maximisation criterion for gauging that voluntary administration is more efficient than alternative insolvency regimes, such as liquidation, if it produces higher wealth for creditors. Efficiency is thereby defined as wealth maximisation in the voluntary administration context using this jurisprudence–method framework. Otherwise, if one adopts an Austrian view of economics, one may acknowledge the affinity between voluntary administration and wealth maximisation but otherwise disagree to use it as a measure of efficiency.

8.4 Conclusion

This chapter has examined the discord between insolvency jurisprudence and economic methodology in clarifying the meaning of efficiency. It arises because the efficiency criterion (or criteria) that is affined with a particular insolvency perspective can be incompatible with one's own position on economic method. More concretely, the chapter demonstrates that a discord exists in holding an Austrian economic view of methodology and the insolvency perspectives of contractarianism, communitarianism and the multiple values approach when it comes to agreeing on an appropriate definition of efficiency. Since the insolvency perspectives have affinities with mainstream efficiency criteria, their criteria are not endorsed under Austrian economics, leaving efficiency as improperly defined. Similarly, the hypothetical insolvency perspective of Austrian contract-centrality has an affinity with the Austrian dynamic efficiency criterion that is neither endorsed under mainstream neoclassical economics.

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[11] See Section 7.3.3 for examples of provisions.

Resolving this discord between insolvency jurisprudence and economic method is not without its difficulties. In the presence of a discord, the options available are to (i) abandon the efficiency criterion (that is affined with an insolvency perspective) in favour of another that conforms to one's methodological inclinations, (ii) concede to accept the methodological assumptions of that criterion or more radically, (iii) adopt a different perspective of insolvency law conducive to that criterion. The chapter has demonstrated that the first option does not settle the discord and instead replaces it with another disaffinity. The second option merely masks the problem without actually resolving it. The third option provides the highest chance of resolving the jurisprudence–method discord, but at the same time gives pause for thought that the resolution may be attained by way of a wholesale rethinking of insolvency jurisprudence with the aid of economic method.

The difficulties encountered in overcoming this discord precisely demonstrate that both law and economic components are important in determining the meaning of efficiency in the insolvency setting. They must be concordant with each other in order to produce a definition of efficiency that is endorsed by both insolvency jurisprudence and economic methodology. Otherwise, 'efficiency' is not properly defined for a particular context. Given the prevalence of mainstream economics in L&E, those holding a position on economic method different from the mainstream are likely to encounter this jurisprudence–method discord more often than those who do not.

CHAPTER 9

Conclusion

How is 'efficiency' determined in the insolvency context?

9.1 Introduction

This thesis has sought to understand how the meaning of efficiency is determined in the insolvency context. Its significance to the wider insolvency jurisprudence literature lies precisely in clarifying this process of determination, especially where economic theory offers a multiplicity of criteria that can create confusion as to what a particular instance of 'efficiency' means. Normative considerations guide the selection of the most appropriate criterion in a certain context. This context can be provided by any number of factors, including political morality.

The thesis has pursued the context in a framework comprising the conjunction of insolvency jurisprudence and economic method. It has advanced two key arguments. First, the context for understanding what efficiency means is provided by the perspectives of insolvency law, where each perspective demonstrates an affinity for an efficiency criterion or criteria in the pursuit of the objectives of insolvency law under it. This is the jurisprudence component of the framework. Second, whether this criterion is endorsed for use depends upon its compatibility with one's position on economic method. This is the economic method component. The thesis was divided into three Parts to demonstrate these arguments sequentially. The next section proceeds to summarise and synthesise the discussions of the Parts.

9.2 Thesis Overview: The Consolidation of Jurisprudence and Method

Part I of the thesis addressed the first of the two thesis arguments by discussing the affinities between specific insolvency perspectives and particular efficiency criterion (or criteria). It examined the contractarian, communitarian and multiple values approach to insolvency law over Chapters 2, 3 and 4 respectively. The thesis has argued that the objectives of insolvency law under these perspectives contextualise what 'efficiency' is referred to mean in pursuing those goals. This may be a means-efficiency criterion where the insolvency regime is to be proceeded with in an efficient *manner*. It may alternatively refer to an ends-efficiency criterion where the objective of

insolvency law is to obtain an efficient *outcome*. Each of the efficiency criteria is further described, including how they are to be applied and the shortcomings encountered in the process, demonstrating that all efficiency criteria are not without their practical or theoretical problems.

The contractarian perspective of insolvency law seeks to obtain the best outcome for creditors. The pursuit of this primary objective is consistent with the wealth maximisation criterion that measures efficiency by reference to money and where efficiency is improved when creditor wealth is increased. On the other hand, the communitarian perspective considers the interests of other stakeholders beyond those of the creditors alone. It tends to refer to efficiency more as a procedural quality, namely, transaction cost efficiency in economising on the costs incurred in achieving a set of goals. Communitarianism aims to distribute the gains and losses from insolvency where transaction costs may be high and thus measuring efficiency by reference to costs is appropriate in this context.

Although minimising costs generally translates to more wealth, transaction cost efficiency can compete with wealth maximisation at times. This is due to two shortcomings of the former criterion of not considering the total perspective and suffering from 'intensity' problems. An illustration of the former problem is as follows. Given a *fixed* pool of resources to distribute in liquidation, the lower the costs involved in distribution (transaction cost efficient), the larger the remainder of the pool left for division (maximised wealth). But if the total wealth obtainable is *variable*, then transaction cost efficiency can constrain wealth maximisation because economising on costs can affect the level of returns obtainable. An example is where more total wealth is obtainable when more effort (and thereby, cost) is expended in attempting to obtain this higher level of wealth. Consequently, there are competing aims in pursuing maximum wealth in the cheapest way possible in some circumstances.

The 'intensity' shortcoming of transaction cost efficiency refers to how much or the extent that the goals of an insolvency regime are aimed at. For example, choosing the least costly among the available means to rescue a company is not independent from its goal as a costlier method may make a rescue attempt more likely to succeed than a more cost-efficient one. What this means is that transaction cost efficiency simpliciter is unsatisfactory for guiding the choice of the most efficient course of action absent further context such as with regard to the relevant 'intensity' of goals to be achieved (in this example, a targeted probability of a successful rescue attempt).

If a perspective of insolvency law affords high significance to achieving better creditor returns, then transaction cost efficiency is less suitable than wealth maximisation that considers both costs and benefits in their totality. But if that perspective places more weight upon non-monetary goals, then

transaction cost efficiency is more appropriate since the goal is not to maximise wealth *per se* but to minimise the costs incurred in pursuing those goals. Wealth maximisation is not without its shortcomings either, such as running into objections about consequentialism where gains in wealth can justify losses to other individuals. The information problems encountered in determining efficiency can also render it problematic to use in practice.

The third of the recognised perspectives, the multiple values approach, considers that insolvency law has multiple objectives. The pursuit of these objectives considers transaction cost and Kaldor-Hicks efficiency. The latter defines an efficient resource allocation as one whereby the utility gains obtained from a change in resource allocation outweighs its utility loss. Since creditor wealth maximisation *per se* is neither the paramount objective in this perspective nor is it possible to place a monetary figure on all the multiple values, efficiency can instead be judged in terms of how much societal utility or welfare alternative resource allocations generate. The problem, however, is the utility metric of Kaldor-Hicks, since utility is immeasurable and hence changes in utility likewise cannot be measured. But this problem can arguably be its strength in the multiple values approach in that while there cannot be an actual balancing of utility costs and benefits, the process of weighing the various pluses and minuses of pursuing alternative sets of objectives is aligned with the thinking process behind the Kaldor-Hicks criterion. To wit, in selecting a course of action that achieves a certain combination of objectives, the selected course is deemed, though not calculated, to be the best one to take (in vague utility or welfare terms) for dealing with insolvency.

Having demonstrated the affinity between specific insolvency law perspectives and their efficiency criteria, Part II of the thesis introduces the thesis' second argument that whether these criteria are to be endorsed for use depends upon their compatibility with one's position on economic method. Part II introduces the topic of economic methodology before entering the subject of compatibility that is reserved for Part III.

Chapters 5 and 6 collectively demonstrated how methodology affects both the properties and the rights–efficiency interaction of efficiency criteria. Chapter 5 examined four important methodological differences between mainstream and Austrian economics to demarcate properties of efficiency that are aligned with the former as distinct from the latter school. The differences are on whether values and information are objective or subjective, whether arguing for efficiency employs econometrics and mathematics or verbal formalism, whether efficiency is assessed against the backdrop of equilibrium or disequilibrium (including the significance of entrepreneurship) and whether the future can be predicted with a certain degree of risk or with difficulty in the presence of uncertainty. This methodological exploration gives pause for thought to the way that efficiency in

insolvency is often referred to without giving explicit consideration to its underlying methodology. It is important since not all economists are adherents of the mainstream economic school. These methodological differences are due to a deep methodological disparity regarding whether economics belongs to the realm of inquiry surrounding social or physical phenomena. The neoclassical mainstream generally takes a monistic view on methodology where the method of economics emulates that of the physical sciences. Meanwhile, the Austrian school is dualist, arguing that economic methodology is distinct from that of the physical sciences applied to economics. In turn, economic phenomena are viewed and analysed differently in both economic schools, as their methodological differences demonstrate.

Rather than contrasting each specific methodological point, the section instead presents the collective effect of economic method on efficiency. In mainstream economics, third party observers (external to the parties that are transacting with each other) can make assessments on efficiency by collecting the requisite information and cost and benefit values in alternative courses of action. These are assumed to be objectively ascertainable, where third parties and individuals alike have the possibility of equal access to them. Given this information, and coupled with the assumption that knowledge of the future is more or less predictable with varying degrees of risk (meaning that individuals are able to factor this information into present considerations), mathematics and econometrics are the primary tools for arguing about efficiency. The degree of efficiency of a specific resource allocation or of an insolvency regime can then be calculated and gauged against a hypothetical equilibrium benchmark, usually a resource allocation with the maximum attainable net benefit or minimum attainable cost. Overall, the assessment of efficiency in mainstream economics can be relatively 'precise' – for instance that one resource allocation is more efficient than another by a certain amount of monetary dollars or a certain degree – since it largely abstracts from the difficulties posed by the passage of time. Since the wealth maximisation, transaction cost and Kaldor-Hicks efficiency criteria have properties aligned with the mainstream economic method, they are classified as being mainstream efficiency criteria.

Contrast this against the collective effect of the Austrian economic method on efficiency. Third parties cannot calculate efficiency in the same manner as in neoclassical economics as they lack knowledge of the requisite subjectively perceived values and information. For instance, albeit reasonable to assume that individuals prefer more wealth to less, there may be subjectively determined reasons why individuals do not always pursue wealth maximisation. Unless the third party understands why a particular constrained level of wealth is preferred, they may gauge efficiency against the incorrect benchmark of maximum attainable wealth given certain *other* constraints; in essence, lacking knowledge of the true subjectively-determined equilibrium

benchmark by which individuals themselves gauge efficiency. In its place, third party Austrian efficiency judgments defer to a disequilibrium backdrop and the extent of entrepreneurial freedom afforded to individuals. Specifically, institutional arrangements that uphold property rights minimises interference in entrepreneurial freedom, enabling individuals to freely coordinate individual plans with one another amidst market disequilibrium and to create and discover more efficient ways to act in the process. But it is not always possible to pursue efficient courses of action in the sure and calculated way of neoclassical economics because individuals can only imperfectly conjecture about the uncertain future. Since this uncertainty is not reducible to risk, determining efficiency conclusively is more difficult than in the mainstream. Whilst these hindrances affect individuals in pursuing efficient courses of action, they disadvantage third parties even more because of the problem of procuring the information. In light of the circumstances to determining efficiency brought on by Austrian economics, third parties employ verbal logic in arguing for efficiency that is cruder compared to the more 'accurate' mainstream tools of mathematics and econometrics, but with the benefit of accommodating qualitative variables such as the respect for property rights and subjective variables (individual preferences and appraisals of information and values). These cannot otherwise be captured when they have to be quantified and objectified for mathematical manipulation.

Chapter 6 extended the methodological discussion of Chapter 5 to analysing whether modifying the rights of property owners can increase efficiency; a relationship termed as the rights–efficiency interaction. This analysis is important since efficiency is one economic reason for why the rights of different stakeholders are modified in insolvency, especially of secured creditors in corporate rescue. The Coase Theorem serves as the starting point for this examination in mainstream economics while an Austrian critique demarcates the Austrian perspective on the rights–efficiency interaction. Following from its methodological assumptions, especially on valuation, mainstream economics is amenable to justifying third party intervention in market operations to encourage efficiency but Austrian economics remains sceptical of this. Just as how third parties can calculate efficiency for a group of individuals in mainstream economics but cannot in Austrian economics, they can likewise judge that rights modification can increase efficiency in the former but not in the latter school. If anything, intervention in market operations for the purposes of increasing 'value' or reducing 'cost' is misguided in the Austrian view, since intervention disrespects the rights of property owners and poses as hindrances to entrepreneurship, thereby discouraging rather than enhancing dynamic efficiency. As in Chapter 5, the thesis demonstrates that the efficiency criteria of wealth maximisation, transaction cost and Kaldor-Hicks assume the mainstream rights–efficiency interaction, again explaining their classification as mainstream efficiency criteria. Thus far, there is

no disaffinity in holding any of three established perspectives of insolvency law and mainstream efficiency criteria.

Having covered methodology and the rights–efficiency interaction, Chapter 7 introduced a hypothetical perspective of insolvency law termed 'Austrian contract-centrality' that has an affinity with an Austrian economic view on efficiency. It did so to provide a setting where an Austrian as opposed to mainstream efficiency criterion is associated with an insolvency perspective. This hypothetical illustrates the significance of the role of economic method in clarifying efficiency (to be demonstrated in Chapter 8).

Under Austrian contract-centrality, the role of insolvency law is to enforce the contractual bargain between debtors and creditors in the event of insolvency, particularly with regard to secured credit. This insolvency perspective is affined with dynamic efficiency since both seek to enforce private property rights. Although third parties cannot measure the efficiency of individual action, they can gauge whether an insolvency regime encourages entrepreneurial freedom for individuals to efficiently pursue their goals by reference to the extent of rights enforcement in it (the metric that dynamic efficiency is measured by). Like other criteria, dynamic efficiency suffers from determinacy problems as the extent of rights enforcement is non-quantifiable. Dynamic efficiency differs from mainstream criteria in focusing on the boundaries for action in terms of abstract and general rules of conduct that does not impose any particular goal on individuals such as minimising costs or maximising utility or wealth. While vaguer than the mainstream, Austrian economics can only propose a general rather than a specific efficiency analysis because of its strict subjectivism.

Mainstream efficiency criteria are not problematic *per se* in the Austrian perspective when used by individuals themselves, particularly if they form part of the individuals' plans. For instance, pursuing transaction cost efficiency in the individual rather than third party sense means that it is the individuals themselves who specify what the costs are for them. Similarly, individual wealth maximisation means that it is the individuals themselves who apply their own localised information and expectations of future valuations in determining what they believe maximises wealth for them. However, caution is raised when third parties use mainstream criteria as a normative guide for economic analysis and disregard individual preferences in the process, especially where rights are modified to increase efficiency and where it is difficult (if not impossible) to use a proper aggregation methodology to account for all the relevant values.

Since mainstream and Austrian economic methodology are so distinct from each other, what happens if one subscribes to a position on economic method that differs from the method

underlying the efficiency criterion that is affined with a specific insolvency perspective? Chapter 8 sought to answer this question with the aid of Austrian contract-centrality to demonstrate this discord between insolvency jurisprudence and economic methodology (termed the jurisprudence–method discord) in determining the meaning of efficiency.

The chapter reiterated that contractarianism, communitarianism and the multiple values approaches are affined with efficiency criteria that have mainstream economic methodological assumptions, whereas Austrian contract-centrality is affined with an efficiency criterion that presupposes Austrian methodological assumptions. However, there can be disaffinity in jointly holding any of the three recognised insolvency perspectives and dynamic efficiency because the latter is ill-suited for promoting the objectives of insolvency law under those perspectives. The same is also true for an Austrian insolvency perspective and a mainstream economic efficiency criterion (although transaction cost efficiency can be argued to be appropriate within that perspective).

In that case, there are three options available for dealing with the jurisprudence–method discord. They are to (i) abandon the efficiency criterion (that is affined with an insolvency perspective) in favour of another that conforms to one's methodological inclinations, (ii) concede to accept the methodological assumptions of that criterion or more radically, (iii) adopt a different perspective of insolvency law conducive to that criterion. The first option does not settle the conflict and instead replaces it with another disaffinity. The second option merely masks the problem without actually resolving it. The third option provides the highest chance of resolving the jurisprudence–method discord, but not without difficulty. At the same time, it gives pause for thought that the resolution may be attained by way of a wholesale rethinking of insolvency jurisprudence with the aid of economic method.

The complications encountered in resolving this discord underscored the thesis argument that the concordance between insolvency jurisprudence and economic method is significant to determining efficiency. The efficiency criterion affined with insolvency jurisprudence must be compatible with the position taken on economic method to produce a definition of efficiency that is endorsed for use. Otherwise, the lack of compatibility is problematic to the extent that efficiency is not properly defined for a particular context. For instance, if one does not adopt a mainstream economic view on methodology, one will hesitate to endorse efficiency criteria (under the insolvency law perspectives) that presuppose this method, namely, wealth maximisation, transaction cost and Kaldor-Hicks efficiency. On the other hand, if one subscribes to both mainstream economic methodology *and* any of the three insolvency perspectives that has an affinity with mainstream

efficiency criteria, one can endorse those criteria as appropriate for use. This means that efficiency is properly defined for a particular jurisprudential context. In short, it can be appreciated why, if one subscribes to mainstream neoclassical economic methodology, the efficiency criteria utilisable from the universe of all criteria are restricted to those with properties consistent with that method. The same applies to the Austrian economic method.

9.3 Conclusion

This thesis has presented one method of determining the meaning of efficiency in the insolvency context. In synthesising insolvency jurisprudence and economic methodology, both large and distinct bodies of work in themselves, there is a risk of oversimplification as the perspective of insolvency law and economic schools discussed in this thesis are only a subset of a larger whole. While there remains work to be done in refining and further expounding upon this synthesis, these limitations permit a preliminary analysis to contextualising the understanding of efficiency.

In the absence of this jurisprudence–method framework, efficiency is typically understood as achieving greater economic value for creditors than is potentially achievable otherwise under alternative insolvency regimes or courses of action. It is also frequently understood to mean dealing with the insolvency of a company in a manner that economises on costs. Often, it is not expressly recognised that such commonplace understandings of efficiency presuppose mainstream economic methodological assumptions, especially with regard to value. Indeed, if value cannot be expressed objectively, no third party can make precise quantitative assessments of efficiency or gauge that rights modification can increase value. Arguments in favour of corporate rescue furthermore commonly assume that it yields higher value compared to immediate liquidation, where value is understood to be measurable by monetary dollars. Some empirical literature on the efficiency of rescue has sought to demonstrate that this is the case.[1]

The thesis recognises the Austrian challenge to the mainstream by way of questioning whether the efficiency criteria of the latter school rests on facts and values that third parties can actually ascertain. But the Austrian dynamic efficiency criterion is not without its drawbacks either. It can be indeterminate and 'unscientific' compared to mainstream criteria and does not provide third parties with a way of gauging efficiency via optimisation or with the aid of empirical studies. However, it is important to recognise that the 'preciseness' of mainstream efficiency criteria is only

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[1] In terms of Australian literature, see, eg, Abe Herzberg, Mark Bender and Lee Gordon-Brown, 'Does the Voluntary Administration Scheme Satisfy its Legislative Objectives? An Exploratory Analysis' (2010) 18 *Insolvency Law Journal* 181 and James Routledge, 'An Exploratory Empirical Analysis of Part 5.3A of the Corporations Law (Voluntary Administration' (1998) 16 *Company and Securities Law Journal* 4.

made possible by their assumptions on objective value and on the attainment of equilibrium via optimisation. It is also of no demerit to Austrian economics that it has not succeeded in discovering how to aggregate value in order to attain this 'preciseness' since what does not exist – namely, objective value – cannot be discovered. In any case, dynamic efficiency provides a vastly different alternative to the wealth or utility-based efficiency criteria of the mainstream, instead focusing on a rights-based criterion that gives support for the respect of property rights and of the separateness of persons in its pursuit. Perhaps counter-intuitively, dynamic efficiency is more practical than the mainstream efficiency criteria since it makes more realistic assumptions on valuation and knowledge while acknowledging the difficulties for third parties to engineer an increase in efficiency. It can furthermore be a useful tool in the comparative analyses of various institutions in a way that differs radically from the usual efficiency analysis of the mainstream.

With that said, from a practical viewpoint, it may perhaps be better to have some sort of a mainstream cost-benefit analysis guide despite its restrictive methodological assumptions, rather than having no guide at all. This constrains the imposition of a third party's subjective values upon others since the assumption of objective value enables other third parties to keep their valuations in check with each other. That is to say, it places arguing about efficiency on more 'objective' grounds of valuation rather than on the subjective preferences of the policy makers, although the Austrian criticisms about valuation nevertheless cannot be ignored.

The thesis thereby encourages giving further thought to the objectives stated under insolvency law as they frame what efficiency is referred to mean in their pursuit. That is not to say that the objectives ought to be framed specifically around efficiency. But since the objectives of rescue (for instance) are also used as a guide for what the third party observer (say, voluntary administrator) should do, setting objectives such as 'minimising the costs of administration' or 'maximising the returns obtainable' presuppose certain methodological assumptions around efficiency. These should not be overlooked, particularly in legislation aimed at increasing the 'efficiency,' however defined, of an insolvency regime. Indeed, when the dominance of mainstream economic methodology in Law and Economics and in insolvency jurisprudence is challenged by insights from Austrian economics, both policy prescriptions based upon dynamic efficiency and insolvency jurisprudence informed by Austrian economics may look very different to its current state.

To conclude the thesis, in response to how the meaning of 'efficiency' is determined in the insolvency context, the answer is that this relies upon contributions from *both* insolvency jurisprudence and economic method, in a process of determination using the jurisprudence–method framework.

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